Structure and Size of Complete Hydration Shells of Metal Ions and Inorganic Anions in Aqueous Solution

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Elelctronic Supplementary Information

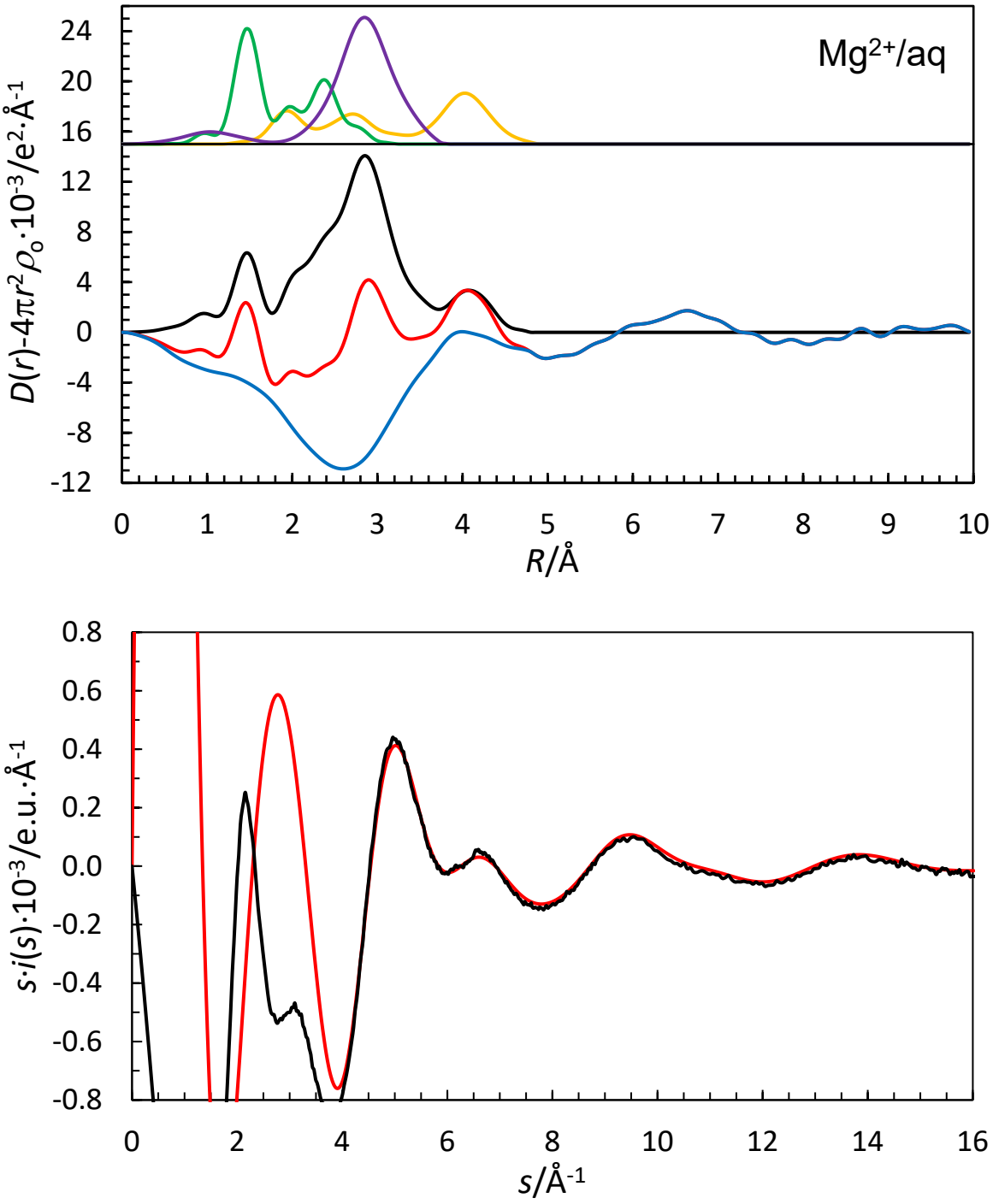

Figure S1. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of magnesium(II) perchlorate. Upper part: Separate model contributions (offset: 15) of the hydrated magnesium ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s\cdot i(s)$ (black line); model $s\cdot i_{calc}(s)$ (red line).

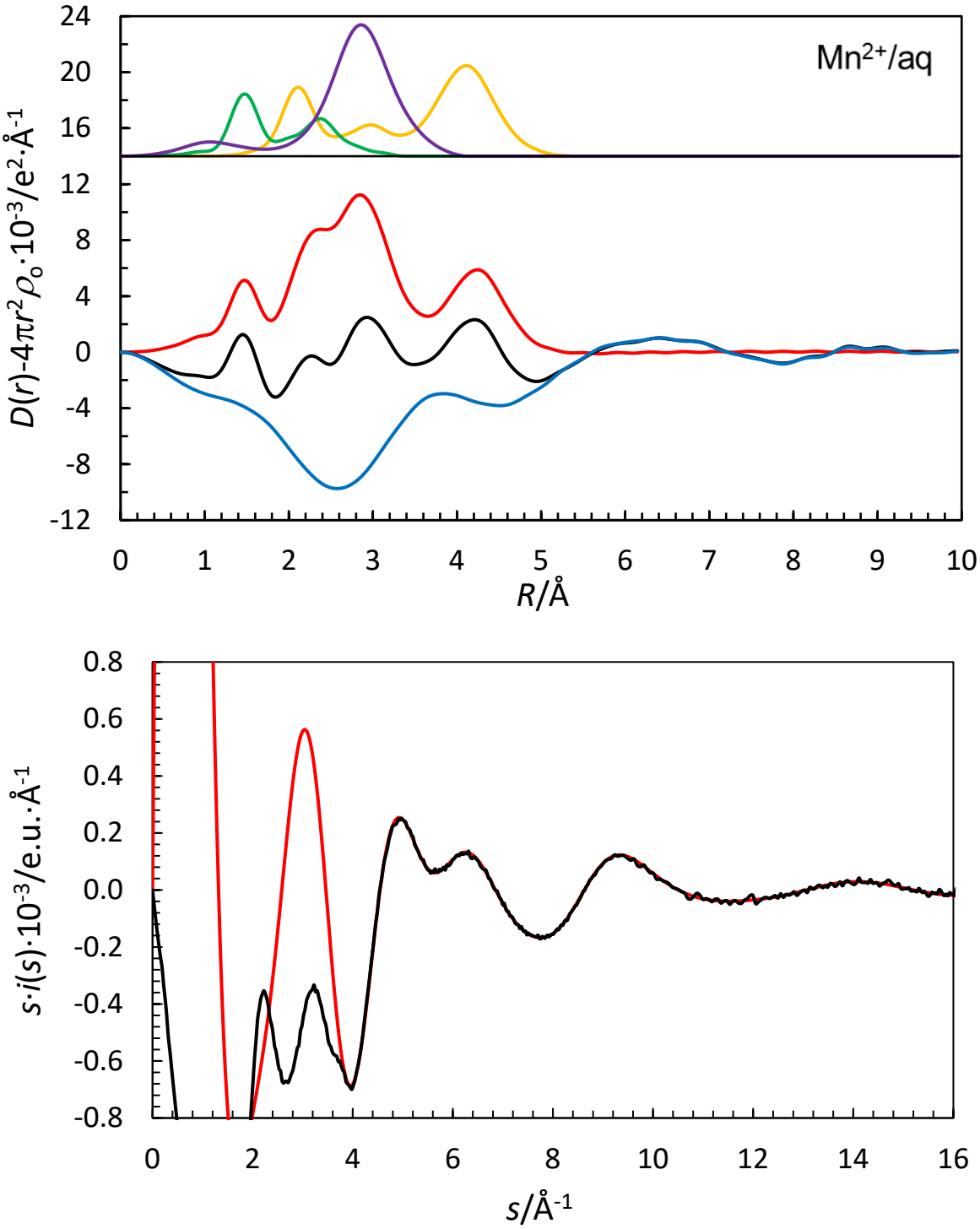

Figure S2. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of manganese(II) perchlorate. Upper part: Separate model contributions (offset: 14) of the hydrated manganese(II) ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s \cdot i(s)$ (black line); model $s \cdot i_{calc}(s)$ (red line).

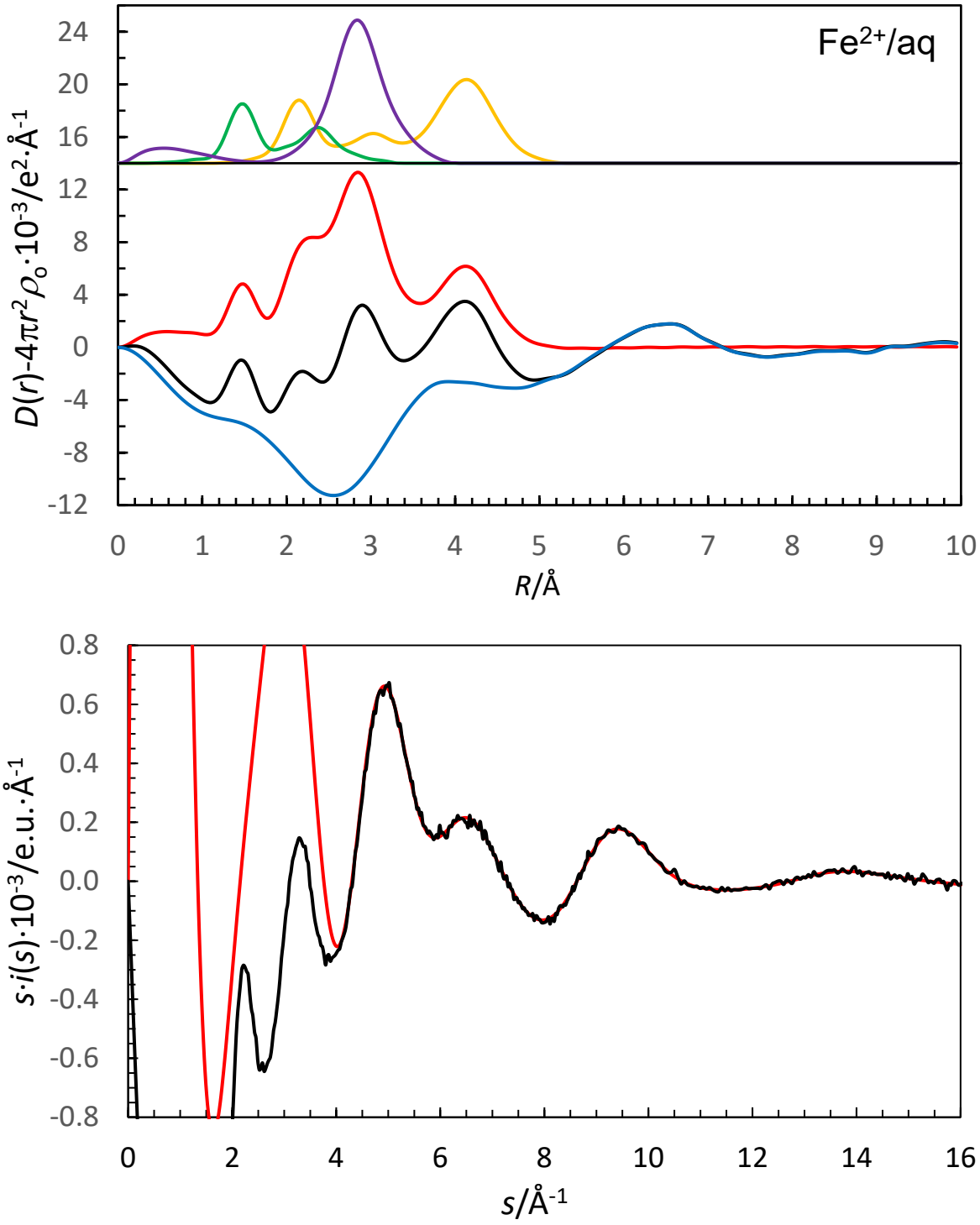

Figure S3. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of iron(II) perchlorate. Upper part: Separate model contributions (offset: 14) of the hydrated iron(II) ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s \cdot i(s)$ (black line); model $s \cdot i_{calc}(s)$ (red line).

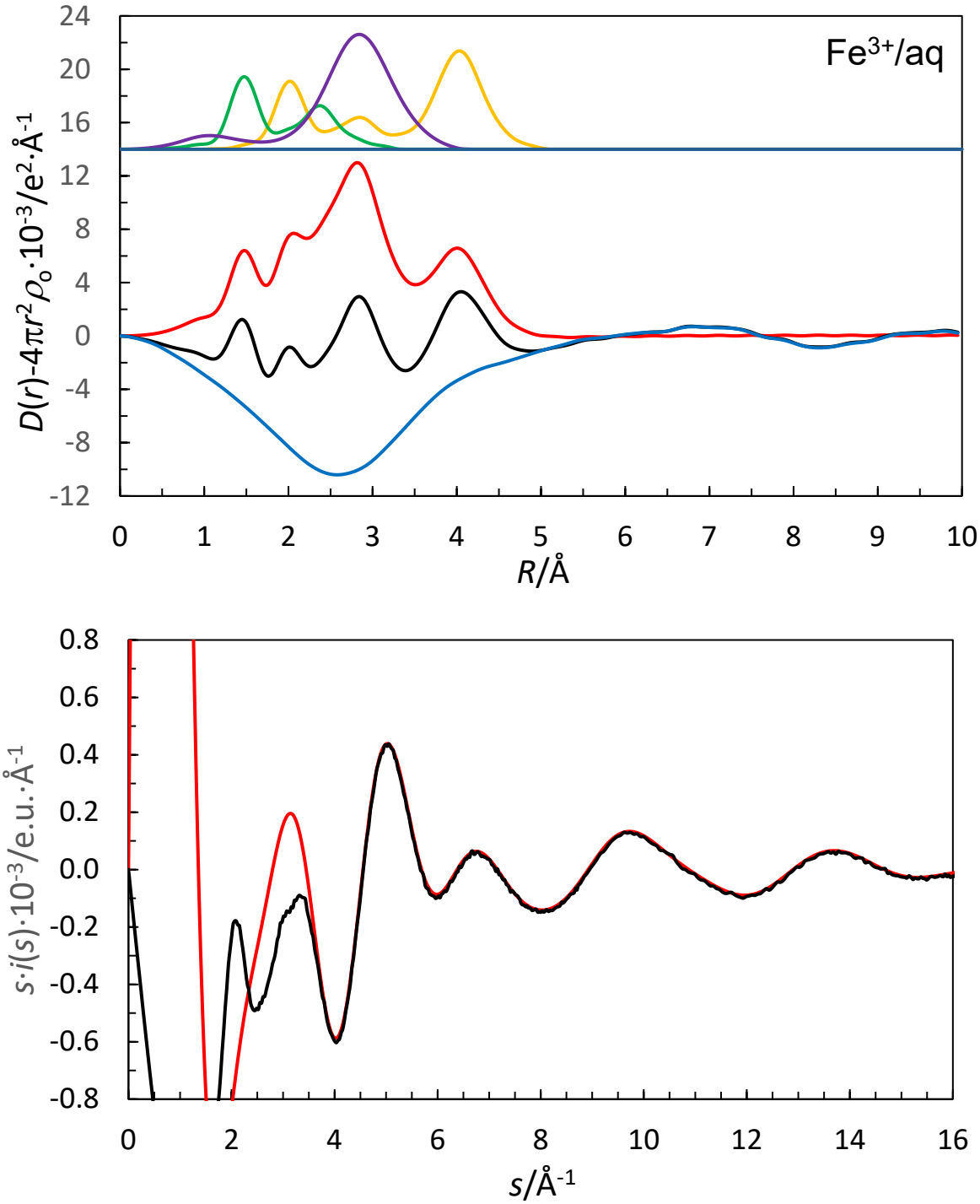

Figure S4. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of iron(III) perchlorate. Upper part: Separate model contributions (offset: 14) of the hydrated iron(III) ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s \cdot i(s)$ (black line); model $s \cdot i_{calc}(s)$ (red line).

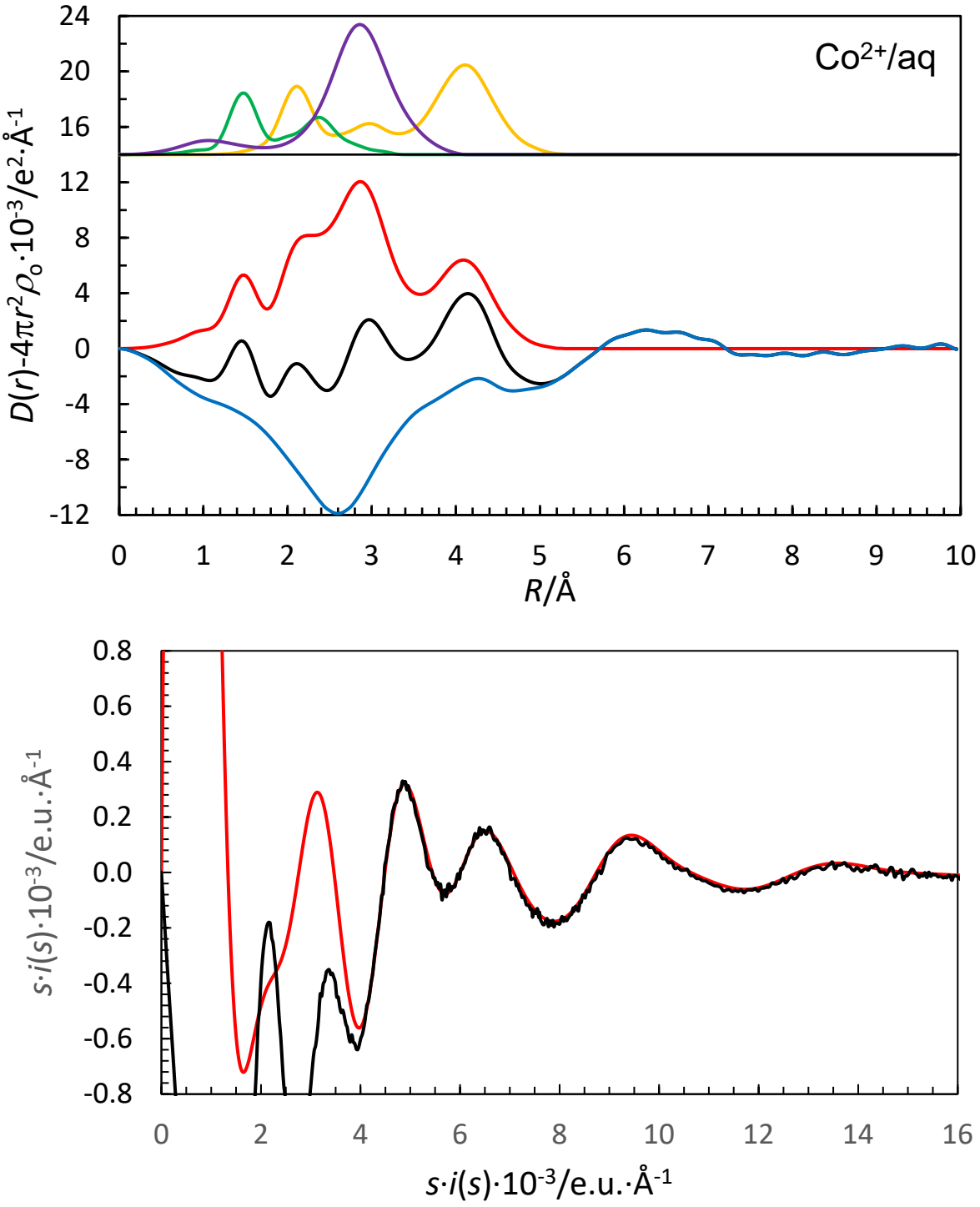

Figure S5. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of cobalt(II) perchlorate. Upper part: Separate model contributions (offset: 14) of the hydrated cobalt(II) ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s\cdot i(s)$ (black line); model $s\cdot i_{calc}(s)$ (red line).

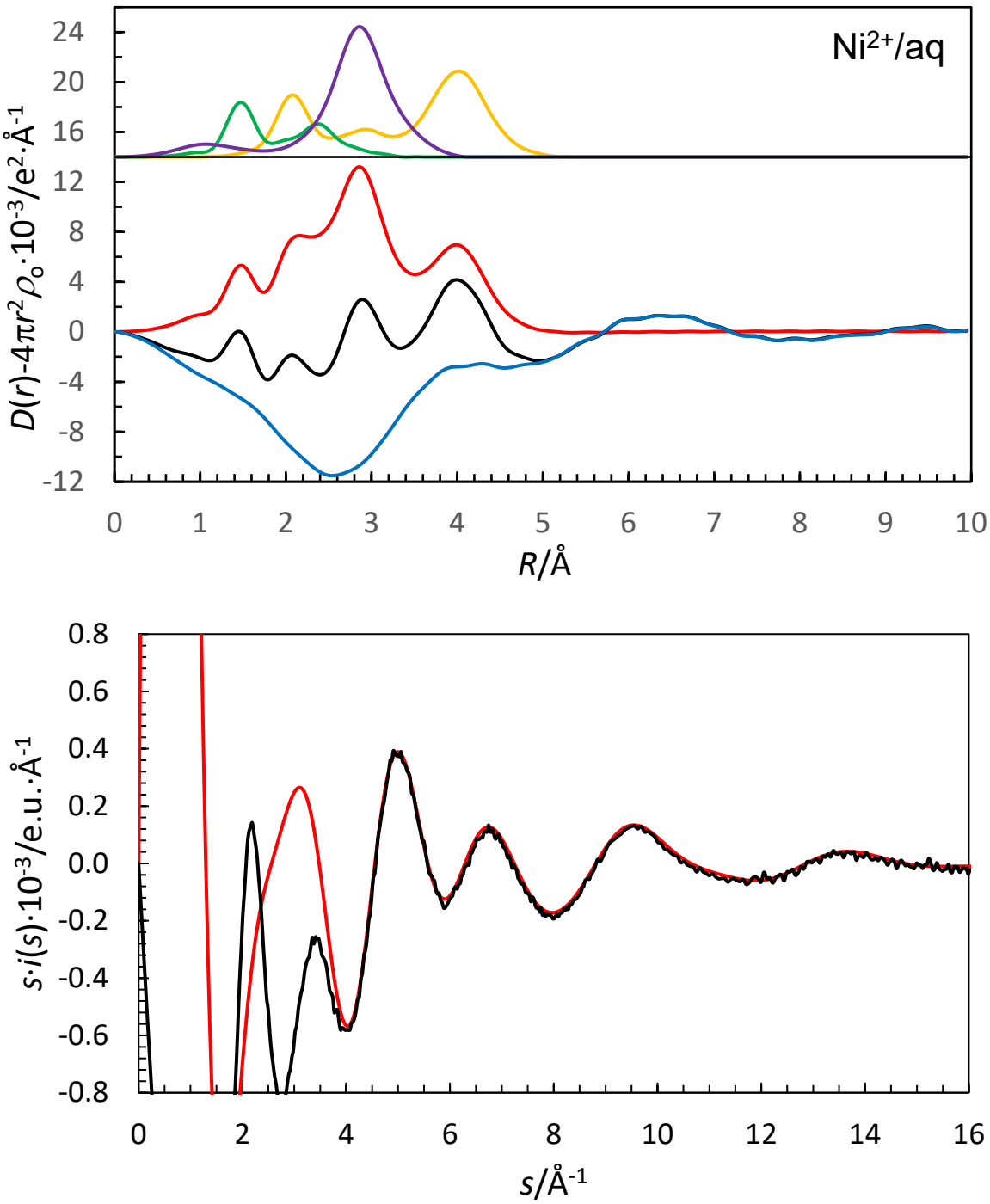

Figure S6. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of nickel(II) perchlorate. Upper part: Separate model contributions (offset: 14) of the hydrated nickel(II) ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s\cdot i(s)$ (black line); model $s\cdot i_{calc}(s)$ (red line).

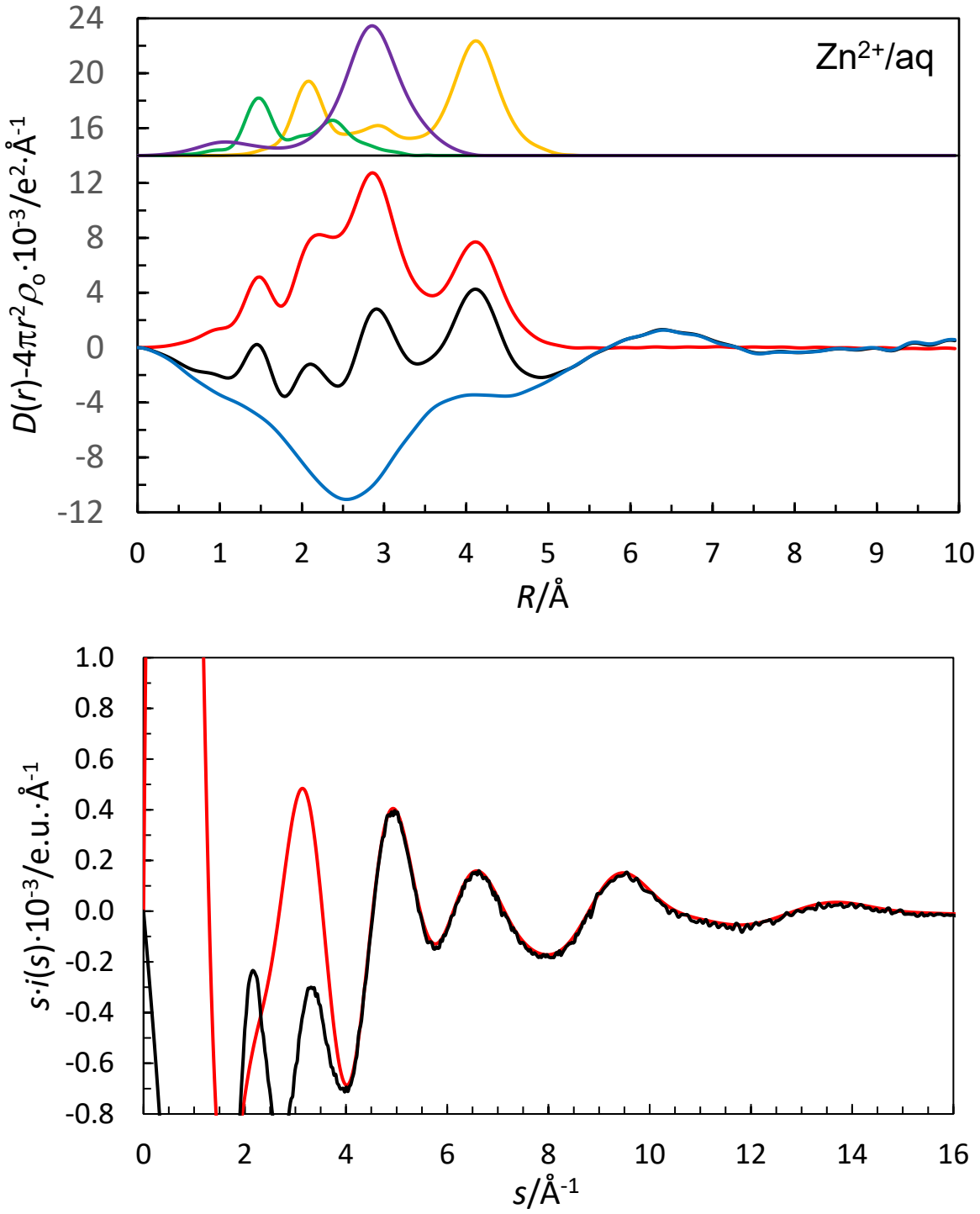

Figure S7. (Top) LAXS radial distribution curves for a 1.50 mol·dm^{-3} aqueous perchloric acidic solution of zinc(II) perchlorate. Upper part: Separate model contributions (offset: 14) of the hydrated zinc ion (yellow line), the hydrated perchlorate ion (green line) and aqueous bulk (purple line). (Middle) Experimental RDF: $D(r) - 4\pi r^2\rho_o$ (black line); sum of model contributions (red line); difference (blue line). (Bottom) Reduced LAXS intensity functions $s \cdot i(s)$ (black line); model $s \cdot i_{calc}(s)$ (red line).

Table S1. Summary reported crystal structures containing a hydrated metal ion until early 2024.

Table S1a. Summary of solid state structures containing a hydrated lithium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Li-O bond distance, *d*(Li-O); *d*(Li-O)$_b$ denotes bridging ligands and *d*(Li-O)$_t$ terminal ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Lithium(I)

Four-coordination

ICSD/CSD code	*d*(Li-O)	Reference, compound formula
LOKMIK	1.872 Å	Pascual-Alvarez, A.; Cano, J.; Lloret, F.; Ferrando-Soria, J.; Armentano, D.; Pardo, E. *Compt. Rendus Chim.* **2019**, *22*, 466.
VERDUS	1.877 Å	Benner, K.; Ihringer, J.; Klufers, P.; Marinov, D. *Angew. Chem., Int. Ed.* **2006**, *45*, 5818. $[Li(H_2O)_4]_2[Na(H_2O)_4][SnC_{126}H_{203}O_{105}]\cdot 3C_2H_5OH\cdot 27H_2O$
VERDIG	1.888 Å	Benner, K.; Ihringer, J.; Klufers, P.; Marinov, D. *Angew. Chem., Int. Ed.* **2006**, *45*, 5818. $K_2[Li(H_2O)_4][MnC_{126}H_{207}O_{105}]\cdot CH_3OH\cdot 23H_2O$
SEJNAW	1.907 Å	Hambley, T. W.; Gahan, L. R.; Searle, G. H. *Acta Crystallogr., Sect. C* **1989**, *45*, 864. $[Li(H_2O)_4][Co(C_6H_{14}N_2S)_2]Br_4\cdot H_2O$
YEMZUL	1.908 Å	Golden, J. H.; Mutolo, P. F.; Lokovsky, E. B.; DiSalvo, F. J. *Inorg. Chem.* **1994**, *33*, 5374. $[Li(H_2O)_4]B(3,5\text{-}(CF_3)_2\text{-}C_6H_3)_4$
EVEGUH	1.912 Å	Barea, E.; Navarro, J. A. R.; Salas, J. M.; Masciocchi, N.; Galli, S.; Sironi, A. *J. Amer. Chem. Soc.* **2004**, *126*, 3014. $[Li(H_2O)_4]NO_3\cdot[Cu_3C_{24}H_{18}N_{12}O_6]\cdot H_2O$
AQAQAM	1.919 Å	Rajkovic, S.; Zivkovic, M. D.; Warzajtis, B.; Rychlewska, U.; Djuran, M. I. *Polyhedron* **2016**, *117*. 367. $[Li(H_2O)_4][Pt_2C_{14}H_{32}Cl_2N_6]Cl_4\cdot 2H_2O$
BADTUV10	1.920 Å	Ymén, I. *Acta Crystallogr., Sect. A* **1981**, *37*, C223; *Acta Crystallogr., Sect. C* **1983**, *39*, 570. $[Li(H_2O)_4]C_4H_8NCS_2$

4348	1.924 Å	Ortner, T. S.; Scheifers, J. P.; Flores, J.; Zhang, Y.; Iyer, A. K.; Gesing, T. M.; Fokwa, B. P. T. *Eur. J. Inorg. Chem.* **2019**, 3526. $Cs_3[Li(H_2O)_4]Cl_4$
YEMZUL01	1.924 Å	Carreras, L.; Rovira, L.; Vaquero, M.; Mon, I.; Martin, E.; Benet-Buchholz, J.; Vidal-Ferran, A. *RSC Advances* **2017**, *7*, 32833. $[Li(H_2O)_4]B(3,5\text{-}(CF_3)_2\text{-}C_6H_3)_4$
FUQMEL	1.926 Å	Specklin, D.; Mameri, S.; Loukopoulos, E.; Kostakis, G. E.; Welter, R. *Polyhedron* **2015**, *100*, 359. $[Li(H_2O)_4][LiC_{10}H_{14}N_2O_7S]\cdot(CH_3)_2CO\cdot H_2O$
260275	1.927 Å	Raabe, I.; Wagner, K.; Santiso-Quinones, G.; Krossing, I. *Z. Anorg. Allg. Chem.* **2009**, *635*, 513. $[Li(H_2O)_4][Al(OC(CF_3)_3)_4]$
FEDHUR	1.928 Å	Harrowfield, J. M. ; Sharma, R. P. ; Skelton, B. W. ; White, A. H. *Aust. J. Chem.* **1998**, *51*, 747. $[Li(H_2O)_4](4\text{-}NO_2\text{-}C_6H_4\text{-}O)\cdot(4\text{-}NO_2\text{-}C_6H_4\text{-}OH)\ [LiC_{10}H_{14}N_2O_7S]\cdot(CH_3)_2CO\cdot H_2O$
LAPNAR	1.928 Å	Declercq, J. P.; Feneau-Dupont, F.; Ladriere, J. *Polyhedron* **1993**, *12*, 1031. $[Li(H_2O)_4]_3[Li_5Fe_2C_{12}H_{12}O_{30}]Cl_2$
GAYFAP	1.928 Å	Kirillova, M. V.; Kirillov, A. M.; Martins, A. N. C.; Graiff, C.; Tiripicchio, A.; Pombeiro, A. J. L. *Inorg. Chem.* **2012**, *51*, 5224. $[Li(H_2O)_4][Cu_4C_{31}H_{57}N_4O_{22}S_4]\cdot H_2O$
NOXBIL	1.928 Å	Duda, A. M.; Karaczyn, A.; Kozlowski, H.; Fritsky, I. O.; Glowiak, T.; Prisyazhnaya, E. V.; Sliva, T. Yu; Swiatek-Kozlowska, J. *J. Chem. Soc., Dalton Trans.* **1997**, 3853. $[Li(H_2O)_4][CuC_9H_{13}N_4O_4]\cdot 2H_2O$
XIFHUP	1.931 Å	Davidovich, R. L.; Gerasimenko, A. V.; Logvinova, V. B. *Zh.Neorg.Khim.* **2001**, *46*, 1297. $[Li(H_2O)_4][Li(H_2O)_2(Bi(C_{12}H_{22}N_6O_9S_2)_2]\cdot 5H_2O$
LEPNIF	1.932 Å	Kruszynski, R.; Sieranski, T.; Bilinska, A.; Bernat, T.; Czubacka, E. *Struct. Chem.* **2012**, *23*, 1643. $[Li(H_2O)_4]I\cdot 2C_6H_{12}N_4$
YIRRIA	1.933 Å	Bakshi, P. K.; Sereda, S. V..; Knop, O. *Can. J. Chem.* **1994**, *72*, 2144. $[Li(H_2O)_4]B(C_6H_5)_4$
OYIPIX	1.934 Å	Kim, S. B.; Kim, J. Y.; Jeong, Kang N. C; Wojciechowski, J.; Dzierzawska, M.; Czubacka, E. *J. Chem. Cryst.* **2015**, *45*, 484. $[Li(H_2O)_4][Li_3Co_4C_{56}H_{32}N_8O_{36}]\cdot 0.5H_2O$
79472	1.935 Å	Touboul, M.; Betourne, E.; Novogorocki, G. *J. Solid State Chem.* **1995**, *115*, 549. $[Li(H_2O)_4]B(OH)_4\cdot 2H_2O$
430533	1.935 Å	Liu, Y.; Chen, Z.; Zhang, Z.; Wang, Y.; Dong, X.; Yang, Z. Mater. Res. Bull. **2016**, *83*, 423. $[Li(H_2O)_4]B(OH)_4\cdot 2H_2O$
SONDUV	1.935 Å	Kotkova, Z.; Pereira, G. A.; Djanashvili, K.; Kotek, J.; Rudovsky, J.; Hermann, P.; Elst, L. V.; Muller, R. N.; Geraldes, C. F. G. C.; Lukes, I.; Peters, J. A. *Eur. J. Inorg. Chem.* **2009**, 119. $[Li(H_2O)_4][GdLiC_{20}H_{50}N_4O_{15}P_4]\cdot[GdC_{20}H_{44}N_4O_{12}P_4]\cdot(CH_3)_2CO\cdot 9H_2O$
WIKWUI	1.935 Å	Ojala, W. H.; Lu, L. K.; Albers, K. E.; Gleason, W. B.; Richardson, T. I.; Lovrien, R. E.; Sudbeck, E. A. *Acta Crystallogr., Sect. B* **1994**, *50*, 684. $[Li(H_2O)_4]_2(C_{16}H_{10}N_2O_7S_2)$
KIJZUZ	1.936 Å	Steyl G. *Acta Crystallogr., Sect. E* **2007**, *63*, m2343. $[Li(H_2O)_4](C_7H_5O_2)_2$
KIJZUZ01	1.938 Å	Budanow, A.; Tutughamiarso, M.; Lerner, H.-W.; Bolte, M. CCDC deposition number 793483, **2010**. $[Li(H_2O)_4](C_7H_5O_2)_2$

PICXIL	1.938 Å	Jassal, A. K.; Sran, B. S..; Mandal, K.; Mukhopadhyay, P.; Hundal, G. *Cryst. Growth Des.* **2018**, *18*, 4737. $NH_4[Li(H_2O)_4](C_7H_5N_2O_4)_2\cdot H_2O$
LEPNEB	1.940 Å	Kruszynski, R.; Sieranski, T.; Bilinska, A.; Bernat, T.; Czubacka, E. *Struct. Chem.* **2012**, *23*, 1643. $[Li(H_2O)_4]Cl\cdot C_6H_{12}N_4$
BUVPOZ	1.941 Å	Kruszynski, R.; Sieranski, T.; Swiatkowski, M.; Zielak, M.; Wojciechowski, J.; Dzierzawska, M.; Czubacka, E. *J. Chem. Cryst.* **2015**, *45*, 484. $[Li(H_2O)_4]ClO_4\cdot 2C_6H_{12}N_4$
TIPWOE	1.944 Å	Zavalij, P. Y.; Chirayil, T.; Whittingham, M. S..; Pecharsky, V. K.; Jacobson, R. A. *Acta Crystallogr., Sect. C* **1997**, *53*, 170. $[Li(H_2O)_4][Li_3Co_4C_{56}H_{32}N_8O_{36}]\cdot 0.5H_2O$
170007	1.944 Å	Zavalij, P. Y.; Chirayil, T.; Whittingham, M. S.; Pecharskii, V. K.; Jacobson, R. A. *Acta Crystallogr., Sect. C* **1997**, *53*, 170.
260274	1.945 Å	Raabe, I.; Wagner, K.; Santiso-Quinones, G.; Krossing, I. *Z. Anorg. Allg. Chem.* **2009**, *635*, 513. $[Li(H_2O)_4]OCCF_3$
COVBEU	1.945 Å	Perron, J.; Beauchamp, A. L. *Inorg. Chem.* **1984**, *23*, 2853. $[Li(H_2O)_4][Ag(NC_4H_4O_2)_2]$
KAJZAZ	1.945 Å	Imada, Y.; Nakano, H.; Furukawa, K.; Kishi, R.; Nakano, M.; Maruyama, H.; Nakamoto, M.; Sekiguchi, A.; Ogawa, M.; Ohta, T.; Yamamoto, Y. *J. Chem. Am. Soc.* **2016**, *138*, 479. $[Li(H_2O)_4[Li(C_{16}H_9F_{20}O_5S)](C_{16}H_3F_{20}O_2S)\cdot H_2O$
VERDEC	1.945 Å	Benner, K.; Ihringer, J.; Klufers, P.; Marinov, D. *Angew. Chem., Int. Ed.* **2006**, *45*, 5818. $[Li(H_2O)_4]_3[GeC_{126}H_{200}O_{105}]\cdot 3C_2H_5OH\cdot 24H_2O$
XAQTOC	1.945 Å	Vitze, H.; Lerner, H.-W.; Bolte, M. CCDC deposition number 2123519, **2021**. $[Li(H_2O)_4](BSi_4C_{44}H_{84})$
265010	1.946 Å	Peryshkov, D. V.; Bukovsky, E. V.; Lacroix, M. R.; Wu, H.; Zhou, W.; Jones, W. M.; Lozinšek, M.; Folsom, T. C.; Heyliger, D. L.; Udovic, T. J.; Strauss, S. H. *Inorg. Chem.* **2017**, *56*, 12023. $K[Li(H_2O)_4]B_{12}H_{12}$
IGAZUL	1.946 Å	Santos, A. M.; Fernanda, M.; Carvalho, N. N.; Galvao, A. M.; Pombeiro, A. J. L. *Z. Naturforsch., Sect. B* **2002**, *57*, 691. $[Li(H_2O)_4](C_{10}H_{14}NO_4S)$
POVMOF	1.946 Å	Charushnikova, I. A.; Krot, N. N.; Perminov, V. P. *Radiokhimiya* **2018**, *60*, 521. $(C(NH_2)_3)_2[Li(H_2O)_4[NpO_2(OH)_4]\cdot 2H_2O$
NEWLIM	1.947 Å	Kufelnicki, A.; Tomyn, S. V.; Vitske, V.; Jaciubek-Rosinska, J.; Haukka, M.; Fritsky, I. O. *Polyhedron* **2013**, *56*, 144. $[Li(H_2O)_4]_2[Co_3Li_2C_{18}H_{30}N_6O_{24}]$
RIBDEM	1.947 Å	Lazarides, T.; Easun, T. L.; Veyne-Marti, C.; Alsindi, W. Z.; George, M. W.; Deppermann, N.; Hunter, C. A.; Adams, H.; Ward, M. D. *J. Am. Chem. Soc.* **2007**, *129*, 4014. $[Li(H_2O)_4][Li(Ru(CN)_4(N_2C_{10}H_8)_{20}O_5S)]$
54839	1.949 Å	Locock, A. J.; Burns, P. C.; Duke, M. J. M.; Flynn, T. M. *Can. Mineral.* **2004**, *42*, 973. $Li(H_2O)_4][(UO_2)PO_4]$
109876	1.949 Å	Declercq, J. P.; Feneau-Dupont, J.; Ladriere, J. *Polyhedron* **1993**, *12*, 1031. $[Li(H_2O)_4]_3(Li_5Fe_2(C_2O_4)_6(H2O)_6]Cl_2$
IDOZAC	1.951 Å	Antipin, M. Yu.; Ilyukhin, A. B.; Kotov, V. Y. *Mendeleev Commun.* **2001**, 210.

		$[Li(H_2O)_4]_2(H_5C_2\text{-}NC_5H_4\text{-}C_5H_4N\text{-}C_2H_5)_3[Fe(CN)_6]_2\cdot 20H_2O$
POGSIQ	1.951 Å	Zhilov, V. I; Kostikova, G. V.; Kuz'mina, L. G.; Demina, L. I.; Demin, S. V.;Tsivadze, A. Y. *Izv. Akad. Nauk SSSR, Ser. Khim.* **2018**, *67*, 2191. $[Li(H_2O)_4][LiC_{14}H_{21}NO_8]_2Cl_4\cdot[LiC_{14}H_{19}ClNO_7]\cdot H_2O$
ZAGPOQ	1.954 Å	Park, K. H.; Lee, K. M.; Go, M. J.; Choi, S. H.; Park, H.-R.; Kim, Y.; Lee, J. *Inorg. Chem.* **2014**, *53*, 8213. $[Li_2(H_2O)_7][Li(H_2O)_4]_2[Fe_2Li_2C_{42}H_{28}N_{24}O_8]\cdot 4.5H_2O$
QEHJIY	1.955 Å	Nicholson, B. K.; Clark, C. J.; Wright, C. E.; Telfer, S. G.; Groutso, T. *Organometallics* **2011**, *30*, 6612. $[Li(H_2O)_4]_2[Li_4Sb_{12}C_{84}H_{93}O_{31}]Br\cdot 10H_2O$
ZEGJUT	1.958 Å	Quarez, E.; Deunf, E.; Cadiou, V.; Gutel, T.; Boucher, F.; Guyomard, D.; Dolhem, F.; Poizot, P. *CrystEngComm* **2017**, *19*, 6787. $[Li(H_2O)_4](C_{20}H_{14}N_2O_4]Br$
1521	1.960 Å	Caranoni, C.; Pepe, G.; Capella, L. *Acta Crystallogr: Sect. B* **1978**, *34*, 741. $[Li(H_2O)_4][GaO_2(H_2O)_2]$
YIDJAW	1.965 Å	Amini, M.M.; Heeg, M. J.;Taylor, R. W.; Zuckerman, J. J.; Seik Weng Ng *Main Group Met.Chem.* **1993**, *16*, 415. $[Li(H_2O)_4]_2[SnC_{14}H_{25}N_2]ClBr$
WABFIO	1.966 Å	Goodson, P. A.; Hodgson, D. J.; Glerup, J.; Michelsen, K.; Weihe, H. *Inorg. Chim. Acta* **1992**, *197*, 141. $[Li(H_2O)_4]_2[Mn_2C_{16}H_{40}N_8O_2]Cl_4\cdot H_2O$
PUPCUY	1.957 Å	Meske, W.; Babel, D. *Z. Anorg. Allg. Chem.* **1998**, *624*, 1751. $((CH_3)_4N)_6[Li(H_2O)_4]_2[Li((H_2O)_2(Mo(CN)_6)_2]\cdot H_2O$
16441	1.967 Å	Lebioda, L.; Ciechanowicz-Rutkowska, M.; Baker, L. C. W.; Grochowski, J. *Acta Crystallogr. Sect. B* **1980**, *36*, 2530. $[Li(H_2O)_4]_2H[Co_4H_{12}I_3O_{24}]\cdot 3H_2O$
YAPKIJ	1.968 Å	Fuchs, R.; Habermann, N.; Klufers, P. *Angew. Chem., Int. Ed.* **1993**, *32*, 852. $[Li(H_2O)_4]_3[Li(H_2O)_3][Cu_4Li_7C_{84}H_{135}O_{77}]\cdot 18H_2O$
JAHZAW	1.973 Å	de Jongh, L.-A.; Dobrzanska, L.; Strasser, C. E.; Raubenheimer, H. G.; Cronje, S. *Z. Naturforsch., Teil B* **2015**, *69*, 1073. $[Li(H_2O)_4][LiC_6H_{16}O_4][Au(C_6F_5)_2]_2\cdot(CH_3)_2CO\cdot H_2O$
TUJTAU	1.975 Å	Kunz, K.; Bolte, M.; Wagner, M.; Lerner, H.-W. *Z. Anorg. Allg. Chem.* **2009**, *635*, 1850. $[Li(H_2O)_4](B(C_4H_5N_2S)_4)$
QARGUP	2.011 Å	Kornowicz, A.; Terlecki, M.; Justyniak, I.; Prochowicz, D.; van Leusen, J. ; Kogerler, P. ; Lewinski, J. Inorg. Chem. 2022, 61, 2499. $[Li(H_2O)_4]_4[Co_3Li_6C_{72}H_{114}O_{69}]\cdot 28H_2O$
VERDOM	2.063 Å	Benner, K.; Ihringer, J.; Klufers, P.; Marinov, D. *Angew. Chem., Int. Ed.* **2006**, *45*, 5818. $[Li(H_2O)_4]_3[PbC_{126}H_{203}O_{105}]\cdot 5CH_3OH\cdot 34H_2O$
Mean	**1.941 Å/53 structures**	

Five-coordination

ICSD/CSD code	*d*(Li-O)	Reference, compound formula
XAQTUI	2.044 Å	Vitze, H.; Lerner, H.-W.; Bolte, M. CCDC deposition number 2123520, **2021**. $[Li(H_2O)_5][Li(H_2O)(OC_4H_8O](BSi_4C_{56}H_{108})_2$
LEZSER	2.132 Å	Ge, Z.-Y.; Zhu, Z.-B.; Deng, Z.-P.; Huo, L.-H.; Gao, S. *CrystEngComm* **2018**, *20*, 2968-2979. $[Li(H_2O)_5][Li_3C_{14}H_{12}O_{16}S_2]\cdot 3H_2O$
YESHIN	2.173 Å	Bruggemann, R. C. y.; Thewalt, U. *Z. Naturforsch., Teil B* **1994**, *49*, 1531. $[Li(H_2O)_5][CoCr_2C_4H_{16}N_4O_8]$
FEGMAI	2.298 Å	Srivastava, A. K.; Vijayakanth, T.; Divya, P.; Praveenkumar, B.; Steiner, A.; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[Li(H_2O)_5][Ni_4C_{128}H_{136}N_{32}O_{16}P_8](NO_3)_9\cdot 18.5H_2O$
FEGMEM	2.337 Å	Srivastava, A. K.; Vijayakanth, T.; Divya, P.; Praveenkumar, B.; Steiner, A.; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[Li(H_2O)_5][Co_4C_{128}H_{136}N_{32}O_{16}P_8](NO_3)_9\cdot 27H_2O$
Mean	**2.044 Å/1 structure**	

Six-coordination

ICSD/CSD code	*d*(Li-O)	Reference, compound formula
LELRID	1.937 Å	Tang, K.-L.; Li, A.-Q.; Jin, X.-L.; Tang, Y.-Q. *Gaodeng Xuexiao Huaxue Xuebao* **1993**, *14*, 310. $((C_2H_5)_4N)_3[Li(H_2O)_6][Cd_4C_{60}H_{78}S_6]_2\cdot 2C_2H_5OH$
DAXCIQ	2.144 Å	Hou, Y.; Rodriguez, M. A.; Nyman, M. *Cryst. Growth Des.* **2012**, *12*, 1422. $[Li(H_2O)_6][Fe_4Li_2C_{26}H_{40}N_4O_{27}]_2\cdot 16H_2O$
Mean	**2.144 Å/1 structure**	

Dimeric hydrate complexes

Four-coordination, tetrahedral configuration

ICSD/CSD code	$d(Li\text{-}O)_b + d(Li\text{-}O)_t$	Reference, compound formula
$[Li_2(H_2O)_6]^{2+}$		
CUSWES01	2.004 + 1.917 Å	Srinivasan, B. R.; Shetgaonkar, S. Y.; Dhavskar, K. T.; Sundar, J. K.; Natarajan, S. *Ind. J. Chem., Sect. A* **2012**, *51*, 564. $[Li_2(H_2O)_6](4\text{-}NO_2\text{-}C_6H_4\text{-}COO)_2$
KUPFUW	2.017 + 1.900 Å	Maigrot, N.; Ricard, L.; Charrier, C.; Mathey, F. *Angew. Chem., Int. Ed.* **1992**, *31*, 1031. $[Li_2(H_2O)_6][Li(H_2O)(OC(CH_3)_2)](C_{30}H_{20}P_4S_8)\cdot(CH_3)_2CO$
GEFDEA	2.022 + 1.880 Å	Raston, C. L.; Whitaker, C. R.; White, A. H. *Aust. J. Chem.* **1988**, *41*, 413. $[Li_2(H_2O)_6]Cl_2\cdot 6(2,5\text{-}(CH_3)_2C_5H_3N)$
HOXZIF	2.032 + 1.913 Å	Drukenmuller, I. E.; Klapotke, T. M.; Morgenstern, Y.; Rusan, M. ; Stierstorfer, J. . *Z. Anorg. Allg. Chem.* **2014**, *640*, 2139. $[Li_2(H_2O)_6](C_3H_5O_6)_2$

CELGUV	2.034 + 1.896 Å	Ymén, I. *Acta Crystallogr., Sect. C* **1984**, *40*, 241. $[Li_2(H_2O)_6]((C_2H_5)_2NCS_2)_2$
Mean	**2.022 + 1.901 Å/5 structures; mean all Li-O bond distances: 1.962 Å**	

$[Li_2(H_2O)_7]^{2+}$

SODLEE	1.981 + 1.910 Å	Dash, S. P.; Panda, A. K.; Pasayat, S.; Dinda, R.; Biswas, A.; Tiekink, E. R. T.; Patil, Y. P.; Nethaji, M.; Kaminsky, W.; Mukhopadhyay, S.; Bhutia, S. K. *Dalton Trans.* **2014**, *43*, 10139. $[Li_2(H_2O)_7][VO_2(C_{14}H_{10}N_2O_3)]\cdot H_2O$
ZAGPOQ	2.006 + 1.931 Å	Park, K. H.; Lee, K. M.; Go, M. J.; Choi, S. H.; Park, H.-R.; Kim, Y.; Lee, J. *Inorg. Chem.* **2014**, *53*, 8213. $[Li_2(H_2O)_7][Li(H_2O)_4]_2[Fe_2Li_2C_{42}H_{28}N_{24}O_8]\cdot 4.5H_2O$
TOKSAQ	2.043 + 1.918 Å	Heczko, M.; Suminska, E.; Sieklucka, B.; Nowicka, B. *CrystEngComm* **2019**, *21*, 5067. $[Li_2(H_2O)_7][Mo_2Ni_3C_{46}H_{72}N_{28}]\cdot 17H_2O$
Mean	**2.010 + 1.918 Å/3 structures; mean all Li-O bond distances: 1.988 Å**	

Polymeric hydrate complexes

Four-coordination, tetrahedral configuration

ICSD/CSD code		Reference, compound formula
$[Li_3(H_2O)_6]^{3+}$	d(Li-O)$_b$	
173216	2.001 Å	Schnabel, S.; Roehr, C. *Z. Naturforsch., Teil B* **2007**, *62*, 1235. $[Li_3(H_2O)_6]VO_4$
Mean	**2.001 Å/1 structure**	
$[Li_3(H_2O)_8]^{3+}$	d(Li-O)$_b$ + d(Li-O)$_b$	
173217	1.976 + 1.938 Å	Schnabel, S.; Roehr, C. *Z. Naturforsch., Teil B* **2007**, *62*, 1235. $[Li_3(H_2O)_8]VO_4$
Mean	**1.953 Å/1 structure**	

Table S1b. Summary of solid state structures containing a hydrated sodium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Na-O bond distance, *d*(Na-O). Data in purple text are not included in the mean distance as they differ significantly from the mean value.

Sodium(I)

Two-coordination, linear configuration

ICSD/CSD code	*d*(Na-O)	Reference, compound formula
FUDRUR10	1.968 Å	Haiyan A.; Enbo W.; Yangguang L.; Zhiming Z.; Lin X. *Inorg Chem. Commun.* **2007**, *10*, 299. $Na[Na(H_2O)_2][Cu_6C_{16}H_{368}O_{18}][H_2W_{12}BO_{40}]_2 \cdot 13H_2O$
VOHSAN	2.058 Å	Wen, X.; Liu, Y.; Li, Z. *Acta Crystallogr., Sect. E* **2008**, *64*, m1634. $[Na(H_2O)_2]ClO_4 \cdot [Cu_2C_{30}H_{32}N_4O_6]$
RENPIK	2.180 Å	Chang, C.-T.; Chen, C.-L.; Liu, Y.-H.; Peng, S.-M.; Chou, P.-T.; Liu, S.-T. *Inorg. Chem.* **2006**, *45*, 7590. $[Na(H_2O)_2]B(3,5\text{-}C_6H_3(CF_3)_2)_4$
Mean	**2.058 Å/1 structure**	

Four-coordination, tetrahedral configuration

ICSD/CSD code	*d*(Na-O)	Reference, compound formula
81459	2.177 Å	Khan, M. I.; Chen Qin; Salta, J.; O'Connor, C. J. O.; Zubieta, J. *Inor. Chem.* **1996**, *35*, 1880-1901. $(NH_4)_7[Na(H_2O)_3Mo_{16}(OH)_{12}O_{40}] \cdot H_2O$
WABPIZ	2.217 Å	Hassfjell, S.; Kongshaug, K. O.; Romming, C. *Dalton Trans.* **2003**, 1433. $[Na(H_2O)_4][BiC_{12}H_{28}N_4O_{12}P_4]$
GIXBAQ	2.224 Å	Carina, R. F.; Verzegnassi, L.; Bernardinelli, G.; Williams; A. F. *Chem.Commun.* **1998**, 2681. $[FeC_{22}H_{14}N_{10}]_2[Na(H_2O)_4][NaC_{16}H_{28}N_4O_2]$
BAFGIA	2.257 Å	Taidakov, I. V.; Zaitsev, B. E.; Krasnosel'sky, S. S.; Polyakova, I. N.; Sergienko, V. S. *Zh. Neorg. Khim.* **2011**, *56*, 387. $[Na(H_2O)_4][EuC_{52}H_{60}N_{16}O_8] \cdot 0.78CH_2Cl_2$
OQANUQ	2.289 Å	Ene, C. D.; Nastase, S.; Maxim, C.; Madalan, A. M.; Tuna, F.; Andruh, M. *Inorg. Chim. Acta* **2010**, *363*, 4247. $[Na(H_2O)_4](As(C_6H_5)_4][Fe(CN)_5N_3]$
Mean	**2.247 Å/4 structures**	

Five-coordination, trigonal bipyramidal fashion

ICSD/CSD code	*d*(Na-O	Reference, compound formula
FAZYAH	2.338 Å	Yu Liu; Hao Wang; Heng-Yi Zhang; Li-Hua Wang, *Cryst. Growth Des.* **2005**, *5*, 231. $[Na(H_2O)_5](C_{24}H_{22}N_2)_2(C_{24}H_{11}O_{16}S_8) \cdot 4.5H_2O$.
MITGUS	2.344 Å	Makha, M.; Alias, Y.; Raston, C. L.; Sobolev, A. N. *New. J. Chem.* **2008**, *32*, 83. $[Na(H_2O)_5]((C_6H_5)_3PCH_2C_6H_4CH_2P(C_6H_5)_3)_2C_{28}H_{19}O_{16}S_4 \cdot 4.5H_2O$

Mean **2.341 Å/2 structures**

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Na-O)	Reference, compound formula
LEYPEM	2.306 Å	Xu, Y.; Gao, Y.; Wei, W.; Wang, Z.; Li, S.; Hu, C. *Dalton Trans.* **2013**, *42*, 5228. $K[Na(H_2O)_6][CuC_{36}H_{48}N_{12}O_{48}][W_{18}P_2O_{62}]\cdot 36H_2O$
OJAHAL	2.322 Å	Somsri, S.; Kuwamura, N.; Yoshinari, N.; Konno, T. *Inorg. Chem.* **2020**, *59*, 5610. $[Na(H_2O)_6][Co(H_2O)_2(C_{12}H_8N_2)_2][Co_2Au_3C_{54}H_{72}N_{10}O_{13}S_6]_3$
429357	2.357 Å	Yakubovich, O. V.; Steele, I. M.; Yakovleva, E. V.; Dimitrova, O. V. *Acta Crystallogr., Sect. C* **2015**, *71*, 465. $Rb_4[Na(H_2O)_6][HV_{10}O_{28}]\cdot 4H_2O$
PEJWAC	2.359 Å	Nefedov, S. E.; Sidorov, A. A.; Berke, H.; Eremenko, I. L. *Izv. Akad. Nauk SSSR, Ser. Khim.* **1998**, 1030. $[Na(H_2O)_6](H_3O)[Re_2C_{18}H_{37}N_2O_5S_4]_2\cdot H_2O$
281590	2.361 Å	Uk, L.; Joo, H.-C. *Acta Crystallogr. Sect. E* **2004**, *60*, i22-i24. $K_4[Na(H_2O)_6][HV_{10}O_{28}]\cdot 4H_2O$
MABNEL	2.367 Å	Arinez-Soriano, J.; Albalad, J.; Perez-Carvajal, J.; Imaz, I.; Busque, F.; Juanhuix, J.; Maspoch, D. CrystEngComm **2016**, *18*, 4196. $[Na(H_2O)_6]_2[MNC_{30}H_{35}N_6O_{10}]\cdot 5H_2O$
XUKWOP	2.379 Å	Hegetschweiler, K.; Finn, R. C.; Rarig, Jr., R. S.; Sander, J.; Steinhauser, S.; Worle, M.; Zubieta, J. *Inorg. Chim. Acta* **2002**, *337*, 39. $[Na(H_2O)_6]_2[Nb_6Ni_2C_{12}H_{32}N_6O_{25}]\cdot 18H_2O$
XUXCEZ	2.380 Å	Tan, H.; Chen, W.; Liu, D.; Li, Y.; Wang, E. *Dalton Trans.* **2010**, *39*, 1245. $NH_4Na_4[Na(H_2O)_6][Mo_4VP_4C_4H_6O_{26}]\cdot 7H_2O$
PULDUW	2.389 Å	Zhong, Y.; Fu, H.; Meng, J.; Wang, E. *J. Coord. Chem.* **2010**, *63*, 26. $Na[Na(H_2O)_6][Cu(C_2H_4NO_2)_2][Na_3H_{31}W_{12}]\cdot 8.5H_2O$
161174	2.405 Å	Abrahams, B. F.; Haywood, M. G.; Robson, R. *Crystal Growth Design* **2008**, *8*, 1288-1293. $[Na(H_2O)_6][(Mn(H_2O)_2)_3][Cu(SO_3)_4]$
UNILUZ	2.406 Å	Niu, J.; Chen, G.; Zhao, J.; Yu, C.; Ma, P.; Wang, J. *Cryst. Growth Des.* **2010**, *10*, 4689. $[Na(H_2O)_6][Cu(C_{10}H_8N_2)_3]_2[Cu(C_3H_{10}N_2)_2H_2O]_6[Cu(C_3H_{10}N_2)_2]_{12}[Mo_8O_{42}PV_6]_5[HMo_8O_{42}PV_6]\cdot 2H_2O$
253649	2.413 Å	Kampf, A. R.; Hughes, J. M.; Nash, B. P.; Marty, J. *Can. Miner.* **2016**, *54*, 145. $[Na(H_2O)_6Ca_{12}(H_2O)_{58})(H_2O)_{14}][As_7V_{12}O_{51}]_2$
PODTAG	2.417 Å	Somov, N. V.; Chausov, F. F.; Lomova, N. V.; Zakirova, R. M.; Fedotova, I. V.; Petrov, V. G.; Shumilova, M. A.; Zhirov, D. K. *Koord. Khim.* **2019**, *45*, 47. $[Na(H_2O)_6]_2(PrNa_6C_6H_{33}N_2O_{28}P_6]\cdot 6H_2O$
LUQBII	2.421 Å	Benetollo, F.; Bombieri, G.; Calabi, L.; Aime, S.; Botta; M. *Inorg. Chem.* **2003**, *42*, 148. $[Na(H_2O)_6](CeNaC_{17}H_{29}N_4O_{13}]$.

DIWMOO	2.421 Å	Somov, N. V.; Chausov, F. F.; Zakirova, R. M.; Shumilova, M. A.; Petrov, V. G.; Zhirov, D. K. *Crystallogr. Rep.* **2018**, *63*, 901. $[Na(H_2O)_6]_2[TbNa_6C_6H_{32}N_2O_{28}P_6]\cdot 6H_2O$
NESREK	2.421 Å	Han, S.-D.; Song, W.-C.; Zhao, J.-P.; Yang, Q.; Liu, S.-J.; Li, Y.; Bu, X.-H. *Chem. Commun.* **2013**, *49*, 871. $[Na(H_2O)_6][Co(H_2O)_6][Co_9C_{30}H_{43}N_{12}O_{37}]((CH_3)_3CCOO)_2\cdot 2H_2O$
QOWTII	2.422 Å	Somov, N. V.; Chausov, F. F.; Lomova, N. V.; Vorobyov, V. L.; Zakirova, R. M.; Petrov, V. G.; Shumilova, M. A.; Zhirov, D. K. *Zh. Strukt. Khim.* **2019**, *60*, 1385. $[Na(H_2O)_6]_2[GdNa_6C_6H_{33}N_2O_{28}P_6]\cdot 4H_2O$
YEBMIE	2.423 Å	Somov, N. V.; Chausov, F. F.; Zakirova, R. M.; Petrov, V. G.; Shumilova, M. A.; Aleksandrov, V. A. *Koord. Khim.* **2017**, *43*, 373. $[Na(H_2O)_6]_2[LaNa_6C_6H_{33}N_2O_{28}P_6]\cdot 3H_2O$
XAFFEQ	2.424 Å	Suzuki, J.; Yamauchi, T.; Akashi, H. *Bull. Res. Inst. Nat. Sci. Okayama Univ. Sci.* **2001**, 13. $[Ni(H_2O)_6][Na_2C_{24}H_{28}O_{24}S_8]\cdot 4H_2O.$
PODSUZ	2.426 Å	Somov, N. V.; Chausov, F. F.; Lomova, N. V.; Zakirova, R. M.; Fedotova, I. V.; Petrov, V. G.; Shumilova, M. A.; Zhirov, D. K. *Koord. Khim.* **2019**, *45*, 47. $[Na(H_2O)_6]_2(NdNa_6C_6H_{33}N_2O_{28}P_6]\cdot 6H_2O$
AGAMAZ	2.430 Å	Salcedo, I. R.; Colodrero, R. M. P.; Bazaga-Garcia, M.; Vasileiou, A.; Papadaki, M.; Olivera-Pastor, P.; Infantes-Molina, A.; Losilla, E. R.; Mezei, G.; Cabeza, A.; Demadis, K. D. *CrystEngComm* **2018**, *20*, 7648. $[Na(H_2O)_6][Na_3C_{20}H_{68}N_4O_{32}P_8]\cdot 8H_2O$
ALOWUU	2.431 Å	Gunari, P.; Krishnasamy, S.; Bai, S.-Q.; Hor, T. S. A. *Dalton Trans.* **2010**, *39*, 9462. $[Na(H_2O)_6][Pd_6Na_{11}C_{36}H_{72}O_{66}]\cdot H_2O$
QUQKES	2.434 Å	Bailey, P. J.; Lanfranchi, M.; Marchio, L.; Parsons, S. *Inorg.Chem.* **2001**, *40*, 5030. $[Na(H_2O)_6][NaC_{24}H_{38}B_2N_{18}S_6]$
UKARIK	2.437 Å	Kaur, S.; Pramanik, S.; Day, V. W.; Bowman-James, K. *Dalton Trans.* **2021**, *50*, 480. $[Na(H_2O)_6]_3[Na_{33}C_{18}H_{228}O_{168}P_{18}]\cdot 5.6H_2O$
HULFUS	2.448 Å	$K(CH_3NH_3)_6[Na(H_2O)_6][NaMn_8W_{18}Si_2C_{12}H_{23}O_{86}]\cdot 28H_2O$
LUQCIJ	2.449 Å	Benetollo, F.; Bombieri, G.; Calabi, L.; Aime, S.; Botta; M. *Inorg. Chem.* **2003**, *42*, 148. $[Na(H_2O)_6](CeNaC_{17}H_{29}N_4O_{13}]\cdot[Sc_2Na_4C_{32}H_{62}N_8O_{23}][ScC_{16}H_{24}N_4O_8]\cdot 11H_2O.$
OJAGUE	2.465 Å	Somsri, S.; Kuwamura, N.; Yoshinari, N.; Konno, T. *Inorg. Chem.* **2020**, *59*, 5610. $[Na(H_2O)_6][Co(H_2O)_2(C_{12}H_8N_2)_2](Co_3Au_3C_{54}H_{72}N_{10}O_{13}S_6]_3$
82492	2.471 Å	Cooper, M. A.; Hawthorne, F. C. *Can. Mineral.* **1996**, *34*, 91. $[AlMn_2(OH)_6)_3][Na(H_2O)_6](SO_4)_2\cdot 6H_2O$
MIVBAV	2.473 Å	Philippopoulos, A. I.; Terzis, A.; Raptopoulou, C. P.; Catalano, V. J.; Falaras, P. *Eur. J. Inorg. Chem.* **2007**, 5633. $[Na(H_2O)_6][RuC_{24}H_{15}N_8O_4]\cdot 0.5CH_3CN\cdot 1.5H_2O$
FASCEI	2.477 Å	Gerasimchuk, N. N.; Dalley, N. K. *J. Coord. Chem.* **2004**, **57,** 1431. $[Na(H_2O)_6][C_{18}H_{12}N_{18}NaNi_2O_{12}]$
OJAGOY	2.505 Å	Somsri, S.; Kuwamura, N.; Yoshinari, N.; Konno, T. *Inorg. Chem.* **2020**, *59*, 5610. $[Na(H_2O)_6][Mn(H_2O)_2(C_{12}H_8N_2)_2][Au_3Co_2MnC_{54}H_{72}N_{10}O_{13}S_6]_3$

OJAHEP	2.523 Å	Somsri, S.; Kuwamura, N.; Yoshinari, N.; Konno, T. *Inorg. Chem.* **2020**, *59*, 5610. $[Na(H_2O)_6][Zn(H_2O)_2(C_{12}H_8N_2)_2][Au_3Co_2ZnC_{54}H_{72}N_{10}O_{13}S_6]_3$
Mean	**2.418 Å/28 structures**	

Eight-coordination

ICSD/CSD code	*d*(Na-O)	Reference, compound formula
VOGJOQ	2.477 Å	Hardie, M. J.; Raston, C. L.; Salinas, A. *Chem. Commun.* **2001**, 1850. $[Y(H_2O)_8][Na(H_2O)_8](C_{27}H_{30}O_6)_8[CoC_4H_{22}B_{18}]_4\cdot 8CH_3CN\cdot 8H_2O$.
VOGNOU	2.465 Å	Hardie, M. J.; Raston, C. L.; Salinas, A. *Chem. Commun.* **2001**, 1850. $[La(H_2O)_8][Na(H_2O)_8](C_{27}H_{30}O_6)_8[CoC_4H_{22}B_{18}]_4\cdot 8CH_3CN\cdot 8H_2O$.

Mean Na-O bond distance in eight-coordinated oxygen donor ligands: 2.471 Å/2 structures

Dimeric sodium hydrates

ICSD/CSD code	*d*(Na-O)$_b$/*d*(Na···Na)	Reference, compound formula
$[Na_2(H_2O)_6]_n^{2+}$		
HAYQUU	2.403 Å	Wang, D.-D.; Zhu, H.-J.; Song, G.-L.; Wang, J.-T. *Acta Crystallogr., Sect. E* **2005**, *61*, m2610.
	3.130 Å	$[Na_2(H_2O)_6]_n$(*2,5*-$(COO)_2$-*1,4*-$(COC_6H_5)_2$-$C_6H_2)_n\cdot 4nH_2O$

ICSD/CSD code	*d*(Na-O$_b$)+*d*(Na-O$_t$)/*d*(Na···Na)	Reference, compound formula
$[Na_2(H_2O)_7]_n^{2+}$		
PEHSEC	2.422 + 2.379 Å	Iqbal, M.; Ali, S.; Muhammad, N.; Parvez, M.; Langer , P. *J. Organometal. Chem.* **2013**, *723*, 214.
	3.264 + 4.227 Å	$[Na_2(H_2O)_7]_n$(*2*-$(CHC(COOH)(C_2H_5))$*1*-F-$C_6H_4)_{2n}$

$[Na_2(H_2O)_8]_n^{2+}$ *d*(Na-O$_b$)+*d*(Na-O$_t$)/*d*(Na···Na)/Å		
KOJBIV	2.378 + 2.539 Å	Wang, Y.; Song, Y.; Pan, Z.-R.; Shen, Y.-Z.; Hu, Z.; Guo, Z.-J.; Zheng, H.-G. *Dalton Trans.* **2008**,
	3.440 Å	5588. $[Na_2(H_2O)_8]_n[Cu_2Sm_2C_{20}H_{24}N_8O_{26}]\cdot 3H_2O$
OVABOF	2.382 + 2.476 Å	Abrahams, B. F.; Commons, C. J.; Hudson, T. A.; Sanchez Arlt, R.; White, K. F.; Chang, M.;
	3.406 Å	Jackowski, J. J.; Lee, M.;: Lee, S. X.; Liu, H.D.; Mei, B. M.; Meng, J. E.; Poon, L.; Xu, X.; Yu, Z. *Acta Crystallogr., Sect. C* **2021**, *77*, 340. $[Na_2(H_2O)_8]_n$(*p*-$C_6H_4(OH)(COO))_{2n}$
KOJBOB	2.384 + 2.538 Å	Wang, Y.; Song, Y.; Pan, Z.-R.; Shen, Y.-Z.; Hu, Z.; Guo, Z.-J.; Zheng, H.-G. *Dalton Trans.* **2008**,
	3.461 Å	5588. $[Na_2(H_2O)_8]_n[Cu_2Pr_8C_{20}H_{24}N_8O_{26}]\cdot 3H_2O$
ONETEJ	2.390 + 2.454 Å	Starynowicz, P. *New. J. Chem.* **2021**, *45*, 5879. $[Na_2(H_2O)_{10}][EuNa_5C_{12}H_{42}N_4O_{21}P_4]\cdot 12H_2O$

	3.533 Å	
KOJBER	2.397 + 2.519 Å	Wang, Y.; Song, Y.; Pan, Z.-R.; Shen, Y.-Z.; Hu, Z.; Guo, Z.-J.; Zheng, H.-G. *Dalton Trans.* **2008**,
	3.490 Å	5588.
KOJBAN	2.416 + 2.539 Å	Wang, Y.; Song, Y.; Pan, Z.-R.; Shen, Y.-Z.; Hu, Z.; Guo, Z.-J.; Zheng, H.-G. *Dalton Trans.* **2008**,
	3.464 Å	5588. $[Na_2(H_2O)_8]_n[Cu_2Gd_2C_{20}H_{24}N_8O_{26}]\cdot 3H_2O$
EJAMEH	2.419 + 2.526 Å	Ma, C.; Chen, C.; Chen, F.; Zhang, X.; Zhu, H.; Liu, Q.; Liao, D.; Li L. *Bull Chem. Soc. Jpn.* **2003**, *76*,
	3.640 Å	301. $[Na_2(H_2O)_8]_n[Na_2(H_2O)_9]_n[Mn_2Na_2C_{28}H_{28}N_4O_{24}]n\cdot 0.5nCH_3OH$
MUYXEM	2.424 + 2.413 Å	Li, H.-L.; Lian, C.; Yin, D.-P.; Yang, G.-Y. *Inorg. Chem.* **2020**, *59*, 12842.
	3.477 Å	$(CH_3)_2H_2N)_{14}[Na_2(H_2O)_8][Zr_2Sb_2W_{18}C_{20}H_2O_{71}]\cdot 24H_2O$
OSURUR	2.424 + 2.421 Å	Gainsford, G. J.; Kemmitt, T. Higham, C. *Acta Crystallogr., Sect. E* **2008**, *64*, i24.
	3.452 Å	$[Na_2(H_2O)_8]_n[H_4B_4O_9]_n$
TOJYEY	2.425 + 2.410 Å	Weil, M.; Bonneau, B. *Acta Crystallogr., Sect. E* **2014**, *70*, 54. $[Na_2(H_2O)_8]_n[SeO_4]_n\cdot 2nH_2O$
	3.519 Å	
Mean	**2.402 + 2.491 Å/9 structures**	
	3.489 Å	

$[Na_2(H_2O)_9]^{2+}$

CAWDOV	2.396 + 2.420 Å	Guo, G.; Xu, Y.; Cao, J.; Hu, C. *Chem. Eur. J.* **2012**, *18*, 3493.
	3.154 Å	$[Na_2(H_2O)_9][Cu(NH_2CH(CH_3)CHNH_2)_2][H_2Nb_6V_4O_{30}]\cdot 15H_2O$
INUJIN	2.448 + 2.415 Å	Kurbah, S. D. *J. Coord. Chem.* **2021**, *74*, 905. $[Na_2(H_2O)_9][VO2(C_{18}H_{12}N_2O_2)]\cdot 2H_2O$
	3.275 Å	
Mean	**2.422 + 2.418 Å/2 structures**	

$[Na_2(H_2O)_{10}]^{2+}$

DOGQOG	2.371 + 2.423 Å	Breen, J. M.; Schmitt, W. *Angew. Chem., Int. Ed.* **2008**, *47*, 6904.
	3.543 Å	$[Na_2(H_2O)_{10}][As_4Na_4V_5C_{27}H_{59}N_5O_{36}]_2\cdot 2(CH_3)_2NCHO\cdot 3H_2O$
OWOJAO	2.381 + 2.552 Å	Miyamoto, K.; Saito, M.; Tsuji, S.; Takagi, T.; Shiro, M.; Uchiyama, M.; Ochiai, M. *J. Am. Chem. Soc.*
	3.611 Å	**2021**, *143*, 9327. $[Na_2(H_2O)_{10}](o\text{-}C_6H_4(BrO)(COO))_2$
ONETEJ	2.390 + 2.454 Å	Starynowicz, P. *New. J. Chem.* **2021**, *45*, 5879. $[Na_2(H_2O)_{10}][EuNa_5C_{12}H_{42}N_4O_{21}P_4]\cdot 12H_2O$
	3.533 Å	

XIJXOG	2.402 + 2.377 Å	Oldknow, S.; Martir, D. R.; Pritchard, V. E.; Blitz, M. A.; Fishwick, C. G.; Zysman-Colman, E.; Hardie,
	3.565 Å	M. J. *Chem. Sci.* **2018**, *9*, 8150. $[Na_2(H_2O)_{10}](C_{12}H_8N_3O_2)_2$
ASOMOM	2.408+ 2.411 Å	Angeloski, A.; Hook, J. M.; Bhadbhade, M.; Baker, A. T.; McDonagh, A. M. *CrystEngComm* **2016**, *18*,
	3.480 Å	7070. $[Na_2(H_2O)_{10}](S_2CN(CH(CH)_3)_2)_2$
ECEPIL	2.411 + 2.432 Å	Nathan, L. C.; Mai, T. D. *J. Chem. Cryst.* **2000**, *30*, 509.
	3.705 Å	$[Na_2(H_2O)_{10}][Ni(C_7H_3NO_4)(C_7H_4NO_4)]_2\cdot 13H_2O$
IGUXAL	2.416 + 2.441 Å	Konieczny, K.; Bakowicz, J.; Turowska-Tyrk, I. *Acta Crystallogr., Sect. C* **2015**, *71*, 410.
	3.504 Å	$[Na_2(H_2O)_{10}](C_{23}H_{27}O_3)_2\cdot 2H_2O$
KUHGUS	2.417 + 2.446 Å	Konieczny, K.; Bakowicz, J.; Turowska-Tyrk, I. *Acta Crystallogr., Sect. C* **2015**, *71*, 410.
	3.504 Å	$[Na_2(H_2O)_{10}](C_{23}H_{27}O_3)_2\cdot 2H_2O$
SIRGOQ	2.423 + 2.414 Å	Yamada, M.; Kondo, Y.; Akimoto, K.; Kabuto, C.; Hamada, F. *New J. Chem.* **2007**, *31*, 1874.
	3.626 Å	$[Na_2(H_2O)_{10}](C_{10}H_{22}O_{24}S_{12})\cdot 16H_2O$
KOTRUJ	2.426 + 2.411 Å	Li, Z.; Zhang, J.; Lin, L.-D.; Liu, J.-H.; Li, X.-X.; Zheng, S.-T. *Chem. Commun.* **2019**, *55*, 11735.
	3.487 Å	$[Na_2(H_2O)_{10}]_2[Cu(H_2O)_2(C_3H_{10}N_2)_2][Cu_4Ta_{12}C_{18}H_{62}N_{12}O_{38}]\cdot 26H_2O$
422705	2.429 + 2.414 Å	Oreshkina, A. V.; Kaziev, G. Z.; Holguin Quinones, S.; Stash, A. I.; Shipilova, P. A. *Koord. Khim.*
	3.451 Å	**2011**, *37*, 848. $[Na_2(H_2O)_{10}][Na(H_2O)_3]_2[MnW_6O_{18}(OH)_6]\cdot 6H_2O$
KOTSIY	2.431 + 2.416 Å	Li, Z.; Zhang, J.; Lin, L.-D.; Liu, J.-H.; Li, X.-X.; Zheng, S.-T. *Chem. Commun.* **2019**, *55*, 11735.
	3.430 Å	$[Na_2(H_2O)_{10}]_2[Cu(H_2O)_2(NH_2(CH_2)_2NH_2)_2][Cu_3Ta_{12}C_8H_{34}N_8O_{38}]\cdot 6H_2O$
MAJKUE	2.448 + 2.379 Å	Li, G.-B.; Yang, S.-H.; Xiong, M.; Lin, J.-H. *Acta Crystallogr., Sect. C* **2004**, *60*, m612.
	3.593 Å	$(H_3N(CH_2)_2NH_3)_2[Na_2(H_2O)_{10}][V_{10}O_{28}]$
GUBQAY	2.457 + 2.455 Å	Huang, W.; Tang, Y.; Imler, G. H.; Parrish, D. A.; Shreeve, J. M. *J. Am. Chem. Soc.* **2020**, *142*, 3652.
	3.492 Å	$[Na_2(H_2O)_{10}](C_4H_2ClN_6O)_2$
VOGXEX01	2.459 + 2.452 Å	Mu, X.; Axtell, J. C.; Bernier, N. A.; Kirlikovali, K. O.; Jung, D.; Umanzor, A.; Qian, K.; Chen, X.;
	3.740 Å	Bay, K. L.; Kirollos, M; Rheingold, A. L.; Houk, K. N.; Spokoyny, A M. *Cell Press: Chem.* **2019**, *5*,
		2461. $[Na_2(H_2O)_{10}](C_{13}H_{13}B_6I_5P)_2\cdot 2H_2O$
HEFYOH	2.460 + 2.420 Å	Schmidt, M. U.; Schmiermund, T.; Bolte, M. *Acta Crystallogr., Sect. C* **2006**, *62*, m37.
	3.492 Å	$[Na_2(H_2O)_{10}](C_{20}H_{14}N_2O_4)\cdot H_2O$
AVUNUA	2.475 + 2.423 Å	King, P.; Clerac, R.; Anson, C. E.; Powell, A. K. *Dalton Trans.* **2004**, 852.
	3.460 Å	$[Na_2(H_2O)_{10}][Ni(H_2O)_2(C_5H_2N_2O_4)_2$

LUWPAX	2.490 + 2.424 Å	Al-Fayaad, H. .A.; Arachchige, K. S. A.; Clegg, J. K. *CrystEngComm* **2020**, *22*, 5310.
	3.733 Å	$[Na_2(H_2O)_{10}](C_{18}H_{10}N_2O_4)\cdot C_{18}H_{10}N_2O_4\cdot 8H_2O$
IYEVOZ	2.499 + 2.432 Å	Surinwong, S.; Yoshinari, N.; Kojima, T.; Konno, T. *Chem. Commun.* **2016**, *52*, 12893.
	3.792 Å	$[Na_2(H_2O)_{10}]_9[Au_6Co_4ZnC_{64}H_{114}N_{12}O_{28}S_{12}]_2[Au_3Co_2C_{30}H_{54}N_6O_{12}S_6]_2\cdot 170H_2O$
Mean	**2.431 + 2.430 Å/19 structures**	
	3.565 Å	

Tetrameric and polymeric sodium hydrate complexes

ICSD/CSD code	d(Na-O$_b$)+d(Na-O$_t$)/d(Na···Na)/Å	Reference, compound formula
$[Na_4(H_2O)_{14}]_n^{4+}$		
WAPZOE	2.391 Å	Kinnibrugh, T.; Garcia, N.; Clearfield, A. *J. Solid State Chem.* **2012**, *187*, 149.
	3.301 Å	$((CH_3)_2NH)_{2n}[Na_4(H_2O)_{14}]_n(O_3P(C_6H_5)_2PO_3)(O_3P(C_6H_5)_2PO_3H)_n\cdot 2nH_2O$
LIQFUN01	2.402 Å	Oyama, H.; Miyamoto, T.; Sekine, A.; Nugrahani, I.; Uekusa, H. *Crystals* **2021**, *11*, 412.
	3.443 Å	$[Na_4(H_2O)_{14}]_n[C_{14}H_{10}Cl_2NO_2]_4n\cdot 5nH_2O$
LAYCAQ	2.462 Å	Franca, M. C. K.; Eon, J.-G.; Fournier, M.; Payen, E.; Mentre, O. *Solid State Sci.* **2005**, *7*,
	3.678 Å	1533. $((CH_3)_4N)_{2n}[Na_4(H_2O)_{14}]_n[W_6O_{19}]_n(SO_4)_n$
ROPYAW	2.503 Å	Loose, I.; Boesing, M.; Klein, K.; Krebs, B.; Schulz, R. P.; Scharbert, B. *Inorg. Chim. Acta* **1997**, *263*, 99. $[Na_2(H_2O)_{14}]_n(N(CH_3)_4)_2(Co_2Na_2H_{26}W_{12}O_{54}]_n\cdot 2nH_2O$
Mean	**2.452 Å/3 structures**	
$[Na_4(H_2O)_{16}]^{4+}$		
YEGTEN	2.431 + 2.363 Å	Patra, D.; Pal, A.; Nath, S.; Kundu, R.; Drew, M. G. B.; Ghosh, T. *J. Bioinorg. Chem.* **2022**, *234*,
	3.338 Å	111900. $[Na_4(H_2O)_{16}][VO_2(C_{17}H_{14}N_2O_3)]_4$
$[Na_4(H_2O)_{16}]_n^{4+}$		
NIBDIN	2.342 + 2.524 Å	Beckmann, J.; Duthie, A.; Gesing, T. M.; Koehne, T.; Lork, E. *Organometallics* **2012**, *31*, 3451.
	3.313 Å	$[Na_4(H_2O)_{16}]_n(1\text{-}N(CH_3)_2\text{-}8\text{-}TeO_2\text{-}C_{10}H_6)_{4n}\cdot 4nH_2O$
NABSEQ	2.369 + 2.448 Å	Marino, N.; Vortherms, A. R.; Hoffman, A. E.; Doyle , R. P. *Inorg. Chem.* **2010**, *49*, 6790.
	3.360 Å	$[Na_4(H_2O)_{16}]_n[Cu(H_2O)(N_2C_{12}H_8)(P_2O_7)]_n$
DARNIU	2.405 + 2.418 Å	Yi, X.-Y.; Liu, B.; Jimenez-Aparicio, R.; Urbanos, F.A. Gao, S.; Xu, W.; Chen, J.-S.; Song, Y.; Zheng,
	3.456 Å	L.-M. *Inorg. Chem.* **2005**, *44*, 4309. $[Na_4(H_2O)_{16}]_n[RuC_4H_8ClO_{14}P_4]_n$

DARNOA	2.420 + 2.412 Å	Yi, X.-Y.; Liu, B.; Jimenez-Aparicio, R.; Urbanos, F.A. Gao, S.; Xu, W.; Chen, J.-S.; Song, Y.; Zheng,
	3.453 Å	L.-M. *Inorg. Chem.* **2005**, *44*, 4309. $[Na_4(H_2O)_{16}]_n[RuC_4H_8BrO_{14}P_4]_n$
XIJFOM	3.432 + 2.355 Å	Dinoi, C.; Taban, G.; Sozen, P.; Demirhan, F.; Daran, J.-C.;.; Poli, R. *J. Organometal. Chem.* **2007**,
	3.326 Å	*692*, 3743. $[Na_4(H_2O)_{16}][MoO_3(C_5H_5)]_4\cdot 4H_2O$
Mean	**2.393 + 2.431 Å/5 structures**	
	3.381 Å	

$[Na_4(H_2O)_{18}]_n^{4+}$

240730	2.449 Å	Lu Hui; Fu Yunlong; Yang Junying; Ng Seik Weng *Acta Crystallogr., Sect E* **2007**, *63*, m316. $[Na_4(H_2O)_{18}]_n[La_2(C_2O_4)_5]_n$
ECEPEH	2.442 Å	Nathan, L. C.; Mai, T. D. *J. Chem. Cryst.* **2000**, *30*, 509.
	4.316 Å	$[Na_4(H_2O)_{18}][Co(H_2O)_6][CoC_{14}H_6N_2O_8]2[Co_2C_{28}H_{24}N_4O_{11}]\cdot 4H_2O$
Mean	**2.446 Å/2 structures**	

$[Na_5(H_2O)_{18}]^{5+}$

EDABEU	2.437 + 2.319 Å	Carrasco, C. J.; Montilla, F.; Alvarez, E.; Calderon-Montano, J. M.; Lopez-Lazaro, M.; Galindo, A. *J.*
	3.179 Å	*Bioinorg. Chem.* **2022**, *235*, 111924. $[Na_5(H_2O)_{18}]_2[AgC_{14}N_{13}N_4O_8]_2\cdot 4H_2O$

$[Na_5(H_2O)_{21}]_n^{5+}$

ATIVAD	2.415 + 2.352 Å	Jiang, L.; Hu, C. T.; De Riccardis, F.; Kirshenbaum, K. *Cryst. Growth Des.* **2021**, *21*, 3889.
	3.589 Å	$[Na_5(H_2O)_{21}]_2[Na_2C_{60}N_{72}N_{12}O_{36}]\cdot 12H_2O$

$[Na_8(H_2O)_{24}]_n^{8+}$

YOMHOY	2.428 + 2.504 Å	Wang, L.; Chu, Z.; Huang, W.; Gou, S. *Inorg. Chem. Commun.* **2009**, *12*, 4. $[Na_8(H_2O)_{24}]_n(C_{26}H_{22}N_2O_4)_{4n}$

Table S1c. Summary of solid state structures containing a hydrated potassium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean K-O bond distance, *d*(K-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Potassium(I)

Six-coordination

ICSD/CSD code	*d*(K-O)	Reference, compound formula
GUGNUR	1.584 Å	Andrade-Lopez, N.; Cartas-Rosado, R. ; Garcia-Baez, E. ; Contreras, R. ; Tlahuext, H. *Heteroat. Chem.* **1998**, *9*, 399. $[K(H_2O)_6](C_8H_9BN_5O_2)\cdot H_2O$
RUGXAS	2.830 Å	Wang, R.-Y.; Li, J.-R. ; Jin, T.-Z. ; Xu, G.-X. ; Zhou, Z.-Y. ; Zhou, X.-G. *Polyhedron* **1997**, *16*, 1361. $[K(H_2O)_6][KLaC_{18}H_{26}N_4O_{13})\cdot 2H_2O$
EVUWAV	2.911 Å	Vinokur, V. I. ; Guzei I. A. CCDC deposition number 1507365, **2016**. $[K(H_2O)_6][Al(H_2O)_6](SO_4)_2$

Seven-coordination

ICSD/CSD code	*d*(K-O)	Reference, compound form
EHECUS	2.400 Å	Liu, Y. ; Qi, X. ; Zhang, W. ; Yin, P.; Cai, Z. ; Zhang, Q. *Org. Lett.* **2021**, *23*, 734. $[K(H_2O)_7]C_6H_4N_7O_2\cdot C_6H_5N_7O_2\cdot 2H_2O$
YIQQOG	2.894 Å	Igashira-Kamiyama, A. ; Fukushima, A. ; Konno, T. *Chem. Eur. J.* **2013**, *19*, 16532. $[K(H_2O)_7][Fe(C_{12}H_8N_2)_3]_2[Au_3Ni_2C_{30}H_{54}N_6O_{12}S_6]\cdot 30H_2O$
YIQQAS	2.923 Å	Igashira-Kamiyama, A. ; Fukushima, A. ; Konno, T. *Chem. Eur. J.* **2013**, *19*, 16532. $[K(H_2O)_7][Ni(C_{12}H_8N_2)_3]_2[Au_3Ni_2C_{30}H_{54}N_6O_{12}S_6]\cdot 30H_2O$
Mean	**2.909 Å/2 structures**	

Eight-coordination

ICSD/CSD code	*d*(K-O)	Reference, compound form
OCUVUF	2.896 Å	Ritchie, C. ; Miller, C. E.; Boskovic, C. *Dalton Trans.* **2001**, *40*, 12037. $K_7Na_2[K(H_2O)_8][As_4Dy_4K_4W_{42}C_{24}H_{52}N_4O_{170}]\cdot 40H_2O$
JOSFOO	2.898 Å	Srivastava, A. K. ; Praveenkumar, B. ; Mahawar, I. K. ; Divya, P. ; Shalini S. ; Boomishankar, R. *Chem. Mater.* **2014**, *26*, 3811. $[K(H_2O)_8][Cu_4C_{128}H_{128}N_{21}P_8](NO_3)_6\cdot 9H_2O$
FEGMUC	3.047 Å	Srivastava, A. K. ; Vijayakanth, T. ; Divya, P. ; Praveenkumar, B. ; Steiner, A. ; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[K(H_2O)_8][Ni_4C_{128}H_{136}O_{16}P_8](NO_3)_9\cdot 17H_2O$

FEGNEN	3.059 Å	Srivastava, A. K. ; Vijayakanth, T. ; Divya, P. ; Praveenkumar, B. ; Steiner, A. ; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[K(H_2O)_8][Co_4C_{128}H_{136}O_{16}P_8](NO_3)_9 \cdot 23H_2O$
Mean	**2.897 Å/2 structures**	

Dimeric hydrated potassium complexes
Six-coordination

ICSD/CSD code	d(K-O$_b$)+d(K-O$_t$)/d(K···K)/Å	Reference, compound formula
$[K_2(H_2O)_9]^{2+}$		
d(K-O$_b$)+d(K-O$_t$)/d(K···K)/Å		
CAMKIN	2.287 + 2.463 Å 3.126 Å	Barats-Damatov, D.; Shimon, L. J. W.; Neumann, R. *Eur. J. Inorg. Chem.* **2013**, 1649. $Na_3[K_2(H_2O)_9][KOs_2W_9C_{12}H_{36}O_{39}S_6] \cdot 6H_2O$

Table S1d. Summary of solid state structures containing a hydrated rubidium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Rb-O bond distance, *d*(Rb-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Rubidium(I)

Nine-coordination

ICSD/CSD code	*d*(Rb-O)	Reference, compound formula
FEGMOW	3.187 Å	Srivastava, A. K. ; Vijayakanth, T. ; Divya, P. ; Praveenkumar, B. ; Steiner, A. ; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[Rb(H_2O)_9][Ni_4C_{128}H_{136}O_{16}P_8](NO_3)_9 \cdot 20H_2O$
FEGLOV	3.189 Å	Srivastava, A. K. ; Vijayakanth, T. ; Divya, P. ; Praveenkumar, B. ; Steiner, A. ; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[Rb(H_2O)_9][Co_4C_{128}H_{136}O_{16}P_8](NO_3)_9 \cdot 27H_2O$

Table S1e. Summary of solid state structures containing a hydrated cesium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Cs-O bond distance, *d*(Cs-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Cesium(I)

Ten-coordination

ICSD/CSD code	*d*(Cs-O)	Reference, compound formula
FEGMIQ	3.299 Å	Srivastava, A. K. ; Vijayakanth, T. ; Divya, P. ; Praveenkumar, B. ; Steiner, A. ; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[Cs(H_2O)_{10}][Ni_4C_{128}H_{136}O_{16}P_8](NO_3)_9 \cdot 17H_2O$
FEGLEL	3.310 Å	Srivastava, A. K. ; Vijayakanth, T. ; Divya, P. ; Praveenkumar, B. ; Steiner, A. ; Boomishankar, R. *J. Mater. Chem. C* **2017**, *5*, 7352. $[Cs(H_2O)_{10}][Co_4C_{128}H_{136}O_{16}P_8](NO_3)_9 \cdot 25H_2O$

Table S1f. Summary of solid state structures containing a hydrated beryllium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Be-O bond distance, *d*(Be-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Beryllium(II)

Four-coordination, tetrahedral configuration

ICSD/CSD code	*d*(Be-O)	Reference, compound formula
74577	1.607 Å	Kellersohn, T.; Delaplane, R. G.; Olovsson, I. *Acta Crystallogr., Sect. B* **1994**, *50*, 316. $[Be(H_2O)_4]SO_4$.
417642	1.607 Å	Massa, W.; Dehnicke, K. *Z. Anorg. Allg. Chem.* **2007**, *633*, 1366. $[Be(H_2O)_4]Cl_2$.
KIDREU	1.607 Å	Robl, C.; Hentschel, S. *Z. Naturforsch., Teil B* **1990**, *45*, 1499. $[Be(H_2O)_4](OOCCCCOO)$
74576	1.608 Å	Kellersohn, T.; Delaplane, R. G.; Olovsson, I. *Acta Crystallogr., Sect. B* **1994**, *50*, 316. $[Be(H_2O)_4]SO_4$.
150083	1.609 Å	Wildner, M.; Stoilova, D.; Georgiev, M.; Karadjova, V. *J. Mol. Struct.* **2004**, *707*, 123. $[Be(H_2O)_4]SeO_4$.
CADZIS	1.609 Å	Fischer, N.; Klapotke, T. M.; Peters, K.; Rusan, M.; Stierstorfer, J. *Z. Anorg. Allg. Chem.* **2011**, *637*, 1693. $[Be(H_2O)_4](C_2N_8)\cdot H_2O$
KIQPEH	1.609	Klepov, V. V.; Vologzhanina, A. V.; Serezhkina, L. B.; Serezhkin, V. N. *Radiokhimiya* **2012**, *54*, 500. $[Be(H_2O)_4][UO_2(CH_3COO)_3]_2$
23218	1.610 Å	Dance, I. G.; Freeman, H. C. *Acta Crystallogr., Sect B* **1969**, *25*, 304. $[Be(H_2O)_4]SO_4$.
82397	1.610 Å	Zhang, Z.; Lutz, H. D.; Georgiev, M.; Maneva, M. *Acta Crystallogr., Sect. C* **1996**, *52*, 2660. $[Be(H_2O)_4](H_4IO_6)_2$.
74574	1.614 Å	Kellersohn, T.; Delaplane, R. G.; Olovsson, I. *Acta Crystallogr., Sect. B* **1994**, *50*, 316. $[Be(H_2O)_4]SO_4$.
83329	1.615 Å	Lutz, H. D.; Moeller, H.; Maneva, M.; Paulus, W.; Cousson, A.; Lauriat, J. P.; Elkaim, E. *Z. Kristallogr.* **1996**, *211*, 170. $[Be(H_2O)_4](IO_3)_2$.
15858	1.616 Å	Divjakovic, V.; Edenharter, A.; Nowacki, W.;Ribar, B. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1976**, *144*, 314. $[Be(H_2O)_6](NO_3)_2$.
MINKUP	1.616 Å	Moers, O.; Friedrichs, S.; Blaschette, A.; Jones, P. G. *Z.Anorg.Allg.Chem.* **2002**, *628*, 589. $[Be(H_2O)_4](C_6H_4NO_4S_2)_2\cdot 2H_2O$
KIDREU01	1.617 Å	Robl, C.; Hentschel, S.; McIntyre, G. J. *J. Solid State Chem.* **1992**, *96*, 318. $[Be(H_2O)_4](OOCCCCOO)$
23219	1.618 Å	Sikka, S. K.; Chidambaram, R. *Acta Crystallogr., Sect. B* **1969**, *25*, 310. $[Be(H_2O)_4]SO_4$.
INIMAU	1.618 Å	Puchta, R.; Neumuller, B.; Dehnicke, K. *Z. Anorg. Allg. Chem.* **2011**, *637*, 67. $[Be(H_2O)_4]I_2\cdot 2CH_3CN$
83329	1.619 Å	Lutz, H. D.; Moeller, H.; Maneva, M.; Paulus, W.; Cousson, A.; Lauriat, J. P.; Elkaim, E. *Z. Kristallogr.* **1996**, *211*, 170. $[Be(H_2O)_4](IO_3)_2$.

CICXOC	1.619 Å	Yasodha, V.; Govindarajan, S.; Low, J. N.; Glidewell, C. *Acta Crystallogr., Sect C* **2007**, *63*, m207. $[Be(H_2O)_4](C_7H_2O_6)$
36555	1.620 Å	Macicek, J.; Maneva-Petrova, M.; Georgiev, M. *Z. Kristallogr.* **1992**, *199*, 177. $[Be(H_2O)_4](IO_3)_2{\cdot}2HIO_3{\cdot}2H_2O$.
174422	1.621 Å	Georgiev, M.; Wildner, M.; Marinova, D.; Stoilova, D. *Solid State Sci.* **2010**, *12*, 899. $Rb_4[Be(H_2O)_4](SeO_4)_2(HSeO_4)_2$
24228	1.685 Å	Beevers, C. A.; Lipson, H. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1932**, *82*, 297. $[Be(H_2O)_4]SO_4$.
36157	2.193 Å	Schonefeld, P. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1931**, 78, 16. $[Be(H_2O)_4]SO_4$.
Mean	**1.613 Å/20 structures**	

Table S1g. Summary of solid state structures containing a hydrated magnesium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Mg-O bond distance, *d*(Mg-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Magnesium(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Mg-O)	Reference, compound formula
52357	2.002 Å	Hofmann, W., *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1931**, *78*, 279-333; **1932**, *83*, 323-324. $(NH_4)_2[Mg(H_2O)_6](SO_4)_2$
POZHUI	2.002 Å	Nouar, F.; Eckert, J.; Eubank, J. F.; Forster, P.; Eddaoudi, M. *J. Am. Chem. Soc.* **2009**, *131*, 2864. $[Mg(H_2O)_6][InC_{20}H_4N_8O_{16}]$
23220	2.011 Å	Braibanti, A.; Tiripicchio, A.; Manotti Lanfredi, A. M.; Bigoli, F. *Acta Crystallogr. Sect. B* **1969**, *25*, 354-361. $[Mg(H_2O)_6](NO_3)_2$
48112	2.020 Å	Anderson, L.; Lindqvist, O. *Acta Crystallogr., Sect. C* **1984**, *40*, 584-586. $[Mg(H_2O)_6]SO_3$
BOVNIC	2.022 Å	Bahrin, L. G.; Bejan, D.; Shova, S.; Gdaniec, M.; Fronc, M.; Lozan, V.; Janiak, C. *Polyhedron* **2019**, *173*, 114128. $[Mg((H_2O)_6]_2(C_{46}H_{37}O_8)_2(C_{46}H_{36}O_8)$
AVOLEE	2.029 Å	Klepov, V. V.; Serezhkina, L. B.; Serezhkin, V. N.; Alekseev, E. V. *J. Solid State Chem.* **2016**, *244*, 100. $[Mg(H_2O)_6][Na(UO_2(OOCCH_3)_3)_3]$
24548	2.036 Å	Ferrari, A.; Cavalca, L.; Nardelli, M. *Gazz. Chim.* **1954**, *84*, 169-174. $Cs[Mg(H_2O)_6]AsO_4$
ASUNOT	2.038 Å	Serezhkin, V. N.; Grigoriev, M. S.; Abdulmyanov, A.R.; Fedoseev, A.M.; Savchenkov, A. V.; Serezhkina, L. B. *Inorg. Chem.* **2016**, *55*, 7688. $[Mg(H_2O)_6][UO_2(OOCC_2H_5)_3]_2$
49914	2.039 Å	Duhlev, R.; Faggiani, R.; Brown, I. D. *Acta Crystallogr., Sect. C* **1987**, *43*, 2046-2048. $Zn_2[Mg(H_2O)_6]Br_6$
24550	2.041 Å	Ferrari, A.; Cavalca, L.; Nardelli, M. *Gazz. Chim.* **1955**, *85*, 1232-1238. $Cs[Mg(H_2O)_6]PO_4$
26744	2.042 Å	Andress, K. R.; Gundermann, J. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1934**, *87*, 345-369. $[Mg(H_2O)_6]Cl_2$
QEZKEM	2.042 Å	Matovic, Z. D.; Meetsa, A.; Miletic, V. D.; van Koningsbruggen, P. J. *Inorg. Chim. Acta* **2007**, *360*, 2420. $[Mg(H_2O)_6][CuC_8H_{13}N_2O_7]_2{\cdot}2H_2O$
CUNZUJ	2.044 Å	Goedderz, D.; Schafer, T.; Klitsch, J.; Weber, L.; Weber, B.; Fuhr, O.; Buntkowsky, G.; Schonberger, F.; Doering, M. *Eur. J. Inorg. Chem.* **2020**, 2444. $[Mg(H_2O)_6](C_{12}H_8O_3P)_2{\cdot}2H_2O$
12694	2.044 Å	Zolotarev, Jr., A. A.; Zhitova, E. S.; Krzhizhanovskaya, M. G.; Rassomakhin, M. A.; Shilovskikh, V. V.; Krivovichev, S. V. *Minerals* **2019**, *9*, 486. $NH_4[Mg(H_2O)_6]Cl_3$

ERUPAI	2.044 Å	Zhang, Z.-T.; Yang, B.-L.; Liu, Q.-G.; Liu, X.-H.; Gao, Z.-W.; Yu, K.-B. *Chin. J. Chem.* **2003**, *21*, 588. $[Mg(H_2O)_6](C_{16}H_{11}O_7S)_2 \cdot 10H_2O$
DABDEQ	2.045 Å	Chen, X.; Liu, Y.-H.; Alexander, A.-M.;.; Gallucci, J. C.; Hwang, S.-J.; Lingam, H. K.; Huang, Z.; Wang, C.; Li, H.; Zhao, Q.; Ozkan, U. S.; Shore, S. G.; Zhao, J.-C. *Chem. Eur. J.* **2004**, *10*, 7325. $[Mg(H_2O)_6]B_{12}H_{12}$
DABDEQ01	2.045 Å	Chen, X.; Liu, Y.-H.; Alexander, A.-M.; Gallucci, J. C.; Hwang, S.-J.; Lingam, H. K.; Huang,Z.; Wang, C.; Li, H.; Zhao, Q.; Ozkan, U. S.; Shore, S. G.; Zhao, J.-C. *Chem. Eur. J.* **2014**, *20*, 7325. $[Mg(H_2O)_6]B_{12}H_{12} \cdot 6H_2O$
SEQQIQ	2.045 Å	Yisgedu, T. B.; Chen, X.; Lingam, H. K.; Huang, Z.; Highley, A.; Maharrey, S.; Behrens, R.; Shore, S. G.; Zhao, J.-C. *J. Phys. Chem. C* **2011**, *115*, 11713. $[Mg(H_2O)_6]B_{10}H_{10} \cdot 4H_2O$
YORYOU	2.045 Å	Das, M. C.; Ghosh, S. K.; Sanudo, E. C.; Bharadwaj, P. K. *Dalton Trans.* **2009**, 1644. $[Mg(H_2O)_6][MgC_{16}H_{12}N_2O_{16}] \cdot 2H_2O$
36461	2.046 Å	Leclaire, A. *Acta Crystallogr., Sect. C* **1985**, *41*, 169. $Mn_2[Mg(H_2O)_6]Br_6 \cdot 6H_2O$
143067	2.046 Å	Parafiniuk, J.; Stachowicz, M.; Woźniak, K. *Miner. Mag.* **2021**, *85*, 132. $NH_4[Mg(H_2O)_6]Cl_3$
252873	2.046 Å	Serezhkin, V. N.; Grigoriev, M. S.; Abdulmyanov, A. R.; Fedoseev, A.M.; Savchenkov, A. V.; Serezhinka, L. B. *Inorg. Chem.* **2016**, *55*, 7688. $[Mg(H_2O)_6][UO_2(C_2H_5COO)_3]_2$
252874	2.046 Å	Serezhkin, V. N.; Grigoriev, M. S.; Abdulmyanov, A. R.; Fedoseev, A.M.; Savchenkov, A. V.; Serezhinka, L. B. *Inorg. Chem.* **2016**, *55*, 7688. $[Mg(H_2O)_6][NpO_2(C_2H_5COO)_3]_2$
ASUNUZ	2.046 Å	Serezhkin, V. N.; Grigoriev, M. S.; Abdulmyanov, A.R.; Fedoseev, A.M.; Savchenkov, A. V.; Serezhkina, L. B. *Inorg. Chem.* **2016**, *55*, 7688. $[Mg(H_2O)_6][NpO_2(OOCC_2H_5)_3]_2$
EMEZAX	2.046 Å	Dale, S. H.; Elsegood, M. R. J.; Kainth, S. *Acta Crystallogr., Sect. E* **2003**, *59*, m505. $[Mg(H_2O)_6]C_{10}H_4O_8$
UNUBAI	2.046 Å	Dhavskar, K. T.; Bhargao, P. H.;Srinivasan, B. R. *J. Chem. Sci. (Bangladore)* **2016**, *128*, 421. $[Mg(H_2O)_6](p\text{-}CH_3OC_6H_4CH_2COO)_2 \cdot 2H_2O$
131994	2.047 Å	Rincke, C.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2020**, *76*, 244. $KCl \cdot [Mg(H_2O)_6]Cl$
MODFAN	2.047 Å	Jeremic, D.; Kaluderovic, G. N.; Brceski, I.; Gomez-Ruiz, S.: Andelkovic, K. K. *Acta Crystallogr., Sect. E* **2008**, *64*, m952. $[Mg(H_2O)_6](C_{10}H_{16}O_4S)_2$
252875	2.048 Å	Serezhkin, V. N.; Grigoriev, M. S.; Abdulmyanov, A. R.; Fedoseev, A.M.; Savchenkov, A. V.; Serezhinka, L. B. *Inorg. Chem.* **2016**, *55*, 7688. $[Mg(H_2O)_6][PuO_2(C_2H_5COO)_3]_2$
ASUPAH	2.048 Å	Serezhkin, V. N.; Grigoriev, M. S.; Abdulmyanov, A.R.; Fedoseev, A.M.; Savchenkov, A. V.; Serezhkina, L. B. *Inorg. Chem.* **2016**, *55*, 7688. $[Mg(H_2O)_6][PuO_2(OOCC_2H_5)_3]_2$
TIZRIG01	2.048 Å	Didelot, E.; Sadikin, Y.; Lodziana, Z.; Cerny, R. *Solid State Sci.* **2019**, *90*, 86. $[Mg((H_2O)_6]B_{12}H_{12}$

CIRVAA	2.049 Å	Gupta, M. P.; Van Alsenoy, C.; Lenstra, A. T. H. *Acta Crystallogr. Sect. C* **1984**, *40*, 1526. $[Mg((H_2O)_6](HOOCCHCHCOO)_2$
ORAQOP	2.049 Å	Xu, X.; Hu, F.; Yan, S.; Lin, J.; Li, Q.; Shuai, Q. *RSC Advances* **2016**, *6*, 67610. $[Mg(H_2O)_6](C_9H_8ClO_3)_2$
XAXHIP	2.049 Å	Wei, M.; Li, H.; Wang, X. *J. Cluster Sci.* **2012**, *23*, 325. $H_3O[Mg(H_2O)_6][Mo_{12}O_{40}P]\cdot 4(4\text{-}C_5H_4NHCOOH)\cdot 3.5H_2O$
1834	2.050 Å	Black, W. H.; Griffith, E. A. H.; Robertson, B. E. *Acta Crystallogr., Sect. B* **1975**, *31*, 615-617. $[Mg(H_2O)_6]S_2O_6$
29557	2.050 Å	Mereiter, K. *Neues Jahrbuch für Mineralogie. Monatshefte* **1986**, 481-492. $Ca[Mg(H_2O)_6](UO_2(CO_3)_3)\cdot 6H_2O$
FURWIZ	2.050 Å	Leong, W. L.; Vittal, J. J. *Inorg. Chim. Acta* **2009**, *362*, 2189. $[Mg(H_2O)_6][MgC_{30}H_{28}N_2O_{16}]\cdot 2CH_3CN$
OROFEI	2.050 Å	Brady, M.; Piombo, S. D.; Hu, C.; Buccella, D. *Dalton Trans.* **2016**, *45*, 12458 $[Mg(H_2O)_6][MgC_{12}H_{10}NO_7]\cdot C_4H_8O_2\cdot 6H_2O$
TIZTIG	2.050 Å	Antsyshkina, A. S.; Sadikov, G. G.; Sergienko, V. S.; Poznyak, A. L. *Zh. Neorg. Khim.* **2007**, *52*, 566. $[Mg(H_2O)_6][VOC_{10}H_{12}N_2O_8]_2\cdot 3.5H_2O$
WANKUT	2.050 Å	Rajbanshi, A.; Custelcean, R. *Supramol. Chem.* **2012**, *24*, 65. $[Mg(H_2O)_6]CrO_4\cdot 2C_{24}H_{30}N_{10}O_3$
32507	2.051 Å	Thomas, R.; Moore, F. H. *Acta Crystallogr. Sect. B* **1981**, *37*, 2153-2155. $[Mg(H_2O)_6]I_8$
248632	2.051 Å	Chen, X.; Li, Y.-H.; Alexander, A.-M.; Gallucci, J. C.; Hwang, S.-J.; Lingam, H. K.; Huang, Z.; Wang, C.; Li, H.; Zhao, Q.; Ozkan, U. S.; Shore, S. G.; Zhao, J.-C. *Chem. Eur. J.* **2014**, *20*, 7325. $[Mg(H_2O)_6]B_{12}H_{12}\cdot 6H_2O$
HAZZIT	2.051 Å	Chang, L.-M.; Zhao, X.; Gu, Z.-G.; Liu, W.-J.; Wei, Z.-Q.; Liu, Y.-L.; Mo, H.-H.; Yue, S.-T. *Z. Anorg. Allg. Chem.* **2012**, *638*, 652. $[Mg(H_2O)_6][EuMgC_{12}H_{12}O_{15}]_2\cdot 6H_2O$
YOCGAA	2.051 Å	Savchenkov, A.V.; Vologzhanina, A. V.; Serezhkin, V. N.; Pushkin, D. V.; Serezhkina, L. B. *Kristallografiya* **2014**, *59*, 235. $[Mg(H_2O)_6][UO_2C_{12}H_{21}O_6]$
AYIPII	2.052 Å	Smith, G.; Wermuth, U. D.; Williams, M. L. *Acta Crystallogr., Sect. E* **2011**, *67*, 1194. $[Mg(H_2O)_6](C_7H_5O_6S)_2\cdot 2H_2O$
CABCAN	2.052 Å	Gardner, H. C.; Kennedy, A. R.; McCarney, K. M.; Staunton, E.; Stewart, H.; Teat, S. J. *Acta Crystallogr. Sect. C* **2020**, *76*, 972. $[Mg(H_2O)_6](C_{12}H_{10}N_3O_6S_2)_2\cdot 8H_2O$
ENEFOT	2.052 Å	Guner, F. E. G.; Lutz, M.; Sakurai, T.; Spek, A. L.; Hondoh, T. *Cryst. Growth Des.* **2010**, *10*, 4327. $[Mg(H_2O)_6](CH_3SO_3)_2\cdot 6H_2O$
IVOTET	2.052 Å	Kose, D. A.; Zumreoglu-Karan, B.; Hokelek, T. *Inorg. Chim. Acta* **2011**, *375*, 236. $[Mg(H_2O)_6]Cl_2\cdot (C_{14}H_8BO_6)_2\cdot 4H_2O$
IYAGEW	2.052 Å	Zhang, Y. CCDC deposition number, 1509632, **2016**. $[Mg(H_2O)_6][C_4H_2N_{11}]_2\cdot 6H_2O$

MOYTAV	2.052 Å	Baier, J.; Thewalt, U. *Z. Anorg. Allg. Chem.* **2002**, *628*, 1890. $[Mg(H_2O)_6][OOCCCCOOH)_2 \cdot 2H_2O$
OHUCEZ	2.052 Å	Zhou, Z.-H.; Deng, Y.-F.; Jiang, Y.-Q.; Wan, H.-L.; Ng, S. W. *Dalton Trans.* **2003**, 2636. $K_2[Mg(H_2O)_6][TiC_{18}H_{18}O_{21}]_2 \cdot 6H_2O$
RARYUG	2.052 Å	Saha, D.; Maity, T.; Dey, T.; Koner, S. *Polyhedron* **2012**, *35*, 55. $[Mg(H_2O)_6][CuC_{14}H_6N_2O_8] \cdot 2H_2O$
THIAMG10	2.052 Å	Blank, G.; Rodrigues, M.; Pletcher, J.; Sax, M. *Acta Crystallogr., Sect. B* **1976**, *32*, 2970. $[Mg(H_2O)_6](C_{12}H_{18}N_4OS)_2Cl_6 \cdot 4H_2O$
UWESIB	2.052 Å	Xie, L.; Bai, H.; Song, L.; Liu, C.; Gong, W.; Wang, W.; Zhao, X.; Takemoto, C.; Wang, H. *Inorg. Chem.* **2021**, *60*, 8826. $[Mg(H_2O)_6][RuCl_3(NO)(C_9H_5ClNO)]_2 \cdot 3H_2O$
YIDVIR	2.052 Å	Wang, L.-H.; Yin, J.; Tai, X.-S. *Acta Crystallogr., Sect. E* **2007**, *63*, m1664. $[Mg(H_2O)_6](C_{13}H_{10}NO_4S)_2$
WELQIQ	2.052 Å	Liao, J.-Z.; Wang, S.-S.; Wu, X.-Y.; Yu, R.; Lu, C.-Z.; Chen, X.-L. *Dalton Trans.* **2018**, *47*, 1027. $[Mg((H_2O)_6](C_{18}H_{12}N_2O_{10}S_2)$
ZURWIS	2.052 Å	Haas, A.; Klare, C.; Betz, P.; Bruckmann, J.; Kruger, C.; Tsay, Y.-H.; Aubke, F. *Inorg. Chem.* **1996**, *35*, 1918. $[Mg((H_2O)_6](N(SO_2CF_3)_2)_2 \cdot 2H_2O$
35627	2.053 Å	Solans, X.; Font-Altaba, M.; Aguilo, M.; Solans, J.; Domenech, M. V. *Acta Crystallogr., Sect. C* **1983**, *39*, 1488-1490. $NH_4[Mg(H_2O)_6]Cl_3$
163021	2.053 Å	Lixin, Y.; DesMarteau, D. D.; Pennington, W. T. *Solid State Sci.* **2005**, *7*, 311. $[Mg(H_2O)_6](((CF_3SO_2)_2N)_2 \cdot 2H_2O$
760215	2.053 Å	Lacrox, M. R.; Bukovsky, E. V.; Lozinšek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y. Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14893. $[Mg(H_2O)_6]B_{12}F_{12}$
GIJVEA	2.053 Å	Meyer, H.-J.; Pickardt, J. *Z. Anorg. Allg. Chem.* **1988**, *560*, 185. $[Mg((H_2O)_6](C_6H_{13}N_4)_2[Fe(CN)_6]$
HAHWAO	2.053 Å	Graf, M.; Stoeckli-Evans, H.; Whitaker, C.; Marioni, P.-A.; Marty, W. *Chimia* **1993**, *47*, 202. $[Mg((H_2O)_6][CuC_8H_4N_2O_{10}] \cdot 2H_2O$
NEPGAT	2.053 Å	Novikov, S. A.; Serezhkina, L. B.; Grigoriev, M. S.; Serezhkin, V. N. *Polyhedron* **2018**, *141*, 147. $[Mg((H_2O)_6][UO_2(C_{10}H_{13}O_8)] \cdot 3H_2O$
NIKKOK	2.053 Å	Gacki, M. CCDC deposition number 1869947, **2018**. $[Mg((H_2O)_6](C_7H_7N_4O_2)_2 \cdot 2(C_7H_8N_4O_2) \cdot 2H_2O$
OHUCID	2.053 Å	Zhou, Z.-H.; Deng, Y.-F.; Jiang, Y.-Q.; Wan, H.-L.; Ng, S. W. *Dalton Trans.* **2003**, 2636. . $(NH_4)_2[Mg(H_2O)_6][TiC_{18}H_{18}O_{21}]_2 \cdot 6H_2O$
PICDUC	2.053 Å	Klepov, V. V.; Peresypkina, E. V.; Serezhkina, L. B.; Karasev, M. O.; Virovets, A. V..; Serezhkin, V. N. *Polyhedron* **2013**, *61*, 137. $[Mg(H_2O)_6][UO_2(OOCH_3)_3]_2$
POHGIC	2.053 Å	Jin-Ling, W.; Bo, L.; Fang-Ming, M. *Chinese J. Struct. Chem.* **1994**, *13*, 304. $[Mg((H_2O)_6][C_{10}H_8NO_3S) \cdot 6H_2O$
PONGIJ	2.053 Å	Rheingold, A. L. CCDC deposition number 705780, **2008**. $[Mg(H_2O)_6](C_{12}H_{21}O_4)_2 \cdot H_2O$

YIRWAA	2.053 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinsek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Mg((H_2O)_6]B_{12}F_{12}$
VAFKET	2.053 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, *41*, 6986. $[Mg((H_2O)_6]_3[C_9H_9O_9S_3)_2$
ZURWIS02	2.053 Å	Veryasov, G.; Harinaga, U.; Matsumoto, K.; Hagiwara, R. *Eur. J. Inorg. Chem.* **2017**, 1087. $[Mg(H_2O)_6]((CF_3SO_2)_2N)_2\cdot 2H_2O$
29558	2.054 Å	Mereiter, K. *Neues Jahrbuch für Mineralogie. Monatshefte* **1986**, 481. $Sr[Mg(H_2O)_6](UO_2(CO_3)_3)\cdot 6H_2O$
281355	2.054 Å	Kuratieva, N. V.; Naumova, M. I.; Naumov, D. Y.; Podberezskaya, N.V. *Acta Crystallogr., Sect. E* **2003**, *59*, i89. $[Mg(H_2O)_6](H_2PO_4)_2$
GIYCAT	2.054 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Mg(H_2O)_6]SO_4\cdot 2C_{24}H_{30}N_{10}O_3$
GIYCEX	2.054 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Mg(H_2O)_6]SO_3\cdot 2C_{24}H_{30}N_{10}O_3$
GIYCIB	2.054 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Mg(H_2O)_6]CO_3\cdot 2C_{24}H_{30}N_{10}O_3$
GIYCOH	2.054 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Mg(H_2O)_6]SeO_4\cdot 2C_{24}H_{30}N_{10}O_3$
IBEMIM	2.054 Å	Seifullina, I. I.; Martsinko, E. E.; Aleksandrov, G. G.; Sergienko, V. S. *Zh. Neorg. Khim.* **2004**, *49*, 928. $[Mg(H_2O)_6]_2[Ge_6C_{12}H_{32}O_{48}P_{12})_2\cdot 28H_2O$
KOZXOP	2.054 Å	Liu T.; Wang J.; Chen L.; Cao D.;, Lu, Z.; Wu, N. *Z. Kristallogr. – New Cryst. Struct.* **2019**, *234*, 933. $[Mg(H_2O)_6](C_3HN_4O_4)_2$
MOYTAV01	2.054 Å	Yang, L.; Foxman, B. M. CCDC deposition number 2106594, **2021**. $[Mg(H_2O)_6](OOCCCCOOH)_2\cdot 2H_2O$
MUCTEM	2.054 Å	Singh, R.; Kociok-Kohn, G.; Jassal, A. K.; Singh, L. *Polyhedron* **2019**, *175*, 114200. $[Mg((H_2O)_6](C_2H_5SO_3)_2$
YIKKUA	2.054 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2013**, *69*, 1292. $[Mg(H_2O)_6]I_2\cdot 2H_2O$
DAQMIT	2.055 Å	Sabate, C.M.; Jeanneau, E.; Delalu, H. *Dalton Trans.* **2012**, *41*, 3817. $[Mg(H_2O)_6](C_4N_5)_2\cdot 2H_2O$
DOFXIG	2.055 Å	Zhou, Q.-P.; Zha, G.-F.; She, J.-B. *J. Coord. Chem.* **2008**, *61*, 2601. $[Mg(H_2O)_6](C_5H_2N_3O_5]$
HAZZOZ	2.055 Å	Chang, L.-M.; Zhao, X.; Gu, Z.-G.; Liu, W.-J.; Wei, Z.-Q.; Liu, Y.-L.; Mo, H.-H.; Yue, S.-T. *Z. Anorg. Allg. Chem.* **2012**, *638*, 652. $[Mg(H_2O)_6][MgTbC_{12}H_{12}O_{15}]_2\cdot 6H_2O$
KESVEL	2.055 Å	Kruszynski, R.; Sieranski, T. *J. Coord. Chem.* **2013**, *66*, 42. $[Mg(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 2H_2O$
LUZZUC	2.055 Å	Xi-Shi Tai, X.-S.; Wang, D.-F.; Zhao, Z.-B. *Chin. J. Inorg. Chem.* **2010**, *26*, 1490. $[Mg(H_2O)_6](C_9H_8N_3O_2S)_2$

MISXER	2.055 Å	Wiesbrock, F.; Nogai, S.; Schier, A.; Schmidbaur, H. *Helv. Chim. Acta* **2002**, *85*, 1151. $[Mg((H_2O)_6][C_5H_8NO_4)_2$
RIHFEV	2.055 Å	Astbury, C.; Conway, L. K.; Gillespie, C.; Hodge, K.; Innes, E.; Kennedy, A. R. *Dyes Pigm.* **2013**, *97*, 100. $[Mg(H_2O)_6](C_{15}H_{13}N_4O_3S)_2\cdot 6H_2O$
TEKBIU	2.055 Å	Turel, I.; Leban, I.; Zupancic, M.; Bukovec, P.; Gruber, K. *Acta Crystallogr., Sect. C* **1996**, *52*, 2443. $[Mg((H_2O)_6](C_{17}H_{19}FN_3O_3)_2(SO_4)_2\cdot 6H_2O$
TUGGEJ	2.055 Å	Cui, Z.-H.; Sun, J.-H.; Jia, Y.-Z.; Chen, Y.-M.; Jiang, X.-P. *Synth. React. Inorg., Met.-Org., Nano-Met.Chem.* **2015**, *45*, 1004. $[Mg(H_2O)_6]Cl_2\cdot 2(HO(CH_2)_2OH)$
1317	2.056 Å	Anderson, M. R.; Jenkin, G. T.; White, J. W. *Acta Crystallogr., Sect. B* **1977**, *33*, 3933-3936. $La_2[Mg(H_2O)_6]_3(NO_3)_{12}\cdot 6H_2O$
40972	2.056 Å	Duhlev, R.; Faggiani, R.; Brown, I. D. *Acta Crystallogr., Sect. C* **1987**, *43*, 2046-2048. $Cd[Mg(H_2O)_6]_2Br_6$
49915	2.056 Å	Duhlev, R.; Faggiani, R.; Brown, I. D. *Acta Crystallogr., Sect. C* **1987**, *43*, 2044-2046. $Cd[Mg(H_2O)_6]_2Br_6$
166057	2.056 Å	Parafiniuk, J.; Dobrzycki, L.; Wozniak, K. *Am. Miner.* **2010**, *95*, 11. $(H_3O)_3[Mg(H_2O)_6]Fe_{15}(SO_4)_{21}(OH)_{18}\cdot 62H_2O$
416173	2.056 Å	Kremenovic, A.; Poleti, D.; Ghermani, N. E.; Karanovic, L.; Mioc, U. B.; Nedic, Z.; Spasojevic-de Bire, A. *Cryst. Res. Technol.* **2007**, *42*, 98. $[Mg(H_2O)_6][HPW_{12}O_{40}]\cdot 4H_2O$
BADTEX10	2.056 Å	Dubler, E.; Jameson, G. B.; Kopajtic, Z. *J. Inorg. Biochem.* **1986**, *26*,1. $[Mg((H_2O)_6](C_5H_3N_4O_3)_2\cdot 2H_2O$
CIPGIS	2.056 Å	Wadepohl, H. CCDC deposition number 660994, **2007**. $[Mg(H_2O)_6][Mg(H_2O)_4(O(CH_3)_2)_2](B(C_6H_5)_4)_4\cdot C_6H_5CH_3$
HAZZUF	2.056 Å	Chang, L.-M.; Zhao, X.; Gu, Z.-G.; Liu, W.-J.; Wei, Z.-Q.; Liu, Y.-L.; Mo, H.-H.; Yue, S.-T. *Z. Anorg. Allg. Chem.* **2012**, *638*, 652. $[Mg(H_2O)_6][GdMgC_{12}H_{12}O_{15}]_2\cdot 6H_2O$
KOZXOP01	2.056 Å	Wenli Cao, W.; Wang, T.; Mei, H.; Dong, W.; Tariq, Q.; Yin, L.; Li, Z.; Zhang, J.-G. *ACS Appl. Mater. Interfaces* **2022**, *14*, 32084. $[Mg(H_2O)_6](C_3HN_4O_4)_2$
NOGLAW	2.056 Å	Simonsen, O. *Acta Chem. Scand.* **1997**, *51*, 861. $[Mg((H_2O)_6](C_4H_2N_3O_5)_2\cdot 2H_2O$
OKOKUV	2.056 Å	Custelcean, R.; Bock, A.; Moyer, B. A. *J. Am. Chem. Soc.* **2010**, *132*, 7177. $[Mg(H_2O)_6](C_{24}H_{30}N_{10}O_3)_2(SO_4)_{0.52}(SeO_4)_{0.48}$
QAWXEU	2.056 Å	He, P.; Zhang, J.-G.; Wu, L.; Wu, J.-T.; Zhang, T.-L. *Z. Anorg. Allg. Chem.* **2017**, *643*, 432. $[Mg(H_2O)_6](C_2N_{10}O_2)\cdot 2H_2O$
WABFOW01	2.056 Å	Islam, S.; Tripathi, S.; Hossain, A.; Seth, S. K.; Mukhopadhyay, S. *J. Mol. Struct.* **2022**, *1265*, 133373. $[Mg(H_2O)_6](C_7H_4NO_4)_2$

WITMUJ	2.056 Å	Zhang, R.; Zhao, Y.; Wang, J.; Ji, L.; Yang, X.-J.; Wu, B. *Cryst. Growth Des.* **2014**, *14*, 544. $[Mg(H_2O)_6]Cl_2 \cdot 2(C_{24}H_{30}N_{10}O_3)$
YIKKOU	2.056 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2013**, *69*, 1292. $[Mg(H_2O)_6]Cl_2 \cdot 2H_2O$
16434	2.057 Å	Leclaire, A.; Borel, M. M.; Monier, J.-C. *Acta Crystallogr., Sect. B* **1980**, *36*, 2734-2735. $Ca[Mg(H_2O)_6]_2Cl_6$
39126	2.057 Å	Nakayasu, M.; Suzukawa, Y.; Kobayashi, W. *Denki Kagaku Oyobi Kogyo Butsuri Kagaku* **1983**, *51*, 419-422. $NH_4[Mg(H_2O)_6]Cl_3$
BADTEX01	2.057 Å	Dubler, E.; Jameson, G. B.; Kopajtic, Z. *J. Inorg. Biochem.* **1986**, *26*,1. $[Mg((H_2O)_6](C_5H_3N_4O_3)_2 \cdot 2H_2O$
DOFXAY	2.057 Å	Zhou, Q.-P.; Zha, G.-F.; She, J.-B. *J. Coord. Chem.* **2008**, *61*, 2601. $[Mg(H_2O)_6](C_5H_2N_3O_5] \cdot 2H_2O$
ECEBBUI	2.057 Å	Dokorou, V. N.; Milios, C. J.; Tsipis, A.C.; Haukka, M.; Weidler, P.G.; Powell, A. K.; Kostakis, G. E. *Dalton Trans.* **2012**, *41*, 12501. $[Mg(H_2O)_6](C_6H_{10}N_2O_6)_2 \cdot 5.5H_2O$
GOLPIG	2.057 Å	Castellari, C.; Comelli, F.; Ottani, S. *Acta Crystallogr. Sect. C* **1999**, *55*, 1054. $[Mg((H_2O)_6](C_{14}H_{10}Cl_2NO_2)_2 \cdot 2H_2O$
JEJTEY	2.057 Å	Zhang, Z.-T.; Wang, Q.-Y. *Heterocycles* **2005**, *65*, 1947. $[Mg(H_2O)_6](C_{19}H_{17}O_7S)_2 \cdot 8H_2O$
KEQRAZ	2.057 Å	Rychlewska, U.; Radanovic, D. D.; Jevtovic, V. S.; Radanovic, D. J. *Polyhedron* **2000**, *19*, 1. $[Mg((H_2O)_6][CuC_{11}H_{14}N_2O_8] \cdot 2H_2O$
KUZJEU	2.057 Å	Rubtsova, T. B.; Kireeva, O. K.; Bulychev, B. M.; Streltsova, N. P.; Belsky, V. K.; Tarasov, B. P. *Polyhedron* **1992,** *11*, 1929. $[Mg((H_2O)_6][CuCl_8(H_2O)_2] \cdot C_{10}H_{20}O_5 \cdot H_2O$
UNEVUE	2.057 Å	Dhungana, S.; White, P. S.; Crumbliss, A. L. *J. Am. Chem. Soc.* **2003**, *125*, 14760. $[Mg(H_2O)_6][FeC_{25}H_{46}N_6O_8]_2(ClO_4)_4 \cdot 2C_{16}H_{24}O_8 \cdot 9H_2O$
WIKXAP	2.057 Å	Ojala, W. H.; Lu, L. K.; Albers, K. E.; Gleason, W. B.; Richardson, T. I.; Lovrien, R. E.; Sudbeck, E. A. *Acta Crystallogr., Sect. B* **1994**, *50*, 684. $[Mg((H_2O)_6]C_{16}H_{16}N_2O_7S_2$
15588	2.058 Å	Zalkin, A.; Forrester, J. D.; Templeton, D. H. *J. Chem. Phys.* **1963**, *39*, 2881-2891. $Ce_2[Mg(H_2O)_6]_3(NO_3)_{12} \cdot 6H_2O$
AVOLAA	2.058 Å	Klepov, V. V.; Serezhkina, L. B.; Serezhkin, V. N.; Alekseev, E. V. *J. Solid State Chem.* **2016**, *244*, 100. $[Mg(H_2O)_6][Na(UO_2(OOCCH_3)_3)_3]$
BEKCID	2.058 Å	Simonsen O.; Hurup Mogelmose, M.-L.; la Cour, A. *Acta Chem. Scand.* **1999**, *53*, 432. $[Mg((H_2O)_6](C_8H_9N_2O_3)_2 \cdot 4H_2O$
DUVNAL	2.058 Å	Klepov, V. V.; Serezhkina, L. B.; Pushkin, D. V.; Alekseev, E. V.; Grigor'ev, M. S.; Sergeeva, O. A.; Shimin, N. A.; Serezhkin, V. V. *J. Eur. Inorg. Chem.* **2016**, 118. $[Mg(H_2O)_6][Na(UO_2(OOCCHCH_2)_3)_3]$
EKOYIO	2.058 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Pietraszko, A. *Acta Crystallogr., Sect. C* **2016**, *72*, 432. $[Mg(H_2O)_6]_3(2\text{-}C_5H_5N\text{-}NH_2)_2(SO_4)_4 \cdot 2H_2O$
IJIVED	2.058 Å	Tai, X.-S. *Acta Crystallogr., Sect. E* **2011**, *67*, m132. $[Mg(H_2O)_6](C_{13}H_9BrNO_4S)_2 \cdot 2H_2O$

KURWOK	2.058 Å	Xi-Shi Tai, X.-S.; Zhang, F.-G. *Acta Crystallogr., Sect. E* **2010**, *66*, m422. $[Mg(H_2O)_6](C_{16}H_{16}NO_5S)_2$
NIJMEB	2.058 Å	Assi, H.; Haouas, M.; Mouchaham, G.; Martineau-Corcos, C.; Allain, C.; Clavier, G.; Guillou, N.; Serre, C.; Devic, T. *Polyhedron* **2018**, *156*, 111. $[Mg((H_2O)_6][Ti(C_6H_4O_2)_3)]$
OKOKOP	2.058 Å	Custelcean, R.; Bock, A.; Moyer, B. A. *J. Am. Chem. Soc.* **2010**, *132*, 7177. $[Mg(H_2O)_6](C_{24}H_{30}N_{10}O_3)_2(SO_4)_{0.35}(SeO_4)_{0.65}$
RACBII	2.058 Å	Fernando, I. R.; Daskalakis, N.; Demadis, K. D.; Mezei, G. *New J. Chem.* **2010**, *34*, 221. $[Mg(H_2O)_6](C_3H_3N_2O_3S)_2$
ROXBEO	2.058 Å	Park, G.; Oh, I.-H.; Park, S.-H. *Z. Kristallogr. – New Cryst. Struct.* **2020**, *235*, 85. $[Mg((H_2O)_6](O_3SC_6H_4NNC_6H_4NCH_3)_2$
TUXYOA	2.058 Å	Zhang, J.-G.; Zhang, T.-L.; Yang, L.; Yu, K.-B. *Hanneng Cailiao Nagasaki Daigaku* **2001**, *9*, 179. $[Mg((H_2O)_6](C_6H_2N_3O_8)_2{\cdot}2H_2O$
UMANOL	2.058 Å	Dalrymple, S. A.; Shimizu, G. K. H. *Supramol. Chem.* **2003**, *15*, 591. $[Mg(H_2O)_6]_3C_6(CH_2SO_3)_6{\cdot}3O(CH_4)_2O$
VOPCEI	2.058 Å	Shakeri, V.; Haussuhl, S. *Z. Kristallogr.* **1992**, *198*, 169. $[Mg((H_2O)_6](C_6H_6NO_3S)_2$
VUNFER	2.058 Å	Ru Ding, R.; Wei, T.; Wang, Q.-Y.; Wang, T.; Zhang, Z.-T. *Z. Anorg. Allg. Chem.* **2015**, *641*, 1130. $[Mg(H_2O)_6](C_{16}H_{11}O_7S)_2{\cdot}2H_2O$
WUNWAF	2.058 Å	Tutusaus, O.; Mohtadi, R.; Arthur, T. S.; Mizuno, F.; Nelson, E. G.; Sevryugina, Y. V. *Angew, Chem., Int. Ed.* **2015**, *54*, 7900. $[Mg(H_2O)_6](CH_{12}B_{11})_2{\cdot}1.5H_2O$
YIKKEK	2.058 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2013**, *69*, 1292. $[Mg(H_2O)_6]Br_2{\cdot}3H_2O$
YAQVUI	2.058 Å	Novitchi, G.; Costes, J.-P.;.; Ciornea, V.; Shova, S.; Filippova, I.; Simonov, Y. A.; Gulea, A. *Eur. J. Inorg. Chem.* **2005**, 929. $[Mg(H_2O)_6][CrC_{12}H_{14}N_2O_{14}]{\cdot}4H_2O$
ZARMEK	2.058 Å	Harrowfield, J. M.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **1995**, *48*, 1333. $[Mg((H_2O)_6](C_6H_2N_3O_7)_2{\cdot}3H_2O$
9264	2.059 Å	Fischer, W. *Neues Jahrbuch fuer Mineralogie. Monatshefte* **1973**, 100-109. $K[Mg(H_2O)_6]Cl_3$
34694	2.059 Å	Agron, P. A.; Busing, W. R. *Acta Crystallogr., Sect. A* **1969**, *25*, 118-119. $[Mg(H_2O)_6]Cl_2$
AJIDUT	2.059 Å	Zhang, W.; Chen, Y.-T. *Acta Crystallogr., Sect. E* **2009**, *65*, m1549. $[Mg(H_2O)_6](C_6H_3NH_2(SO_3)(CH_3))_2$
ANAPHS	2.059 Å	Cody, V.; Hazel, J. *Acta Crystallogr., Sect B* **1977**, *33*, 3180. $[Mg((H_2O)_6](C_{16}H_{12}NO_3S)_2{\cdot}6H_2O$
BIHNEM	2.059 Å	Kennedy, A. R.; Kirkhouse, J. B. A.: McCarney, K. M.; Puissegur, O.; Smith, W. E.; Staunton, E.; Teat, S. J.; Cherryman, J. C.; James, R. *Chem. Eur. J.* **2004**, *10*, 4606. $[Mg(H_2O)_6](C_{12}H_9N_2O_4S)_2{\cdot}2H_2O$
CAWCEK	2.059 Å	Kennedy, A. R.; Stewart, H.; Eremin, K.; Stenger, J. *J. Chem. Eur. J.* **2012**, *18*, 3064. $[Mg(H_2O)_6](C_{20}H_{13}N_2O_4S)_2{\cdot}4H_2O$

CIRVAA04	2.059 Å	Malaspina, L. A.; Hoser, A. A.; Edwards, A. J.; Woinska, M.; Turner, M. J.; Price, J. R.; Sugimoto, K.; Nishibori, E.; Bürgi, H.-B.; Jayatilaka, D.; Grabowsky, S. *CrystEngComm* **2020**, *22*, 4778. $[Mg(H_2O)_6](C_4H_3O_4)_2$
CIRVAA05	2.059 Å	Malaspina, L. A.; Genoni, A..; Jayatilaka, D.; Turner, M. J.; Sugimoto, K.; Nishibori, E.; Grabowsky, S. *J. Appl. Crystallogr.* **2021**, *54*, 718. $[Mg(H_2O)_6](C_4H_3O_4)_2$
HEBBAT	2.059 Å	Chang, L.-M.; Zhao, X.; Gu, Z.-G.; Liu, W.-J.; Wei, Z.-Q.; Liu, Y.-L.; Mo, H.-H.; Yue, S.-T. *Z. Anorg. Allg. Chem.* **2012**, *638*, 652. $[Mg(H_2O)_6][MgNdC_{12}H_{12}O_{15}]_2 \cdot 6H_2O$
RIHCOC	2.059 Å	Astbury, C.; Conway, L. K.; Gillespie, C.; Hodge, K.; Innes, E.; Kennedy, A. R. *Dyes Pigm.* **2013**, *97*, 100. $[Mg(H_2O)_6](C_{15}H_{13}N_4O_3S)_2 \cdot 6H_2O$
SUGKAI	2.059 Å	Zhao, Z. CCDC deposition number 1055925, **2015**. $[Mg(H_2O)_6](C_2N_{10}) \cdot 2H_2O$
TUTPAC	2.059 Å	Ren, J.; Zhang, W.; Zhang, T.; Yin, Y.; Wang, L.; Li, Z.; Zeng, Q.; Zhang, T. *J. Ener. Mater.* **2020**, 1. $[Mg(H_2O)_6](C_2N_6O_3) \cdot 2H_2O$
YIYBOZ	2.059 Å	Hamdy, L. B.; Raithby, P. R. Thomas, L. H.; Wilson, C. C. *New. J. Chem.* **2014**, *38*, 2135. $[Mg(H_2O)_6][MgC_{14}H_{10}N_2O_{10}] \cdot 3H_2O$
ZZZNLI01	2.059 Å	Fewings, K. R.; Junk, P. C.; Georganopoulou, D.; Prince, P. D.; Steed, J. W. *Polyhedron* **2001**, *20*, 643. $[Mg((H_2O)_6](C_7H_7O_3S)_2$
22508	2.060 Å	Tabachenko, V. V.; Kovba, L. M.; Serezhkin, V. N. *Koord. Khim.* **1983**, *9*, 1568-1571. $[Mg(H_2O)_6](UO_2)_3(MoO_4)_4 \cdot 2H_2O$
236335	2.060 Å	Fortes, A. D.; Wood, I. G.; Gutmann, M. J. *Acta Crystallogr., Sect. C* **2013**, *69*, 324. $[Mg(H_2O)_6]CrO_4 \cdot 5H_2O$
250186	2.060 Å	Kuratieva, N. V.; Naumova, M. I.; Naumov, D.Y.; Podberezskaya, N. V. *Zh. Strukt. Khim.* **2004**, *45*, 296. $[Mg(H_2O)_6](H_2PO_4)_2$
413594	2.060 Å	Tiritiris, I.; Schleid, T. *Z. Anorg. Allg. Chem.* **2004**, *630*, 541. $[Mg(H_2O)_6]B_{12}H_{12} \cdot 6H_2O$
433851	2.060 Å	Sun, C.; Zhang, C.; Jiang, C.; Yang, C.; Du, Y.; Zhao, Y.; Hu, B.; Zheng, Z. *Nature Commun.* **2018**, *9*, 1269. $[Mg(H_2O)_6]_3(N_5)_2 \cdot 4H_2O$
AMATIT	2.060 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 138. $[Mg(H_2O)_6](4\text{-}C_5H_5N\text{-}NH_2)_2(SO_4)_2$
CIRVAA02	2.060 Å	Malaspina, L. A.; Edwards, A. J.; Woinska, M.; Jayatilaka, D.; Turner, M. J.; Price, J. R.; Herbst-Irmer, R.; Sugimoto, K.; Nishibori, E.; Grabowsky, S. *Cryst. Growth Des.* **2017**, *17*, 3812. $[Mg((H_2O)_6](C_4H_3O_4)_2$
CUPSIQ	2.060 Å	Kennedy, A. R.; Andrikopoulos, P. C.; Arlin, J.-B.; Armstrong, D. R.; Duxbury, N.; Graham, D. V.; Kirkhouse, J. B. A. *Chem. Eur. J.* **2009**, *15*, 9494. $[Mg(H_2O)_6](C_{16}H_{15}N_4O_3S)_2 \cdot 9H_2O$

ILUXAO	2.060 Å	Gatjens, J.; Meier, B.; Adachi, Y.; Sakurai, H.; Rehder, D. *Eur. J. Inorg. Chem.* **2006**, 3575. $[Mg(H_2O)_6](C_8H_6NO_4)_2{\cdot}4H_2O$
KIMNID	2.060 Å	Schier, A.; Gamper, S.; Müller, G. *Inorg Chim. Acta* **1990**, *177*, 179. $[Mg((H_2O)_6](C_2H_7NO_3P)_2{\cdot}2H_2O$
LAFYIB	2.060 Å	Liu, W.-L.; Zou, Y.; Lu, C.-S.; Dang, D.-B.; Li, Y.-Z.; Yao, Y.-G.; Meng, Q.-J. *Polyhedron* **2004**, *23*, 2125. $[Mg(H_2O)_6][CuC_{12}H_{11}N_2O_8]_2{\cdot}4H_2O$
MGNTSP	2.060 Å	Talberg, H. J. *Acta Chem. Scand., Ser. A* **1977**, *31*, 37. $[Mg((H_2O)_6](C_2H_{17}NO_3P)_2{\cdot}2H_2O$
MITKUY	2.060 Å	Lesniewska, B.; Coleman, A. W.; Perret, F.; Suwinska, K. *Cryst. Growth Des.* **2019**, *19*, 1695. $[Mg((H_2O)_6](C_{12}H_9N_2)_4(C_{42}H_{30}O_{24}S_6){\cdot}17H_2O$
OBOHIY	2.060 Å	Zhang, Y. *Acta Crystallogr., Sect. E* **2011**, *67*, m1856. $[Mg(H_2O)_6]Cl(C_8H_6N_5O_2){\cdot}2H_2O$
OLEFIX	2.060 Å	Mudsainiyan, R. K.; Jassal, A. K.; Islam, N. . *J. Mol. Struct.* **2021**, *1232*, 130073. $[Mg(H_2O)_6](C_7H_5N_2O_4)_2{\cdot}C_{10}H_8N_2{\cdot}H_2O$
VILLAE	2.060 Å	Mastropietro, T. F.; Armentano, D. Marino, N.; De Munno, G. *Polyhedron* **2007**, *27*, 4945. $[Mg(H_2O)_6]Cl_2{\cdot}2C_5H_5N_5$
VILLEI	2.060 Å	Mastropietro, T. F.; Armentano, D. Marino, N.; De Munno, G. *Polyhedron* **2007**, *27*, 4945. $[Mg(H_2O)_6]Br_2{\cdot}2C_5H_5N_5$
VINJEK	2.060 Å	Li, C.; Deng, Z.-P.;Huo, L.-H.; Gao, S. *CrystEngComm* **2018**, *20*, 7513. $[Mg((H_2O)_6](C_{12}H_9SO_4)_2{\cdot}(C_{12}H_9SO_4){\cdot}4H_2O$
XAHFAQ	2.060 Å	Yu, Y.-Z.; Li, Y.-N.; Deng, Z.-P.; Zhu, Z.-B.; Huo, L.-H.; Gao, S. *Eur. J. Inorg. Chem.* **2015**, 2254. $[Mg(H_2O)_6](C_{12}H_8O_8S_2){\cdot}H_2O$
XECJIY	2.060 Å	Ptasiewicz-Bak, H.; Leciejewicz, J. *J. Coord. Chem.* **1998**, *44*, 299. $[Mg((H_2O)_6]C_6H_2N_2O_4$
YIKKAG	2.060 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2013**, *69*, 1292. $[Mg(H_2O)_6]Cl_2{\cdot}6H_2O$
XEZCIP	2.060 Å	Xie, Y.-R.; Ge, G.-W.; Yuan, X.-Y.; Wan, D.-B.; Yang, R.-Q. *Acta Crystallogr., Sect. E* **2007**, *63*, m812. $[Mg(H_2O)_6](C_7H_6NO_5S){\cdot}2H_2O$
16326	2.061 Å	Clark, J.; Evans, Jr., H. T.; Erd, R. C. *Acta Crystallogr., Sect. B* **1980**, *36*, 2736-2739. $Ca[Mg(H_2O)_6]_2Cl_6$
16546	2.061 Å	Zalkin, A.; Ruben, H.; Templeton, D. H. *Acta Crystallogr.,* **1964**, *17*, 235-240. $[Mg(H_2O)_6][p\text{-}ONC_6H_4O)_2$
192443	2.061 Å	Nitschke, C.; Koeckerling, M.; Bernhardt, E.; Kueppers, T.; Willner, H. *Dalton Trans.* **2014**, *43*, 7128. $[Mg(H_2O)_6](B(CN)_4)$
ADUMAQ	2.061 Å	Xu, X. Lu, Y.; Hu, F.; Xu, L.; Shuai, Q. *J. Coord. Chem.* **2016**, *69*, 3294. $[Mg(H_2O)_6][FeC_{11}H_9O_3]_2{\cdot}2H_2O$
BIHLIO	2.061 Å	Kennedy, A. R.; Kirkhouse, J. B. A.: McCarney, K. M.; Puissegur, O.; Smith, W. E.; Staunton, E.; Teat, S. J.; Cherryman, J. C.; James, R. *Chem. Eur. J.* **2004**, *10*, 4606. $[Mg(H_2O)_6](C_{12}H_9N_2O_4S)_2{\cdot}2H_2O$

CABLEA01	2.061 Å	Liebing, P.; Oehler, F.; Witzorke, J.; Schmeide, M. *CrystEngComm* **2020**, *22*, 7838. $[Mg(H_2O)_6]_2[Pt(S_2CN(CH_2COO)_2)_2]\cdot(CH_3)_2CO\cdot 9.5H_2O$
CAWTID	2.061 Å	Riley, P. E.; Pecoraro, V. L. Carrano, C. J.; Raymond, K. N. *Inorg. Chem.* **1983**, *22*, 3096. $[Mg((H_2O)_6][GaC_{18}H_{16}N_2O_6)_2\cdot 3H_2O$
DAWVED	2.061 Å	Rychlewska, U.; Guresic, D. M.; Warzajtis, B.; Radanovic, D. D.; Djuran, M. I. *Polyhedron* **2005**, *24*, 2009. $[Mg(H_2O)_6][ZnC_{11}H_{14}N_2O_8]\cdot 2H_2O$
FAHJOQ	2.061 Å	Yang, J.-H.; Cheng, R.-M.; Jia, Y.-Y.; Jin, J.; Yang, B.-B.; Cao, Z.; Liu, B. *Dalton Trans.* **2016**, *45*, 2945. $K[Mg(H_2O)_6]_2[Ru_2Cl_2(CO_3)_4]\cdot 4H_2O$
FUGCAM	2.061 Å	Jiang, J.; Lu, Y.; Yuan, L.; Liu, W. *Acta Crystallogr., Sect. E* **2009**, *65*, m1352. $[Mg(H_2O)_6][CuC_{12}H_{11}N_2O_5]_2\cdot 6H_2O$
PONGIJ01	2.061 Å	Perrin, C. L.; Lau, J. S. Kim, Y.-J.; Karri, P.; Moore, C.; Rheingold, A. L. *J. Am. Chem. Soc.* **2009**, *131*, 13548. $[Mg(H_2O)_6](C_{12}H_{21}O_4)_2\cdot H_2O$
QOFGID	2.061 Å	Nitschke, C.; Kockerling, M.; Bernhardt, E.; Kuppers, T.; Willner, H. *Dalton Trans.* **2014**, *43*, 7128. $[Mg(H_2O)_6](B(CN)_4)_2$
RAHLAP	2.061 Å	Gusev, I. M.; Skripkin, M. Y.; Spektor, K. K.; Starova, G. L. *Zh. Obshch. Khim.* **2011**, *81*, 529. $(CH_3)_4N[Mg(H_2O)_6]Br_3$
RAMXOS	2.061 Å	Henke, K. R.; Hutchison, A. R.; Krepps, M. K.; Parkin, S.; Atwood, D. A. *Inorg. Chem.* **2001**, *40*, 4443. $[Mg((H_2O)_6](C_3H_{12}N_3S_3)_2$
REFTEC	2.061 Å	Rodrigues, V. H..; Beja, A. M.; Paixao, J. A.; Costa, M. M. R. *Z. Kristallogr. – New Cryst. Struct.* **2005**, *220*, 620. $[Mg(H_2O)_6]SO_4\cdot(C_5H_{11}NO_2)_2\cdot 3H_2O$
RIVCAA	2.061 Å	Geday, M. A.; De Munno, G.; Medaglia, M.; Anastassopulou, J.; Theophanides, T. *Angew. Chem., Int. Ed. Engl.* **1997**, *36*, 511. $[Mg((H_2O)_6](ClO_4)_2\cdot 6C_5H_7N_3O\cdot H_2O$
TAKZEK	2.061 Å	Coiro, V. M.; Mazza, F. *Acta Crystallogr., Sect. C* **1991**, *47*, 1169. $[Mg((H_2O)_6](n\text{-}C_{12}H_{25}OSO_3)_2$
VUKMIX	2.061 Å	Shkol'nikova, L. M.; Polyanchuk, G. V.; Poznyak, A. L.; Yashunskii, V. G.; Ilyukhin, A. B. *Koord. Khim.* **1991**, *17*, 626. $[Mg((H_2O)_6][CoC_{12}H_{16}N_2O_8)_2\cdot 2H_2O$
XOSGIY	2.061 Å	Savchenkov, A. V.;Pirozhkov, P. A.; Vologzhanina, A. V.; Zubavichus, Y. V.; Dorovatovskii, P. V.; Pushkin, D. V.; Serezhkina, L. B. *Chem. Sel.* **2019**, *4*, 8416. $[Mg((H_2O)_6][UO_2(OOCCHCHCH_3)_3]$
YIKKIO	2.061 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2013**, *69*, 1292. $[Mg(H_2O)_6]I_2\cdot 3H_2O$
589	2.062 Å	Yamashita, K.; Komatsu, K.; Hattori, T.; Machida, S.; Kagi, H. *Acta Crystallogr., Sect. C* **2019**, *75*, 1605. $[Mg((H_2O)_6]Cl_2$
5950	2.062 Å	Wang, Y.; Han, J.; Guo, F.; Cheng, S.; Yang, Z.; Pan, S. *Dalton Trans.* **2019**, *48*, 17408. $[Mg(H_2O]_6](BO_5(OH)_4)\cdot 3H_2O$
22072	2.062 Å	Goodyear, J.; Ali, S. A. D. *Acta Crystallogr.* **1969**, *25*, 2664-2664. $[Mg(H_2O)_6]ClBr$

26020	2.062 Å	Sasvari, K.; Jeffrey, G. *Acta Crystallogr.* **1966**, *20*, 875-881. $[Mg(H_2O)_6]Cl_2{\cdot}6H_2O$
32512	2.062 Å	Ledesert, M.; Monier, J.-C. *Acta Crystallogr., Sect. B* **1982**, *38*, 237-239. $Cd_2[Mg(H_2O)_6]Cl_6$
35417	2.062 Å	Brodersen, K.; Pezzei, G. *Z. Anorg, Allg. Chem.* **1983**, *499*, 169-174. $[Mg(H_2O)_6]Hg_3Cl_8$
413819	2.062 Å	Miras, H. N.; Raptis, R. G.; Lalioti, N.; Sigalas, M. P. Baran, P.; Kabanos, T. A. *Chem. Eur. J.* **2005**, *11*, 2295. $[Mg(H_2O)_6][Na_4(H_2O)_{14}][V_{10}O_{28}]{\cdot}3H_2O$
EGAXIV	2.062 Å	Singh, S.; Saini, D.; Kaur, G.; Mehta, S. K.; Kaur, R.; Ferretti, V. *Inorg. Chim. Acta* **2014**, *419*, 13. $[Mg(H_2O)_6](CCl_3COO)_2$
EGOFAK	2.062 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr. Sect. C* **2019**, *75*, 633. $[Mg((H_2O)_6](C_{18}H_{14}N_2O_7S_2)_2{\cdot}(CH_3)_2CHO$
FADPEG	2.062 Å	Minacheva, L. Kh.; Skogareva, L. S.; Sergienko, V. S. *Zh. Neorg. Khim.* **2001**, *46*, 1289. $[Mg((H_2O)_6](ClO_4)_2{\cdot}2C_6H_{12}N_4{\cdot}2H_2O$
FAPFOR10	2.062 Å	Shibahara, T.; Kuroya, H.; Akashi, H.; Matsumoto, K.; Ooi, S. *Inorg. Chim. Acta* **1993**, *212*, 251. $[Mg((H_2O)_6]_2[Mo_4C_{20}H_{24}N_4O_{16}S_4]{\cdot}10H_2O$
IDIFEG	2.062 Å	Yan, W. B.; Deng, Y. F.; Zhang, F. Z.; Zhou, Z. H.; Wan, H. L., Ng, S. W. *Acta Crystallogr., Sect. E* **2002**, *58*, m22. $[Mg((H_2O)_6]_2[Mo_2C_{12}H_{14}N_2O_{17}]{\cdot}6H_2O$
JEYCEW	2.062 Å	Beck, J.; Ben-Amer, Y. *Z. Anorg. Allg. Chem.* **2007**, *633*, 435. $[Mg(H_2O)_6]C_4S_4$
KALXAZ	2.062 Å	Novikov, S. A.; Grigor'ev, M. S.; Serezhkina, L. B.; Serezhkin, V. N. *J. Solid State Chem.* **2017**, *248*, 178. $[Mg((H_2O)_6][UO_2C_{12}H_{12}O_{14}]{\cdot}2H_2O$
LOJWOZ	2.062 Å	Xanthopoulos, K.; Anagnostou, Z.; Chalkiadakis, S.; Choquesillo-Lazarte, D.; Mezei, G.; Zareba, J. K.; Zon, J.; Demadis, K. D. *Crystals* **2019**, *9*, 301. $[Mg((H_2O)_6](O_3PCH_2)_2NH(CH_2)_4NH(CH_2PO_3)_2)$
MOYVOM	2.062 Å	Zhou, Y.; Yang, G.-W.; Li, Q.-Y.; Liu, K.; Gu, G.-Q.; Ma, Y.-S.; Yuan, R.-X. *Inorg. Chim. Acta* **2009**, *362*, 1723. $[Mg(H_2O)_6](C_8H_6N_5O_2)_2{\cdot}2H_2O$
OLOKAD	2.062 Å	Xie, Y.; Shaffer, D. W.; Lewandowska-Andralojc, A.; Szalda, D. J.; Concepcion, J. J. *Angew, Chem, Int. Ed.* **2016**, *55*, 8067. $[Mg(H_2O)_6][RuC_{22}H_{20}N_4O_6P_2]{\cdot}14H_2O$
QAJYOT	2.062 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_{0.42}(C_8H_{10}O_4)_{0.79}{\cdot}2H_2O$
QECSID	2.062 Å	Xu, Y.; Wang, Q.; Shen, C.; Lin, Q.; Wang, P.; Lu, M. *Nature* **2017**, *549*, 78. $[Mg((H_2O)_6](N_5)_2{\cdot}4H_2O$
QOVFEP	2.062 Å	Wang, Y.; Han, J.; Guo, F.; Cheng, S.; Yang, Z.; Pan, S. *Dalton Trans.* **2019**, *48*, 17408. $[Mg((H_2O)_6][B_4H_4O_9){\cdot}3H_2O$
RAHLET	2.062 Å	Gusev, I. M.; Skripkin, M. Y.; Spektor, K. K.; Starova, G. L. *Zh. Obshch. Khim.* **2011**, *81*, 529. $(C_2H_5)_4N[Mg(H_2O)_6]Br_3$
TEKSUA	2.062 Å	Sunkel, K.; Nimax, P. R. *Dalton Trans.* **2018**, *47*, 409. $[Mg((H_2O)_6](C_5(CN)_5)_2{\cdot}4H_2O$

TEZGOW	2.062 Å	Ma, K.-R.; Wei, C.-L.; Zhang, Y.; Kan, Y.-H.; Cong, M.-H.; Yang, X.-J. *J. Spectrosc.* **2013**, 378379. $[Mg(H_2O)_6](C_6H_{14}N_2O_6P_2)\cdot 4H_2O$
24842	2.063 Å	Elerman, Y.; Fuess, H.; Joswig, W. *Acta Crystallogr., Sect. B* **1982**, *38*, 1799-1801. $[Mg(H_2O)_6]S_2O_3$
96559	2.063 Å	Waizumi, K.; Matsumoto, T.; Abe, T.; Fukushima, N.; Masuda, H. *J. Solid State Chem.* **2003**, *174*, 182. $[Mg(H_2O)_6][CoCl_4]\cdot 2H_2O$
AHAKAX	2.063 Å	Chen, B. CCDC deposition number 1414623, **2015**. $(NH_4)_2[Mg(H_2O)_6]_2[V_{10}O_{28}]\cdot 4H_2O$
AJIDUT01	2.063 Å	Tai, X.-S.; Jie, Y. *Crystals* **2015**, *5*, 294. $[Mg(H_2O)_6](C_7H_8NO_3S)_2$
DIPNUL	2.063 Å	Cole, L. B.; Holt, E. M. *Inorg. Chim. Acta* **1985**, *108*, 159. $[Mg((H_2O)_6]_2(3\text{-}COO\text{-}C_5H_4N)_2\cdot 4H_2O$
DUVNOZ	2.063 Å	Klepov, V. V.; Serezhkina, L. B.; Pushkin, D. V.; Alekseev, E. V.; Grigor'ev, M. S.; Sergeeva, O. A.; Shimin, N. A.; Serezhkin, V. V. *J. Eur. Inorg. Chem.* **2016**, 118. $[Mg(H_2O)_6][Na(UO_2(OOCC(CH_3)CH_2)_3)_3]$
FUYCOS03	2.063 Å	Missina, J. M.; Conti, L.; Rossi, P.; Ienco, A.; Nunes, G. G.; Valtancoli, B.; Chelazzi, L.; Paoli, P. *Inorg. Chim. Acta* **2021**, *523*, 120319. $[Mg(H_2O)_6](C_{13}H_{17}O_2)_2\cdot 2H_2O$
GAKPOY	2.063 Å	Zhao, J.-G.; Zhang, Z.-Y.; Huo, L.H.; Gao, S. *Acta Crystallogr., Sect. E* **2004**, *60*, m1987. $[Mg(H_2O)_6](C_7H_6NO_3)_2\cdot 2H_2O$
HUYMEW	2.063 Å	Chen, Y.; Zhao, X; Gao, R.; Ruan, Z.; Lin, J.; Liu, S.; Tian, Z.; Chen, X. *J. Solid State Chem.* **2020**, *292*, 121674. $[Mg(H_2O)_6](C_3H_5N_2)[Eu(C_7H_3NO_4)_3]\cdot 0.5\ C_3H_4N_2\cdot 4H_2O$
LIFHEO	2.063 Å	Zhang, Z.-T.; Cheng, X.-L. *J. Coord. Chem.* **2007**, *60*, 1111. $[Mg(H_2O)_6]Cl_2\cdot(C_{17}H_{13}O_7S)_2\cdot 8H_2O$
POTLOC	2.063 Å	Ren, J.; Zhang, T.; Li, Z.; Wang, L.; Zhang, T. *Thermochim. Acta* **2019**, *682*, 178391. $[Mg((H_2O)_6](C_2N_8O_4]$
SEKKEZ	2.063 Å	Li, Q.; Fu, M.-L.; Liu, X.; Guo, G.-C.; Huang, J.-S.; *Inorg. Chem. Commun.* **2006**, *9*, 767. $[Mg(H_2O)_6][Ag_2C_{14}H_{12}O_{14}S_2]\cdot 4H_2O$
RAKYOR01	2.063 Å	Zhao, W.-H.; Chen, Y.-T.; Tai, X.-S. *Adv. Mater. Res.* **2014**, *830*, 197. $[Mg(H_2O)_6]C_{10}H_6(SO_3)_2$
TEFLEZ	2.063 Å	Tong, Z.; Guangyuan, Z.; Zishuai, X.; Jian, R.; Lizhen, C.; Jianlong, W. Z. Kristyallogr. New Cryst. Struct. 2022, 237, 309. $[Mg(H_2O)_6](C_3HN_7O_5)\cdot H_2O$
VUQVUB	2.063 Å	Meng, X.; Kang, K.; Liang, F.; Tang, J.; Yin, W.; Lin, Z.; Xia, M. *Z. Inorg. Chem. Front.* **2020**, *7*, 3674. $[Mg(H_2O)_6](C_3H_2N_3O_3)_2$
XAGVAF01	2.063 Å	Yurdakul, O.; Demirtas, G.; Dege, N.; Icbudak, H.; Kose, D. A.; Buyukgungor, O. *Hacettepe J.. Biol. & Chem.* **2016**, *44*, 95. $[Mg(H_2O)_6](C_4H_4NO_4S)_2$
XUXLUX	2.063 Å	Haxia, M.; Jirong, S.; Xiaohong, S.; Rongzu, H.; Shengli, G.; Kaibei, Y. *Huaxue Gongcheng* **2001**, *29*, 47. $[Mg((H_2O)_6](C_2HN_4O_3)_2\cdot 2H_2O$
YIGCOH	2.063 Å	Rychlewska, U.; Warzajtis, B.; Cvetic, D.; Radanovic, D. D.; Guresic, D. M.; Djuran, M. I. *Polyhedron* **2007**, *26*, 1717. $[Mg(H_2O)_6][MgC_{11}H_{14}N_2O_8]\cdot 2H_2O$

XAJNOP	2.063 Å	Wang, Y.; Yang, X.; Hu, J.; Li, H.; Li, Z.; Zhang, T. *New J. Chem.* **2020**, *44*, 19054. $[Mg(H_2O)_6](C_5H_4N_{10}O_4)\cdot H_2O$
260038	2.064 Å	Weil, M.; Jerbi, H.; Ben Amara, M. *Acta Crystallogr., Sect. E* **2008**, *64*, i50. $Cs[Mg(H_2O)_6]PO_4$
260150	2.064 Å	Weil, M. *Acta Crystallogr., Sect. E* **2009**, *65*, i2. $Cs[Mg(H_2O)_6]AsO_4$
CUPVEP	2.064 Å	Srinivasan, B. R.; Shetgaonkar, S. Y.; Raghavaiah, P. *Ind. J. Chem., Sect A* **2009**, *48*, 1662. $[Mg(H_2O)_6](C_8H_5N_2O_5)_2$
HAGVOA	2.064 Å	Pech, L.; Bankovsky, Yu. Sobolev, A.; Sturis, A.; Tetere, I. *Latv. Khim. Z.* **1992**, 483. $[Mg((H_2O)_6](C_{10}H_6NO_2S)_2\cdot 4H_2O$
IMAFOR	2.064 Å	Radanovic, D. D.; Rychlewska, U.; Djuran, M. I.; Draskovic, N. S.; Vasojevic, M. M.; Hodzic, I. M.; Radanovic, D. J. *Polyhedron* **2003**, *22*, 2745. $[Mg(H_2O)_6][CoC_{11}H_{16}N_2O_8]\cdot 2H_2O$
JAMQAQ	2.064 Å	D.D.Radanovic, D. D.; Rychlewska, U.; Djuran, M. I.; Warzajtis, B.; Draskovic, N. S.; Guresic, D. M. *Polyhedron* **2004**, *23*, 2183. $[Mg(H_2O)_6][MgC_{11}H_{14}N_2O_8]\cdot 2H_2O$
MAVDOD	2.064 Å	Gryz, M.; Starosta, W.; Leciejewicz, J. *Acta Crystallogr., Sect. E* **2005**, *61*, m1920. $[Mg(H_2O)_6]C_8H_2O_8\cdot 4H_2O$
MINKOJ	2.064 Å	Moers, O.; Friedrichs, S.; Blaschette, A.; Jones, P. G. *Z. Anorg. Allg. Chem.* **2002**, *628*, 589. $[Mg((H_2O)_6](C_6H_4NO_4S_2)_2$
NUVXAG	2.064 Å	Rusev, R.; Tsvetanova, L.; Shivachev, B.; Kossev, K.; Nikolova, R. *Bulgarian Chem. Commun.* **2018**, *50*, 79. $[Mg((H_2O)_6](BF_4)_2$
POHGIC01	2.064 Å	Downer, S. M.; Squattrito, P. J.; Bestaoui, N.; Clearfield, A. *J. Chem. Cryst.* **2006**, *36*, 487. $[Mg(H_2O)_6](C_{10}H_8NO_3S)_2\cdot 6H_2O$
QAKLAT05	2.064 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_{0.86}(C_8H_{10}O_4)_{0.57}\cdot 2H_2O$
QIVHOV	2.064 Å	Ibad, M. F.; Schulz, A.; Villinger, A. *Organometallics* **2019**, *38*, 1445. $[Mg((H_2O)_6][B(C_6F_5)_4)_2\cdot 2C_2H_5OC_2H_5$
RATRIN01	2.064 Å	Marsh, R. E. *Acta Crystallogr., Sect. B* **2004**, *60*, 252. $[Mg(H_2O)_6](ClO_4)_2\cdot C_{28}H_{40}O_{10}$
VUYJIJ	2.064 Å	Fu, C.-H.; Zhou, X.; Yu, Q.; Bian, H.-D. *Acta Crystallogr., Sect. E* **2010**, *66*, m657. $[Mg(H_2O)_6](C_9H_7N_4O_2S)_2$
YOHJAI	2.064 Å	Fortes, A. D.; Gutmann, M. J. *Acta Crystallogr., Sect. E* **2014**, *70*, 134. $[Mg(H_2O)_6]SeO_4\cdot H_2O$
39218	2.065 Å	Avtamonova, N. V.; Trunov, V. K.; Makarevich, L. G. *Iz. Akad. Nauk SSSR, Neorg. Mater.* **1990**, *26*, 350-356. $Rb_2[Mg(H_2O)_6]V_{10}O_{28}\cdot 10H_2O$
236334	2.065 Å	Fortes, A. D.; Wood, I. G.; Gutmann, M. J. *Acta Crystallogr., Sect. C* **2013**, *69*, 324. $[Mg(H_2O)_6]SO_4\cdot 5H_2O$

281563	2.065 Å	Massa, W.; Yakubovich, O. V.; Dimitrova, O. V. *Acta Crystallogr., Sect. C* **2003**, *59*, i83. $Cs[Mg(H_2O)_6]PO_4$
710008	2.065 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2009**, *224*, 360. $Tl_2[Mg(H_2O)_6](SeO_4)_2$
ADULUJ	2.065 Å	Xu, X. Lu, Y.; Hu, F.; Xu, L.; Shuai, Q. *J. Coord. Chem.* **2016**, *69*, 3294. $[Mg(H_2O)_6][FeC_{18}H_{13}O_3]_2\cdot 2H_2O$
BEJYIZ	2.065 Å	Davies, H. O.; Park, J.-H.; Gillard, R. D. *Inorg. Chim. Acta* **2003**, *356*, 69. $[Mg(H_2O)_6][CuC_4H_8Cl_2N_2O_4]\cdot H_2O$
GANVUO	2.065 Å	Qiao, C.-F.; Zhou, C.-S. *Acta Crystallogr., Sect. E* **2012**, *68*, m173. $[Mg(H_2O)_6](C_8H_5N_8)_2\cdot 4H_2O$
HUYMIA	2.065 Å	Chen, Y.; Zhao, X; Gao, R.; Ruan, Z.; Lin, J.; Liu, S.; Tian, Z.; Chen, X. *J. Solid State Chem.* **2020**, *292*, 121674. $[Mg(H_2O)_6](C_3H_5N_2)[Tb(C_7H_3NO_4)_3]\cdot 0.5\ C_3H_4N_2\cdot 4H_2O$
NOQNIS	2.065 Å	Elahi, S. M.; Rajasekharan, M. V. *Eur. J. Inorg. Chem.* **2015**, 171. $[Mg(H_2O)_6]_2[CeC_{14}H_{12}N_3O_{12}]\cdot[CeC_{14}H_{12}N_3O_{11}]\cdot 2H_2O$
OMARID	2.065 Å	Cote, A. P.; Shimizu, G. K. H. *Chem. Eur. J.* **2003**, *9*, 5361. $[Mg(H_2O)_6]C_6H_4O_8S_2\cdot 3H_2O$
PUFYOF	2.065 Å	Wang, Y.-P.; Li, J.; Dong, H.-Z. *Acta Crystallogr., Sect. E* **2009**, *65*, m1436. $[Mg(H_2O)_6](C_9H_6N_3O_3S)_2\cdot 4H_2O$
QAJBOU	2.065 Å	Dai, J.; Chen, X.-Y. *Acta Crystallogr., Sect. E* **2011**, *67*, m113. $[Mg(H_2O)_6]Br_2\cdot 2C_6H_5N_5$
QOFVIS	2.065 Å	Zhang, R.; Zhang, Y.; Wang, J.; Ji, L.; Huang, X.; Wu, B. *Chin. J. Chem.* **2013**, *31*, 679. $[Mg(H_2O)_6](SO_4)_2\cdot 2(C_{24}H_{30}N_{10}O_3)$
RATRIN	2.065 Å	Marquis, D.; Greiving, H.; Desvergne, J.-P.; Lahrahar, N.; Marsau, P.; Hopf, H.; Bouas-Laurent, H. *Liebigs Ann.* **1997**, 97. $[Mg(H_2O)_6](ClO_4)_2\cdot C_{28}H_{40}O_{10}$
RUMQUL	2.065 Å	Zasurskaya, L. A.; Pozdnyak, A. L.; Polynova, T. N.; ;Rybakov, V. B.; Porai-Koshits, M. A. *Zh. Neorg. Khim.* **1996**, *41*, 1647. $[Mg(H_2O)_6][CoC_{10}H_{12}N_2O_8]_2\cdot 4H_2O$
ULAQEE	2.065 Å	Zheng, W.-N. *Acta Crystallogr., Sect. E* **2011**, *67*, m344. $[Mg(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$
XOSPOL	2.065 Å	Tai, X.-S.; Xu, J.; Feng, Y.-M.; Liang, Z.-P.; Wang, D.-Q. *Chin. J. Inorg. Chem.* **2009**, *25*, 552. $[Mg(H_2O)_6]C_{14}H_{10}N_2O_6S_2\cdot 2H_2O$
ZEQWEX	2.065 Å	McCann, M.; Kaddock, K.; Cardin, C.; Convery, M.; Ferguson, G. *Polyhedron* **1995**, *14*, 3655. $((C_2H_5)_3NH)_2[Mg(H_2O)_6][Mo_8O_{26}]\cdot 2H_2O$
16595	2.066 Å	Baur, W. H. *Acta Crystallogr.* **1964**, *17*, 1361-1369. $[Mg(H_2O)_6]SO_4\cdot H_2O$
135097	2.066 Å	Srinivasan, B. R.; Deshpande, M. S. *Optics & Laser Technol.* **2021**, *137*, 106864. $[Mg(H_2O)_6]SO_4\cdot H_2O$
CIRVAA01	2.066 Å	Vanhouteghem, F.; Lenstra, A. T. H.; Schweiss, P. *Acta Crystallogr. Sect. B* **1987**, *43*, 523. $[Mg((H_2O)_6](C_4H_3O_4)_2$

DERJOZ	2.066 Å	Matak-Vinkovic, D.; Vinkovic, M.; Dumic, M. *Croat. Chem. Acta* **1999**, *72*, 541. $[Mg(H_2O)_6](ClO_4)_2 \cdot 3C_{10}H_{14}O_4$
FAHSAI	2.066 Å	Cole, L. B.; Holt, E. M. *J. Chem. Soc., Perkin Trans. 2* **1986**, 1997. $[Mg(H_2O)_6](C_6H_3N_2O_5)_2 \cdot 2H_2O$
FUSMEO01	2.066 Å	Meng, X.; Kang, K.; Liang, F.; Tang, J.; Yin, W.; Lin, Z.; Xia, M. *Z. Inorg. Chem. Front.* **2020**, *7*, 3674. $[Mg(H_2O)_6](C_3H_2N_3O_3)_2 \cdot 2H_2O$
GAKPOY01	2.066 Å	Zhang, Z.; Gao, S.; Zhao, H.; Huo, L.; Zhao, J. *J. Nat. Sci. Heilongjiang Univ.* **2007**, *24*, 678. $[Mg(H_2O)_6](C_7H_6NO_3) \cdot 2H_2O$
GATLUI	2.066 Å	Lee, H.; Lynch, V. M.; Cao G.; Mallouk, T. E. *Acta Crystallogr. Sect. C* **1988**, *44*, 365. $((C_2H_5)_3NH)_2[Mg(H_2O)_6]((C_6H_5)_2CHPO_3H)_2 \cdot 2H_2O$
HAYZOZ	2.066 Å	Srinivasan, B. R.; Nather, K. T. D. C. *J. Chem. Sci. (Bangladore)* **2016**, *128*, 1765. $[Mg(H_2O)_6](p\text{-}NO_2C_6H_4CH_2COO)_2 \cdot 4H_2O$
IRUYEB02	2.066 Å	Huskic, I.; Friscic, T. *Cryst. Growth Des.* **2020**, *20*, 525. $[Mg((H_2O)_6][FeNaC_6H_{12}] \cdot 3H_2O$
JAXYUF	2.066 Å	Safin, A.; Railliet, A. P.; Robeyns, K.; Mitoraj, M. P.; Kubisiak, P.; Sagan, F.; Garcia, Y. *New J. Chem.* **2017**, *41*, 6210. $[Mg((H_2O)_6](C_3H_2N_7)_2$
NEMRUU	2.066 Å	Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Solid State Sci.* **2012**, *14*, 1503. $[Mg(H_2O)_6](CH_2)_4(NH_2)_2)(SO_4)_2 \cdot 6H_2O$
NIQLIJ01	2.066 Å	Tepavitcharova, S.; Rabadjieva, D.; Havlicek, D.; Nemec, I.; Vojtisek, P.; Plocek, J.; Koleva, Z. *J. Mol. Struct.* **2012**, *1018*, 113. $[Mg(H_2O)_6][Mg(H_2O)_4(OCOCH_2NH_3)_2](SO_4)_2$
OBENUH	2.066 Å	Huang, Y.-Q.; Cheng, H.-D.; Guo, B.-L.; Wan, Y.; Chen, H.-Y.; Li, Y.-K.; Zhao, Y. *Inorg. Chim. Acta* **2014**, *421*, 318. $[Mg(H_2O)_6](1\text{-}CH_2COO\text{-}4\text{-}COO\text{-}C_5H_4N)_2) \cdot 2H_2O$
OKUZIF	2.066 Å	Xiaojun, W.; Jin, S.; Li, L.; Chen, S.; Shu, Q. *Z. Kristallogr. - New Cryst. Struct.* **2016**, *231*, 305. $[Mg(H_2O)_6](C_2N_8O_2)_2$
QAKKIA01	2.066 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_2 \cdot 2H_2O$
QAKMUO	2.066 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_{1.32}(C_8H_{10}O_4)_{0.34} \cdot 2H_2O$
QERJIH	2.066 Å	Zhang, X.-F.; Gao, S.; Huo, L.-H.; Zhao, H. *Acta Crystallogr., Sect. E* **2007**, *63*, m1664. $[Mg(H_2O)_6](C_5H_3N_2O_4)_2 \cdot 2H_2O$
TOXDMG	2.066 Å	Neuman, M. A.; Steinrt, E. C.; van Remoortere, F. P.; Boer, F. P. *Inorg. Chem.* **1975**, *14*, 734. $[Mg(H_2O)_6]Cl_2 \cdot C_8H_{16}O_4$
ULAQEE01	2.066 Å	Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Solid State Sci.* **2012**, *14*, 1503. $[Mg(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$

UDIVIN	2.066 Å	Srinivasan, B. R.; Sawant, J. V.; Nather, C.; Bensch, W. *J. Chem. Sci. (Bangladore)* **2007**, *119*, 243. $[Mg(H_2O)_6](p\text{-}NO_2C_6H_4COO)_2\cdot 2H_2O$
ZEGJON	2.066 Å	Quarez, E.; Deunf, E.; Cadiou, V.; Gutel, T.; Boucher, F.; Guyomard, D.; Dolhem, F.; Poizot, P. *CrystEngComm* **2017**, *19*, 6787. $[Mg(H_2O)_6](C_{20}H_{14}N_2O_2)\cdot 2.8H_2O$
2917	2.067 Å	Suesse, P. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.*, **1972**, *135*, 34-55. $[Mg(H_2O)_6]Fe_4((OH)_2(SO_4)_6)\cdot 14H_2O$
32526	2.067 Å	Takagi, S.; Mathew, M.; Brown, W. E. *Acta Crystallogr., Sect B* **1982**, *38*, 44-50. $K[Mg(H_2O)_6]H(AsO_4)_2\cdot 3H_2O$
35665	2.067 Å	Elerman, Y.; Bats, J. W.; Fuess, H. *Acta Crystallogr,. Sect. C* **1983**, *39*, 515-518. $[Mg(H_2O)_6]S_2O_3$
252174	2.067 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *Phys. Chem. Miner.* **2016**, *43*, 287. $Na[Mg(H_2O)_6][Fe(C_2O_4)_3]\cdot 3H_2O$
252896	2.067 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, 1600621. $Na[Mg(H_2O)_6][Fe_{0.76}Al_{0.24}(C_2O_4)_3]\cdot 3H_2O$
433347	2.067 Å	Shen, C.; Mei, D.; Sun, C.; Liu, Y.; Wu, Y. *Z. Anorg. Allg. Chem.* **2017**, *643*, 1082. $Cs_3[Mg(H_2O)_6]_3(SeO_4)_3$
ESIDES	2.067 Å	Clegg, W.; Nichol, G. S. CCDC deposition number 2080578, **2021**. $[Mg(H_2O)_6](C_4H_3N_2O_3)_2\cdot 3H_2O$
FUSMEO	2.067 Å	Reckeweg, O.; Lissner, F.; Blaschkowski, B.; Gross, P.; Hoppe, H. A.; Schleid, T. *Z. Anorg. Allg. Chem.* **2020**, *646*, 1252. $[Mg(H_2O)_6](C_3H_2N_3O_3)_2\cdot 2H_2O$
GUHHOG	2.067 Å	Arranz Mascaros, P.; Cobo Domingo, J.; Godino, Salido, M.; Gutierrez Valero, M. D.; Lopez Garzon, R.; Low, J. N. *Acta Crystallogr. Sect. C* **2000**, *56*, e4. $[Mg(H_2O)_6](C_7H_8N_5O_4)_2\cdot 2H_2O$
LEFLOB	2.067 Å	Lorenz, V.; Liebing, P.; Müller, M.; Hilfert, L.; Feneberg, M.; Kluth, E.; Kuhling, M.; Buchner, M. R.; Goldhahn, R.; Edelmann, F. T. *Dalton Trans.* **2022**, *51*, 7975. $[Mg(H_2O)_6](C_6H_6N_3O_4)_2$
ONIJIH	2.067 Å	Gruhne, M. S.; Lommel, M.; Wurzenberger, M. H. H.; Klapotke, T. M.; Stierstorfer, J. *Inorg. Chem.* **2021**, *60*, 4816. $[Mg(H_2O)_6](O_2NN(CH_2)_2NNO_2)$
OXESUH	2.067 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *J. Coord. Chem.* **2015**, *68*, 3776. $[Mg(H_2O)_6][NaCrC_6O_{12}]\cdot 3H_2O$
NIQLIJ02	2.067 Å	Oguey, S.; Jacquier, Y.; Neels, A.; Stöckli-Evans, H. CCDC deposition number 936398, **2013**.
RAKYOR	2.067 Å	Cai, J.; Chen, C.-H.; Liao, C.-Z.; Feng, X.-L., Chen, X.-M. *Acta Crystallogr., Sect. B* **2001**, *57*, 520. $[Mg(H_2O)_6](C_{10}H_6O_6S_2)_2\cdot 2H_2O$
RIRGEF	2.067 Å	Tai, X.-S.; Yin, J.; Hao, M.-Y. *Z. Kristallogr. - New Cryst. Struct.* **2007**, *222*, 231. $[Mg(H_2O)_6](ClO_4)_2\cdot 2C_{10}H_{16}\cdot 2H_2O$
RODXOA	2.067 Å	Huskic, I.; Novendra, N.; Lim, D.-W.; Topic, F.; Titi, H. M.; Pekov, IS. V.; Krivovichev, S. V.; Navrotsky, A.; Kitagawa, H.; Friscic, T. *Chem. Sci.* **2019**, *10*, 4923. $[Mg((H_2O)_6][FeNaC_6H_{12}]$

SIMZUJ	2.067 Å	Bach, I.; Kumberger, O.; Schmidbaur, H. *Chem. Ber.* **1990**, *123*, 2267. $[Mg(H_2O)_6](C_5H_3N_2O_4)_2\cdot 2H_2O$
TEHJUN	2.067 Å	Draskovic, N. S.; Radanovic, D. D.; Rychlewska, U.; Warzajtis, B.; Stanojevic, I. M.; Djuran, M. I. *Polyhedron* **2012**, *43*, 185. $[Mg(H_2O)_6][NiC_{13}H_{18}N_2O_8]\cdot 4H_2O$
UMANEB	2.067 Å	Dalrymple, S. A.; Shimizu, G. K. H. *Supramol. Chem.* **2003**, *15*, 591. $[Mg(H_2O)_6]_3C_6(CH_2SO_3)_6\cdot 3(CH_3)_2CO$
UNEWEP	2.067 Å	Dhungana, S.; White, P. S.; Crumbliss, A. L. *J. Am. Chem. Soc.* **2003**, *125*, 14760. $[Mg(H_2O)_6][FeC_{25}H_{46}N_6O_8]_2(ClO_4)_4\cdot 2C_{16}H_{24}O_8\cdot C_2H_5OH\cdot 8H_2O$
VILLIM	2.067 Å	Mastropietro, T. F.; Armentano, D. Marino, N.; De Munno, G. *Polyhedron* **2007**, *27*, 4945. $[Mg(H_2O)_6](ClO_4)_2\cdot 2C_5H_5N_5$
YIKLAH	2.067 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2013**, *69*, 1292. $[Mg(H_2O)_6]Br_2$
CIVBUG	2.068 Å	Shi, J.; Wang, Y.-C.; Wang, Q.-Y.; Zhang, Z.-T. *Inorg. Chim. Acta* **2014**, *409*, 259. $[Mg(H_2O)_6](C_{17}H_{12}BrO_9S)_2\cdot 2H_2O$
CUPRUB	2.068 Å	Kennedy, A. R.; Andrikopoulos, P. C.; Arlin, J.-B.; Armstrong, D. R.; Duxbury, N.; Graham, D. V.; Kirkhouse, J. B. A. *Chem. Eur. J.* **2009**, *15*, 9494. $[Mg(H_2O)_6](C_{17}H_{20}N_3O_5S)_2\cdot 2.63H_2O$
DEHMIN	2.068 Å	Kennedy, A. R.; Kirkhouse, J. B. A.; Whyte, L. *Inorg. Chem.* **2006**, *45*, 2965. $[Mg(H_2O)_6]C_{16}H_{10}N_2O_7S_2\cdot 3.33H_2O$
EXUBOO	2.068 Å	Gao, F.; Meng, B.-H.; Wei, Y.-B. *Acta Crystallogr., Sect. C* **2004**, *60*, m360. $[Mg(H_2O)_6]_2[MgC_{16}H_{22}ClN_2O_{13}]\cdot 20H_2O$
GOBSIA	2.068 Å	Morgant, G.; d'Angelo, J.; Desmaele, D.; Dichi, E.; Sghaier, M.; Fraisse, B.; Retailleau, P.; Brumas, V.; Fiallo, M. M. L.; Tomas, A. *Polyhedron* **2008**, *27*, 2097. $[Mg(H_2O)_6](C_7H_4NO_5)_2$
IJIZIL	2.068 Å	Dai, J.; Chen, X.-Y. *Acta Crystallogr., Sect. E* **2011**, *67*, m171. $[Mg(H_2O)_6]Cl_2\cdot(C_6H_5N_5)_2$
MEBCAB	2.068 Å	Chen, X.; Wang, S.; Chen, Y.; Hu, Y.; Zhang, C.; Guo, Z.; Ma, H. *Appl. Organometal. Chem.* **2022**, *38*, e6497. $[Mg(H_2O)_6](C_4H_4N_{12}O_4)_2\cdot H_2O$
OKUTUL	2.068 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *Phys. Chem. Minerals* **2016**, *43*, 287. $[Mg(H_2O)_6][FeNaC_6O_{12}]\cdot 3H_2O$
NIMXOX	2.068 Å	Radanovic, D. D.; Rychlewska, U.; Warzajtis, B.; Cvijovic, M. S.; Dimitrijevic, M. D.; Djuran, M. I. *Polyhedron* **2007**, *26*, 4799. $[Mg(H_2O)_6][CoC_{12}H_{16}N_2O_8]\cdot 3H_2O$
PONGUV	2.068 Å	Miminoshvili, E. B.; Miminoshvili, K. E.; Beridze, L. A. *Zh. Strukt, Khim.* **2008**, *49*,787. $[Mg(H_2O)_6](C_{12}H_{13}N_4O_4S)_2\cdot 5H_2O$
QAKKOG	2.068 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_{1.72}(C_8H_{10}O_4)_{0.14}\cdot 2H_2O$

QORNOD	2.068 Å	Singh, R.; Kociok-Kohn, G.; Jassal, A. K.; Singh, L. *Polyhedron* **2020**, *175*, 114200. $[Mg(H_2O)_6](C_3H_7SO_3)_2$
QORNOD	2.068 Å	Singh, R.; Kociok-Kohn, G.; Jassal, A. K.; Singh, L. *Polyhedron* **2019**, *175*, 114200. $[Mg((H_2O)_6](C_3H_7SO_3)_2$
UDAPIB	2.068	Smith, G.; Wermuth, U. D. *Acta Crystallog., Sect. C* **2017**, *73*, 61. $[Mg(H_2O)_6](H_2NC_6H_4AsO_3)_2\cdot 4H_2O$
TAHKUJ	2.068 Å	Morris, J. E.; Squattrito, P. J.; Kirschbaum, K.; Pinkerton, A. A. *J. Chem. Cryst.* **2003**, *33*, 307. $[Mg(H_2O)_6](C_{10}H_8NO_3S)_2\cdot 2H_2O$
TUCGII	2.068 Å	Miletic, V. D.; Meetsma, A.; van Koningsbruggen, P. J.; Matovic, Z. D. *Inorg. Chem. Commun.* **2009**, *12*, 720. $[Mg(H_2O)_6][NiC_{11}H_{14}N_2O_8]\cdot 2H_2O$
XITDUZ	2.068 Å	Wiesbrock, F.; Schier, A.; Schmidbaur, H. *Z. Naturforsch., Teil B* **2002**, *57*, 251. $[Mg(H_2O)_6](C_7H_6NO_2)_2\cdot 2H_2O$
25713	2.069 Å	Margulis, T. N.; Templeton, D. H. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1962**, *117*, 344-357. $(NH_4)_2[Mg(H_2O)_6](SO_4)_2$
34705	2.069 Å	Baggio, S.; Amzel, L. M.; Becka, L. N. *Acta Crystallogr., Sect. B* **1969**, *25*, 2650-2653. $[Mg(H_2O)_6]S_2O_3$
35664	2.069 Å	Elerman, Y.; Bats, J. W.; Fuess, H. *Acta Crystallogr., Sect. C* **1983**, *39*, 515-518. $[Mg(H_2O)_6]S_2O_3$
AWIXEM	2.069 Å	Kalinowska, M.; Golebiewska, E.; Mazur, L.; Lewandowska, H.; Pruszynski, M.; Swiderski, G.; Wyrwas, M.; Pawluczuk, N.; Lewandowski, W. *Materials* **2021**, *14*, 3236. $[Mg(H_2O)_6](C_{10}H_9O_2)_2\cdot 6H_2O$
IRUYEB	2.069 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, e1600621. $[Mg(H_2O)_6][FeNaC_6O_{12}]\cdot 3H_2O$
OKUTUL03	2.069 Å	Huskic, I.; Novendra, N.; Lim, D.-W.; Topic, F.; Titi, H. M.; Pekov, IS. V.; Krivovichev, S. V.; Navrotsky, A.; Kitagawa, H.; Friscic, T. *Chem. Sci.* **2019**, *10*, 4923. $[Mg((H_2O)_6][FeNaC_6H_{12}]\cdot 3H_2O$
QAJYEJ	2.069 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_2\cdot 2H_2O$
QAJYEJ01	2.069 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_2\cdot 2H_2O$
ULULUK	2.069 Å	Skieneh, J.; Najafabadi, B. K.; Horne, S.; Rohani, S. *Molecules* **2016**, *21*, 544. $Mg(H_2O)_6][MgC_{51}H_{54}N_9O_9S_3]2\cdot 6C_4H_9OH\cdot 6H_2O$
XAGVAF	2.069 Å	Piro, O. E.; Echeverria, G. A.; Parajon-Costa, B. S.; Baran, E. J. *Z. Naturforsch., Teil B* **2016**, *71*, 51. $[Mg(H_2O)_6](C_4H_4NO_4S)_2$
YIZWUZ	2.069 Å	Suh, J.-S.; Shin, J.-Y.; Yoon, C.; Lee, K.-W.; Suh, I.-H.; Lee, J.-H.; Ryu, B.-Y.; Lim., S.-S. *Bull. Korean Chem. Soc.* **1994**, *15*, 245. $[Mg(H_2O)_6][CrNaC_6O_{12}]\cdot 4H_2O$
588	2.070 Å	Yamashita, K.; Komatsu, K.; Hattori, T.; Machida, S.; Kagi, H. *Acta Crystallogr., Sect. C* **2019**, *75*, 1605. $[Mg(D_2O)_{5.76}(H_2O)_{0.24}]Cl_2$

26368	2.070 Å	Ledesert, M.; Monier, J.-C. *Acta Crystallogr. Sect. B* **1981**, *37*, 652-654. $Cd[Mg(H_2O)_6]_2Cl_6$
29384	2.070 Å	Calleri, M.; Gavetti, A.; Ivaldi, G.; Rubbo, M. *Acta Crystallogr. Sect. B* **1984**, *40*, 218-222. $[Mg(H_2O)_6]SO_4{\cdot}H_2O$
32101	2.070 Å	Mayer, H.; Mereiter, K. *Tschermaks Mineralogische und Petrographische Mitteilungen* **1986**, *35*, 133-146. $[Mg(H_2O)_6]_2(UO_2(CO_3)_3)\cdot 6H_2O$
39217	2.070 Å	Avtamonova, N. V.; Trunov, V. K.; Makarevich, L. G. *Iz. Akad. Nauk SSSR, Neorg. Mater.* **1990**, *26*, 350-356. $(NH_4)_2[Mg(H_2O)_6]V_{10}O_{28}{\cdot}10H_2O$
252175	2.070 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *Phys. Chem. Miner.* **2016**, *43*, 287. $Na[Mg(H_2O)_6][Fe_{0.45}Al_{0.55}(C_2O_4)_3]{\cdot}3H_2O$
409746	2.070 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2003**, *218*, 409. $Cs_2[Mg(H_2O)_6](SeO_4)_2$
419834	2.070 Å	Weil, M. *Cryst. Res. Technol.* **2008**, *43*, 1286. $Rb[Mg(H_2O)_6]PO_4$
BUVRAM	2.070 Å	Fischer, N. V.; Inayat, A.; Schwieger, W.; Burzlaff, N. *J. Coord. Chem.* **2010**, *63*, 2831. $[Mg(H_2O)_6](C_5H_4N_3O_2)_2$
CADZEO	2.070 Å	Fischer, N.; Klapotke, T. M.; Peters, K.; Rusan, M.; Stierstorfer, J. *Z. Anorg. Allg. Chem.* **2011**, *637*, 1693. $[Mg(H_2O)_6]C_2N_8{\cdot}3H_2O$
DAWVON	2.070 Å	Rychlewska, U.; Guresic, D. M.; Warzajtis, B.; Radanovic, D. D.; Djuran, M. I. *Polyhedron* **2005**, *24*, 2009. $[Mg(H_2O)_6][CdC_{11}H_{16}N_2O_9]{\cdot}2H_2O$
DELBIH	2.070 Å	Sieranski, T.; Kruszynski, R. *J. Thermal Anal. Calorimetry* **2012**, *109*, 141. $[Mg(H_2O)_6]SO_4{\cdot}2C_6H_{12}N_4{\cdot}5H_2O$
GUCSUU	2.070 Å	Sene, S.; Begu, S.; Gervais, C.; Renaudin, G.; Mesbah, A.; Smith, M. E.; Hubert Mutin, P.; van der Lee, A.; Nedelec, J.-M..; Bonhomme, C.; Laurencin, D. *Chem. Mater.* **2015**, *27*, 1242. $[Mg(H_2O)_6][C_7H_8BO_3]{\cdot}4H_2O$
NIQLIJ	2.070 Å	Elayaraja, K.; Parthiban, S. P.; Ramalingom, S.; Bocelli, G.; Kalkura, S. N. *Acta Crystallogr., Sect. E* **2007**, *63*, m2901. $[Mg(H_2O)_6](C_{10}H_{16}O_4S)_2$
OKUVAT03	2.070 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *J. Coord. Chem.* **2015**, *68*, 3776. $[Mg(H_2O)_6][NaAlC_6O_{12}]{\cdot}3H_2O$
QAKKIA	2.070 Å	Shang, W.; Schlam, R. F.; Hickey, M. B.; Zhou, J.; Wheeler, K. A.; de Delgado, G. C. D.; Chen, C.-H.; Snider, B. B.; Foxman, B. M. *Cryst. Growth Des.* **2021**, *21*, 663. $[Mg(H_2O)_6](CH_3(CH)_2COO)_2{\cdot}2H_2O$
QOGYUI	2.070 Å	Zhang, X.-B.; Ren, Y.-H.; Li, W.; Zhao, F.-Q.; Wang, B.-Z.; Song, J.-R. *Chem. Res. Chin. Univ.* **2013**, *29*, 627. $[Mg(H_2O)_6](C_4H_2N_{14}){\cdot}2H_2O$
TUHMOZ01	2.070 Å	Ji-Hua Deng, Ya-Qiong Wen, Jie Luo, Zhi-Qiang Huang, Di-Chang Zhong, D.-C. *J. Mol. Struct.* **2017**, *1142*, 211. $[Mg(H_2O)_6](C_8H_5N_8)_2{\cdot}2H_2O$

YIBROR	2.070 Å	Rychlewska, U.; Warzajtis, B.; Cvetic, D.; Radanovic, D. D.; Guresic, D. M.; Djuran, M. I. *Polyhedron* **2007**, *26*, 1717. $[Mg(H_2O)_6][MnC_{11}H_{16}N_2O_9]\cdot 2H_2O$
YUNNAY	2.070 Å	Shopov, D. Y.; Campos, J.; Brudvig, G. W.; Crabtree, R. H. *J. Am. Chem. Soc.* **2015**, *137*, 7243. $[Mg(H_2O)_6]Cl_2\cdot 2[IrC_{24}H_{30}N_3O_3]\cdot 2(CH_3)_2CO\cdot CH_2Cl_2$
2503	2.071 Å	Ferraris, G.; Franchini-Angela, M. *Acta Crystallogr., Sect. B* **1973**, *29*, 286-292. $[Mg(H_2O)_6]HAsO_4)\cdot H_2O$
9134	2.071 Å	Mathern, G.; Weiss, R. *Acta Crystallogr., Sect. B* **1971**, *27*, 1598-1609. $K[Mg(H_2O)_6]Nb(O_2)_4\cdot H_2O$
30504	2.071 Å	Mathew, M.; Schroeder, L. W. *Acta Crystallogr. Sect. B* **1979**, *35*, 11-13. $K[Mg(H_2O)_6]PO_4\cdot H_2O$
162313	2.071 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 74. $K_2[Mg(H_2O)_6](SO_4)_2$
236113	2.071 Å	Wildner, M.; Marinova, D.; Stoilova, D. *Int. Res. J. Pure Appl. Chem.* **2016**, *13*, 1. $Rb_2[Mg(H_2O)_6](CrO_4)_2$
260246	2.071 Å	Unruh, D. K.; Burtner, A. Burns, P. C. *Inorg. Chem.* **2009**, *48*, 2346. $K_2[Mg(H_2O)_6][(UO_2)_3(O_2)_8]\cdot 2H_2O$
409719	2.071 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2003**, *218*, 265. $Rb_2[Mg(H_2O)_6](SeO_4)_2$
409998	2.071 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2009**, *224*, 351. $K_2[Mg(H_2O)_6](SeO_4)_2$
432035	2.071 Å	Hoeppe, H. A.; Scharinger, S. W.; Heck, J. G.; Gross, P.; Netzsch, P.; Kazmierczak, K. *Solid State Sci.* **2016**, *62*, 50. $Na[Mg(H_2O)_6](PO_3S)\cdot 3H_2O$
DAMZAT	2.071 Å	Somsook, E.; Rujeeratanavorapan, V.; Pisitsak, P.; Suriyarak, S.; Prabpai, S.; Kongsaeree, P.; Pohmakotr, M. *Z. Kristallogr. – New Cryst. Struct.* **2004**, *219*, 319. $[Mg(H_2O)_6](C_{18}H_{13}O_4)_2\cdot 4H_2O$
DAWVON01	2.071 Å	Rychlewska, U.; Warzajtis, B.; Cvetic, D.; Radanovic, D. D.; Guresic, D. M.; Djuran, M. I. *Polyhedron* **2007**, *26*, 1717. $[Mg(H_2O)_6][CdC_{11}H_{16}N_2O_9]\cdot 2H_2O$
LOJVOY	2.071 Å	Xanthopoulos, K.; Anagnostou, Z.; Chalkiadakis, S.; Choquesillo-Lazarte, D.; Mezei, G.; Zareba, J. K.; Zon, J.; Demadis, K. D. *Crystals* **2019**, *9*, 301. $[Mg((H_2O)_6](p\text{-}H_3NC_6H_4CHPO_3)_2\cdot 6H_2O$
MAZLOO	2.071 Å	Hermann, J.; Erxleben, A. *Inorg. Chim. Acta* **2000**, *304*, 125. $[Mg(H_2O)_6][ZnC_{30}H_{30}N_{16}O_4]\cdot 6H_2O$
YODWUK	2.071 Å	Riesen, H.; David Rae, A. *Dalton Trans.* **2008**, 4717. $[Mg(H_2O)_6]_3[Al_3Na_3C_{18}O_{36}]\cdot 9H_2O$
10080	2.072 Å	Schroeder, L. W.; Mathew, M.; Brown, W. E. *J. Phys. Chem.* **1978**, *82*, 2335-2340. $[Mg(H_2O)_6]_3(PO_4)_2\cdot 4H_2O$
14269	2.072 Å	Whitaker, A.; Jeffery, J. W. *Acta Crystallogr., Sect. B* **1970**, *26*, 1429-1439. $NH_4[Mg(H_2O)_6]PO_4$
39216	2.072 Å	Avtamonova, N. V.; Trunov, V. K.; Makarevich, L. G. *Iz. Akad. Nauk SSSR, Neorg. Mater.* **1990**, *26*, 350-356. $K_2[Mg(H_2O)_6][V_{10}O_{28}]\cdot 10H_2O$

409737	2.072 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2003**, *218*, 409. $Cs_2[Mg(H_2O)_6](SO_4)_2$
AFEXEQ	2.072 Å	Martsinko, E. E.; Minacheva, L. K.; Chebanenko, E. A.; Seifullina, I. I.; Sergienko, V. S.;Churakov, A. V. *Zh. Neorg. Khim.* **2013**, *58*, 588. $[Mg(H_2O)_6][SnC_{12}H_{10}O_{14}]\ ]\cdot 4H_2O$
AXIMOJ	2.072 Å	Liu, W.-L.; Zou, Y.; Ni, C.-L.; Ni, Z.-P.; Li, Y.-Z.; Yao, Y.-G.; Meng, Q.-J. *Polyhedron* **2004**, *23*, 849. $[Mg(H_2O)_6][CuC_{13}H_{12}N_3O_5]_2\cdot 3.5H_2O$
FUYCOS03	2.072 Å	Missina, J. M.; Conti, L.; Rossi, P.; Ienco, A.; Nunes, G. G.; Valtancoli, B.; Chelazzi, L.; Paoli, P. *Inorg. Chim. Acta.* **2021**, *523*, 120319. $[Mg(H_2O)_6](p\text{-}C_6H_4(CH_2C_3H_7)(CH(CH_3)COO))_2\cdot 2H_2O$
LUTVUS	2.072 Å	Monteiro, B.; Cunha-Silva, L.; Gago, S.; Klinowski, J.; Paz, F. A. A.; Rocha, J.; Goncalves, I. S.; Pillinger, M. *Polyhedron* **2010**, *29*, 719. $((CH_3)_4N)_4[Mg(H_2O)_6][MoC_{14}H_7O_{10}]_2\cdot 13H_2O$
WABFOW	2.072 Å	Pasdar, H.; Heidari, S.; Aghabozorg, H.; Notash, B. *Acta Crystallogr., Sect. E* **2010**, *66*, m657. $[Mg(H_2O)_6](C_7H_4NO_4)_2$
WOPXOQ	2.072 Å	Hassan, D. b.; Rekik, W.; Naili, H.; Mhiri, T. *Chem. Papers* **2014**, *68*, 210. $[Mg(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
YADGOB	2.072 Å	Schau-Magnussen, M.; Gorbanev, Y. Y.; Kegnaes, S.; Riisager, A. *Acta Crystallogr., Sect. C* **2011**, *67*, m327. $[Mg(H_2O)_6]C_6H_2O_5$
ZUKSAC	2.072 Å	Huskic, I.; Friscic, T. *Cryst. Growth Des.* **2020**, *20*, 525. $[Mg((H_2O)_6][GaNaC_6H_{12}]\cdot 3H_2O$
16035	2.073 Å	Baggio, S.; Amzel, L.; Becka, L. N. *Acta Crystallogr., Sect. B* **1969**, *25,* 1650-2653. $[Mg(H_2O)_6]S_2O_3$
16111	2.073 Å	Ferraris, G.; Jones, D. W. *J. Chem. Soc., Dalton Trans.* **1973**, 816. $[Mg(H_2O)_6]SO_4\cdot H_2O$
32527	2.073 Å	Takagi, S.; Mathew, M.; Brown, W. E. *Acta Crystallogr., Sect B* **1982**, *38*, 44-50. $K[Mg(H_2O)_6]H(PO_4)_2\cdot 3H_2O$
56834	2.073 Å	Nagel, R.; Botova, M.; Pracht, G.; Suchanek, E.; Maneva, M.; Lutz, H. D. *Z. Naturforsch., Teil B* **1999**, *54*, 999-1008. $H_4[Mg(H_2O)_6](IO_5)_2$
170694	2.073 Å	Messouri, I.; El Bali, B.; Capitelli, F.; Piniella, J. F.; Lachkar, M.; Slimani, Z. *Acta Crystallogr., Sect. E* **2005**, *61*, i129. $(NH_4)_2[Mg(H_2O)_6]_2(HPO_4)_3$
236112	2.073 Å	Wildner, M.; Marinova, D.; Stoilova, D. *Int. Res. J. Pure Appl. Chem.* **2016**, *13*, 1. $Cs_2[Mg(H_2O)_6](CrO_4)_2$
252895	2.073 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, 1600621. $Na[Mg(H_2O)_6][Fe_{0.4}Al_{0.6}(C_2O_4)_3]\cdot 3H_2O$
409875	2.073 Å	Hinrichs, F.; Gjikaj, M. *Z. Kristallogr.* **2006**, *221*, 121. $(NH_4)_2[Mg(H_2O)_6](P2O_6)\cdot 2H_2O$
APOJIZ	2.073 Å	Li, S.-J.; Song, W.-D.; Miao, D.-L.; Ma, D.-Y. *Acta Crystallogr., Sect. C* **2011**, *67*, m105. $[Mg(H_2O)_6][Cu_2C_{16}H_4N_2O_{14}]\cdot 2H_2O$
BAWGOV	2.073 Å	Smith, G. O'Reilly, E. J.; Kennard, C. H. L. *Cryst. Struct. Commun.* **1981**, *10*, 1277. $[Mg(H_2O)_6](C_6H_2Cl_3N_2O_2)_2\cdot 4H_2O$

FEDQUA	2.073 Å	Harrowfield, J. M.; Sharma, R. P.; Skelton, B. W.; Venugopalam, P.; White, A. H. *Aust. J. Chem.* **1998**, *51*, 775. $[Mg(H_2O)_6](p\text{-}NOC_6H_4O)_2\cdot 2H_2O$
GADZAP	2.073 Å	Zhu, J.; Jin, S.; Wan, L. Zhang, C.; Li, L.; Chen, S.; Shu, Q. *Dalton Trans.* **2016**, *45*, 3590. $[Mg(H_2O)_6](C_4H_3N_8O_2)_2\cdot 4H_2O$
NOPPUE	2.073 Å	Klapotke, T. M.; Minar, N. K.; Stierstorfer, J. *Polyhedron* **2009**, *28*, 13. $[Mg(H_2O)_6](C_4H_6N_{11})_2\cdot 6H_2O$
OKUVAT	2.073 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *Phys. Chem. Minerals* **2016**, *43*, 287. $[Mg(H_2O)_6][AlNaC_6O_{12}]\cdot 3H_2O$
TUCMEL	2.073 Å	Gruene, T.; Sheldrick, G. M.; Zlatopolskiy, B. D.; Kozhushkov, S. I.; de Meijere, A. *Z. Naturforsch., Teil B* **2014**, *69*, 945. $[Mg(H_2O)_6](CH_3CH(O)CH_3)_2\cdot 2(C_{55}H_{69}ClN_{10}O_{14})\cdot 12H_2O$
TUHMOZ	2.073 Å	Peli, G. Masciocchi, N.; Garlaschelli, L.; Aprea, A.; Maspero, A. *Inorg. Chim. Acta* **2009**, *362*, 4630. $[Mg(H_2O459)_6](C_8H_5N_8)_2\cdot 2H_2O$
9341	2.074 Å	Whitaker, A. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1973**, *137*, 194, 246. $[Mg(H_2O)_6]HAsO_4\cdot H_2O$
80936	2.074	Waisumi, K.; Masudam H.; Fukushima, N. *Inorg Chim. Acta* **1995**, *238*, 121. $[Mg(H_2O)_6]_2[MnCl_6]$
252894	2.074 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, 1600621. $Na[Mg(H_2O)_6][Fe(C_2O_4)_3]\cdot 3H_2O$
CANRIW	2.074 Å	Singha, S.; Khanra, B.; Goswami, S.; Mondal, R.; Jana, R.; Dey, A.; Dey, S. K.;Ray, P. P.; Rizzoli, C.; Saha, R.; Kumar, S. *New. J. Chem.* **2021**, *45*, 20596. $[Mg(H_2O)_6][Co(H_2O)_2(C_7H_3NO_4)_2]\cdot 4H_2O$
CUSZEY	2.074 Å	Chen, Y.; Gao, R.; Zhao, X.; Ruan, Z.; Lin, J.; Tian, Z.; Liu, S. *J. Mol. Struct.* **2021**, *1224*, 120301. $[Mg(H_2O)_6](C_3H_5N_2)[Dy(C_7H_3NO_4)_3]\cdot 7H_2O$
DEVTUW	2.074 Å	Su, Q.; Wang, X. J.; Shu, Q. H.; Jin, S. H.; Chen, S. S.; Li J.-L. *J. Heterocycl. Chem.* **2018**, *55*, 481. $[Mg((H_2O)_6](C_4H_2N_{10}O_4)$
FEDQUA01	2.074 Å	Muthuraman, M.; Bordet, P.; Le Fur, Y. *Z. Kristallogr.-New. Cryst. Struct.* **1999**, *214*, 527. $[Mg(H_2O)_6](p\text{-}NOC_6H_4O)_2\cdot 2H_2O$
FUYCOS	2.074 Å	Chow, E. H. H.; Strobridge, F. C.; Friscic, T. *Chem. Commun.* **2010**, *46*, 6368. $[Mg(H_2O)_6](C_{13}H_{17}O_2)_2\cdot 2H_2O$
HETZUB	2.074 Å	Kariuki, B. M.; Valim, J. B.; Jones, W.; King, J. *Acta Crystallogr., Sect. C* **1994**, *50*, 1665. $[Mg(H_2O)_6](p\text{-}OOCCHCH\text{-}C_6H_4Cl)_2\cdot 2H_2O$
IWOYEY	2.074 Å	Liu, J.-W.; Gao, S.; Huo, L.-H.; Dong, Y.; Zhao, H. *Acta Crystallogr., Sect. E* **2004**, *60*, m845. $[Mg(H_2O)_6]C_{10}H_8O_6\cdot 3H_2O$
KAYQUY	2.074 Å	Yang, G.-W.; Wang, B.-J.; Shen, Z.-T.; Li, Q.-Y.; Ji, C.; Shen, X.-F.; He, M.-H. *J. Coord. Chem.* **2012**, *65*, 2657. $[Mg(H_2O)_6](C_5H_3N_6)_2$
MGCITD	2.074 Å	Johnson, C. K. *Acta Crystallogr.* **1965**, *18*, 1004. $[Mg(H_2O)_6][MgC_6H_7O_8]_2\cdot 2H_2O$

NIMXUD	2.074 Å	Radanovic, D. D.; Rychlewska, U.; Warzajtis, B.; Cvijovic, M. S.; Dimitrijevic, M. D.; Djuran, M. I. *Polyhedron* **2007**, *26*, 4799. $[Mg(H_2O)_6][NiC_{12}H_{16}N_2O_8]\cdot 3H_2O$
14365	2.075 Å	Weiss, R.; Wendling, J. P.; Grandjean, D. *Acta Crystallogr.* **1966**, *20*, 563-566. $[Mg(H_2O)_6]SeO_3$
172340	2.075 Å	Abdallah, K. I.; Mohamed, S.; Mohamed, R.; Abdelhalim, G. *Acta Crystallogr., Sect. C* **2006**, *62*, i43. $(NH_4)_2[Mg(H_2O)_6]_2(HPO_4)_3$
419837	2.075 Å	Weil, M. *Cryst. Res. Technol.* **2008**, *43*, 1286. $Tl[Mg(H_2O)_6]PO_4$
FEDQUA02	2.075 Å	Shirin, S.; Roy, S.; Rao, A.; Pillai, P. P. *J. Phys. Chem. C* **2020**, *124*, 19157. $[Mg((H_2O)_6](p\text{-}NO_2C_6H_4O)_2\cdot 2H_2O$
GAYJAU	2.075 Å	Witty, M.; Dingra, N. N.; Abboud, K. A.; Felts, A. C.; Theppawut; Ayudhya, I. N. *Anal. Letters* **2017**, *50*, 2549. $NH_4[Mg((H_2O)_6]PO_4$
JOKQOQ	2.075 Å	Kiseleva, E. A.; Troyanov, S. I.; Korenev, Y. M. *Koord. Khim.* **2007**, *33*, 89. $[Mg(H_2O)_6](t\text{-}C_4H_9COO)_2\cdot 3H_2O$
KAVBUE	2.075 Å	Solans, X.; Gali, S.; Font-Altaba, M.; Oliva, J.; Herrera, J. *Afinidad* **1988**, *45*, 243. $[Mg(H_2O)_6][MnC_{10}H_{14}N_2O_9)_2\cdot 2H_2O$
MGHBZA21	2.075 Å	Luo, Y.-H. CCDC deposition number 890730, **2016**. $[Mg(H_2O)_6](p\text{-}OOCC_6H_4OH)_2)_2\cdot 2H_2O$
OHISUW	2.075 Å	Chang, X.; Jiang, L.-T.; Chen, S.-C.; He, M.-Y.; Chen, Q. *J. Coord. Chem.* **2020**, *73*, 439. $[Mg(H_2O)_6][Cu_2MgC_{52}H_{36}N_{20}O_{12})_3]\cdot 8H_2O$
QUGLAI	2.075 Å	Kerber, W. D.; Hartnett, D. S.; Wang, A.; Mafrice, C. H.; Siegler, M. A. *Inorg. Chim. Acta* **2020**, *506*, 119547. $[Mg(H_2O)_6][Mg_2C_{16}H_{22}FN_2O_{13}]_2\cdot 14H_2O$
UDIVIN01	2.075 Å	Arlin, J.-B.; Florence, A. J.; Johnston, A.; Kennedy, A. R.; Miller, G. J.; Patterson, K. *Cryst. Growth Des.* **2011**, *11*, 1318. $[Mg(H_2O)_6](p\text{-}NO_2C_6H_4OH)_2\cdot 2H_2O$
23668	2.076 Å	Suesse, P. *Neues Jahrbuch für Mineralogie. Monatshefte* **1973**, 93. $Na[Mg(H_2O)_6]_2Fe_5(SO_4)_7(OH)_6\cdot 24H_2O$
24841	2.076 Å	Elerman, Y.; Fuess, H.; Joswig, W. *Acta Crystallogr. Sect. B* **1982**, *38*, 1799. $[Mg(H_2O)_6]S_2O_3$
112809	2.076 Å	Yuan, F.; Hu, L.; Bai, Z.; Liu, L.; Huang, Y.; Zhang, L.; Wei, D.; Lin, Z. *Inorg. Chem.* **2021**, *60*, 8103. $K[Mg(H_2O)_6]PO_4$
404779	2.076 Å	Peter, S.; Suchanek, E.; Esser, D.; Lutz, H. D. *Z. Naturforsch, Teil B.* **1996**, *51*, 1072. $[Mg(H_2O)_6](BrO_3)_2$
430263	2.076 Å	Yelovik, N. A.; Mironov, A. V.; Bykov, M. A.; Kuznetsov, A. N.; Grigorieva, A. V.; Wie, Z.; Dikarev, E. V. Shevelkov, A. V. *Inorg. Chem.* **2016**, *55*, 4132. $[Mg(H_2O)_6][Bi_2I_8]$
434667	2.076 Å	Weil, M. *Z. Naturforsch., Teil B* **2019**, *74*, 9. $K[Mg(H_2O)_6]AsO_4$
AQMEDA	2.076 Å	Julian, M. O.; Day, V. W.; Hoard, J. L. *Inorg. Chem.* **1973**, *12*, 1754. $[Mg(H_2O)_6]C_{10}H_{14}N_2O_8$
AQOKEY	2.076 Å	Fujita, M.; Kazerouni, A. M..; Bacsa, J. *Acta Crystallogr., Sect. C* **2016**, *72*, 627. $[Mg(H_2O)_6](CF_3SO_3)_2\cdot C_{54}H_{90}N_6O_{18}\cdot 3H_2O$

DANFUU	2.076 Å	Costes, J.-P.; Clemente-Juan, J. M.; Dahan, F.; Milon, J. *Inorg. Chem.* **2004**, *43*, 8200. $[Mg(H_2O)_6][CuC_{11}H_{13}N_2O_3]_2 \cdot 3H_2O$
SOMSUK	2.076 Å	Piro, O. E.; Echeverria, G. A.; Gonzalez-Baro, A. C.; Baran, E. J. *J. Coord. Chem.* **2015**, *68*, 3776. $[Mg(H_2O)_6][NaCrC_6O_{12}] \cdot 3H_2O$
20220	2.077 Å	Serezhkin, V. N.; Soldatkina, M. A.; Efremov, V. A. *Zh. Strukt. Khim.* **1981**, *22*, 174. $[Mg(H_2O)_6]UO_2(SO_4)_2 \cdot 3H_2O$
44890	2.077 Å	Fernandez Gonzalez, R.; Lopez de Lerma, J. *Anales de la Real Sociedad Espanola de Fisica y Quimica. Serie A: Fisica* **1955**, *51*, 29. $NH_4[Mg(H_2O)_6]AsO_4$
BIKPUG	2.077 Å	Cingi, M. B.; Lanfredi, A. M. M.; Tiripicchio, A.; Bandoli, G.; Clemente, D. A. *Inorg. Chim. Acta* **1981**, *52*, 237. $[Mg(H_2O)_6]Br_2 \cdot 2C_8H_{10}N_4O_2$
419835	2.077 Å	Weil, M. *Cryst. Res. Technol.* **2008**, *43*, 1286. $Rb[Mg(H_2O)_6]AsO_4$
132052	2.077 Å	Rincke, C.; Schmidt, H.; Buth, G.; Voigt, W. *Acta Crystallogr., Sect. C* **2020**, *76*, 741. $[Mg(H_2O)_6] \cdot MgCl_2 \cdot H_2O$
252898	2.077 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, 1600621. $Na[Mg(H_2O)_6][Fe_{0.32}Al_{0.68}(C_2O_4)_3] \cdot 3H_2O$
GUVJUE	2.077 Å	Kovalenko, E. A.; Samsonenko, D.G.; Naumov, D. Y.; Fedin, V. P. *Zh. Strukt. Khim.* **2014**, *55*, S274. $[Mg(H_2O)_6](p\text{-}C_6H_4(COO)_2) \cdot C_{36}H_{36}N_{24}O_{12} \cdot 14H_2O$
IQOSUF	2.077 Å	Liu, J.-J.; Sun, Z.-L.; Liu, J.; Xia, S.-B. *J. Mol. Struct.* **2021**, *1238*, 130444. $[Mg(H_2O)_6](C_{26}H_{14}N_2O_8) \cdot H_2O$
ZAZQUP	2.077 Å	Kamburov, S.; Schmidt, H.; Voigt, W.; Balarew, C. *Acta Crystallog., Sect. C* **2017**, *73*, 582. $[Mg(H_2O)_6][NaSeO_4(H_2O)_2]$
43309	2.078 Å	Montgomery, H.; Lingafelter, E. C. *Acta Crystallogr.* **1964**, *17*, 1478-1479. $(NH_4)_2[Mg(H_2O)_6](SO_4)_2$
CIKYEC	2.078 Å	Shankar, K.; Das, B.; Baruah, J. B. *Eur. J. Inorg. Chem.* **2013**, 6147. $[Mg(H_2O)_6][CuC_{14}H_6N_2O_8]\ ] \cdot 2H_2O$
IXOJAJ	2.077 Å	Karaer, E.; Kose, D. A.; Sahin, Z. S.; Sahin, O. *J. Mol. Struct.* **2021**, *1244*, 130970. $[Mg(H_2O)_6](C_9H_5O_3)_2$
MGABES	2.078 Å	Broomhead, J. M.; Nicol, A. D. I. *Acta Crystallogr.* **1948**, *1*, 88. $[Mg(H_2O)_6](C_6H_5SO_3)_2$
QIWGIO	2.078 Å	Kobayashi, A.; Ohba, T.; Saitoh, E.; Suzuki, Y.; Noro, S.; Chang, H.-C.; Kato, M. *Inorg. Chem.* **2014**, *53*, 2910. . $[Mg(H_2O)_6][MgRuC_{36}H_{24}N_6O_{15}]$
2531	2.079 Å	Ferraris, G.; Franchini-Angela, M. *Acta Crystallogr., Sect B* **1973**, *29*, 859. $NH_4[Mg(H_2O)_6]AsO_4$
CDEDTA11	2.079 Å	Solans, X.; Gali, S.; Font-Altaba, M.; Oliva, J.; Herrera, J. *Acta Crystallogr. Sect. C* **1983**, *39*, 438. $[Mg(H_2O)_6][Cd(C_{10}H_{14}N_2O_9)_2 \cdot 3H_2O$
ETATIF	2.079 Å	Louati, M;.; Ksiksi, R.; Elbini-Dhouib, I.; Mlayah-Bellalouna, S.; Doghri, R.; Srairi-Abid, N; Zid, M.-F. *J. Mol. Struct.* **2021**, *1242*, 130711. $[Mg(H_2O)_6](C_4H_7N_2)_4[V_{10}O_{28}] \cdot 4H_2O$

GELTEX	2.079 Å	Kontturi, M.; Kunnas-Hiltunen, S.; Vepsalainen, J. J.; Ahlgren, M. *Solid State Sci.* **2006**, *8*, 1098. $[Mg(H_2O)_6][Mg_2C_2H_4Cl_4O_{14}P_4]\cdot 14H_2O$
MGCITD01	2.079 Å	Kaduk, J. A. *Acta Crystallogr. Sect. E* **2020**, *76*, 1611. $[Mg(H_2O)_6][MgC_6H_7O_8)_2\cdot 2H_2O$
10423	2.080 Å	Wan, C.; Ghose, S. *Am. Mineral.* **1977**, *62*, 1135. $[Mg(H_2O)_6]B_4O_5(OH)_4\cdot H_2O$
20128	2.080 Å	Razmanova, Z. P.; Rumanova, I. M.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1969**, *189*, 1003. $[Mg(H_2O)_6]_2B_6O_{11}\cdot 3H_2O$
29385	2.080 Å	Abbona, F.; Calleri, M.; Ivaldi, G. *Acta Crystallogr. Sect. B* **1984**, *40*, 223. $NH_4[Mg(H_2O)_6]PO_4$
419836	2.080 Å	Weil, M. *Cryst. Res. Technol.* **2008**, *43*, 1286. $Tl[Mg(H_2O)_6]AsO_4$
FETHAO	2.080 Å	Yang, Q.; Gao, S.; Huo, L. H. *Acta Crystallogr., Sect. E* **2005**, *61*, m277. $[Mg(H_2O)_6]C_{10}H_8O_6$
HONGOH	2.080 Å	Karaghiosoff, K.; Klapotke, T. M.; Sabate, C. M. *Eur. J. Inorg. Chem.* **2009**, 238. $[Mg(H_2O)_6]C_2H_2N_{10}\cdot 0.5H_2O$
22335	2.081 Å	Rumanova, I. M.; Ashirov, A. *Kristallografiya* **1963**, *8*, 517-532; *Am. Mineral.* **1956**, *41*, 927-927. $[Mg(H_2O)_6]_2B_6O_{11}\cdot 3H_2O$
112808	2.081 Å	Yuan, F.; Hu, L.; Bai, Z.; Liu, L.; Huang, Y.; Zhang, L.; Wei, D.; Lin, Z. *Inorg. Chem.* **2021**, *60*, 8103. $NH_4[Mg(H_2O)_6]PO_4$
FAPFOR	2.081 Å	Shibahara, T.; Kuroya, H.; Matsumoto, K.; Ooi, S. *Inorg. Chim. Acta* **1986**, *116*, L25. $[Mg(H_2O)_6]2[MoC_{20}H_{24}N_4O_{16}S_4]\cdot 10H_2O$
IFOYAE	2.081 Å	Chekhlov, A. N. *Koord. Khim.* **2007**, *33*, 578. $[Mg(H_2O)_6]Br_2\cdot C_{12}H_{24}O_6\cdot 2H_2O$
JAPFOV	2.081 Å	Kariuki, B. M.; Jones, W. *Acta Crystallogr., Sect. C* **1989**, *45*, 1297. $[Mg(H_2O)_6](C_8H_5O_4)_2$
750	2.082 Å	Fugel, M.; Malaspina, L. A.; Pal, R.; Thomas, S. P.; Shi, M. W.; Spackman, M. A.; Sugimoto, K.; Grabowsky, S. *Chem. Eur. J.* **2019**, *25*, 6523. $NH_4[Mg(H_2O]_6]PO_4$
2524	2.082 Å	Flack, H. D. *Acta Crystallogr., Sect. B* **1973**, *29*, 656. $[Mg(H_2O)_6]SO_3$
4303	2.082 Å	Suesse, P. *Neues Jahrbuch fuer Mineralogie. Monatshefte* **1975**, 27-40. $Na[Mg(H_2O)_6]_2Fe_5(SO_4)_7(OH)_6\cdot 21H_2O$
23662	2.082 Å	Suesse, P. *Neues Jahrbuch für Mineralogie. Monatshefte* **1970**, 286. $[Mg(H_2O)_6]Fe_4(SO_4)_6(OH)_2\cdot 14H_2O$
60626	2.082 Å	Ferraris, G.; Fuess, H.; Joswig, W. *Acta Crystallogr., Sect. B* **1986**, *42*, 253. $NH_4[Mg(H_2O)_6]PO_4$
JAPFUB	2.082 Å	Kariuki, B. M.; Jones, W. *Acta Crystallogr., Sect. C* **1989**, *45*, 1297. $[Mg(H_2O)_6](C_8H_5O_4)_2\cdot 2H_2O$
FUJGOI	2.082 Å	Zou, J. H.; Cui, H. J:; Xu, B.; Zhu, D. L.; Li, Q. Y.; Yang, G. W.; Hua, Y. C. *Inorg. Chim. Acta* **2014**, *423a*, 430. $[Mg(H_2O)_6](C_7H_5N_6O_2)_2\cdot H_2O$
RAFQIC	2.082 Å	Ksiksi, R.; Jendoubi, I.; Chebbi, H.; Graia, M.; Zid, M. F. *Zh. Strukt. Khim.* **2021**, *62*, 1243. $(C_6H_{14}N_2)_2[Mg(H_2O)_6][V_{10}O_{28}]\cdot 8H_2O$
40750	2.083 Å	Miller, S. A.; Taylor, J. C. *Z. Kristallogr.* **1986**, *177*, 247. $[Mg(H_2O)_6](UO_2)_2(PO_4)_2\cdot 4H_2O$

48111	2.083 Å	Montgomery, H. *Acta Crystallogr., Sect. C* **1984**, *40*, 14. $Cs_2[Mg(H_2O)_6](CrO_4)_2$
48115	2.083 Å	Anderson, L.; Lindqvist, O.; Moret, J. *Acta Crystallogr., Sect. C* **1984**, *40*, 586. $[Mg(H_2O)_6]SeO_3$
NUHROY	2.083 Å	Indrani, M.; Ramasubramanian, R.; Fronczek, F. R.; Braga, D.; Vasanthacharya, N. Y.; Kumaresan, S. *J. Chem. Sci (Bangladore)* **2009**, *121*, 413. $[Mg(H_2O)_6](C_8H_8NO_3S)_2$
OKUTUL01	2.083 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, e16000621. $[Mg(H_2O)_6][FeNaC_6O_{12}]\cdot 3H_2O$
23881	2.084 Å	Nardelli, M.; Fava, G.; Giraldi, G. *Acta Crystallogr.* **1962**, *15*, 227. $[Mg(H_2O)_6]S_2O_3$
120226	2.086 Å	Rincke, C.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2020**, *76*, 244. $[Mg(H_2O)_6]CO_3$
OKUVAT01	2.086 Å	Huskic, I.; Pekov, I. V.; Krivovichev, S. V.; Friscic, T. *Sci. Adv.* **2016**, *2*, e16000621.
VINFEF	2.087 Å	Wu, B.-D.; Zhang, T.-L.; Li, Y.-L.; Zhou, Z.-N.; Yang, L.; Zhang, J.-G. *Main Group Chem.* **2013**, *12*, 185. $[Mg(H_2O)_6](2,4,6\text{-}C_6H_2(NO_2)_3O)_2\cdot 4C_2H_4N_4$
YOZTUE	2.087 Å	Bensegueni, M. A.; Cherouana, A.; Dahaoui, S. *Acta Crystllogr., Sect. C* **2015**, *71*, 222. $[Mg(H_2O)_6](C_5H_3N_6)$
250196	2.087 Å	Cherkasova, T. G.; Tatarinova, E. S.; Cherkasova, E. V. . *Zh. Strukt. Khim.* **2004**, *49*, 1161. $[Mg(H_2O)_6]SiF_6$
32528	2.087 Å	Mathew, M.; Kingsbury, P.; Tagaki, S.; Brown, W. E. *Acta Crystallogr., Sect B* **1982**, *38*, 40-44. $[Mg(H_2O)_6]PO_4\cdot H_2O$
47161	2.087 Å	Agron, P. A.; Busing, W. R. *Acta Crystallogr., Sect. C* **1985**, *41*, 8-10. $[Mg(H_2O)_6]Cl_2$
MGHBZA10	2.090 Å	Nadzhafov, G. N.; Mamedov, Kh. S.; Shnulin, A. N.; Movsumov, E. M.; Amiraslanov, I. R.; Usubaliev, B. T.; Akhmedov, A. I. *Dokl. Akad. Nauk Az. SSSR* **1980**, *36*, 36. $[Mg(H_2O)_6](p\text{-}OOCC_6H_4OH)_2\cdot 2H_2O$
MGHBZA20	2.090 Å	Shnulin, A. N.; Nadzhafov, G. N.; Amiraslanov, I. R.; Usubaliev, B. T.; Mamedov, K. S. *Koord. Khim.* **1981**, *7*, 1409. $[Mg(H_2O)_6](p\text{-}OOCC_6H_4OH)_2\cdot 2H_2O$
48114	2.091 Å	Anderson, L.; Lindqvist, O.; Moret, J. *Acta Crystallogr., Sect. C* **1984**, *40*, 586-589. $[Mg(H_2O)_6]TeO_3$
LONQIP	2.091 Å	Wang, J.-G.; Kang, H.-X.; Qin, J.-H. *Z. Kristallogr. – New Cryst Struct.* **2008**, *223*, 445. $[Mg(H_2O)_6]C_{14}H_8N_2O_4\cdot C_{12}H_{10}N_2\cdot 2H_2O$
OCEQIW	2.091 Å	Radanovic, D. J.; Ama, T.; Kawaguchi, H.; Draskovic, N. S.; Ristanovic, D. M.; Janicijevic, S. *Bull. Chem. Soc. Jpn.* **2001**, *74*, 701. $[Mg(H_2O)_6][NiC_{11}H_{14}N_2O_8]\cdot 2H_2O$
26772	2.092 Å	Kannan, K. K.; Viswamitra, M. A. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1965**, *122*, 161-174. $K_2[Mg(H_2O)_6](SO_4)_2$
760112	2.092 Å	Yang, J.; Yin, X.; Wu, L.; Wu, J.; Zhang, J.; Gozin, M. *Inorg. Chem.* **2018**, *57*, 15105. $[Mg(H_2O)_6](CH_2N_5O)_2$
DIRXUA	2.092 Å	Yang, J.; Yin, X.; Wu, L.; Wu, J.; Zhang, J.; Gozin M. *Inorg. Chem.* **2018**, *57*, 15105. $[Mg((H_2O)_6](CH_2N_5O)_2$

GUMPEJ	2.092 Å	Radanovic, D. J.; Ama, T.; Guresic, D. M.; Ristanovic, D. M.; Radanovic, D. D.; Kawaguchi, H. *Bull. Chem. Soc. Jpn.* **2000**, *73*, 2283. $[Mg(H_2O)_6][CuC_{11}H_{14}N_2O_8]\cdot 2H_2O$
KIDLUF	2.092 Å	Mastropietro, T. F.; Armentano, D.; Marino, N.; De Munno, G.; Anastassopoulou, J.; Theophanides, T. *Cryst. Growth Des.* **2007**, *7*, 609. $[Mg(H_2O)_6]Cl_2\cdot(C_5H_7N_3O)_2\cdot 3H_2O$
MGEDTA10	2.094 Å	Pozhidaev, A. I.; Polynova, T. N.; Porai-Koshits, M. A.; Logvinenko, V. A. *Zh. Strukt. Khim.* **1973**, *14*, 746. $[Mg(H_2O)_6][MgC_{10}H_{14}N_2O_9]\cdot 2H_2O$
KIZYUQ	2.095 Å	Qu, Y. X.; Zhang, Y. Q.; Zhou, K. Z.; Wei, L. T.; Zhan, L. L.; Cheng, S. Y.; Tao, Z.; Ma. P. H. *Chem Sel.* **2017**, *2*, 4360. $[Mg((H_2O)_6][ZnCl_3(H_2O)](C_{54}H_{60}N_{24}O_{12})\cdot 9H_2O$
NANMAS	2.095 Å	Xu, Y.; Che, Y.-X.; Cheng, F.-Y.; Zhen, J.-M. *Eur. J. Inorg. Chem.* **2011**, 5299. $[Mg(H_2O)_6][La_2Mg_2C_{24}H_{24}O_{30}]\cdot 6H_2O$
ZEJDOL	2.095 Å	Audebrand, N.; Demont, A.; El Osta, R.; Mironov, Y. V.; Naumov, N. G.; Cordier, S. *Molecules* **2021**, *26*, 2662. $[Mg(H_2O)_6][Re_6C_8H_{13}N_4O_4S_8]\cdot 17H_2O$
TUWXIT	2.097 Å	Abrahams, B. F.; FitzGerald, N. J.; Robson, R. *Angew. Chem, Int. Ed.* **2010**, *49*, 2896. $[Mg(H_2O)_6]_3[Mg_3C_{84}H_{72}O_{42}V_6]\cdot 46H_2O$
16664	2.099 Å	Corbridge, D. E. C. *Acta Crystallogr.* **1956**, *9*, 991-994. $[Mg(H_2O)_6]HPO_3$
37198	2.099 Å	Brodersen, K.; Pezzei, G.; Thiele, G. *Z. Anorg. Allg. Chem.* **1983**, *502*, 209. $[Mg(H_2O)_6][Hg_2Br_6]$
192137	2.099 Å	Mueller, Melanie; Dinnebier, Robert E.; Dippel, Ann-Christin; Stokes, Harold T.; Campbell, Branton J. *J. Appl. Crystallogr.* **2014**, *47*, 532. $Rb[Mg(H_2O)_6]Br_3$
HMTMGC10	2.101 Å	Dahan, F. *Acta Crystallogr., Sect. B* **1974**, *30*, 22. $[Mg(H_2O)_6]Cr_2O_7\cdot 2C_6H_{12}N_4$
2818	2.102 Å	Syoyama, S.; Osaki, K. *Acta Crystallogr., Sect B* **1972**, *28*, 2626. $[Mg(H_2O)_6]SiF_6$
LATNUS	2.104 Å	Sohmiya, A.; Okuyama, T.; Suzuki, R.; Yamanishi, K.; Sugimoto, K.; Kondo, M. *Chem. Lett.* **2017**, *46*, 485. $[Mg(H_2O)_6][MgC_{46}H_{32}Cl_{14}O_{14}]\cdot 6H_2O$
427801	2.106 Å	Abdija, Z.; Najdoski, M.; Koleva, V.; Runcevski, T.; Dinnebier, R. E.; Soptrajanov, B.; Stefov, V. *Z. Anorg. Allg. Chem.* **2014**, *640*, 3177. $K[Mg(H_2O)_6]AsO_4$
419423	2.107 Å	Dinnebier, R. E.; Liebold-Ribeiro, Y.; Jansen, M. *Z. Anorg. Allg. Chem.* **2008**, *634*, 1857. $Rb[Mg(H_2O)_6]B_3$
419421	2.108 Å	Dinnebier, R. E.; Liebold-Ribeiro, Y.; Jansen, M. *Z. Anorg. Allg. Chem.* **2008**, *634*, 1857. $Rb[Mg(H_2O)_6]B_3$
EMETAS	2.108 Å	Tamasi, G.; Berrettini, F.; Hursthouse, M. B.; Cini, R. *Open Crystallogr. J.* **2010**, *3*, 1. $[Mg(H_2O)_6](C_{10}H_{10}N_3)_2[MgC_{20}H_{26}N_{10}O_{26}P_6]\cdot 6H_2O$
FOJWOQ	2.108 Å	Castellato, U.; Guerriero, P.; Tamburini, S.; Vigato, P. A. *Inorg. Chim. Acta* **1987**, *134*, 165. $[Mg(H_2O)_6][Th_2C_{60}H_{36}Cl_3N_6O_9]_2$

79821	2.111 Å	Lutoslawska-Rogoz, J.; Kapturkiewicz-Kowal, E.; Hodorowicz, S. A. *Cryst. Res. Technol.* **1995**, *30*, 255-262. $[Mg(H_2O)_6](BrO_3)_2$
248633	2.113 Å	Chen, X.; Li, Y.-H.; Alexander, A.-M.; Gallucci, J. C.; Hwang, S.-J.; Lingam, H. K.; Huang, Z.; Wang, C.; Li, H.; Zhao, Q.; Ozkan, U. S.; Shore, S. G.; Zhao, J.-C. *Chem. Eur. J.* **2014**, *20*, 7325. $[Mg(H_2O)_6]B_{12}H_{12}$
DENBOR	2.113 Å	Yong Hu, Y.; Lu, Z.-J.; Dong, W.-S.; Zhang, J.-G.; Sinditskii, V. P. *New. J. Chem.* **2022**, *46*, 13874. $[Mg(H_2O)_6](C_6H_3N_{10}O_3)_2\cdot 8H_2O$
2549	2.114 Å	Galigne, J. L.; Dumas, Y. *Acta Crystallogr., Sect. B* **1973**, *29*, 1115-1119. $[Mg(H_2O)_6](H_2PO_2)_2$
DECDIY	2.118 Å	Cini, R.; Burla, M. C.; Nunzi, A.; Polidori, G. P.; Zanazzi, P. F. *J. Chem. Soc., Dalton Trans.* **1984**, 2467. $[Mg(H_2O)_6](C_{10}H_{10}N_3)_2[MgC_{20}H_{26}N_{10}O_{26}P_6]\cdot 12H_2O$
CIYFIB	2.119 Å	Rivera, A.; Rohlicek, J.; Sadat-Bernal, J.; Rios-Motta, J.; Dusek, M. *Z. Krist. Cryst. Mater.* **2014**, *229*, 319. $[Mg(H_2O)_6]Br_2\cdot(C_7H_{14}N_4)_2\cdot 4H_2O$
NALFEO	2.120 Å	Marino, N.; Armentano, D.; De Munno, G. *Inorg. Chim. Acta* **2016**, *452*, 229. $[Mg(H_2O)_6]Br_2\cdot 2(C_5H_7N_3O)_2$
18167	2.123 Å	Scavnicar, S.; Prodic, B. *Acta Crystallogr.* **1965**, *18*, 698-702. $[Mg(H_2O)_6]Th(NO_3)_6\cdot 2H_2O$
GUCSEE	2.126 Å	Sene, S.; Begu, S.; Gervais, C.; Renaudin, G.; Mesbah, A.; Smith, M. E.; Hubert Mutin, P.; van der Lee, A.; Nedelec, J.-M..; Bonhomme, C.; Laurencin, D. *Chem. Mater.* **2015**, *27*, 1242. $[Mg(H_2O)_6][MgC_{14}H_{24}B_2O_{10}]\cdot 4H_2O$
419422	2.127 Å	Dinnebier, R. E.; Liebold-Ribeiro, Y.; Jansen, M. *Z. Anorg. Allg. Chem.* **2008**, *634*, 1857. $Cs[Mg(H_2O)_6]B_3$
16007	2.132 Å	Bigoli, F.; Manotti Lanfredi, A. M.; Tiripicchio, A.; Tiripicchio Camellini, M. *Acta Crystallogr., Sect. B* **1970**, *26*, 1075-1079. $[Mg(H_2O)_6]H_3IO_6$
24250	2.137 Å	West, C.D., *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1935**, *91*, 480. $[Mg(H_2O)_6](ClO_4)_2$
TUHMIT	2.138 Å	Peli, G. Masciocchi, N.; Garlaschelli, L.; Aprea, A.; Maspero, A. *Inorg. Chim. Acta* **2009**, *362*, 4630. $[Mg(H_2O)_6]C_8H_4N_8$
188928	2.140 Å	Demartin, F.; Gramaccioli, C. M.; Campostrini, I.; Castellano, C. *Miner. Magazine* **2011**, *75*, 2847. $[Mg(H_2O)_6][Al(H2O)5F]_{12}(SO_4)_{12}(HSO_4)_2$
26745	2.147 Å	Andress, K. R.; Gundermann, J. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1934**, *87*, 345. $[Mg(H_2O)_6]Br_2$
GAYLUN	2.154 Å	Cini, R.; Marzilli, L. G. *Inorg. Chem.* **1988**, *27*, 1855. $[Mg(H_2O)_6](C_{10}H_{10}N_3)_2[ZnC_{20}H_{26}N_{10}O_{26}P_6]\cdot 12H_2O$
28660	2.161 Å	Ferrari, A.; Colla, C. *Gazz. Chim.* **1937**, *67*, 294. $[Mg(H_2O)_6]H_2PO_4$
28663	2.161 Å	Ferrari, A.; Colla, C. *Gazz. Chim.* **1937**, *67*, 424. $[Mg(H_2O)_6](ClO_2)_2$

26040	2.163 Å	Angoso, A.; Onken, H.; Hahn, H. *Z. Anorg. Allg. Chem.* **1964**, *328*, 223. $[Mg(H_2O)_6]TeCl_6$
DECDIY01	2.238 Å	Tamasi, G.; Berrettini, F.; Hursthouse, M. B.; Cini, R. *Open Crystallogr. J.* **2010**, *3*, 1. $[Mg(H_2O)_6](C_{10}H_{10}N_3)_2[MgC_{20}H_{26}N_{10}O_{26}P_6]\cdot 12H_2O$
26041	2.411 Å	Angoso, A.; Onken, H.; Hahn, H. *Z. Anorg. Allg. Chem.* **1964**, *328*, 223. $[Mg(H_2O)_6]TeBr_6$
Mean	**2.066 Å/521 structures**	

Table S1h. Summary of solid state structures containing a hydrated calcium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ca-O bond distance), *d*(Ca-O); *d*(Ca-O)$_b$ denotes bridging ligands and *d*(Ca-O)$_t$ terminal ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Calcium(II)

Four-coordination, square-planar configuration

ICSD/CSD code	*d*(Ca-O)	Reference, compound formula
OYIDOS	2.253 Å	Jørgensen, M.; Zhou, W.; Wu, H.; Udovic, T. J.; Paskevicius, M.; Cerny, R.; Jensen, T. R. *Inorg. Chem.* **2021**, *60*, 10943. $[Ca(H_2O)_4]B_{10}H_{10}$
Mean	**2.253 Å/1 structure**	

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ca-O)	Reference, compound formula
YAZTEC	2.220 Å	Zhu, J. ; Fu, S. ; Li, K. ; Zeng, X. ; Chen, S. *J. Thermal Anal Calorimetry* **2022**, *134*, 1873. $[Ca(H_2O)_6](C_4H_4N_8O_2)_2\cdot 6H_2O$
ZUDLES	2.217 Å	Urbanovsky, P.; Kotek, J.; Cisarova, I.; Hermann, P. *Dalton Trans.* **2020**, *49*, 1555. $[Ca(H_2O)_6][GdC_{30}H_{42}N_5O_9P]_2\cdot 6H_2O$
WANLII	2.306 Å	Rajbanshi, A.; Custelcean, R. *Supramol. Chem.* **2012**, *24*, 65. $[Ca(H_2O)_6]SO_4\cdot C_{24}H_{30}N_{10}O_3$
FELVEZ	2.309 Å	Torres, J.; Gonzalez-Platas, J.; Sanchiz, J.; Castiglioni, J.; Dominguez, S.; Kremer, C. *Inorg. Chim. Acta* **2013**, *394*, 196. $[Ca(H_2O)_6][CaDyC_{12}H_{12}O_{15}]_2\cdot 3H_2O$
WANLAA	2.312 Å	Rajbanshi, A.; Custelcean, R. *Supramol. Chem.* **2012**, *24*, 65. $[Ca(H_2O)_6]CrO_4\cdot C_{24}H_{30}N_{10}O_3$
WANLEE	2.313 Å	Rajbanshi, A.; Custelcean, R. *Supramol. Chem.* **2012**, *24*, 65. $[Ca(H_2O)_6]SeO_4\cdot C_{24}H_{30}N_{10}O_3$
GAYLOH	2.315 Å	Cini, R.; Marzilli, L. G., *Inorg. Chem.* **1988**, *27*, 1855. $[Ca(H_2O)_6](C_{10}H_{10}N_3)_2[CdC_{20}H_{26}N_{10}O_{26}P_6]\cdot 9H_2O$
RALHAO01	2.315 Å	Barnes, J. C. CCDC deposition number 265189, **2005**. $[Ca(H_2O)_6](C_{10}H_{14}BrO_4S)_2$
FELWUQ	2.317 Å	Torres, J.; Gonzalez-Platas, J.; Sanchiz, J.; Castiglioni, J.; Dominguez, S.; Kremer, C. *Inorg. Chim. Acta* **2013**, *394*, 196. $[Ca(H_2O)_6][CaYC_{12}H_{12}O_{15}]_2\cdot 3H_2O$.
NOGLEA	2.320 Å	Simonsen, O., *Acta Chem. Scand.* **1997**, *51*, 861. $[Ca(H_2O)_6](C_4H_2N_3O_5)_2\cdot 2H_2O$
FELWEA	2.321 Å	Torres, J.; Gonzalez-Platas, J.; Sanchiz, J.; Castiglioni, J.; Dominguez, S.; Kremer, C. *Inorg. Chim. Acta* **2013**, *394*, 196. $[Ca(H_2O)_6][CaTbC_{12}H_{12}O_{15}]_2\cdot 3H_2O$
FELVOJ	2.326 Å	Torres, J.; Gonzalez-Platas, J.; Sanchiz, J.; Castiglioni, J.; Dominguez, S.; Kremer, C. *Inorg. Chim. Acta* **2013**, *394*, 196. $[Ca(H_2O)_6][CaEuC_{12}H_{12}O_{15}]_2\cdot 3H_2O$

RIHXIR	2.327 Å	Suescun, L.; Wang, J.; Faccio, R.; Peinado, G.; Torres, J.; Kremer, C.; Burrow, R. A. *Powder Diffr.* **2012**, *27*, 232. $[Ca(H_2O)_6][CaGdC_{12}H_{12}O_{15}]_2 \cdot 4H_2O$
WITNAQ	2.327 Å	Zhang, R. Zhao, Y.; Wang, J.; Ji, L.; Yang, X.-J.; Wu, B. *Cryst. Growth Des.* **2014**, *14*, 544. $[Ca(H_2O)_6]Cl_2 \cdot C_{24}H_{30}N_{10}O_3$
XEDFAO	2.342 Å	Cetin, A.; Ziegler, C. J. *Dalton Trans.* **2006**, 1006. $[Ca(H_2O)_6](C_{12}H_{16}BN_6S_3)_2 \cdot 4H_2O$
IBEPEN	2.350 Å	Perkins, C. K.; Apblett, A. W. *Chem. Sel.* **2016**, *1*, 3685. $[Ca(H_2O)_6][WO_2(C_4H_6O_3)_2]$
ZUDLIW	2.361 Å	Urbanovsky, P.; Kotek, J.; Cisarova, I.; Hermann, P. *Dalton Trans.* **2020**, *49*, 1555. $[Ca(H_2O)_6][HoC_{30}H_{40}N_5O_8P]_2 \cdot 6H_2O$
GAZZAM	2.385 Å	Bindl, D.; Mandal, P. K.; Huc, I. *Chem. Eur. J.* **2022**, 28, e202200538. $[Ca(H_2O)_6]_3[Ca_3C_{198}H_{182}N_{36}O_{78}]_2 \cdot 14.8H_2O$
113226 OYIDAE	2.395 Å	Jørgensen, M.; Zhou, W.; Wu, H.; Udovic, T. J..; Paskevicius, M.; Cerny, R.; Jensen, T. R. *Inorg. Chem.* **2021**, *60*, 10943. $[Ca(H_2O)_6]B_{10}H_{10}$
DECDOE	2.396 Å	Cini, R.; Burla, M. C.; Nunzi, A.; Polidori, G. P.; Zanazzi, P. F., *J. Chem. Soc., Dalton Trans.* **1984**, 2467. $[Ca(H_2O)_6](C_{10}H_{10}N_3)_2[CaC_{20}H_{26}N_{10}O_{26}P_6] \cdot 9H_2O$
HAGCOL	2.420 Å	You, C. CCDC deposition number 2108252, **2021**. $[Ca(H_2O)_6]_2[Cu_8C_{40}H_{12}O_{36}]$
EMETEW	2.464 Å	Tamasi, G.; Berrettini, F.; Hursthouse, M. B.; Cini, R. *Open Crystallogr. J.* **2010**, *3*, 1. $[Ca(H_2O)_6](C_{10}H_{10}N_3)_2[Ca(C_{20}H_{28}N_{10}O_{26}P_6] \cdot 8H_2O$
Mean	**2.324 Å/15 structures**	

Seven-coordination

ICSD/CSD code	*d*(Ca-O)	Reference, compound formula
WIKXET	2.380 Å	Ojala, W. H.; Lu, L. K.; Albers, K. E.; Gleason, W. B.; Richardson, T. I.; Lovrien, R. E.; Sudbeck, E. A., *Acta Crystallogr., Sect. B* **1994**, *50*, 684. $[Ca(H_2O)_7]^{2+}$
NARKEY	2.383 Å	Yoshida, R.; Ogasahara, S.; Akashi, H.; Shibahara, T. *Inorg. Chim. Acta* **2012**, *383*, 157. $[Ca(H_2O)_7][MoC_6H_{10}N_2O_6S_4] \cdot H_2O$
REMNAY	2.391 Å	Moers, O.; Blaschette, A.; Jones, P. G., *Acta Crystallogr., Sect.C* **1997**, *53*, 845. $[Ca(H_2O)_7]^{2+}$
EGOGIT	2.391 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Ca(H_2O)_7](C_{20}H_{12}N_2O_7S_2] \cdot H_2O$
HEPHOZ	2.392 Å	Shkol'nikova, L. M.; Porai-Koshits, M. A.; Poznyak, A. L., *Koord. Khim.* **1993**, *19*, 683. $[Ca(H_2O)_7]^{2+}$
EGOFEO	2.393 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Ca(H_2O)_7](C_{18}H_{14}N_2O_7S_2] \cdot 2.5\ H_2O$
YIRVON	2.393 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinsek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Ca(H_2O)_7](B_{12}F_{12})$

XAKFUL	2.396 Å	Okada, T.; Tanaka, K.; Shiro, M.; Shionoya, M. *Chem. Commun.* **2005**, 1484. $[Ca(H_2O)_7][Ag_6Ca_3C_{96}H_{168}N_{24}O_{24}S_{12}](CF_3SO_3)_{14}$
WUKVEF	2.397 Å	Zhou, Q.; Qian, J.; Zhang, C. *J. Mol. Struct.* **2016**, *1119*, 340. $[Ca(H_2O)_7][CuC_{14}H_8N_2O_9]\cdot H_2O$
RUMQOF	2.412 Å	Zasurskaya, L. A; Pozdnyak, A. L.; Polynova, T. N; Rybakov, V. B.; Porai-Koshits, M. A. *Zh. Neorg. Khim* **1996**, *41*, 1647. $[Ca(H_2O)_7][CoC_{10}H_{12}N_2O_8]_2$
GEBCIC	2.414 Å	Mateus, P.; Wicher, B.; Ferrand, Y.; Huc, I. *Chem. Commun.* **2017**, *53*, 9300. $[Ca(H_2O)_7](C_{161}H_{151}N_{35}O_{26})$
AHAKEB	2.402 Å	Chen, B. CCDC deposition number 1414624, **2015**. $(NH_4)_2[Ca(H_2O)_7]_2(V_{10}O_{28})\cdot 2H_2O$
CUPSUC	2.405 Å	Kennedy, A. R.; Andrikopoulos, P. C.; Arlin, J.-B.; Armstrong, D. R.; Duxbury, N.; Graham, D. V.; Kirkhouse, J. B. A. *Chem. Eur. J.* **2009**, *15*, 9494. $[Ca(H_2O)_7](C_{16}H_{18}N_3O_5S)_2\cdot H_2O$
29437	2.407 Å	Takagi, S.; Mathew, M.; Brown, W. E., *Acta Crystallogr., Sect. C* **1984**, *40*, 1111. $NH_4[Ca(H_2O)_7][PO_4]$.
20719	2.409 Å	Solntsev, K. A.; Kuznetsov, N. T.; Ponomarev, V. I., *Iz. Akad. Nauk SSSR, Neorg. Mater.* **1976**, *12*, 1044-1048. $[Ca(H_2O)_7][B_{12}H_{12}]\cdot H_2O$.
ZZZKVU10	2.411 Å	Brown, C. J.; Ehrenberg, M.; Yadav, H. R., *Acta Crystallogr., Sect. C* **1984**, *40*, 58. $[Ca(H_2O)_7](C_{10}H_8NO_3S)_2\cdot H_2O$
RUMQOF	2.412 Å	Zasurskaya, L.A. ; Pozdnyak, A. L.; Polynova, T. N.; Rybakov, V. B.; Porai-Koshits, M. A., *Zh. Neorg. Khim.* **1996**, *41*, 1647. $[Ca(H_2O)_7][CoC_{10}H_{12}N_2O_8]_2$
32502	2.421 Å	Thomas, R.; Moore, F. H., *Acta Crystallogr., Sect. B* **1981**, *37*, 2156. $[Ca(H_2O)_7](I_5)_2$.
Mean	**2.401 Å/18 structures**	

Eight-coordination, square antiprismatic configuration

ICSD/CSD code	*d*(Ca-O)	Reference, compound formula
LIQRAE	2.417 Å*	Shibahara, T.; Yoshida, S.; Maeyama, M.; Kojima, M.; *Bull. Chem. Soc. Jpn.* **1999**, *72*, 2271. $[Ca(H_2O)_8]^{2+}$
ZAYLET	2.420 Å	Danylyuk, O. *CrystEngComm* **2017**, *19*, 3892. $(C_{36}H_{36}N_{24}O_{12})_2[Ca(H_2O)_8](C_4H_8N_2O_3)_4Cl$ $15H_2O$ -
195938	2.458 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect.C* **2014**, *70*, 876. $[Ca(H_2O)_8]Br_2\cdot H_2O$
WUKXOS	2.461 Å	Hong, Y.; Yufit, D. S.; Letzelter, N.; Steed, J. W. *CrystEngComm* **2020**, *22*, 2585. $[Ca(H_2O)_8][Ca(H_2O)_4(C_9H_8O_8]\cdot 2H_2O$
WUKXUY	2.463 Å	Hong, Y.; Yufit, D. S.; Letzelter, N.; Steed, J. W. *CrystEngComm* **2020**, *22*, 2585. $[Ca(H_2O)_8][Ca(H_2O)_4(C_9H_8O_8]\cdot 2H_2O$
JAXZAM	2.472 Å	Safin, D. A.; Railliet, A. P.; Robeyns, K.; Mitoraj, M. P.; Kubisiak, P.; Sagan, F.; Yann Garcia *New J. Chem.* **2017**, *41*, 6210. $[Ca(H_2O)_8](C_3H_2N_7)_2$

30571	2.475 Å	Harr, T. E., *Thesis*, Univ. Syracuse (USA) **1947**, 1. $[Ca(H_2O)_8]O_2$.
32548	2.476 Å	Leligny, H.; Monier, J.-C., *Acta Crystallogr., Sect. B* **1982**, *38*, 355-358. $[Ca(H_2O)_8]_2[Cd_3Cl_{10}]\cdot 2H_2O$.
2832	2.477 Å	Dickens, B.; Brown, W. E., *Acta Crystallogr., Sect. B* **1972**, *28*, 3056-3065. $K[Ca(H_2O)_8](AsO_4)$.
LIQREI	2.480 Å	Shibahara, T.; Yoshida, S.; Maeyama, M.; Kojima, M.; *Bull. Chem. Soc. Jpn.* **1999**, *72*, 2271. $[Ca(H_2O)_8](Mo_3C_{12}H_{15}N_3O_{12}S_4]\cdot 2H_2O$
POXKIW	2.481 Å	Henke, K., Atwood, D. A., *Inorg. Chem.* **1998**, *37*, 224. $(C_3H_2N_3S_3)_8[Ca(H_2O)_8]_4\cdot 12H_2O$
250342	2.484 Å	Shilov, G. V.; Karelin, A. I.; Lemesheva, D. G.; Leonova, L. S.; Atovmyan, L. O. *Zh. Neorg. Khim.* **2005**, *50*, 921. $[Ca(H_2O)_8]O_2$
LOJVUE	2.488 Å	Xanthopoulos, K.; Anagnostou, Z.; Chalkiadakis, S.; Choquesillo-Lazarte, D.; Mezei, G.; Zareba, J. K.; Zon, J.; Demadis, K. D. *Crystals* **2019**, *9*, 301. $[Ca(H_2O)_8](C_7H_9NO_3P)_2$
Mean	**2.474 Å/11 structures**	

Dimers

Six-coordination

ICSD/CSD code	d(Ca-O)$_b$ + d(Ca-O)$_t$/d(Ca···Ca)	Reference, compound formula
SAXYOU	2.446 + 2.551 Å 3.601 Å	Mon, M.; Ferrando-Soria, J.; Verdaguer, M.; Train, C.; Paillard, C.; Dkhil, B.; Versace, C.; Bruno, R.; Armentano, D.; Pardo, E. *J. Am. Chem. Soc.* **2017**, *139*, 8098. $[(H_2O)_4Ca(H_2O)_2Ca(H_2O)_4][Cu_8C_{56}H_{55}N_{24}O_{31}]\cdot 54.8H_2O$

Seven-coordination

ICSD/CSD code	d(Ca-O)$_b$ + d(Ca-O)$_t$/d(Ca···Ca)	Reference, compound formula
NAKQUP	2.518 + 2.426 Å 3.673 Å	Mikuriya, M.; Nagao, N.; Kurahashi, S.; Tabuchi, A.; Tomohara, S.; Tsuboi, M.; Yoshioka, D.; Sakiyama, H.; Fuyuhiro, A. *J. Chem. Moldova* **2014**, *9*, 100. $[(H_2O)_4Ca(H_2O)_3Ca(H_2O)_4][Mn_4C_{26}H_{33}N_4O_{24}]\cdot 6H_2O$

Eight-coordination

ICSD/CSD code	d(Ca-O)$_b$ + d(Ca-O)$_t$/d(Ca···Ca)	Reference, compound formula
YOHGAF	2.413 + 2.545 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2014**, *70*, 876. $[(H_2O)_4Ca(H_2O)_3Ca(H_2O)_4]I_4$
195941	3.884 Å	
MINBOA	2.423 + 2.626 Å	Hammerl, A.; Holl, G.; Klapotke, T. M.; Mayer, P.; Noth, H.; Piotrowski, H.; Warchhold, M. *Eur. J. Inorg.*

	4.380 Å	*Chem.* **2002**, 834. $[(H_2O)_6Ca(H_2O)_2Ca(H_2O)_6](C_2N_{10})_2 \cdot 2H_2O$
YOHFOS	2.426 + 2.591 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2014**, *70*, 876. $[(H_2O)_6Ca(H_2O)_2Ca(H_2O)_6]I_4 \cdot 2H_2O$
195939	4.339 Å	
YOHFUY	2.433 + 2.568 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. C* **2014**, *70*, 876. $[(H_2O)_6Ca(H_2O)_2Ca(H_2O)_6]I_4$
195940	4.202 Å	
XAJNUV	2.435 + 2.584 Å	Wang, Y.; Yang, X.; Hu, J.; Li, H.; Li, Z.; Zhang, T. *New J. Chem.* **2020**, *44*, 19054.
	4.255 Å	$[(H_2O)_6Ca(H_2O)_2Ca(H_2O)_6](C_5H_4N_{10}O_4)_2 \cdot 4H_2O$
Mean	**2.426 + 2.583 Å; mean all Ca-O bond distances: 2.540 Å/5 structures**	
	4.212 Å	

Polymeric structures

Nine-coordination

ICSD/CSD code	d(Ca-O)$_b$ + d(Ca-O)$_t$/d(Ca···Ca)	Reference, compound formula
59142	6*2.594+3*2.453 Å	Agron, P. A.; Busing, W. R. *Acta Crystallogr., Sect. C* **1986**, *42*, 141.
	3.955 Å	$[Ca(H_2O)_6]_nCl_{2n}$
1140	6*2.590+3*2.451 Å	Leclaire, A.; Borel, M. M. *Acta Crystallogr., Sect. C* **1977**, *33*, 2938.
	3.954 Å	$[Ca(H_2O)_6]_nCl_{2n}$
1141	6*2.622+3*2.466 Å	Leclaire, A.; Borel, M. M. *Acta Crystallogr., Sect. C* **1977**, *33*, 2938.
	4.016 Å	$[Ca(H_2O)_6]_nBr_{2n}$
Mean	**6*2.602+3*2.457 Å/3 structures**	

Table S1i. Summary of solid state structures containing a hydrated strontium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Sr-O bond distance, *d*(Sr-O); *d*(Sr-O)$_b$ denotes bridging ligands and *d*(Sr-O)$_t$ terminal ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Strontium(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Sr-O)	Reference, compound formula
FEXVOX	2.460 Å	Savchenkov, A. V.; Vologzhanina, A. V.; Pushkin, D. V.; Serezhkina, L. B. *Eur. J. Inorg. Chem.* **2018**, 1867. $[Sr(H_2O)_6][NaU_3C_{36}H_{63}O_{24}]$
USATEO	2.505 Å	Chen, Y.; Zheng, L.; She, S.; Chen, Z.; Hu, B.; Li, Y. *Dalton Trans.* **2011**, *40*, 4970. $[Sr(H_2O)_6][Cu_4SrC_{32}H_{28}N_{16}O_{20}]\cdot 6H_2O$
KOWFEJ	2.522 Å	Savchenkov, A. V.; Klepov, V. V.; Vologzhanina, A. V.; Serezhkina, L. B.; Pushkin, D. V.; Serezhkin, V. N. *CrystEngComm* **2015**, *17*, 740. $[Sr(H_2O)_6][SrU_2C_{12}H_{26}O_{20}]_2[UC_6H_9O_8]_2$
Mean	**2.496 Å/3 structures**	

Eight-coordination, square antiprismatic configuration

ICSD/CSD code	*d*(Sr-O)	Reference, compound formula
30572	2.578 Å	Harr, T. E., *Thesis*, Univ. Syracuse (USA), **1947**, 1. $[Sr(H_2O)_8]O_2$
EGOGOZ	2.581 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Sr(H_2O)_8](C_{20}H_{12}N_2O_7S_2)\cdot H_2O$
24689	2.597 Å	Smith, H. G., *Acta Crystallogr.* **1953**, *6*, 604. $[Sr(H_2O)_8](OH)_2$
VOGDUQ	2.600 Å	Hardie, M. J.; Raston, C. L.; Salinas, A., *Chem. Commun.* **2001**, 1850. $[Sr(H_2O)_8][CoC_4H_{22}B_{18}]_2\cdot 4C_{27}H_{30}O_6\cdot 4CH_3CN\cdot 4H_2O$
XIJXEV	2.603 Å	Bazhina, E. S.; Nikiforova, M. E.; Aleksandrov, G. G.; Efimov, N. N.; Kiskin, M. A.; Ugolkova, E. A.; Minin, V. V.; Sidorov, A. A.; Novotortsev, V. M.; Eremenko, I. L. *Russ. Chem. Bull.* **2012**, 1411. $[Sr(H_2O)_8][VO(C_5H_6O_4)_2$
237181	2.604 Å	Kan, W. H.; Thangadurai, V. *Inorg. Chem.* **2012**, *51*, 8973. $[Sr(H_2O)_8](OH)_2$
LOJWAL	2.605 Å	Xanthopoulos, K.; Anagnostou, Z.; Chalkiadakis, S.; Choquesillo-Lazarte, D.; Mezei, G.; Zareba, J. K.; Zon, J.; Demadis, K. D. *Crystals* **2019**, *9*, 301. $[Sr(H_2O)_8](C_7H_9NO_3P)_2$
35297	2.606 Å	Thiele, G.; Brodersen, K.; Pezzei, G., *Z. Anorg. Allg. Chem.* **1982**, *491*, 308. $[Sr(H_2O)_8][HgI_4]$

GETSII01	2.606 Å	Heinemann, F. W.; Meier, R. CCDC deposition number 2156426. $[Sr(H_2O)_8][Co(edta)]\cdot H_2O$
65086	2.607 Å	Thiele, G.; Putzas, D., *Z. Naturforsch., Teil B* **1988**, *43*, 1224. $[Sr(H_2O)_8][CdI_4]$
GETSII	2.609 Å	Zasurskaya, L. A.; Polyakova, I. N.; Rybakov, V. B.; Polynova, T. N.; Poznyak, A. L.; Sergienko, V. S. *Kristallografiya* **2006**, *51*, 481. $[Sr(H_2O)_8][Co(edta)]\cdot H_2O$
POXKOC	2.614 Å	Henke, K.; Atwood, A. T., *Inorg. Chem.* **1998**, *37*, 224. $[Sr(H_2O)_8](C_3N_3H_2S_3)\cdot H_2O$
16385	2.619 Å	Geller, S.; Dudley, T.O., *J. Solid State Chem.* **1978**, *26*, 321-328. $[Sr(H_2O)_8][Ag_2I_4]$
N/A	2.619 Å	Persson, I.; Sandström, M.; Yokoyama, H.; Chaudhry, M. *Z. Naturforsch., Ser. A* **1995**, *50*, 21. $[Sr(H_2O)_8](OH)_2$
417100	2.619 Å	Reuter, H.; Kamaha, S.; Zerzouf, O. *Z. Naturforsch., Ser. B* **2007**, *62*, 215. $[Sr(H_2O)_8](OH)_2$
170825	2.620 Å	Ricci, J. S.; Stevens, R. C.; McMullan, R. K.; Klooster, W. T. *Acta Crystallogr., Sect. B* **2005**, *61*, 381. $[Sr(H_2O)_8](OH)_2$
94431	2.624 Å	Tiritiris, I.; Schleid, T., *Z. Anorg. Allg. Chem.* **2001**, *627*, 1836. $[Sr(H_2O)_8][B_{12}H_{12}]$
16430	2.630 Å	Lazarini, F.; Leban, I., *Acta Crystallogr., Sect. B* **1980**, *36*, 2745. $[Sr(H_2O)_8][Bi_2Br_{10}]$
200016	2.636 Å	Solntsev, K. A.; Kuznetsov, N. T.; Rannev, N. V.; Zavodnik, V. E., *Dokl. Akad. Nauk SSSR* **1977**, *232*, 1366. $[Sr(H_2O)_7][B_{12}H_{12}]$.
87465	2.637 Å	Mathew, M., *J. Chem. Crystallogr.*, **1998**, *10*, 741. $K[Sr(H_2O)_8][AsO_4]$
24775	2.645 Å	Vannerberg, N.-G., *Arkiv Kemi* **1959**, *14*, 17. $[Sr(H_2O)_8]O_2$
250017	2.667 Å	Pushcharovskii, D. Yu.; Suleimanov, E. V.; Pasero, M.; Merlino, S.; Barinova, A. V.; Alekseev, E. V., *Kristallografiya* **2003**, *48*, 246-249. $[Sr(H_2O)_8][AsUO_6]$.
76004	2.683 Å	Preisinger, A. *Tschermaks Miner. Petrogr. Mitteilungen* **1954**, *5*, 123. $[Sr(H_2O)_8](OH)_2$
	2.613 Å/20 structures	

Nine-coordination

ICSD/CSD code	*d*(Sr-O)	Reference, compound formula
237723	2.656 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. E* **2014**, *70*, 510. $[Sr(H_2O)_7(ClO_4)_2]\cdot 2H_2O$
Mean	**2.656 Å/1 structure**	

Dimeric hydrates

Nine-coordination

ICSD/CSD code	*d*(Sr-O)$_b$ + *d*(Sr-O)$_t$/d(Sr···Sr)	Reference compound formula
48110	6*2.709+3*2.563 Å 4.124 Å	English, R.B.; Nassimbeni, L.R. *Acta Crystallogr., Sect. C* **1984**, *40*, 580. $[Sr(H_2O)_6]_nCl_{2n}$
79713	6*2.714+ 3*2.553 Å 4.159 Å	Abrahams, I.; Vordemvenne, E. *Acta Crystallogr., Sect. C* **1995**, *51*, 183. $[Sr(H_2O)_6]_nBr_{2n}$
59143	6*2.715+3*2.570 Å 4.124 Å	Agron, P.A.; Busing, W.R. *Acta Crystallogr., Sect. C* **1986**, *42*, 141. $[Sr(H_2O)_6]_nCl_{2n}$
25125	6*2.802+3*2.646 Å	**Je**nsen, A. T. Matematisk-Fysiske Meddelelser - Kongelige Danske Videnskabernes Selskab 1940, **17**, 1-27. $[Sr(H_2O)_6]_nCl_{2n}$
Mean	**6*2.713+3*2.562 Å/3 structures; mean 2.663 Å**	

Table S1j. Summary of solid state structures containing a hydrated barium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ba-O bond distance), *d*(Ba-O); *d*(Ba-O)$_b$ denotes bridging ligands and *d*(Ba-O)$_t$ terminal ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Barium(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ba-O)	Reference, compound formula
FABDEU	2.798 Å*	Li; J.; Wang; C.; Gao; X.; Zhao; F.; Zhao; K.; Fan; X. ; Zhang; G. ; Zhang; W. ; Gao, Z. *Polyhedron* **2016**, *106*, 58. $[Ba(H_2O)_6]^{2+}$?. At least seven-coordinate, most likely eight-coordinate.

* incomplete or distorted coordination sphere

Eight-coordination, square antiprismatic configuration

ICSD/CSD code	*d*(Ba-O)	Reference, compound formula
34894	2.742 Å	Manohar, H.; Ramaseshan, S. *Z. Kristallogr.* **1964**, *119*, 357. $[Ba(H_2O)_8](OH)_2$
30574	2.774 Å	Harr, T. E. *Thesis*, University of Syracusa, USA, **1947**, 1. $[Ba(H_2O)_8]O_2$
33741	2.779 Å	Sacerdoti, M.; Bertolasi, V.; Ferretti, V.; Accorsi, C. A. *Z. Kristallogr.* **1990**, *192*, 111. $[Ba(H_2O)_8](OH)_2$
MUNKUC	2.814 Å	Thuery, P. *Cryst. Growth Des.* **2009**, *9*, 5492. $[Ba(H_2O)_8]_2[Ba_2U_8C_{120}H_{176}O_{68}]\cdot 8H_2O$
Mean	**2.777 Å/4 structures**	

Nine-coordination

ICSD/CSD code	*d*(Ba-O)	Reference, compound formula
195744	2.826 Å	Thiele, G.; Vondung, L.; Donsbach, C.; Pulz, S.; Dehnen, S. *Z. Anorg. Allg. Chem.* **2014**, *640*, 2684. $[Ba(H_2O)_3]Se_2$
426703	2.827 Å	Edhokkar, F.; Hadrich, A.; Mhiri, T.; Graia, M. *J. Mol. Struct.* **2014**, *1059*, 260. $Na[Ba(H_2O)_9]AsO_4$.
20539	2.828 Å	Baturin, S.V.; Malinovskii, Yu.A.; Belov, N.V. *Doklady Akademii Nauk SSSR* **1982**, *266*, 624. $Na[Ba(H_2O)_9]PO_4$
FEDWEQ	2.845 Å	Harrowfield, J. M.; Sharma, R. P.; Skelton, B.W.; Venugopalam, P.; White, A.H. *Aust. J. Chem.* **1998**, *51*, 775. $[Ba(H_2O)_8NO_2\text{-}C_6H_4O](p\text{-}OC_6H_4NO_2)_2$
ICEKAD	2.874 Å	Deng; Y.-F.; Zhou; Z.-H.; Wan, H.- L. *Inorg. Chem.* **2004**, *43*, 6266. $(NH_4)_7[Ba(H_2O)_9][BaTiC_{36}H_{39}O_{48}]$
420481	2.901 Å	Kazmiercak, K.; Heck, J.G.; Hoeppe, H.A. *Z. Anorg. Allg. Chem.* **2010**, *636*, 409. $[Ba(H_2O)_9]^{2+}$
Mean	**2.832 Å/4 structures**	

Dimeric hydrates

Nine-coordination

ICSD/CSD code	d(Ba-O)$_b$ + d(Ba-O)$_t$/d(Ba···Ba)	Reference, compound formula
ECIVIY	2.866 + 2.783 Å	Xiuling Xu, Fan Hu, Qi Shuai, Q. *New J. Chem.* **2017**, *41*, 13319.
	4.535 Å	$[(H_2O)_7Ba(H_2O)_2Ba(H_2O)_7][FeC_{18}H_{13}O_3]\cdot 12H_2O$
EFIZEZ	2.926 + 2.788 Å	Murugavel, R.; Kuppuswamy, S; Randoll, S. *Inorg. Chem.* **2008**, *47*, 6028.
	4.049 Å	$[(H_2O)_5Ba(H_2O)_4Ba(H_2O)_5](C_{12}H_{17}O_4P)_2\cdot 4H_2O$

Ten-coordination

ICSD/CSD code	d(Ba-O)$_b$ + d(Ba···Ba)$_t$/d(Ba···Ba)	Reference, compound formula
DAXCAI	2.920 + 2.805 Å	Yu Hou; Rodriguez, M.A.; Nyman, M. *Cryst.Growth Des.* **2012**, *12*, 1422.
	4.840 Å	$[(H_2O)_6Ba(H_2O)_4Ba(H_2O)_6][Ba_2Fe_8C_{52}H_{76}N_8O_{54}]\cdot H_2O$

Table S1k. Summary of solid state structures containing a hydrated scandium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Sc-O bond distance, *d*(Sc-O); $d(\text{Sc-O})_p$ denotes ligands forming the prism and $d(\text{Sc-O})_c$ the capping ligands in dicapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Scandium(III)

Six-coordination

ICSD/CSD code	*d*(Sc-O)	Reference, compound formula
CEMXAU	2.085 Å	Lindqvist-Reis, P.; Persson, I.; Sandström, M. *Dalton Trans.* **2006**, 3868. $[Sc(H_2O)_6][Sc(OSO_2CH_3]_6$
QUKXOJ	2.134 Å	Yan, C.; Lu, Z.; Wang, Z.; Liao,C. CCDC deposition number 103179, **2001**. $[Sc(H_2O)_6][Sc_3C_{36}H_{78}N_6O_{16}](OSO_2CH_3](ClO_4)_{11}\cdot 9.5\ H_2O$
Mean	**2.085 Å/1 structure**	

Seven-coordination

ICSD/CSD code	*d*(Sc-O)	Reference, compound formula
252245	2.158 Å	Vander Hoogerstraete, T.; Brooks, N. R.; Onghena, B.; Van Meervelt, L.; Binnemans, K. *CrystEngComm* **2015**, *17*, 7142. $[Sc(H_2O)_7](N(SO_2CF_3)_2)_3\cdot H_2O$
91460	2.159 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 875. $[Sc(H_2O)_7]Cl_3$
91461	2.161 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 875. $[Sc(H_2O)_7]Br_3$
91462	2.161 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 875. $[Sc(H_2O)_7]I_3$
HOSFOK	2.166 Å	Waller, F. J.; Barrett, A. G. M.; Braddock, D. C.; Ramprasad, D.; McKinnell, R. M.; White, A. J. P.; Williams, D. J.; Ducray, R. *J. Org. Chem.* **1999**, *64*, 2910. $[Sc(H_2O)_7](C(SO_2CF_3)_3)_3\cdot H_2O$
Mean	**2.161 Å/5 structures**	

Eight-coordination, dicapped trigonal prim

ICSD/CSD code	$d(\text{Sc-O})_p + d(\text{Sc-O})_c$	Reference, compound formula
415177	2.170 + 2.439 Å	Abbasi, A.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, D.; Lidin, S.; Persson I.; Sandström, M.
MATSIK01		*Chem. Eur. J.* **2005**, *11*, 4065. $[Sc(H_2O)_8](CF_3SO_3)_2)_3$
NINMIG	2.170 + 2.479 Å	Castellani, C. B.; Carugo, O.; Giusti, M.; Sardone, N. *Eur. J. Solid State Inorg. Chem.* **1995**, *32*, 1089. $[Sc(H_2O)_9](CF_3SO_3)_2)_3$ Comment: there is most likely only 2 water molecules in the capping positions

Mean	**2.170 + 2.459 Å/2 structures; mean 2.242 Å**	
415181	2.182 + 2.295+2.574 Å	Abbasi, A.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, M. *Chem. Eur. J.* **2005**, *11*, 4065.
MATSIK04		$[Sc(H_2O)_8](CF_3SO_3)_2)_3$ (100 K; mean Sc-O bond distance: 2.245 Å)
MATSIK05	2.183 + 2.315 Å	Boyle, T. J.; Sears, J. M.; Neville, M. L.; Alam, T. M.; Young, V. G. *Inorg. Chem.* **2015**, *54*, 11831. $[Sc(H_2O)_8](CF_3SO_3)_3 \cdot H_2O$ (100 K; mean Sc-O bond distance: 2.216 Å)

Table S1l. Summary of solid state structures containing a hydrated yttrium ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Y-O bond distance, *d*(Y-O); $d(\text{Y-O})_p$ denotes ligands forming the prism and $d(\text{Y-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Yttrium(III)

Eight-coordination, square antiprismatic configuration

ICSD/CSD code	*d*(Y-O)	Reference, compound formula
BEDDOJ	2.336 Å	Bukowska-Strzyzewska, M.; Tosik, A *Acta Crystallogr., Sect. B* **1982**, *38*, 950. $[Y(H_2O)_8]Cl_3 \cdot 2C_{10}H_8N_2$
WAKSOR	2.338 Å	Tripol'skaya, A. A.; Geras'ko, O. A.; Naumov, D. Y.; Lipkowski, J.; Logvinenko, V. A.; Fedin, V. P. *Russ. J. Struct. Chem.* **2004**, *45*, 284. $[Y(H_2O)_8]_2(NO_3)_4(HN_2O_6)_2 \cdot (C_{36}H_{36}N_{24}O_{12}) \cdot 13H_2O$
FIBJEH	2.341 Å	Ling, I.; Sobolev, A. N.; Alias, Y.; Raston, C. L. *CrystEngComm* **2013**, *15*, 2888. $[Y(H_2O)_8](C_{14}H_{27}N_2)(C_6H_5)_3(C_6H_4OCH_3)P)(C_{28}H_{19}O_{16}S_4) \cdot 8H_2O$
FIBJOR	2.345 Å	Ling, I.; Sobolev, A. N.; Alias, Y.; Raston, C. L. *CrystEngComm* **2013**, *15*, 2888. $[Y(H_2O)_8](C_{14}H_{27}N_2)(C_6H_5)_4P)(C_{28}H_{19}O_{16}S_4) \cdot 12H_2O$
NAJNEU	2.345 Å	Falk, F.; Hackbarth, L.; Lochbrunner, S.; Marciniak, H.; Kockerling, M. *Eur. J. Inorg. Chem.* **2016**, 469. $[Y(H_2O)_8](B(CN)_4)_3 \cdot 2.32H_2O$
KIMSAC	2.346 Å	Dobrokhotova, Z. V.; Pertosyants, S. P.; Ilyukhin, A. B.; Novotortsev, V. M. *Russ Chem. Bull* **2012**, 2039. $[Y(H_2O)_8]Cl_3 \cdot C_{12}H_{24}O_6 \cdot 4H_2O$
LOHCIW	2.346 Å	Petrosyants, S. P.; Ilyukhin, A. B. *Khoord. Khim.* **2014**, *40*, 379. $[Y(H_2O)_8](C_{10}H_{10}N_2)Cl_5 \cdot H_2O$
421757	2.348 Å	Rukk, N. S.; Albov, D. V.; Skryabina, A. Y.; Kravchenko, V. V.; Mavrin, B. N.; Zamalyutin, V. V.; Alikberova, L. Y. *Koord. Khim.* **2011**, *37*, 643. $[Y(H_2O)_8]Br_3 \cdot 2H_2O$
HISTAH	2.349 Å	Ilyukhin, A.; Petrosyants, S. CCDC deposition number 1542589, **2018**. $[Y(H_2O)_8][Ba_2Cl_2(C_{12}H_{28}O_8)_2)Cl_5 \cdot H_2O$
CEQMET	2.353 Å	Chesnokov, G. A.; Topchiy, M. A.; Asachenko, A. F.; Muravyev, N. V.; Grishin, L. I.; Nikiforova, A. S.; Utochnikova, V. V.; Rybakov, V. B.; Khrustalev, V. N.; Nechaev, M. S. *Eur. J. Inorg. Chem.* **2018**, 805. $[Y(H_2O)_8]_2(C_2N_8)_3 \cdot 2H_2O$
ZUJLOI	2.354 Å	Zhang, B. CCDC deposition number 1978247, **2020**. $[Y(H_2O)_8]Cl_3 \cdot 2(C_4H_8O_2)$
LOHCUI	2.356 Å	Petrosyants, S. P.; Ilyukhin, A. B. *Khoord. Khim.* **2014**, *40*, 379. $[Y(H_2O)_8](C_{10}H_9N_2)Cl_4 \cdot H_2O$
87631	2.357 Å	Junk, P. C.; Semenova, L. I.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **1999**, *52*, 531. $[Y(H_2O)_8]Br_3$
FIBJAD	2.357 Å	Ling, I.; Sobolev, A. N.; Alias, Y.; Raston, C. L. *CrystEngComm* **2013**, *15*, 2888. $[Y(H_2O)_8](NH_3C_{12}H_{25})(C_6H_5)_4P)(C_{28}H_{19}O_{16}S_4) \cdot 10H_2O$

156364	2.359 Å	Wang J. P.; Han Q. X.; Niu J. Y. *Jiegou Huaxue* **2006**, *25*, 333. $[Y(H_2O)_8]_2[V_{10}O_{28}]\cdot 9H_2O$
MINBUG	2.360 Å	Hammerl, A.; Holl, G.; Klapotke, T. M.; Mayer, P.; Noth, H.; Piotrowski, H.; Warchhold, M. *Eur. J. Inorg. Chem.* **2002**, 834. $[Y(H_2O)_8]_2(C_2N_{10})_3\cdot 6H_2O$
FAYVEG01	2.364 Å	Rogers, R. D.; Kurihara, L. K. *Inorg Chim. Acta* **1987**, *129*, 277. $[Y(H_2O)_8]Cl_3\cdot C_{10}H_{20}O_6$
VATJAD	2.364 Å	Qiao, C.-F.; Wei, Q., Xia, Z.-Q.; Zhou, C.-S.; Chen, S.-P. *J. Therm. Anal. Calorimetry* **2012**, *107*, 527. $[Y(H_2O)_8](C_8H_5N_8)_3\cdot 9H_2O$
RAHLOE	2.365 Å	Yamada, M.; Hamada, F. *Int. J. Soc. Mater. Eng. Resour.* **2014**, *20*, 230. $[Y(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 16H_2O$
FAYVEG02	2.366 Å	Lindqvist-Reis, P.; Walther, C.; Klenze, R.; Eichhofer, A.; Fanghanel, T *J. Phys Chem B* **2006**, *110*, 5279. $[Y(H_2O)_8]Cl_3\cdot 2C_{10}H_{20}O_6$
FAYVEG	2.373 Å	Rogers, R. D.; Kurihara, L. K. *Inorg Chim. Acta* **1986**, *116*, 171. $[Y(H_2O)_8]Cl_3\cdot C_{10}H_{20}O_6$
VOGNOU	2.465 Å	Hardie, M. J.; Raston, C. L.; Salinas, A. *Chem. Commun.* **2001**, 1850. $[Y(H_2O)_8][Na(H_2O)_6][Co(C_2B_9H_{11})_2]_4\cdot 8C_{27}H_{30}O_6\cdot 8CH_3CN\cdot 8H_2O$
Mean	**2.353 Å/21 structures**	

Nine-coordination, tricapped trigonal prim

ICSD/CSD code	$d(Y\text{-}O)_p + d(Y\text{-}O)_c$	Reference, compound formula
BUVWAQ	2.344 + 2.525 Å	Harrowfield, J. M.; Kepert, D. L.; Patrick, J. M.; White, A. H. *Aust. J. Chem.* **1983**, *36*, 483. $[Y(H_2O)_9(CF_3SO_3)_3)]$
AYETHS01	2.368 + 2.517 Å	Broach, R. W.; Williams, J. M.; Felcher, G. P.; Hinks, D. G. *Acta Crystallogr., Sect. B* **1979**, *35*, 2317. $[Y(H_2O)_9(SO_3(OCH_2CH_3)]$.
172190	2.371 + 2.434 Å	Abbasi, A.; Eriksson, L. *Acta Crystallogr., Sect. E* **2006**, *62*, i126. $[Y(H_2O)_9](BrO_3)_3$
164698	2.371 + 2.446 Å	Abbasi, A.; Badiei, A. *Iran J. Chem. Chem. Eng.* **2007**, *26*, 123. $[Y(H_2O)_9](BrO_3)_3$
Mean	**2.364 + 2.481 Å (mean 2.403 Å)/4 structures**	

Table S1m. Summary of solid state structures containing a hydrated lanthanum(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean La-O bond distance, *d*(La-O); $d(\text{La-O})_p$ denotes ligands forming the prism and $d(\text{La-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Lanthanum(III)

Six-coordination

ICSD/CSD code	*d*(La-O)	Reference, compound formula
31756	2.301 Å	Glaser, J.; Johansson, G., *Acta Chem. Scand., Ser. A* **1981**, *35*, 639. $[La(H_2O)_6](ClO_4)_3$.

Eight-coordination

ICSD/CSD code	*d*(La-O)	Reference, compound formula
UMOKEP	2.353 Å	Tan, Y.-H. CCDC deposition number 911647, **2021**. $[La(H_2O)_8](C_6H_4N_5)_3{\cdot}2C_6H_5N_5{\cdot}7H_2O$
VOGJOQ	2.479 Å	Hardie, M. J.; Raston, C. L.; Salinas, A. *Chem. Commun.* **2001**, 1850. $[La(H_2O)_8][Na(H_2O)_8][CoC_4H_{22}B_{18}]{\cdot}8C_{27}H_{30}O_6{\cdot}8CH_3CN{\cdot}8H_2O$
XIDZEQ	2.511 Å	Dong, Y.-B.; Wang, P.; Ma, J.-P.; Zhao, X.-X.; Wang, H.-Y.; Tang, B.; Huang, R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 4872. $[La(H_2O)_8][La_2C_{64}H_{44}N_{16}O_{18}]Cl{\cdot}2H_2O$
Mean	**2.495 Å/2 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(\text{La-O})_p + d(\text{La-O})_c$	Reference, compound formula
280944	2.451 + 2.523 Å	Peng, X.-H.; Li, Y.-Z.; Cai, L.X.; Wang, L.-F.; Wu, J.-G. *Acta Crystallogr., Sect. E* **2002**, *58*, 111. $[La(H_2O)_9]_2[V_{10}O_{28}]{\cdot}8H_2O$
BUVVIX01	2.513 + 2.611 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[La(H_2O)_9](CF_3SO_3)_3$
ZZZAQP01	2.517 + 2.615 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984**, *40,* 781. $[La(H_2O)_9](C_2H_5SO_4)_3$
37206	2.519 + 2.619 Å	Harrowfield, J. Mc. B.; Kepert, D. L.; Patrick, J. M.; White, A. H. *Aust. J. Chem.* **1983**, *36*, 483.
BUVVIX		$[La(H_2O)_9](CF_3SO_3)_3$
419231	2.519 + 2.604 Å	Tiritiris, I.; Schleid, T. *Z. Anorg. Allg. Chem.* **2008**, *634*, 1353. $(H_3O)[La(H_2O)_9]_2(B_{12}H_{12})_2Cl_2{\cdot}H_2O$
424952	2.524 + 2.608 Å	Zhang, S.; Zhang, D.; Ma, P.; Liang, Y.; Wang, J.; Niu, J. *CrystEngComm* **2013**, *15*, 2992. $Na_{12}[La(H_2O)_9]_2[H_4W_{17}O_{61}P_2(La(H_2O)_4)_6]{\cdot}100H_2O$
419232	2.527 + 2.617 Å	Tiritiris, I.; Schleid, T. *Z. Anorg. Allg. Chem.* **2008**, *634*, 1353. $[La(H_2O)_9]_2(B_{12}H_{12})_3{\cdot}15H_2O$

BOYZOH	2.533 + 2.565 Å	Esteban-Parra, G. M.; Moscoso, I.; Ruiz, J. C.; Garcia, J. A.; Moreno, M. S.; Rodriguez-Dieguez, A.; Quiros, M. *Eur. J. Inorg. Chem.* **2020**, 308. $[La(H_2O)_9][La(NO_3)_6]\cdot 9C_7H_8N_4$
WUKJOD	2.537 + 2.649 Å	Wu, Y.; Shi, R.; Wu, Y.-L.; Holcroft, J. M.; Liu, Z.; Frasconi, M.; Wasielewski, M. R.; Li, H.; Stoddart, J. F. *J. Am. Chem. Soc.* **2015**, *137*, 4111. $[La(H_2O)_9][Mo_{12}O_{40}]\cdot 2(C_{48}H_{80}O_{40})$
WUKJIX	2.544 + 2.590 Å	Wu, Y.; Shi, R.; Wu, Y.-L.; Holcroft, J. M.; Liu, Z.; Frasconi, M.; Wasielewski, M. R.; Li, H.; Stoddart, J. F. *J. Am. Chem. Soc.* **2015**, *137*, 4111. $[La(H_2O)_9][Mo_{12}O_{40}]\cdot 2(C_{42}H_{70}O_{35})\cdot 27H_2O$
FIKGEO	2.549 + 2.631 Å	Zabrodina, G. S.; Katkova, M.A.; Samsonov, M. A.; Ketkov, S. Y. *Z. Anorg. Allg. Chem.* **2018**, *644*, 907. $[La(H_2O)_9](OH)[Cu_{10}La_2C_{90}H_{124}N_{20}O_{48}S_4]\cdot 15H_2O$
Mean	**2.528 + 2.611 Å/10 structures, mean: 2.556 Å**	

Nine-coordination

ICSD/CSD code	*d*(La-O)	Reference, compound formula
CEJFON	2.541 Å	Barnes, J. C. CCDC deposition number 606877, **2006**. $[La(H_2O)_9](ClO_4)_3\cdot 3C_4H_8O_2\cdot 2H_2O$
91454	2.549 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 867-873. $[La(H_2O)_9]I_3$
ZILVIZ	2.551 Å	Steed, J. W.; Johnson, C. P.; Barnes, C. L.; Juneja, R. K.; Atwood, J. L.; Reilly, S.; Hollis, R. L.; Smith, P. H.; Clark, D. L. *J. Am. Chem. Soc.* **1995**, *117*, 11426. $Na_2[La(H_2O)_9](C_{35}H_{25}O_{20}S_5)\cdot 10H_2O$
SUDDAW	2.552 Å	Faithfull, D. L.; Harrowfield, J. M.; Ogden, M. I.; Skelton, B. W.; Third, K.; White, A. H. *Aust. J. Chem.* **1992**, *45*, 583-594. $[La(H_2O)_9](C_6H_5CH_2SO_3)_3\cdot 4H_2O$
XENQUG	2.554 Å	Tabuchi, R.; Takezawa, H.; Fujita, M. *Angew. Chem., Int. Ed.* **2022**, *61*, e202208866. $[La(H_2O)_9][Pd_6C_{108}H_{144}N_{36}](C_{12}H_{15}O_9S_3)_4(NO_3)_3\cdot 43H_2O$
NUTNIB	2.560 Å	Lindqvist-Reis, P.; Walther, C.; Klenze, R.; Edelstein, N. M. *J. Phys. Chem. C* **2009**, *113*, 449. $[La(H_2O)_9]Cl_3\cdot C_{10}H_{20}O_5\cdot H_2O$
LEXVIW	2.561 Å	Salaam, J.; Tabti, L.; Bahamyirou, S. B.; Lecointre, A.; Alba, O. H.; Jeannin, O.; Camerel, F.; Cianferani, S.; Bentouhami, E.; Nonat, A. M.; Charbonniere, L. J. *Inorg. Chem.* **2018**, *57*, 6095. $[La(H_2O)_9][LaC_{24}H_{27}N_6O_9P_3]\cdot 10H_2O$
LAGGOQ	2.562 Å	Quanzheng Zhang, Q.; Lu, C.; Yang, W.; Chen, S.; Yu, Y.; He, X.; Yan, Y.; Liu, J.; Xu, X.; Xia, C.; Chen, L.; Wu, W. *Polyhedron* **2004**, *23*, 1975. $(NH_4)[La(H_2O)_9][V_2C_{12}H_{12}N_2O_{15}]$
VATHUV	2.562 Å	Qiao, C.-F.; Wei, Q.; Xia, Z.-Q.; Zhou, C.-S.; Chen, S.-P. *J. Thermal Anal. Calorimet.* **2012**, *107*, 527. $[La(H_2O)_9](C_8H_5N_8)_3\cdot 9H_2O$
Mean	**2.555 Å/9 structures**	
Mean all	**2.556 Å/19 structures**	

Table S1n. Summary of solid state structures containing a hydrated cerium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ce-O bond distance, *d*(Ce-O); $d(Ce\text{-}O)_p$ denotes ligands forming the prism and $d(Ce\text{-}O)_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Cerium(III)

Eight-coordination

ICSD/CSD code	*d*(Ce-O)	Reference, compound formula
XIDZIU	2.485 Å	Dong, Y.-B.; Wang, P.; Ma, J.-P.; Zhao, X.-X.; Wang, H.-Y.; Tang, B.; Huang, R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 4872. $[Ce(H_2O)_8][CeC_{64}H_{44}N_{16}O_{18}]Cl\cdot 2H_2O$
LEQFOG	2.542 Å	Lan, B.-L.; Luo, A.-Y.; Shao, B.; Gao, L.-N.; Wei, Q.; Liang, Y.-N.; Huang, J.; Zhang, Z. *Dalton Trans.* **2022**, *51*, 16158. $H_3O[Ce(H_2O)_8][NiC_{15}H_{24}N_3O_6]_4$
Mean	**2.514 Å/2 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Ce\text{-}O)_p + d(Ce\text{-}O)_c$	Reference, compound formula
BUVWEU01	2.491 + 2.594 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J., *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Ce(H_2O)_6](CF_3SO_3)_3$
CIBSAH	2.491 + 2.600 Å	Gerkin, R. E.; Reppart, W. J., *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Ce(H_2O)_9](C_2H_5SO_4)_3$
Mean	**2.491 + 2.597 Å/2 structures, mean: 2.526 Å**	

Nine-coordination

ICSD/CSD code	*d*(Ce-O)	Reference, compound formula
421753	2.520 Å	Rukk, N. S.; Albov, D. V.; Skryabina, A. Y.; Kravchenko, V. V.; Mavrin, B. N.; Zamalyutin, V. V.; Alikberova, L. Y. *Koord. Khim.* **2011**, *36*, 643. $[Ce(H_2O)_9]I_3$
VOSVAD	2.523 Å	Loh, S. L.; Sobolev, A. N.; Lim, S. H.; Ling, I. *CrystEngComm* **2020**, *22*, 52. $[Ce(H_2O)_9]_4(C_{16}H_{20}N_4)_2(C_{28}H_{20}O_{16}S_4)_2\cdot 33H_2O$
VOSVOR	2.529 Å	Loh, S. L.; Sobolev, A. N.; Lim, S. H.; Ling, I. *CrystEngComm* **2020**, *22*, 52. $[Ce(H_2O)_9][HCe(H_2O)_4]_{0.33}(C_{16}H_{20}N_4)(P(C_6H_5)_4)_2(C_{28}H_{20}O_{16}S_4)_2\cdot 20.6H_2O$
VOSTIJ	2.533 Å	Loh, S. L.; Sobolev, A. N.; Lim, S. H.; Ling, I. *CrystEngComm* **2020**, *22*, 52. $Na[Ce(H_2O)_9]_2(C_{22}H_{32}N_4)(C_{28}H_{20}O_{16}S_4)_2Cl$

SUDDEA	2.535 Å	Faithfull, D. L.; Harrowfield, J. M.; Ogden, M. I.; Skelton, B. W.; Third, K.; White, A. H. *Aust. J. Chem.* **1992**, *45*, 583. $[Ce(H_2O)_9](C_6H_5CH_2SO_3)_3 \cdot 4H_2O$
COTPOR	2.538 Å	Zhang, Q.-Z. CCDC deposition number 238994, **2009**. $NH_4[Ce(H_2O)_9][V_2C_{12}H_{12}N_2O_{15}]$
NEBNUG	2.541 Å	Das, D.; Guha, A. K. *Polyhedron* **2017**, *137*, 1. $H_3O[Ce(H_2O)_9][V_2C_{12}H_{12}N_2O_{15}]$
424952	2.542	Zhang, S.; Zhang, D.; Ma, P.; Liang, Y.; Wang, J.; Niu, J. *CrystEngComm* **2013**, *15*, 2992. $Na_{24}[Ce(H_2O)_9]_2[Ce(H_2O)_4]_6[H_2P_2W_{17}O_{61}] \cdot 56H_2O$
96528	2.543 Å	Yahyaoui, S.; Naili, H.; Ben Hassen, R.; Donadieu, B.; Daran, J. C.; Ben Salah, A. *J. Solid State Chem.* **2003**, *173*, 328. $[Ce(H_2O)_9][Cd_4Cl_{11}] \cdot 4H_2O$
BURSIR	2.545 Å	Kostakis, G. E.; Mondal, K. C.; Anson, C. E.; Powell, A. K. *Polyhedron* **2010**, *29*, 24. $[Ce(H_2O)_9]_2(C_8H_5N_8)(C_8H_4N_8) \cdot 6H_2O$
XITXUW	2.555 Å	Katkova, M. A.; Kremlev, K.; Zabrodina, G.; Rumyantcev, R.; Gazhulina, A.; Gusev, S.; Ketkov, S. Y.; Fomina, I.; Eremenko, I. *Eur. J. Inorg. Chem.* **2019**, 1002. $[Ce(H_2O)_9]_2[Ce_2Cu_{10}C_{90}H_{122}N_{20}O_{47}S_4](OH) \cdot 14H_2O$
Mean	**2.536 Å/10 structures**	
Mean all	**2.535 Å/12 structures**	

Ten-coordination

ICSD/CSD code	*d*(Ce-O)	Reference, compound formula
NEYXEW	2.502 Å	Zheng, Y.; Camara, M.; Daiguebonne, C.; Guillou, O.; Bernot, K.; Calvez, G.; Le Dret, F.; Kerbellec, N. *Inorg. Chim. Acta* **2013**, *401*, 11. $[Ce(H_2O)_{10}][CeC_{14}H_{16}O_{13}]_3 \cdot 6H_2O$

Table S1o. Summary of solid state structures containing a hydrated praseodymium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Pr-O bond distance, *d*(Pr-O); $d(\text{Pr-O})_p$ denotes ligands forming the prism and $d(\text{Pr-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Praseodymium(III)

Eight-coordination

ICSD/CSD code	*d*(Pr-O)	Reference, compound formula
IPICAN	2.476 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Pr(H_2O)_9](OH)_3 \cdot C_{44}H_{44}N_{24}O_{12} \cdot 23H_2O$

Nine-coordination

ICSD/CSD code	$d(\text{Pr-O})_p + d(\text{Pr-O})_c$	Reference, compound formula
APRETS02	2.469 + 2.582 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Pr(H_2O)_9](C_2H_5SO_4)_3$
BUVWIY01	2.470 + 2.579 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Pr(H_2O)_6](CF_3SO_3)_3$
APRETS01	2.471 + 2.591 Å	Albertsson, J.; Elding, I. *Acta Crystallogr., Sect. C* **1977***, 33,* 1460. $[Pr(H_2O)_9](C_2H_5SO_4)_3$
28147	2.488 + 2.521 Å	Albertsson, J.; Elding, I. *Acta Crystallogr., Sect. B* **1977**, *33*, 1460. $[Pr(H_2O)_9](BrO_3)_3$
Mean	**2.475 + 2.568 Å/4 structures, mean: 2.506 Å**	

Nine-coordination

ICSD/CSD code	*d*(Pr-O)	Reference, compound formula
415386	2.485 Å	Müller, A.; Zhou Y.; Boegge, H.; Schmidtmann, M.; Mitra, T.; Haupt, E. T. K.; Berkle, A. *Angew. Chem., Int. Ed.* **2006**, *45*, 460. $(NH_4)_{27}[Pr(H_2O)_9]_{10}[Pr_5\ MoMo_5O_{21}(H_2O)_6)_{12}(Mo_2O_4(SO_4))_{30}]$ $Cl_{12} \cdot 185H_2O$
HAYRUX	2.492 Å	Falk, F.; Herkert, L.; Hackbarth, L.; Muller-Buschbaum, K.; Finze, M.; Kockerling, M. *Z. Anorg. Allg. Chem.* **2017**, *643*, 625. $[Pr(H_2O)_9](B(CN)_4)_3 \cdot (CH_3)_2CO$
GANMUF	2.510 Å	Antonenko, T. A.; Alikberova, L. Y.; Albov, D. V. *Acta Crystallogr., Sect. E* **2012**, 68, m110. $[Pr(H_2O)_6]I_3 \cdot 2(SC(NH_2)_2)$
COKMIZ	2.515 Å	Kostakis, G. E.; Abbas, G.; Anson, C. E.; Powell, A. K. *CrystEngComm* **2008**, *10*, 1117. $[Pr(H_2O)_6](C_8H_5N_8)_3 \cdot 9H_2O$
170692	2.527 Å	Timofte, T.; Babai, A.; Meyer, G.; Mudring, A.V. *Acta Crystallogr., Sect. E* **2005**, 61, i94. $[Pr(H_2O)_9]I_3$

Mean **2.506 Å/5 structures**
Mean all **2.506 Å/9 structures**

Ten-coordination

ICSD/CSD code	*d*(Pr-O)	Reference, compound formula
DOTPUX	2.371 Å	Zhang, Y.-J.; Ma, B.-Q.; Gao, S.; Li, J.-R.; Liu, Q.-D.; Wen, G.-H.; Zhang, X.-X. *J. Chem. Soc., Dalton Trans.* **2000**, 2249. $[Pr(H_2O)_{10}][PrCu_6C_{66}H_{48}N_6O_{36}]\cdot 14H_2O$

Table S1p. Summary of solid state structures containing a hydrated neodymium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Nd-O bond distance, *d*(Nd-O); $d(\text{Nd-O})_p$ denotes ligands forming the prism and $d(\text{Nd-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Neodymium(III)

Eight-coordination

ICSD/CSD code	*d*(Nd-O)	Reference, compound formula
WUNQOS	2.338 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[(Nd(H_2O)_8][Nd_2C_{64}H_{44}N_{16}O_{18}]ClO_4{\cdot}H_2O$
YEGHIC	2.409 Å	Wang, Z.-X.; Shen, X.-F.; Wang, J.; Zhang, P.; Li, E. N. N.; Song, Y.; Ohkoshi, S.; Hashimoto, K.; You, X.-Z. *Angew. Chem., Int. Ed.* **2006**, *45*, 3287. $[(Nd(H_2O)_8][C_{36}H_{48}Mo_3N_{24}Nd_3O_{12}]{\cdot}8CH_3OH$
IPICOB	2.438 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G. Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[(Nd(H_2O)_8](OH)_3{\cdot}C_{40}H_{44}N_{24}O_{12}{\cdot}10H_2O$
WUNSAA	2.450 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[(Nd(H_2O)_8][Nd_2C_{64}H_{40}N_{16}O_{16}]ClO_4$
MONRUE	2.457 Å	Tan, Y.-H.; Xiong, J.-B.; Huang, J.; Gao, J.-X.; Xu, Q.; Yu, Y.-M.; Wang, Y.; Yang, B.; Shu, Q.; Tang, Y.-Z. *Wuji Huaxue Xuebao* **2014**, *20*, 1621. $[(Nd(H_2O)_8](C_6H_4N_5)_3{\cdot}2C_6H_5N_5{\cdot}7H_2O$
Mean	**2.439 Å/4 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(\text{Nd-O})_p + d(\text{Nd-O})_c$	Reference, compound formula
26601	2.470 + 2.404 Å	Helmholz, L. *J. Am. Chem. Soc.* **1939**, *61*, 1544-1550. $[Nd(H_2O)_9](BrO_3)_3$
61780	2.451 + 2.568 Å	Santos, C. O. P.; Castellano, E. E.; Machado, L. C.; Vicentini, G. *Inorg. Chim. Acta* **1985**, *110*, 83-86. $[Nd(H_2O)_9](CF_3SO_3)_3$
63668	2.451 + 2.569 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Nd(H_2O)_9](CF_3SO_3)_3$.
ZZZAQS01	2.458 + 2.570 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984**, *40,* 781. $[Nd(H_2O)_9](C_2H_5SO_4)_3$
BUVWOE04	2.464 + 2.560 Å	Lindqvist-Reis, P.; Apostolidis, C.; Rebizant, J.; Morgenstern, A.; Klenze, R.; Walter, O.; Fanghänel, T.; Haire, R. G. *Angew. Chem., Int. Ed.* **2007**, *46*, 919. $[Nd(H_2O)_9](CF_3SO_3)_3$
BUVWOE05	2.464 + 2.558 Å	Nelyubina, Y. V.; Puntus, L. N.; Lyssenko, K. A. *Chem. Eur J.* **2014**, *20*, 2860. $[Nd(H_2O)_9](CF_3SO_3)_3$
Mean	**2.458 + 2.565 Å/5 structures, mean 2.493 Å**	

Nine-coordination

ICSD/CSD code	*d*(Nd-O)	Reference, compound formula
WEXCOT	2.486 Å	Alikberova, L. Y.; Albov, D. V.; Antonenko, T. A.; Kochetova, I. M.; Rukk, N. S. *Vestnik MITHT* **2010**, *5*, 30. $[Nd(H_2O)_9]I_3 \cdot 2CH_4N_2S$
SEYYAX	2.491 Å	Hatano, M.; Takagi, E.; Arinobe, M.; Ishihara, K. *J. Organometal. Chem.* **2007**, *692*, 569. $[Nd(H_2O)_9]_2(CF_2(CF_2SO_3)_2)_3 \cdot 2H_2O$
SUDDIE	2.494 Å	Faithfull, D. L.; Harrowfield, J. M.; Ogden, M. I.; Skelton, B. W.; Third, K.; White, A. H. *Aust. J. Chem.* **1992**, *45*, 583. $[Nd(H_2O)_9](C_7H_7SO_3)_3 \cdot 4H_2O$
VESYOU	2.500 Å	Semenova, L. I.; Skelton, B. W.; White, A. H. *Z. Anorg. Allg. Chem.* **2006**, *632*, 2405. $((CH_3)_4)_2[Nd(H_2O)_9]Cl_5 \cdot 3H_2O$
GAXFOE	2.502 Å	Guo, Q.; Fang, T.; Liu, Q.; Zhu, L.; Yang, S.; Tian, G. Dalton Trans, 2022, 51, 7416. $[Nd(H_2O)_9](PS_2(CH_2(CH(CH_3)_2)_3$
XOLHEO	2.502 Å	Sieron, L.; Czylkowska, A.; Raducka, A. *Zh. Strukt. Khim.* **2019**, *60*, 124. $[Nd(H_2O)_9](C_{10}H_9N_2)Cl_4 \cdot (C_{10}H_8N_2) \cdot H_2O$
YAMYIV	2.504 Å	Trzesowska, A.; Kruszynski, R.; Bartczak, T. J.; Zalewicz, M. *Acta Crystallogr., Sect. E* **2005**, *61*, m625. $[Nd(H_2O)_9]Cl_3 \cdot 2(C_6H_{12}N_4) \cdot 4H_2O$
JEDLOU	2.508 Å	Dalgarno, S. J.; Atwood, J. L.; Raston, C. L. *Cryst. Growth Des.* **2006**, *6*, 174. $(H_3O)_2[Nd(H_2O)_9](C_8H_{20}N_2O_2)_4(C_{28}H_{20}O_{16}S_4)_4 \cdot 31H_2O$
NABZEW	2.509 Å	Dalgarno, S. J.; Hardie, M. J. ; Raston, C. L. *Cryst. Growth Des.* **2004**, *4*, 174. $[Nd(H_2O)_9]_2(C_{12}H_{26}NO_5)(C_{28}H_{20}O_{16}S_4)(C_{28}H_{21}O_{16}S_4) \cdot 29.5H_2O$
170054	2.512 Å	Timofte, T; Babai, A.; Meyer, G.; Mudring, A.-V. *Acta Crystallogr., Sect. E* **2005**, *61*, i88-i89. $[Nd(H_2O)_9]I_3$
LAGGUW	2.513 Å	Zhang, Q.; Lu, C.; Yang, W.; Chen, S.; Yu, Y.;He, X.; Yan, Y.; Liu, J.; Xu, X.; Xia, C.; Chen, L.; Wu, X. *Polyhedron* **2004**, *23*, 1975.
GOHTAY	2.514 Å	Rogers, R. D. *Inorg. Chim. Acta* **1988**, *149*, 307. $[Nd(H_2O)_9]Cl_3 \cdot C_{10}H_{20}O_5 \cdot H_2O$
LUTHAJ	2.514 Å	Dalgarno, S. J.; Raston, C. L. *Dalton Trans.* **2003**, 287. $[Nd(H_2O)_9]_2(C_{12}H_{28}N_2O_4)(C_{28}H_{20}O_{16}S_4)_2 \cdot 19H_2O$
23018	2.519 Å	Saf'yanov, Yu. N.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1976**, *227*, 1112. $[Nd(H_2O)_9]_2[V_{10}O_{28}] \cdot 10H_2O$
Mean	**2.505 Å/14 structures**	
	2.501 Å/19 structures	

Table S1q. Summary of solid state structures containing a hydrated samarium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Sm-O bond distance, *d*(Sm-O); $d(\text{Sm-O})_p$ denotes ligands forming the prism and $d(\text{Sm-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Samarium(III)

Eight-coordination

ICSD/CSD code	*d*(Sm-O)	Reference, compound formula
IPIDES	2.416 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G. Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[(Eu(H_2O)_8](OH)_3\cdot C_{40}H_{44}N_{24}O_{12}\cdot 9H_2O$
JOQVIX	2.421 Å	Lin, R.-L.; Zhou, J.-J.; Zhou, F. H.; Sun, W.-Q.; Liu, J.-X.; Chen, K. *CrystEngComm* **2019**, *21*, 5641. $[(Sm(H_2O)_8][CdCl_4]NO_3\cdot C_{44}H_{52}N_{24}O_{12}\cdot 3H_2O$
XIDZOA	2.430 Å	Dong, Y.-B.; Wang, P.; Ma, J.-P.; Zhao, X.-X.; Wang, H.-Y.; Tang, B.; Huang, R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 4872. $[Sm(H_2O)_8][Sm_2C_{64}H_{44}N_{16}O_{18}]Cl\cdot 2H_2O$
AZAOT	2.451 Å	Wang, J.; Zhao, J.; Niu, J. *J. Mol. Struct.* **2004**, *697*, 191. $(H_3O)_3[Sm(H_2O)_8][SmW_{18}C_{18}H_{44}N_6O_{69}P_2]\cdot 2(CH_3)_2NCO\cdot 3H_2O$
Mean	**2.430 Å/4 structures**	

Nine-coordination

ICSD/CSD code	$d(\text{Sm-O})_p + d(\text{Sm-O})_c$	Reference, compound formula
BUVWUK01	2.422 + 2.549 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Sm(H_2O)_9](CF_3SO_3)_3$
BUVWUK02	2.428 + 2.530 Å	Chan, E. J.; Harrowfield, J. M.; Robinson, W. T.; Skelton, B. W.; Sobolev, A. N.; White, A. H. *Z. Anorg. All. Chem.* **2009**, *4635*, 456. $[Sm(H_2O)_9](CF_3SO_3)_3$
ZZZAQV01	2.430 + 2.550 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Sm(H_2O)_9](C_2H_5SO_4)_3$
23757	2.462 + 2.550 Å	Sikka, S. K. *Acta Crystallogr. Sect. A* **1969**, *25*, 621. $[Sm(H_2O)_9](BrO_3)_3$
Mean	**2.436 + 2.545 Å/4 structures; mean 2.472 Å**	

Nine-coordination

ICSD/CSD code	*d*(Sm-O)	Reference, compound formula

NUHRIS	2.452 Å	Ma, S.-M.; Ren, S.; Ma, Y.; Liao, D.-Z. *J. Chem. Sci. Bangladore* **2009**, *121*, 421. $[Sm(H_2O)_9][Mo_2Sm_2C_{36}H_{22}N_{20}O_4]$
SEYYEB	2.452 Å	Hatano, M.; Takagi, E.; Arinobe, M.; Ishihara, K. *J. Organometal. Chem.* **2007**, *692*, 569. $[Sm(H_2O)_9]_2(CF_2(CF_2SO_3)_2)_3 \cdot 2H_2O$
YUBQUJ	2.459 Å	Mahmudov, K. T.; Fatima M.; Guedes da Silva, C.; Sutradhar, M.; Kopylovich, M. N.; Huseynov, F. E.; Shamilov, N. T.; Voronina, A. A.; Buslaeva, T. M.; Pombeiro, A. J. L. *Dalton Trans.* **2015**, *44*, 5602. $[Sm(H_2O)_9](C_{16}H_{12}ClN_2O_6S)_3 \cdot 2H_2O$
CEJFUT	2.460 Å	Barnes, J. C. CCDC deposition number 606878, **2006**. $[Sm(H_2O)_9](ClO_4)_3 \cdot 3C_4H_8O_2 \cdot 2H_2O$
91456	2.461 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 867. $[Sm(H_2O)_9]I_3$
DEYYIP	2.471 Å	Barnes, J. C.; Nicoll, G. Y. R. *Inorg. Chim. Acta* **1985**, *110*, 47. $[Sm(H_2O)_9]Br_3 \cdot 2C_4H_8O_2$.
COTNEF	2.474 Å	Zhang, Q.-Z. . CCDC deposition number 236219, **2009**. $NH_4[Sm(H_2O)_9][O(VC_6H_6NO_7)_2]$
Mean	**2.461 Å/7 structures**	
Mean all	**2.465 Å/11 structures**	

Table S1r. Summary of solid state structures containing a hydrated europium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Eu-O bond distance, *d*(Eu-O); *d*(Eu-O)$_p$ denotes ligands forming the prism and *d*(Eu-O)$_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Europium(III)

Eight-coordination

ICSD/CSD code	*d*(Eu-O)	Reference, compound formula
NICQUY	2.391 Å	Bi, Y.; Liao, W.; Zhang, H.; Li, D. *CrystEngComm* **2009**, *11*, 1213. $((CH_3)_4N)[(Eu(H_2O)_8](C_{28}H_{20}O_{16}S_4)\cdot 16H_2O$
HIDFEH	2.405 Å	Yamada, M.; Hamada, F. *CrystEngComm* **2013**, *15*, 5703. $[Eu(H_2O)_8]_2(C_{36}H_{18}O_{24})S_{12})\cdot 16H_2O$
IPIDIW	2.407 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Eu(H_2O)_8](OH)_3\cdot C_{44}H_{44}N_{24}O_{12}\cdot 13H_2O$
MONNAG	2.412 Å	Tan, Y.-H.; Xiong, J.-B.; Huang, J.; Gao, J.-X.; Xu, Q.; Yu, Y.-M.; Wang, Y.; Yang, B.; Shu, Q.; Tang, Y.-Z. *Wuji Huaxue Xuebao* **2014**, *30*, 1621. $[Eu(H_2O)_8](C_6H_4N_5)_3\cdot 2C_6H_5N_5\cdot 7H_2O$
XIFBAQ	2.412 Å	Dong, Y.-B.; Wang, P.; Ma, J.-P.; Zhao, X.-X.; Wang, H.-Y.; Tang, B.; Huang, R.-Q. *J. Am. Chem Soc.* **2007**, *129*, 4872. $[Eu(H_2O)_8][Eu_2C_{64}H_{44}N_{16}O_{18}]Cl\cdot 2H_2O$
VEHLUS	2.413 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Eu(H_2O)_8]Cl_3\cdot(C_{44}H_{52}N_{24}O_{14})\cdot 18H_2O$
132044	2.418 Å	Kang, R.-K.; Cao, J.-P.; Han, Y. M.; Hong, Y.-L.; Yang, M.-X.; Xu, Y. *Z. Anorg. Allg. Chem.* **2020**, *646*, 1315. $[Eu(H_2O)_8]_2[V_{10}O_{28}]\cdot 9H_2O$
87728	2.444 Å	Naruke, H.; Yamase, T.; Kaneko, M. *Bull. Chem. Soc. Jpn.* **1999**, *72*, 1775. $[Eu(H_2O)_8]_2[V_{10}O_{28}]\cdot 8H_2O$
BAPGAB	2.445 Å	Ahmad, R.; Dix, I.; Hardie, M. J. *Inorg. Chem.* **2003**, *42*, 2182. $[Eu(H_2O)_8]_3[Co(C_2B_9H_{11})_2]_9\cdot 12(C_{27}H_{30}O_6)\cdot 11CH_3CN\cdot 15H_2O$
Mean	**2.416 Å/9 structrures**	

Nine-coordination

ICSD/CSD code	*d*(Eu-O)$_p$ + *d*(Eu-O)$_c$	Reference, compound formula
BUVXAR01	2.408 + 2.536 Å	Chatterjee, A., *Pak. J. Sci. Ind. Res.* **1986**, *29*, 381. $[Eu(H_2O)_9](CF_3SO_3)_3$
BUVXAR11	2.412 + 2.536 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Eu(H_2O)_9](CF_3SO_3)_3$
ZZZAQ01	2.416 + 2.542 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Eu(H_2O)_9](C_2H_5OSO_3)_3$

BUVXAR12	2.421 + 2.527 Å	Nelyubina, Y. V. Puntus, L. N.; Lyssenko, K. A. *Chem. Eur. J.* **2014**, *20*, 2860. $[Eu(H_2O)_6](CF_3SO_3)_3$
GIBVAP	2.550 + 2.640 Å	Wang, F.-Q.; Zheng, X.-J.; Wan, Y.-H.; Sun, C.-Y.; Wang, Z.-M.; Wang, K.-Z.; Jin, L.-P. *Inorg. Chem.* **2007**, *46*, 2956. $(H(H_2O)_6)[Eu(H_2O)_9]_2[CuEuC_{18}N_6O_{12}]_2$
Mean	**2.414 + 2.535 Å/4 structures; mean 2.455 Å**	

Nine-coordination

ICSD/CSD code	*d*(Er-O)	Reference, compound formula
ZILVUL	2.432 Å	Steed, J. W.; Johnson, C. P.; Barnes, C. L.; Juneja, R. K.; Atwood, J. L.; Reilly, S.; Hollis, R. L.; Smith, P. H.: Clark, D. L. *J. Am. Chem. Soc.* **1995**, *117*, 11426. $Na[Eu(H_2O)_9]_2[EuC_{75}H_{65}NO_{46}S_{10}]\cdot C_5H_5NO\cdot 17.5H_2O$
GEKZUT	2.457 Å	Antonenko, T. A.; Alikberova, L. Y.; Albov, D. V.; Rukk, N, S. *Koord. Khim.* **2011**, 37, 786. $[Eu(H_2O)_6]I_3\cdot 2(SC(NH_2)_2)$
DAXCEM	2.459 Å	Hou, Y.; Rodriguez, M. A.; Nyman, M. *Cryst. Growth Des.* **2012**, *12*, 1422. $[Eu(H_2O)_9]_2[Fe_4C_{26}H_{34}N_4O_{24}]_2[Eu_2Fe_8C_{52}H_{88}N_8O_{60}]\cdot 12H_2O$
IBIBAX	2.460 Å	Dalgarno, S. J.; Hardie, M. J.; Warren, J. E.; Raston, C. L. *Dalton Trans.* **2004**, 2413. $[Eu(H_2O)_9](C_{12}H_{28}N_2O_2)(C_{35}H_{25}O_{20}S_5)\cdot 13H_2O$
172983	2.461 Å	Ehrenberg, H.; Fuess, H.; Hesse, S; Zimmermann, J.; von Seggern, H.; Knapp, M. *Acta Crystallogr., Sect. B* **2007**, *63*, 201. $Cs_2[Eu(H_2O)_8]Br_5\cdot H_2O$
CUMDUK	2.464 Å	Dang, Z.-H.; Mou, S.; Xu, L. *J. Solid State Chem.* **2009**, 182, 2840. $[Eu(H_2O)_9][Mo_4NaC_{24}H_{28}N_4O_3S_2]\cdot 3H_2O$
JEDLUA	2.465 Å	Dalgarno, S. J.; Atwood, J. L.; Raston, C. L. *Cryst. Growth Des.* **2006**, *6*, 174. $[Eu(H_2O)_9](C_{10}H_{24}N_2O_3)(C_{35}H_{25}O_{20}S_5)\cdot 11.75H_2O$
FEKGUY	2.466 Å	Zhang, Q.-Z.; Chen, S.-M.; Yu, Y.-Q.; He, X.; Yan, Y.; Liu, J-H.; Xu, X.-J.; Xia, C.-K.; Chen, L.-J.; Wu, X.-Y.; Lu, C.-Z. *Wuji Huaxue Xuebao* **2005**, *21*, 101. $NH_4[Eu(H_2O)_9][O(VC_6H_6NO_7)_2]$
NOMWES	2.475 Å	Dalgarno, S.; Warren, J. E.; Atwood, J. L.; Raston, C. L. *New. J. Chem.* **2008**, *32*, 2100. $[Eu(H_2O)_9]_2[NaC_{70}H_{59}O_{43}S_{10}]\cdot 2(4\text{-}CH_3C_5H_4NO)\cdot 16.5H_2O$
59282	2.478 Å	Sugeta, M.; Yamase, T. *Acta Crystallogr., Sect. C* **1997**, *53*, 1166. $H_3K_2[Eu(H_2O)_8]_3O_3[(GeTi_3W_9O_{37})_2]\cdot 13H_2O$
NOMWIW	2.478 Å	Dalgarno, S.; Warren, J. E.; Atwood, J. L.; Raston, C. L. *New. J. Chem.* **2008**, *32*, 2100. $[Eu(H_2O)_9]_2(C_{35}H_{27}O_{20}S_5)_2\cdot 2(4\text{-}ONC_5H_4\text{-}C_5H_4NO)\cdot 17H_2O$
TAHDIQ	2.482 Å	Dalgarno, S. J. Hardie, M. J.; Makha, M.; Raston, C. L. *Chem. Eur. J.* **2003**, *9*, 2834. $[Eu(H_2O)_9]_2(C_{42}H_{30}O_{24}S_6)\cdot 2(C_{12}H_{24}O_6)\cdot 24H_2O$

JIMGES	2.483 Å	Roques, N.; Perruchas, S.; Maspoch, D.; Datcu, A.; Wurst, K.; Sutter, J.-P.; Rovira, C.; Veciana, J. *Inorg. Chim. Acta* **2006**, *360*, 3861. $[Eu(H_2O)_9](CH(C_6Cl_5)_2(C_6Cl_4COO))_3 \cdot 3(CH(C_6Cl_5)_2(C_6Cl_4COOH)) \cdot 6C_2H_5OH \cdot 13H_2O$
Mean	**2.466 Å/13 structures**	
Mean all	**2.463 Å/17 structures**	

Table S1s. Summary of solid state structures containing a hydrated gadolium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Dy-O bond distance, *d*(Gd-O); $d(\text{Gd-O})_p$ denotes ligands forming the prism and $d(\text{Gd-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Gadolinium(III)

Seven-coordination

ICSD/CSD code	*d*(Gd-O)	Reference, compound formula
TUKHUF	2.409 Å	Ling, I.; Sobolev, A. N. *Mater. Today: Proc.* **2018**, *5*, 166. $[Gd(H_2O)_7](C_{25}H_{22}OP)_4(C_9H_{20}N)(C_{28}H_{20}O_{16}S_4)_2\cdot 25H_2O$

Eight-coordination

ICSD/CSD code	*d*(Gd-O)	Reference, compound formula
RUZNUX	2.362 Å	Ling, I.; Sobolev, A. N.; Raston, C. L. *CrystEngComm* **2016**, *18*, 4929. $[Gd(H_2O)_8](C_{25}H_{22}OP)_2(C_8H_{15}N_2)[GdC_{56}H_{47}O_{36}S_8)\cdot H_2O$
MEBTUM	2.383 Å	Ling, I.; Campbell, C. L.; Sobolev, A. N.; Dalgarno, S. J. *CrystEngComm* **2022**, *24*, 4201. $[Gd(H_2O)_8](C_8H_{15}N_2)_2[GdC_{56}H_{51}O_{36}S_8]\cdot 18H_2O$
FIBJIL	2.386 Å	Ling, I.; Sobolwv, A. N.; Alias, Y.; Raston, C. L. *CrystEngComm* **2013**, *15*, 2888. $[Gd(H_2O)_8]((C_6H_5)_4P)(C_{14}H_{27}N_2)(C_{28}H_{19}O_{16}S_4)\cdot 12H_2O$
MEBVAU	2.389 Å	Ling, I.; Campbell, C. L.; Sobolev, A. N.; Dalgarno, S. J. *CrystEngComm* **2022**, *24*, 4201. $[Gd(H_2O)_8]_2(C_{16}H_{20}N_4)(C_{28}H_{20}O_{16}S_4]_2\cdot 27H_2O$
BUZWAV	2.391 Å	Yamada, M.; Kondo, Y.; Hamada, F. *Int. J. Soc. Mater. Eng. Resour.* **2008**, *15*, 50. $[Gd(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 16H_2O$
RACNOA	2.391 Å	Ling, I.; Alias, Y.; Sobolev, A. N.; Raston, C. L. *New J Chem.* **2010**, *34*, 414. $[Gd(H_2O)_9][Gd(H_2O)_8](C_{25}H_{22}OP)_2(C_{13}H_{25}N_2)(C_{28}H_{19}O_{16}S_4)(C_{28}H_{20}O_{16}S_4)\cdot 14H_2O$
DAXNAT	2.392 Å	Ling, I.; Alias, Y.; Skelton, B. W.; Raston, C. L. *Cryst. Growth Des.* **2012**, *12*, 1564. $[Gd(H_2O)_8](C_{44}H_{38}P_2)(C_{35}H_{25}O_{20}S_5)_3\cdot 35.1H_2O$
UMOKIT	2.396 Å	Tan, Y.-H. CCDC deposition number 911646, **2021**. $[Gd(H_2O)_8](C_6H_4N_5)_3\cdot 2C_6H_5N_5\cdot 7H_2O$
SEYYIF	2.397 Å	Hatano, M.; Takagi, E.; Arinobe, M.; Ishihara, K. *J. Organomet. Chem.* **2007**, *692*, 569. $[Gd(H_2O)_8]_2(C_3F_6O_6S_2)_3\cdot H_2O$
VOSVEH	~~2.444 Å (9)~~ 2.397 Å (8)	Loh, S. L.; Sobolev, A. N.; Lim, S. H.; Ling, I. *CrystEngComm* **2020**, *22*, 52. $[Gd(H_2O)_8][Gd(H_2O)_9](C_{16}H_{20}N_4)(C_{28}H_{20}O_{16}S_4)_4\cdot 16H_2O$

FILVOL01	2.399 Å	Janicki, R.; Mondry, A. *Dalton Trans.* **2019**, *48*, 3380. $[Gd(H_2O)_8]Cl_3 \cdot (C_{10}H_{20}O_5)$
RACNUG	2.399 Å	Ling, I.; Alias, Y.; Sobolev, A. N.; Raston, C. L. *New J. Chem.* **2010**, *34*, 414. $[Gd(H_2O)_8](C_{13}H_{25}N_2)(C_{28}H_{20}O_{16}S_4) \cdot 5H_2O$
COKMOF	2.401 Å	Kostakis, G.E.; Abbas, G.; Anson, C. E.; Powell, A. K. *CrystEngComm* **2008**, *10*, 1117. $[Gd(H_2O)_8](C_8H_5N_8)_3 \cdot 9H_2O$
JOQWAQ	2.402 Å	Lin, R-L.; Zhou, J.-J.; Zhou, F. H.; Sun, W.-Q.; Liu, J.-X.; Chen, K. *CrystEngComm* **2019**, *21*, 5641.$[Gd(H_2O)_8][CdCl_4]Cl \cdot (C_{44}H_{52}N_{24}O_{12}) \cdot 5H_2O$
BAXNIX	2.403 Å	Bukowska-Strzyzewska, M.; Tosik, A. *Acta Crystallogr., Sect. B* **1982**, *38*, 265. $[Gd(H_2O)_8]Cl_3 \cdot 2C_{10}H_8N_2$
TUKHIT	2.409 Å	Ling, I.; Sobolev, A. N. *Mater. Today: Proc.* **2018**, *5*, 166. $[Gd(H_2O)_8](C_{25}H_{22}OP)_4(C_{28}H_{21}O_{16}S_4)_2(C_{28}H_{20}O_{16}S_4)Cl \cdot 24H_2O$
BASLUG	2.411 Å	Ling, I.; Sobolev, A: N.; Dalgarno, S. *J. Supramol. Chem.* **2020**, *33*, 71. $(P(C_6H_5)_3CH_3)_8[Gd(H_2O)_9][Gd(H_2O)_8](C_{28}H_{21}O_{16}S_4)_4(CF_3SO_3)Cl \cdot 20H_20$
FILVOL	2.411 Å	Rogers, R. D.; Kurihara, L. K. *Inorg. Chim. Acta* **1987**, *130*, 131-137. $[Gd(H_2O)_8]Cl_3 \cdot 2C_{10}H_{20}O_5$
DAXMUM	2.428 Å	Ling, I.; Alias, Y.; Skelton, B. W.; Raston, C. L. *Cryst. Growth Des.* **2012**, *12*, 1564. $[Gd(H_2O)_8](C_{44}H_{38}P_2)(C_{35}H_{25}O_{20}S_5)_3 \cdot 35.55H_2O$
PITZIC	2.437 Å	Xiang, S.; Hu, S.; Sheng, T.; Fu, R.; Wu, X.; Zhang, X. *J. Am. Chem. Soc.* **2007**, *129*, 15144. $[Gd(H_2O)_8][Cu_{12}Gd_6C_{36}H_{3101}N_{18}O_{56}](ClO_4)_{16} \cdot 14H_2O$
RACNOA	2.445 Å	Ling, I.; Alias, Y.; Sobolev, A. N.; Raston, C. L. *New J Chem.* **2010**, *34*, 414. $[Gd(H_2O)_9][Gd(H_2O)_8](C_{25}H_{22}OP)_2(C_{13}H_{25}N_2)(C_{28}H_{19}O_{16}S_4)(C_{28}H_{20}O_{16}S_4) \cdot 14H_2O$
Mean	**2.401 Å/21 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Gd\text{-}O)_p + d(Gd\text{-}O)_c$	Reference, compound formula
37207	2.396 + 2.540 Å	Harrowfield, J. Mc. B.; Kepert, D. L.; Patrick, J. M.; White, A. H. *Aust. J. Chem.* **1983**, *36*, 483. $[Gd(H_2O)_9](CF_3SO_3)_3$
BUVVOD01	2.398 + 2.536 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Gd(H_2O)_6](CF_3SO_3)_3$
ZZZARA01	2.401 + 2.537 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Gd(H_2O)_9](C_2H_5SO_4)_3$
BUVVOD02	2.405 + 2.519 Å	Batsanov, A. S.; Murray, B.; Parker, D. CCDC deposition number 725072, **2009**. $[Gd(H_2O)_6](CF_3SO_3)_3$
GIBVET	2.407 + 2.622 Å	Wang, F-Q.; Zheng, X.-J.; Wan, Y.-H.; Sun, C.-Y.; Wang, Z.-M.; Wang, K.-Z.; Jin, L.-P. *Inorg. Chem.* **2007**, *46*, 2956. $(H(H_2O)_7)[Gd(H_2O)_9][CuGdC_{18}H_6N_6O_{12}]$
BUVVOD03	2.410 + 2.521 Å	Janicki, R.; Mondry, A. *Dalton Trans.* **2019**, *48*, 3380. $[Gd(H_2O)_6](CF_3SO_3)_3$

132002	2.411 + 2.521 Å	Janicki, R.; Starynowicz, P. *Acta Crystallogr., Sect. E* **2020**, *76*, 572. $[Gd(H_2O)_6](CF_3SO_3)_3$
BUVVOD04		
Mean	**2.404 + 2.542 Å/7 structures, mean: 2.450 Å**	

Nine-coordination

ICSD/CSD code	*d*(Gd-O)	Reference, compound formula
BASLUG	2.403 Å	Ling, I.; Sobolev, A: N.; Dalgarno, S. *J. Supramol. Chem.* **2020**, *33*, 71. $(P(C_6H_5)_3CH_3)_8[Gd(H_2O)_9][Gd(H_2O)_8](C_{28}H_{21}O_{16}S_4)_4(CF_3SO_3)Cl{\cdot}20H_2O$
OHAMEQ	2.404 Å	Ling, I.; Alias, Y.; Sobolev, A. N.; Raston, C. L. *Cryst. Growth Des.* **2009**, *9*, 4497. $[Na_2(H_2O)_9][Gd(H_2O)_9]_2((C_6H_5)_4P)_4(C_{16}H_{20}N_4)_2(C_{28}H_{20}O_{16}S_4)_4{\cdot}22H_2O$
AHADAP	2.428 Å	Ling, I.; Alias, Y.; Sobolev, A. N.; Raston, C. L. *CrystEngComm* **2010**, *12*, 573. $[Gd(H_2O)_9](C_{25}H_{22}OP)(C_{12}H_{23}N_2)(C_{28}H_{19}O_{16}S_4){\cdot}6H_2O$
BASMAN	2.435 Å	Ling, I.; Sobolev, A: N.; Dalgarno, S. *J. Supramol. Chem.* **2020**, *33*, 71. $(P(C_6H_5)_3CH_3)_2(C_8H_{15}N_2)[Gd(H_2O)_9][Gd(H_2O)_7(OC_{28}H_{19}O_{15}S_4)](C_{28}H_{19}O_{16}S_4){\cdot}8H_2O$
BASMIV	2.435 Å	Ling, I.; Sobolev, A: N.; Dalgarno, S. *J. Supramol. Chem.* **2020**, *33*, 71. $(P(C_6H_5)_3CH_3)_6(C_{16}H_{20}N_4)[Gd(H_2O)_9]_{1.33}(C_{28}H_{19}O_{16}S_4)_4{\cdot}27H_2O$
91457	2.438 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 867-873. $[Gd(H_2O)_9]I_3$
OHAMOA	2.440 Å	Ling, I.; Alias, Y.; Sobolev, A. N.; Raston, C. L. *Cryst. Growth Des.* **2009**, *9*, 4497. $[Gd(H_2O)_9]((C_6H_5)_4P)_3(C_{22}H_{32}N_4)(C_{28}H_{20}O_{16}S_4)_2{\cdot}21H_2O$
BASMER	2.442 Å	Ling, I.; Sobolev, A: N.; Dalgarno, S. *J. Supramol. Chem.* **2020**, *33*, 71. $(P(C_6H_5)_3CH_3)(C_{12}H_{23}N_2)[Gd(H_2O)_9](C_{28}H_{19}O_{16}S_4){\cdot}2H_2O$
VOSVEH	2.444 Å (9) ~~2.397 Å (8)~~	Loh, S. L.; Sobolev, A. N.; Lim, S. H.; Ling, I. *CrystEngComm* **2020**, *22*, 52. $[Gd(H_2O)_8][Gd(H_2O)_9](C_{16}H_{20}N_4)(C_{28}H_{20}O_{16}S_4)_4{\cdot}16H_2O$
WEXCUZ	2.447 Å	Alikberova, L. Y.; Albov, D. V.; Antonenko, T. A.; Kochetova, I. M.; Rukk, N. S. *Vestnik MITHT* **2010**, *5*, 30. $[Gd(H_2O)_9]I_3{\cdot}2CH_4N_2S$
LUZXEK	2.461 Å	Ling, I.; Alias, Y.; Skelton, B. W. Raston, C. L. *Aust. J. Chem.* **2010**, *63*, 1492. $[Gd(H_2O)_9](C_{25}H_{22}OP)(C_6H_1N_2O)(C_{28}H_{19}O_{16}S_4){\cdot}4.5H_2O$
Mean	**2.434 Å/11 structures**	
Mean all	**2.440 Å/18 structures**	

Table S1t. Summary of solid state structures containing a hydrated terbium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Tb-O bond distance, *d*(Tb-O); $d(\text{Tb-O})_p$ denotes ligands forming the prism and $d(\text{Tb-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Terbium(III)

Six-coordination

ICSD/CSD code	*d*(Tb-O)	Reference, compound formula
31757	2.218 Å	Glaser, J.; Johansson, G., *Acta Chem. Scand., Ser. A* **1981**, *35*, 639. $[Tb[H_2O)_6](ClO_4)_3$.

Eight-coordination

ICSD/CSD code	*d*(Tb-O)	Reference, compound formula
NAJNAQ	2.363 Å	Falk, F.; Hackbarth, L.; Lochbrunner, S.; Marciniak, H.; Kockerling, M. *Eur. J. Inorg. Chem.* **2016**, 469. $[Tb(H_2O)_8](B(CN)_4)_3 \cdot 2.58H_2O$
XUCYIF	2.363 Å	Wang, C.-Z.; Zhao, W.-X.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J. *ChemPlusChem* **2015**, *80*, 1052. $[Tb(H_2O)_8]Cl_3 \cdot (C_{42}H_{48}N_{24}O_{12}) \cdot 14H_2O$
GAHTOB	2.366 Å	Zhao, W.; Wang, C.; Zhang, Y.; Zhang, Y; Xue, S.; Tao, Z.; Clegg, J. K.; Zhu, Q., Lindoy, L. F.; Wei, G. *New J. Chem.* **2016**, *40*, 2763. $[Tb(H_2O)_8](C_{42}H_{45}N_{24}O_{18}) \cdot 27H_2O$
IPIFAQ	2.371 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Tb(H_2O)_8]Cl_3 \cdot (C_{44}H_{44}N_{24}O_{12}) \cdot 4.5H_2O$
XUMKEV	2.373 Å	Atwood, J. L.; Barbour, L. J.; Dalgarno, S.; Raston, C. L.; Webb, H. R. *J. Chem. Soc., Dalton Trans.* **2002**, 4351. $[Tb(H_2O)_8](C_{28}H_{21}O_{16}S_4) \cdot 16H_2O$
HIDDUV	2.379 Å	Yamada, M.; Hamada, F. *CrystEngComm* **2013**, *15*, 5703. $[Tb(H_2O)_8]_2(C_{36}H_{18}O_{24})S_{12}) \cdot 16H_2O$
RORREX	2.380 Å	Thuery, P.; Harrowfield, J. *Cryst. Growth Des.* **2014**, *14*, 4214. $[Tb(H_2O)_8]_2[(UO_2)_2C_{18}H_{18}O_{12}]_3 \cdot 12H_2O$
VEHMED	2.381 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Tb(H_2O)_8]Cl_3 \cdot (C_{44}H_{52}N_{24}O_{14}) \cdot 10H_2O$
TAHDAI	2.385 Å	Dalgarno, S. J.; Hardie, M.J.; Makha, M.; Raston, C. L., *Chem. Eur. J.* **2003**, *9*, 2834. $[Tb(H_2O)_8][TbC_{42}H_{44}O_{31}S_6] \cdot C_{12}H_{24}O_6 \cdot 22H_2O$
VUMQUQ	2.385 Å	Steinhauser, G.; Giester, CG.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Tb(H_2O)_8]_2(C_2N_{10})_3 \cdot 6H_2O$

KIZGEG	2.385 Å	Eulgem, P.J.; Klein, A.; Maggiarosa, N.; Naumann, D.; Pohl, R. W. H. *Chem. Eur. J.* **2008**, *14*, 3727. $[Tb(H_2O)_8]_2(C_2H_8)_3 \cdot 3\ H_2O$
XIDZUG	2.390 Å	Dong, Y.-B.; Wang, P.; Ma, J.-P.; Zhao, X.-X.; Wang, H.-Y.; Tang, B.; Huang, R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 4872. $[Tb(H_2O)_8][Tb_2C_{64}H_{44}N_{16}O_{18}]Cl \cdot 2H_2O$
JUHFOJ	2.391 Å	Yu, X.; Clegg, J. K.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.; Lindoy, L. F.; Wei, G. *Polyhedron* **2015**, *91*, 150. $[Tb(H_2O)_8]Cl(NO_3)_2 \cdot (C_{44}H_{44}N_{24}O_{12}) \cdot 9H_2O$
NERJAX	2.391 Å	Czylkowska, A.; Kruszyski, R.; Kaczmarek, A.; Markiewicz M. *Zh. Strukt. Khim.* **2012**, *53*, 946. $[Tb(H_2O)_8](C_9H_{10}N_2)(CCl_3COO)_4 \cdot 2(C_{10}H_8N_2) \cdot 4H_2O$
YECSOO	2.395 Å	Kepert, C. J.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **1994**, *47*, 391. $[Tb(H_2O)_8](C_{15}H_{613}N_3)_2Cl_7 \cdot 2.33H_2O$
VIHLOP	2.403 Å	Hou, X.-Y.; Fu, F.; Wang, J.-J.; Tang, L.; Cao, J.; Lei, L. *Z. Kristallogr.- New Cryst. Struct.* **2013**, *228*, 295. $[Tb(H_2O)_8]_2(C_{14}H_6O_8S_2)_3 \cdot 3(C_{10}H_8N_2) \cdot 6H_2O$
132045	2.413 Å	Kang, R.; Cao, J.; Han, Y.; Hong, Y.; Yang, M.; Xu, Y. *Z. Anorg. Allg. Chem.* **2020**, *646*, 1315. $[Tb(H_2O)_8](V_{10}O_{28}] \cdot 6H_2O$
Mean	**2.383 Å/17 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Tb\text{-}O)_p + d(Tb\text{-}O)_c$	Reference, compound formula
BUVXEV01	2.380 + 2.527 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J., *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Tb(H_2O)_9](CF_3SO_3)_3$
ZZZARD01	2.382 + 2.526 Å	Gerkin, R. E.; Reppart, W. J., *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Tb(H_2O)_9](C_2H_5SO_4)_3$
BUVXEV02	2.383 + 2.530 Å	Abbasi, A.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, D.; Lidin, S.; Persson, I.; Sandström, M. *Chem. Eur. J.* **2005**, *11*, 4065. $[Tb(H_2O)_9](CF_3SO_3)_3$
BUVXEV03	2.392 + 2.516 Å	Nelyubina, Y. V.; Puntus, L. N.; Lyssenko, K. A. *Chem. Eur. J.* **2014**, *20*, 2860. $[Tb(H_2O)_9](CF_3SO_3)_3$
300025	2.405 + 2.469 Å	Gallucci, J. C.; Gerkin, R. E.; Reppart, W. J. *Cryst. Struct. Commun.* **1982**, *11*, 1141. $[Tb(H_2O)_9](BrO_3)_3$
Mean	**2.388 + 2.514 Å/5 structures; mean: 2.430 Å**	

Nine-coordination

ICSD/CSD code	*d*(Tb-O)	Reference, compound formula
421756	2.420 Å	Rukk, N. S.; Albov, D. V.; Skryabina, A. Y.; Kravchenko, V. V.; Mavrin, B. N.; Zamalyutin, V. V.; Alikberova, L. Y. *Koord. Khim.* **2011**, *36*, 643. $[Tb(H_2O)_9]I_3$
Mean	**2.420 Å/1 strutcure**	
Mean all	**2.428 Å/6 structures**	

Table S1u. Summary of solid state structures containing a hydrated dysprosium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Dy-O bond distance, *d*(Dy-O); $d(\text{Dy-O})_p$ denotes ligands forming the prism and $d(\text{Dy-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Dysprosium(III)

Eight-coordination

ICSD/CSD code	*d*(Dy-O)	Reference, compound formula
KUXQUQ	2.356 Å	Steinhauser, G.; Giester, G.; Leopold, N.; Wagner, C.; Villa, M.; Musilek, A. *Helv. Chim. Acta* **2010**, *93*, 183. $[Dy(H_2O)_8]_2(C_2N_{10})_3\cdot 4(CHN_7)\cdot 8H_2O$
IPIFOE	2.358 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Dy(H_2O)_8]Cl_3\cdot C_{44}H_{44}N_{24}O_{12}\cdot 8H_2O$
NAJVOM	2.359 Å	Falk, F.; Hackbarth, L.; Lochbrunner, S.; Marciniak, H.; Kockerling, M. *Eur. J. Inorg. Chem.* **2016**, 469. $[Dy(H_2O)_8](B(CN)_4)_3\cdot 2.33H_2O$
CEQMIX	2.364 Å	Chesnokov, G. A.; Topchiy, M. A.; Asachenko, A. F.; Muravyev, N. V.; Grishin, L. I.; Nikiforova, A. S.; Utochnikova, V. V.; Rybakov, V. B.; Khrustalev, V. N.; Nechaev, M. S. *Eur. J. Inorg. Chem.* **2018**, 805. $[Dy(H_2O)_8]_2(C_2N_8)_3\cdot 4H_2O$
132046	2.365 Å	Kang, R.; Cao, J.; Han, Y.; Hong, Y.; Yang, M.; Xu, Y. *Z. Anorg. Allg. Chem.* **2020**, *646*, 1315. $[Ho(H_2O)_8](V_{10}O_{28}]\cdot 6H_2O$
TIWXIH	2.366 Å	Yamada, M.; Kondo, Y.; Hamada, F. *Tetrahedron Lett.* **2008**, *49*, 1790. $[Dy(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 15H_2O$
MUQROG	2.367 Å	Trzesowska-Kruszynska, A.; Kruszynski, R.; Zalewicz, M.; Bartczak, T. J. *J. Coord. Chem.* **2010**, *63*, 1013. $[Dy(H_2O)_8](NO_3)_3\cdot 2C_6H_{12}N_4\cdot 2H_2O$
AQOWIO	2.368 Å	Al Hareri, M.; Gavey, E. L.; Regier, J.; Ras Ali, Z.; Carlos, L. D.; Ferreira, R A. S.; Pilkington, M. *Chem. Commun.* **2016**, *52*, 11335. $[Dy(H_2O)_8](ClO_4)_3\cdot 3C_{14}H_{20}O_5$
SERQOZ	2.371 Å	Bai, Z.; Scheibe, B.; Sperling, J. M.; Albrecht-Schonzart, T. E. *Cryst. Growth Des.* **2022**, *22*, 5504. $[Dy(H_2O)_8](C_3H_5N_6)_3\cdot 3H_2O$
SIQVEW	2.372 Å	Bousrez, G.; Andrews, P. C.; Junk, P. C.; Thielemann, D. T.; Wang, J. *Aust. J. Chem.* **2018**, *71*, 939. $[(Dy(H_2O)_8](C_{11}H_8I_3N_2O_4)_3\cdot 7H_2O$
VUMRAX	2.372 Å	Steinhauser, G.; Giester, CG.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Dy(H_2O)_8]_2(C_2N_{10})_3\cdot 6H_2O$

JOQWEU	2.374 Å	Lin, R.-L.; Zhou, J.-J.; Zhou, F. H.; Sun, W.-Q.; Liu, J.-X.; Chen, K. *CrystEngComm* **2019**, *21*, 5641. $[(Dy(H_2O)_8][CdCl_4]Cl\cdot C_{44}H_{52}N_{24}O_{12}\cdot 6H_2O$
QUTRON	2.374 Å	Liu, L.; Li, F.; Xu, L.; Liu, X.; Gao, G. *J. Solid State Chem.* **2010**, *183*, 350. $((CH_3)_4N)_8[(Dy(H_2O)_8]_2[H_8Dy_2As_4W_{34}O_{126}]\cdot 31H_2O$
NIRGOM	2.378 Å	Knoll, C.; Muller, D.; Giester, G.; Ofner, J.; Lendl, B.; Weinberger, P.; Steinhauser, G. *New. J. Chem.* **2013**, *37*, 3840. $[(Dy(H_2O)_8]_2(C_2N_{10})_3$
FIZKUU	2.379 Å	Rogers, R. D.; Kurihara, L. K.; Voss, E. J. *Inorg. Chem.* **1987**, *26*, 2360. $[Dy(H_2O)_8]Cl_3\cdot 2C_{10}H_{20}O_5$
JUHFUP	2.386 Å	Yu, X.; Clegg, J. K.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.; Lindoy, L. F.; Wei, G. *Polyhedron* **2015**, *91*, 150. $[Tb(H_2O)_8]Cl(NO_3)_2\cdot(C_{44}H_{44}N_{24}O_{12})\cdot 9H_2O$
FOPNAZ	2.387 Å	Rogers, R. D. *Inorg. Chim. Acta* **1987**, *133*, 347. $[Dy(H_2O)_8]Cl_3\cdot C_{12}H_{24}O_6\cdot 4H_2O$
XUCYOL	2.462 Å	Wang, C.-Z.; Zhao, W.-X.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.; *ChemPlusChem* **2015**, *80*, 1052. $[Dy(H_2O)_8]Cl_3\cdot(C_{42}H_{48}N_{24}O_{12})\cdot 12H_2O$
Mean	**2.371 Å/17 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Dy\text{-}O)_p + d(Dy\text{-}O)_c$	Reference, compound formula
BUVXIZ01	2.364 + 2.520 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Dy(H_2O)_9](CF_3SO_3)_3$.
ZZZARG01	2.371 + 2.517 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984**, *40,* 781. $[Dy(H_2O)_9](C_2H_5SO_4)_3$.
Mean	**2.368 + 2.519 Å/2 structures, mean 2.418 Å**	

Nine-coordination

ICSD/CSD code	$d(Dy\text{-}O)$	Reference, compound formula
EQERID	2.416 Å	Liu, D.-P.; Peng, J.-B.; Lin, X.-P.; Huang, Q.; Kong, X.-J.; Long, L.-S.; Huang, R.-B.; Zheng, L.-S. *CrystEngComm* **2014**, *16*, 5527. $[Dy(H_2O)_9][Dy_{24}Mn_2C_{96}H_{260}O_{155}](ClO_4)_{29}\cdot 4C_2H_5OH\cdot 80H_2O$
GIKFOX	2.421 Å	Antonenko, T. A.; Alikberova, L. Y.; Albov, D. V.; Rukk, N. S. *Zh. Strukt. Khim.* **2013**, *54*, 141. $[Dy(H_2O)_9]I_3\cdot 2(SC(NH_2)_2$
XENRER	2.436 Å	Tabuchi, R.; Takezawa, H.; Fujita, M. *Angew. Chem., Int. Ed.* **2022**, *61*, e202208866. $[Dy(H_2O)_9][Pd_6C_{108}H_{144}N_{36}](C_{12}H_{15}O_9S_3)_4(NO_3)_3\cdot 41.5H_2O$
EQEREZ	2.438 Å	Liu, D.-P.; Peng, J.-B.; Lin, X.-P.; Huang, Q.; Kong, X.-J.; Long, L.-S.; Huang, R.-B.; Zheng, L.-S. *CrystEngComm* **2014**, *16*, 5527. $[Dy(H_2O)_9][Dy_{24}Ni_2C_{96}H_{260}O_{155}](ClO_4)_{29}\cdot 4C_2H_5OH\cdot 80H_2O$
Mean	**2.428 Å/4 structures**	
Mean all	**2.425 Å/6 structures**	

Table S1v. Summary of solid state structures containing a hydrated holmium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ho-O bond distance, *d*(Ho-O); $d(\text{Ho-O})_p$ denotes ligands forming the prism and $d(\text{Ho-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Holmium(III)

Eight-coordination

ICSD/CSD code	*d*(Ho-O)	Reference, compound formula
WUNRAZ	2.294 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[(Ho(H_2O)_8][Ho_2C_{64}H_{44}N_{16}O_{18}]ClO_4{\cdot}H_2O$
SISQUH	2.341 Å	Mainicheva, E. A.; Geras'ko, O. A.; Sheludyakova, L. A.; Naumov, D. Y.; Karsanova, I. I.; Amirov, R. R.; Fedin, V. P. *Izv. Akad. Nauk SSSR, Ser. Khim.* **2006**, 1885. $[Ho(H_2O)_8]_3[Ho(H_2O)_6(NO_3)_2][Ho_4C_{84}H_{94}N_{50}O_{38}]_2(NO_3)_{18}{\cdot}62H_2O$
YEWXAC	2.343 Å	Qu, Y.-X. Zhou, K.-Z.; Chen, K.; Zhang, Y.-Q.; Xiao, X.; Zhou, Q.-D.; Tao, Z.; Ma, P.-H.; Wei, G. *Inorg. Chem.* **2018**, *57*, 7412. $[Ho(H_2O)_8](C_{54}H_{60}N_{24}O_{12}][ZnCl_4][ZnCl_3(H_2O)]{\cdot}15H_2O$
IPIGUL	2.345 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Ho(H_2O)_8]Cl_3{\cdot}C_{44}H_{44}N_{24}O_{12}{\cdot}10H_2O$
GAHTER	2.351 Å	Zhao, W.; Wang, C.; Zhang, Y.; Zhang, Y; Xue, S.; Tao, Z.; Clegg, J. K.; Zhu, Q., Lindoy, L. F.; Wei, G. *New J. Chem.* **2016**, *40*, 2763. $[Ho(H_2O)_8](C_{42}H_{45}N_{24}O_{18}){\cdot}25H_2O$
BUZEWZ	2.353 Å	Yamada, M.; Kondo, Y.; Hamada, F. *Int. J. Soc. Mater. Eng. Resour.* **2008**, *15*, 50. $[Ho(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12}){\cdot}15H_2O$
AWOCUN	2.355 Å	Patra, M.; Dubey, S. K.; Singha, S.; Rizzoli, C.; Bhattacharjee, S.; Saha, R. *J. Coord. Chem.* **2021**, *74*, 1879. $[Ho(H_2O)_8](p\text{-}C_6Br_4(COO)_2)_2{\cdot}2C_{10}H_8N_2$
VEHMON	2.355 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Ho(H_2O)_8]Cl(NO_3)_2{\cdot}(C_{44}H_{52}N_{24}O_{14}){\cdot}10H_2O$
CEQMOD	2.355 Å	Chesnokov, G. A.; Topchiy, M. A.; Asachenko, A. F.; Muravyev, N. V.; Grishin, L. I.; Nikiforova, A. S.; Utochnikova, V. V.; Rybakov, V. B.; Khrustalev, V. N.; Nechaev, M. S. *Eur. J. Inorg. Chem.* **2018**, 805. $[Ho(H_2O)_8]_2(C_2N_8)_3{\cdot}4H_2O$
MUQRUM	2.356 Å	Trzesowska-Kruszynska, A.; Kruszynski, R.; Zalewicz, M.; Bartczak, T. J. *J. Coord. Chem.* **2010**, *63*, 1013. $[Ho(H_2O)_8](NO_3)_3{\cdot}2C_6H_{12}N_4{\cdot}2H_2O$
SERRAM	2.360 Å	Bai, Z.; Scheibe, B.; Sperling, J. M.; Albrecht-Schonzart, T. E. *Cryst. Growth Des.* **2022**, *22*, 5504. $[Ho(H_2O)_8](C_3H_5N_6)_3{\cdot}3H_2O$

VUMREB	2.362 Å	Steinhauser, G.; Giester, CG.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Ho(H_2O)_8]_2(C_2N_{10})_3 \cdot 6H_2O$
87629	2.369 Å	Junk, P. C.; Semenova, L. I.;Skelton, B. W.;White, A. *Aust. J. Chem.* **1999**, *52*, 531. $[Ho(H_2O)_8]Br_3$
JOQWIY	2.369 Å	Lin, R.-L.; Zhou, J.-J.; Zhou, F. H.; Sun, W.-Q.; Liu, J.-X.; Chen, K. *CrystEngComm* **2019**, *21*, 5641. $[(Ho(H_2O)_8][CdCl_4]Cl \cdot C_{44}H_{52}N_{24}O_{12} \cdot 5H_2O$
JUHGAW	2.375 Å	Yu, X.; Clegg, J. K.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.; Lindoy, L. F.; Wei, G. *Polyhedron* **2015**, *91*, 150. $[Ho(H_2O)_8]Cl(NO_3)_2 \cdot (C_{44}H_{44}N_{24}O_{12}) \cdot 9H_2O$
Mean	**2.356 Å/13 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	d(Ho-O)$_p$ + d(Ho-O)$_c$	Reference, compound formula
HOESUL02	2.362 + 2.511 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984**, *40,* 781. $[Ho(H_2O)_9](C_2H_5SO_4)_3$
61781	2.368 + 2.527 Å	Santos, C. O. P.; Castellano, E. E.; Machado, L. C.; Vicentini, G. *Inorg. Chim. Acta* **1985**, *110*, 83. $[Ho(H_2O)_9](CF_3SO_3)_3$
BUVXOF01	2.368 + 2.527 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Ho(H_2O)_6](CF_3SO_3)_3$
62508	2.378 + 2.443 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1987**, *43*, 623. $[Ho(H_2O)_9](BrO_3)_3$
62507	2.386 + 2.449 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1987**, *43*, 623. $[Ho(H_2O)_9](BrO_3)_3$
HOESUL	2.390 + 2.512 Å	Hubbard, C. R.; Quicksall, C. O.; Jacobson, R. A. *Acta Crystallogr., Sect. B* **1974**, *30,* 2613. $[Ho(H_2O)_9](C_2H_5SO_4)_3$
91455	2.402 + 2.407 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 867. $[Ho(H_2O)_9]I_3$
Mean	**2.375 + 2.494 Å/6 structures, mean 2.414 Å**	
Mean all	**2.414 Å/6 structures**	

Table S1w. Summary of solid state structures containing a hydrated erbium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Er-O bond distance, *d*(Er-O); $d(\text{Er-O})_p$ denotes ligands forming the prism and $d(\text{Er-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Erbium(III)

Six-coordination

ICSD/CSD code	*d*(Er-O)	Reference, compound formula
31758	2.154 Å	Glaser, J.; Johansson, G., *Acta Chem. Scand., Ser. A* **1981**, *35*, 639. $[Er[H_2O)_6](ClO_4)_3$

Seven-coordination

ICSD/CSD code	*d*(Er-O)	Reference, compound formula
VOSVIL	2.444 Å	Loh, S. L.; Sobolev, A. N.; Lim, S. H.; Ling, I. *CrystEngComm* **2020**, *22*, 52. $[Er(H_2O)_7][Er(H_2O)_7(OC_4H_8)](C_{16}H_{20}N_4)(C_{28}H_{20}O_{16}S_4)_2\cdot 15H_2O$

Eight-coordination

ICSD/CSD code	*d*(Er-O)	Reference, compound formula
BIQPAV	2.235 Å	Smith, J. A.; Singh-Wilmot, M. A.; Carter, K. P.; Cahill, C. L.; Ridenour, J. A. *Cryst. Growth Des.* **2019**, *19*, 305. $[Er(H_2O)_8][Er_3C_{48}Br_{24}O_{24}]\cdot 6H_2O$
JODBOU	2.322 Å	Chekhlov, A.N. *Zh. Neorg. Khim.* **2007**, *52*, 1120. $[Er(H_2O)_8](C_{18}H_{38}N_2O_6)Br_5\cdot 1.5H_2O$
VEHMUT	2.326 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Tm(H_2O)_8]Cl(NO_3)_2\cdot(C_{44}H_{52}N_{24}O_{14})\cdot 7H_2O$
MITGOM	2.333 Å	Makha, M.; Alias, Y.; Raston, C. L.; Sobolev, A. *New J. Chem.* **2008**, *32*, 83. $[Er(H_2O)_9]_2(4\text{-}(C_6H_5)_3PCH_2C_6H_4CH_2P(C_6H_5)_3)(C_{28}H_{10}O_{16}S_4)_2\cdot 22H_2O$
BENDUV	2.334 Å	Benslimane, M.; Merazig, H.; Daran, J.-C.; Zeghouan, O. *Acta Crystallogr., Sect. E* **2012**, *68*, m1388. $[Er(H_2O)_9](4\text{-}(CH_3)_2N\text{-}C_5H_5N)Cl_4\cdot H_2O$
91458	2.336 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 867. $[Er(H_2O)_8]I_3$
HAYROR	2.337 Å	Falk, F.; Herkert, L.; Hackbarth, L.; Muller-Buschbaum, K.; Finze, M.; Kockerling, M. *Z. Anorg. Allg. Chem.* **2017**, *643*, 625. $[Er(H_2O)_8](B(CN)_4)_3\cdot(CH_3)_2CO$
IPIFEU	2.337 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G. Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[(Er(H_2O)_8]Cl_3\cdot C_{40}H_{44}N_{24}O_{12}\cdot 17H_2O$

IXOFEI	2.337 Å	Cherkasova, E. V.; Peresypkina, E. V.; Virovets, A. V.; Cherkasova, T. G. *Zh. Neorg. Khim.* **2016**, *61*, 174. $[(Er(H_2O)_8][Cr(NCS)_6]\cdot 5H_2O$
GAHSUG	2.342 Å	Zhao, W.; Wang, C.; Zhang, Y.; Zhang, Y; Xue, S.; Tao, Z.; Clegg, J. K.; Zhu, Q., Lindoy, L. F.; Wei, G. *New J. Chem.* **2016**, *40*, 2763. $[Er(H_2O)_8](C_{42}H_{45}N_{24}O_{18})\cdot 25H_2O$
MUQSAT	2.342 Å	Trzesowska-Kruszynska, A.; Kruszynski, R.; Zalewicz, M.; Bartczak, T. J. *J. Coord. Chem.* **2010**, *63*, 1013. $[Er(H_2O)_8](NO_3)_3\cdot 2C_6H_{12}N_4\cdot 2H_2O$
BUZVUO	2.343 Å	Yamada, M.; Kondo, Y.; Hamada, F. *Int. J. Soc. Mater. Eng. Resour.* **2008**, *15*, 50. $[Er(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 16H_2O$
KIWBAU	2.343 Å	Zhu, X.; Ma, Z.; Bi, W.; Wang, Y.; Yuan, D.;Cao, R. *CrystEngComm* **2008**, *10*, 19. $[Er(H_2O)_8][ErC_{18}H_{28}N_4O_8]NO_3\cdot 10H_2O$
UHERIK	2.347 Å	Xie, H.; Lu, G. *J. Coord. Chem.* **2015**, *68*, 1800. $[Er(H_2O)_8](2,4,6\text{-}(HOOC)_3\text{-}1,3,5\text{-}COO)_3C_6)\cdot 9H_2O$
TIXJAO	2.349 Å	Li, S.; Zhao, Y.; Qi, H.; Zhou, Y.; Liu, S.; Ma, X.; Zhang, J.; Chen, X. *Chem. Commun.* **2019**, *55*, 2525. $[Er(H_2O)_8]_2[Er4Nb_6W_{30}C_{40}H_{84}B_8N_8O_{158}P_4]\cdot 3H_2O$
VUMRIF	2.349 Å	Steinhauser, G.; Giester, G.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Er(H_2O)_8]_2(C_2N_{10})_3\cdot 6H_2O$
SERROA	2.350 Å	Bai, Z.; Scheibe, B.; Sperling, J. M.; Albrecht-Schonzart, T. E. *Cryst. Growth Des.* **2022**, *22*, 5504. $[Er(H_2O)_8](C_3H_5N_6)_3\cdot 3H_2O$
QUTRIH	2.354 Å	Liu, L.; Li, F.; Xu, L.; Liu, X.; Gao, G. *J. Solid State Chem.* **2010**, *183*, 350. $((CH_3)_4N)_8[(Er(H_2O)_8]_2[H_8Er_2As_4W_{34}O_{126}]\cdot 25H_2O$
JUHGEA	2.355 Å	Yu, X.; Clegg, J. K.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.; Lindoy, L. F.; Wei, G. *Polyhedron* **2015**, *91*, 150. $[Er(H_2O)_8]Cl(NO_3)_2\cdot(C_{44}H_{44}N_{24}O_{12})\cdot 8.5H_2O$
YICCIW	2.363 Å	Rogers, R. D.; Rollins, A. N. *J. Chem. Cryst.* **1994**, *24*, 531. $[Er(H_2O)_8]Cl_3\cdot C_{10}H_{20}O_5$
WUNRED	2.370 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[Er(H_2O)_8][Er_2C_{64}H_{44}N_{16}O_{18}]ClO_4\cdot H_2O$
KIZGIK	2.385 Å	Eulgem, P.J.; Klein, A.; Maggiarosa, N.; Naumann, D.; Pohl, R. W. H. *Chem. Eur. J.* **2008**, *14*, 3727. $[Er(H_2O)_8]_4$(5,5'-bitetrazole)$_3\cdot 2H_2O$
UMOKEP	2.416 Å	Tan, Y.-H. CCDC deposition number 941826, **2021**. $[Er(H_2O)_8](C_6H_4N_5)_3\cdot 2C_6H_5H_5\cdot 7H_2O$
Mean	**2.345 Å/20 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Er\text{-}O)_p + d(Er\text{-}O)_c$	Reference, compound formula
GELBEG	2.285 + 2.211 Å	Antonenko, T. A.; Alikberova, L. Y.; Albov, D. V.; Rukk, N. S. Zh. Strukt. Khim. **2013**, 54, 141. $[Er(H_2O)_9]I_3\cdot 2CS(NH_2)_2$

AERETS	2.362 + 2.524 Å	Fitzwater, D. R.; Rundle, R. E. *Z. Kristallogr., Kristallogeom., Kristalloaphys., Kristallochem.* **1959**, *112*, 363. $[Er(H_2O)_9](C_2H_5SO_4)_3$
AERETS02	2.352 + 2.503 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984***, 40,* 781. $[Er(H_2O)_9](C_2H_5SO_4)_3$
RAPYIR	2.339 + 2.518 Å	Sandström, M.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, D.; Lidin, S.; Persson, I.; Sandström, M. *Chem. Eur. J.* **2005**, *11*, 4065. $[Er(H_2O)_9](CF_3SO_3)_3$
Mean	**2.351 + 2.515 Å/3 structures (mean 2.406 Å)**	

Table S1x. Summary of solid state structures containing a hydrated thulium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Tm-O bond distance, *d*(Tm-O); $d(\text{Tm-O})_p$ denotes ligands forming the prism and $d(\text{Tm-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Thulium(III)

Eight-coordination

ICSD/CSD code	*d*(Tm-O)	Reference, compound formula
VEHNAA	2.322 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Tm(H_2O)_8]Cl_3\cdot(C_{44}H_{52}N_{24}O_{14})\cdot 19H_2O$
HIDDOP	2.332 Å	Yamada, M.;.Hamada, F. *CrystEngComm* **2013**, *15*, 5703. $[Tm(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 16H_2O$
MUQSIB	2.332 Å	Trzesowska-Kruszynska, A.; Kruszynski, R.; Zalewicz, M.; Bartczak, T. J. *J. Coord. Chem.* **2010**, *63*, 1013. $[Tm(H_2O)_8](NO_3)_3\cdot 2(C_6H_{12}N_4)\cdot 2H_2O$
CEQMUJ	2.333 Å	Chesnokov, G. A.; Topchiy, M. A.; Asachenko, A. F.; Muravyev, N. V.; Grishin, L. I.; Nikiforova, A. S.; Utochnikova, V. V; .Rybakov, V. B.; Khrustalev, V. N.; Nechaev, M. S. *Eur. J. Inorg. Chem.* **2018**, 805. $[Tm(H_2O)_8]_2(C_2N_8)_3\cdot 3H_2O$
GAHTUH	2.334 Å	Zhao, W.; Wang, C.; Zhang, Y.; Zhang, Y.; Xue, S.; Tao, Z.; Clegg, J. K.; Zhu, Q.; Lindoy, L. F.; Wei, G. *New. J. Chem.* **2016**, *40*, 2763. $[Tm(H_2O)_8](C_{10}H_9N_2)(CCl_3COO)_4\cdot 2C_{10}H_8N_2\cdot 2H_2O$
NERJEB	2.334 Å	Czylkowska, A.; Kruszyski, R.; Kaczmarek, A.; Markiewicz, M. *Zh. Strukt. Khim.* **2012**, *53*, 946. $[Tm(H_2O)_8](C_{10}H_9N_2)(C_{42}H_{45}N_{24}O_{18})\cdot 27H_2O$
VUMROL	2.339 Å	Steinhauser, G.; Giester, G.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Tm(H_2O)_8]_2(C_2N_{10})_3\cdot 6H_2O$
SERSER	2.340 Å	Bai, Z.; Scheibe, B.; Sperling, J. M.; Albrecht-Schonzart, T. E. *Cryst. Growth Des.* **2022**, *22*, 5504. $[Tm(H_2O)_8](C_3H_5N_6)_3\cdot 3H_2O$
IPIHEW	2.345 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Tm(H_2O)_8]Cl_3\cdot(C_{40}H_{44}N_{24}O_{12})\cdot 11H_2O$
JUHGIE	2.354 Å	Yu, X.; Clegg, J. K.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.;.; Lindoy, L. F.; Wei, G. *Polyhedron* **2015**, *91*, 150. $[Tm(H_2O)_8]Cl_3\cdot C_{40}H_{44}N_{24}O_{12}\cdot 11H_2O$
WUNRIH	2.363 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[Tm(H_2O)_8][Tm_2C_{64}H_{44}N_{16}O_{18}]ClO_4\cdot H_2O$
XUCZEC	2.373 Å	Wang, C.-Z.; Zhao, W.-X.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.; *ChemPlusChem* **2015**, *80*, 1052. $[Er(H_2O)_8]Cl_3\cdot(C_{42}H_{48}N_{24}O_{12})\cdot 14H_2O$

BIQPEZ	2.400 Å	Smith, J. A.; Singh-Wilmot, M. A.; Carter, K. P.; Cahill, C. L.; Ridenour, J. A. *Cryst. Growth Des.* **2019**, *19*, 305. $[Tm(H_2O)_8][Tm_3C_{48}Br_{24}O_{24}]\cdot 6H_2O$
Mean	**2.339 Å/11 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Tm\text{-}O)_p + d(Tm\text{-}O)_c$	Reference, compound formula
ZZZARJ01	2.340 + 2.504 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984**, *40,* 781. $[Tm(H_2O)_9](C_2H_5OSO_3)_3$
RAPYEN	2.322 + 2.522 Å	Sandström, M.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, D.; Lidin, S.; Persson, I.; Sandström, M. *Chem. Eur. J.* **2005**, *11*, 4065. $[Tm(H_2O)_9](CF_3SO_3)_3$
Mean	**2.331 + 2.513 Å/2 structures, mean 2.391 Å**	

Table S1y. Summary of solid state structures containing a hydrated ytterbium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Yb-O bond distance, *d*(Yb-O); $d(\text{Yb-O})_p$ denotes ligands forming the prism and $d(\text{Yb-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Ytterbium(III)

Seven-coordination

MITGIG	2.327 Å	Makha, M.; Alias, Y.; Raston, C. L.; Sobolev, A. N. *New. J. Chem.* **2008**, *32*, 83. $[Yb(H_2O)_7]_{2.33}(C_{44}H_{38}P_2)_7(C_{28}H_{20}O_{16}S_4)_3(C_{28}H_{21}O_{16}S_4)_3 \cdot 36.69H_2O$

Eight-coordination

ICSD/CSD code	*d*(Yb-O)	Reference, compound formula
BIQPOJ	2.240 Å	Smith, J. A.; Singh-Wilmot, M. A.; Carter, K. P.; Cahill, C. L.; Ridenour, J. A. *Cryst. Growth Des.* **2019**, *19*, 305. $[Yb(H_2O)_8][Yb_3C_{48}Br_{24}O_{24}] \cdot 6H_2O$
WUNRON	2.274 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[Yb(H_2O)_8][Yb_2C_{64}H_{44}N_{16}O_{18}]ClO_4 \cdot H_2O$
GAHVAP	2.296 Å	Zhao, W.; Wang, C.; Zhang, Y.; Zhang, Y.; Xue, S.; Tao, Z.; Clegg, J. K.; Zhu, Q.; Lindoy, L. F.; Wei, G. *New. J. Chem.* **2016**, *40*, 2763. $[Yb(H_2O)_8](C_{42}H_{45}N_{24}O_{18}) \cdot 25H_2O$
AHIRUF	2.310 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Yb(H_2O)_8]\ (ReO_4)_3 \cdot (C_{36}H_{36}N_{24}O_{12}) \cdot 6H_2O$
281540	2.312 Å	Yahyaoui, S.; Ben Hassen, R.; Donnadieu, B.; Daran, J. C.; Ben Salah, A. *Acta Crystallogr., Sect. C* **2003**, *59*, i109. $[Yb(H_2O)_8][Cd_3Cl_9(H_2O)] \cdot 6H_2O$
BAQHAE	2.313 Å	Komori-Orisaku, K.; Yamashita, S.; Isozaki, T.; Sugiura, K.; Koide, Y. *Chem. Eur. J.* **2011**, *17*, 13424. $[Yb(H_2O)_8]_2(CF_3SO_3)_6 \cdot 15C_{12}H_{10}N_2 \cdot 18H_2O$
GURCAA	2.317 Å	Ling, I.; Makha, M.; Sobolev, A. N.; Alias, Y.; Raston, C. L. *Aust. J. Chem.* **2020**, *73*, 570. $[Yb(H_2O)_8](NaC_{30}H_{29}NO_{19}S_4) \cdot 6H_2O$
AHISAM	2.318 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Yb(H_2O)_8][YbReC_{36}H_{44}N_{24}O_{20}]_2(ReO_4)_4(NO_3)_3 \cdot 2H_2O$
HOSFUQ	2.319 Å	Waller, F. J.; Barrett, A. G. M.; Braddock, D. C.; Ramprasasd, D.; McKinnell. R. M.; White, A. J. P.; Williams, D. J.; Ducray, R. *J. Org. Chem.* **1999**, *64*, 2910. $[Yb(H_2O)_8](C(O_2SCF_3)_3)_3 \cdot H_2O$
AHISIU	2.321 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Yb(H_2O)_8][YbC_{84}H_{92}N_{56}O_{32}][YbReC_{42}H_{48}N_{28}O_{21}][YbReH_{10}NO_{12}]_2(ReO_4)_{10} \cdot C_{42}H_{42}N_{28}O_{14} \cdot 21H_2O$
GURCEE	2.321 Å	Ling, I.; Makha, M.; Sobolev, A. N.; Alias, Y.; Raston, C. L. *Aust. J. Chem.* **2020**, *73*, 570. $[Yb(H_2O)_8]_2(C_{42}H_{30}O_{24}S_6) \cdot 14H_2O$

PIFQAX	2.322 Å	Makha, M.; Alias, Y.; Raston, C. L.; Sobolev, A. N. *New. J. Chem.* **2007**, *31*, 662. $[Yb(H_2O)_8]((C_6H_5)_4P)_2(C_{28}H_{19}O_{16}S_4)\cdot 20H_2O$
PIFQOL	2.324 Å	Makha, M.; Alias, Y.; Raston, C. L.; Sobolev, A. N. *New. J. Chem.* **2007**, *31*, 662. $[Yb(H_2O)_8]((C_6H_5)_3(CH_2C_6H_5)P)_2(C_{28}H_{20}O_{16}S_4)\cdot 9.5H_2O$
YAVJEL	2.324 Å	Shi, W.; Chen, X.-Y.; Zhao, Y.-N.; Zhao, B.; Cheng, P.; Yu, A.; Song, H.-B.; Wang, H.-G.; Liao, D.-Z.; Yan, S.-P.; Jiang, Z.-H. *Chem. Eur. J.* **2005**, *11*, 5031. $[Yb(H_2O)_8]_2[(VO)_2\text{-}(TTHA)]_3\cdot 21\ H_2O$
SERSAN	2.326 Å	Bai, Z.; Scheibe, B.; Sperling, J. M.; Albrecht-Schonzart, T. E. *Cryst. Growth Des.* **2022**, *22*, 5504. $[Dy(H_2O)_8](C_3H_5N_6)_3\cdot 3H_2O$
IDIYEA	2.328 Å	Rohde, A.; Urland, W. *Acta Crystallogr. Sect. E.* **2006**, *62*, m1210. $[Yb(H_2O)_8][C_6H_3(COOH)(OH)(SO_3)]_3\cdot H_2O$
MONMUZ	2.329 Å	Tan, Y.-H.; Xiong, J.-B.; Huang, J.; Gao, J.-X.; Xu, Q.; Yu, Y.-M.; Wang, Y.; Yang, B.; Shu, Q.; Tang, Y.-Z. *Chin. J. Inorg. Chem.* **2014**, *30*, 1621. $[Yb(H_2O)_8](C_6H_4N_5)_3\cdot 6H_2O$
YURFAT	2.329 Å	Trzesowska-Kruszynska, A.; Kruszynski, R.; Zalewicz, M.; Bartczak, T. J. *J. Coord. Chem.* **2010**, *63*, 1013. $[Yb(H_2O)_8](NO_3)_3\cdot 2(C_6H_{12}N_4)\cdot 2H_2O$
MEFMIU	2.330 Å	Cunha-Silva, L.; Westcott, A.; Whitford, N.; Hardie, M. J. *Cryst. Growth Des.*, **2006**, *6*, 726. $[Yb(H_2O)_8]_2(bpy)_5Cl_6\cdot 13H_2O$
VEHNEE	2.330 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Yb(H_2O)_8]\ Cl_3\cdot(C_{44}H_{52}N_{24}O_{14})\cdot 19H_2O$
VUMRUR	2.330 Å	Steinhauser, G.; Giester, G.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Yb(H_2O)_8]_2(C_2N_{10})_3\cdot 6H_2O$
HIDDIJ	2.331 Å	Yamada, M.;.Hamada, F. *CrystEngComm* **2013**, *15*, 5703. $[Yb(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 16H_2O$
MEFMOA	2.331 Å	Cunha-Silva, L.; Westcott, A.; Whitford, N.; Hardie, M. J. *Cryst. Growth Des.* **2006**, *6*, 726. $[Yb(H_2O)_8]_8(bpy)_{19}Cl_{24}\cdot 49H_2O$
MONMOT	2.331 Å	Tan, Y.-H.; Xiong, J.-B.; Huang, J.; Gao, J.-X.; Xu, Q.; Yu, Y.-M.; Wang, Y.; Yang, B.; Shu, Q.; Tang, Y.-Z. *Chin. J. Inorg. Chem.* **2014**, *30*, 1621. $[Yb(H_2O)_8](C_6H_4N_5)_3\cdot 2C_6H_5N_5\cdot 7H_2O$
WUNRUT	2.332 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B. *Chem. Eur. J.* **2009**, *15*, 10432. $[Yb(H_2O)_8][Yb_2C_{64}H_{50}N_{16}O_{21}]ClO_4\cdot H_2O$
IPIGOF	2.333 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Yb(H_2O)_8]Cl_3\cdot(C_{40}H_{44}N_{24}O_{12})\cdot 11H_2O$
UHESOR	2.333 Å	Xie, H.; Lu, G. *J. Coord. Chem.* **2015**, *68*, 1800. $[Yb(H_2O)_8](C_6(COOH)_3(COO)_3)\cdot 9H_2O$
RANGET	2.337 Å	Makha, M.; Raston, C.L.; Sobolev, A.N.; White, A.H. *Chem. Commun.* **2005**, 1962. $[Yb(H_2O)_8](C_{42}H_{29}O_{24}S_6)_2(C_{24}H_{20}P)_8$

JUHGOK	2.341 Å	Yu, X.; Clegg, J. K.; Zhang, Y.-Q.; Xue, S.-F.; Tao, Z.; Zhu, Q.-J.;.; Lindoy, L. F.; Wei, G. *Polyhedron* **2015**, *91*, 150. $[Yb(H_2O)_8]Cl(NO_3)_2 \cdot C_{40}H_{44}N_{24}O_{12} \cdot 9H_2O$
PUJCIG	2.346 Å	Hassaballa, H.; Steed, J. W.; Junk, P. C.; Elsegood, M. J. R. *Inorg. Chem.* **1998**, *37*, 4666. $[Yb(H_2O)_8]Cl_3 \cdot C_{10}H_{20}O_5$
BAQHAE	2.347 Å	Komori-Orisaku, K.; Yamashita, S.; Isozaki, T.; Sugiura, K.; Koide, Y. *Chem. Eur. J.* **2011**, *17*, 13424. $[Yb(H_2O)_8]_2(CF_3SO_3)_6 \cdot 15C_{12}H_{10}N_2 \cdot 19H_2O$
CEQNAQ	2.366 Å	Chesnokov, G. A.; Topchiy, M. A.; Asachenko, A. F.; Muravyev, N. V.; Grishin, L. I.; Nikiforova, A. S.; Utochnikova, V. V; .Rybakov, V. B.; Khrustalev, V. N.; Nechaev, M. S. *Eur. J. Inorg. Chem.* **2018**, 805. $[Yb(H_2O)_8]_2(C_2N_8)_3 \cdot 3H_2O$
Mean	**2.326 Å/29 structures**	

Nine-coordination

ICSD/CSD code	$d(Yb\text{-}O)_p + d(Tb\text{-}O)_c$	Reference, compound formula
BUVYEW01	2.302 + 2.532 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Yb(H_2O)_6](CF_3SO_3)_3$.
RAPYAJ	2.304 + 2.523 Å	Sandström, M.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, D.; Lidin, S.; Persson, I.; Sandström, M. *Chem. Eur. J.* **2005**, *11*, 4065. $[Yb(H_2O)_9](CF_3SO_3)_3$
28148	2.321 + 2.431 Å	Albertsson, J.; Elding, I. *Acta Crystallogr., Sect. B* **1977**, *33*, 1460. $[Yb(H_2O)_9](BrO_3)_3$
ESULYB	2.321 + 2.518 Å	Albertsson, J.; Elding, I. *Acta Crystallogr., Sect. C* **1977**, *33,* 1460. $[Yb(H_2O)_9](C_2H_5SO_4)_3$
ESULYB01	2.324 + 2.503 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1984**, *40,* 781. $[Yb(H_2O)_9](C_2H_5SO_4)_3$
Mean	**2.314 + 2.501 Å/5 structures, mean 2.376 Å**	

ICSD/CSD code	$d(Yb\text{-}O)$	Reference, compound formula
PEJNUO	2.419 Å	Smith, C. B.; Barbour, L. J.; Makha, M.; Raston, C. L.; Sobolev, A. N. *New J. Chem.* **2006**, *30*, 991. $(H_3O)_9Na_3[Yb(H_2O)_9][Co(C_{12}H_8N_2)_3]_3(C_{56}H_{40}O_{32}S_8)_3 \cdot 21H_2O$
GIKFIR	2.518 + 2.296 Å	Antonenko, T. A.; Alikberova, L. Y.; Albov, D. V.; Rukk, N. S. Zh. Strukt. Khim. **2013**, 54, 141. $[Yb(H_2O)_9]I_3 \cdot 2CS(NH_2)_2$
Mean	**2.314 + 2.501 Å/5 structures (mean 2.376 Å)**	

Table S1z. Summary of solid state structures containing a hydrated lutetium(III) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Lu-O bond distance, *d*(Lu-O); $d(\text{Lu-O})_p$ denotes ligands forming the prism and $d(\text{Lu-O})_c$ the capping ligands in tricapped trigonal prismatic configuration. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Lutetium(III)

Eight-coordination

ICSD/CSD code	*d*(Lu-O)	Reference, compound formula
BIQPOJ	2.226 Å	Smith, J. A.; Singh-Wilmot, M. A.; Carter, K. P.; Cahill, C. L.; Ridenour, J. A. *Cryst. Growth Des.* **2019**, *19*, 305. $[Lu(H_2O)_8][Lu_3C_{48}Br_{24}O_{24}]\cdot 6H_2O$
VEHNII	2.300 Å	Shen, F.-F.; Chen, K.; Hua, Z.-Y.; Wang, Y.; Xu, J.; Chen, M.-D.; Zhang, Y.-Q.; Tao, Z. *CrystEngComm* **2017**, *19*, 5635. $[Lu(H_2O)_8]\ Cl(NO_3)_2\cdot(C_{44}H_{52}N_{24}O_{14})\cdot 9H_2O$
91459	2.303 Å	Lim, K. C.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **2000**, *53*, 867. $[Lu(H_2O)_8]I_3$
GAHTIV	2.304 Å	Zhao, W.; Wang, C.; Zhang, Y.; Zhang, Y.; Xue, S.; Tao, Z.; Clegg, J. K.; Zhu, Q.; Lindoy, L. F.; Wei, G. *New. J. Chem.* **2016**, *40*, 2763. $[Lu(H_2O)_8](C_{42}H_{45}N_{24}O_{18})\cdot 23H_2O$
IXOFAE	2.309 Å	Cherkasova, E. V.; Peresypkina, E. V.; Virovets, A. V.; Cherkasova, T. G. *Zh. Neorg. Khim.* **2016**, *61*, 174. $[Lu(H_2O)_8][Cr(NCS)_6]\cdot 5H_2O$
WIXCUE	2.311 Å	Janicki, R.; Mondry, A. *Dalton Trans.* **2019**, *48*, 3380. $[Lu(H_2O)_8]Cl_3\cdot C_{12}H_{24}O_6$
HIDFAD	2.314 Å	Yamada, M.;.Hamada, F. *CrystEngComm* **2013**, *15*, 5703. $[Lu(H_2O)_8]_2(C_{36}H_{18}O_{24}S_{12})\cdot 16H_2O$
AHISEQ	2.315 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Lu(H_2O)_8][LuReC_{36}H_{44}N_{24}O_{20}]_2(ReO_4)_4(NO_3)_3\cdot 2H_2O$
IPIGAR	2.316 Å	Yang, B.; Gao, Z.-Z.; Lu, J.-H.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Prior, T. J.; Redshaw, C.; Wei, G.; Xiao, X. *CrystEngComm* **2016**, *18*, 5028. $[Lu(H_2O)_8]Cl_3\cdot(C_{40}H_{44}N_{24}O_{12})\cdot 14H_2O$
SERRIU	2.316 Å	Bai, Z.; Scheibe, B.; Sperling, J. M.; Albrecht-Schonzart, T. E. *Cryst. Growth Des.* **2022**, *22*, 5504. $[Lu(H_2O)_8](C_3H_5N_6)_3\cdot 3H_2O$
YURFEX	2.318 Å	Trzesowska-Kruszynska, A.; Kruszynski, R.; Zalewicz, M.; Bartczak, T. J. *J. Coord. Chem.* **2010**, *63*, 1013. $[Lu(H_2O)_8](NO_3)_3\cdot 2(C_6H_{12}N_4)\cdot 2H_2O$
87630	2.319 Å	Junk, P.C.;Semenova, L. I.;Skelton, B. W.;White, A. H. *Aust. J. Chem.* **1999**, *52*, 531. $[Lu(H_2O)_8]Br_3$
CEQNEU	2.321 Å	Chesnokov, G. A.; Topchiy, M. A.; Asachenko, A. F.; Muravyev, N. V.; Grishin, L. I.; Nikiforova, A. S.; Utochnikova, V. V; .Rybakov, V. B.; Khrustalev, V. N.; Nechaev, M. S. *Eur. J. Inorg. Chem.* **2018**, 805. $[Lu(H_2O)_8]_2(C_2N_8)_3\cdot 3H_2O$
VUMSAY	2.321 Å	Steinhauser, G.; Giester, G.; Wagner, C.; Leopold, N.; Sterba, J. H.; Lendl, B.; Bichler, M. *Helv. Chim. Acta* **2009**, *92*, 1371. $[Lu(H_2O)_8]_2(C_2N_{10})_3\cdot 6H_2O$

GIPCOX	2.329 Å	Rogers, R. D. *J. Coord. Chem.* **1988**, *16*, 415. $[Lu(H_2O)_8]Cl_3 \cdot 1.5C_8H_{16}O_4 \cdot 2H_2O$.
FOPPOP	2.337 Å	Rogers, R. D.; Voss, E. J. *Inorg. Chim. Acta* **1987**, *133*, 181. $Na[Lu(H_2O)_8]Cl_3 \cdot C_{16}H_{32}O_8 \cdot 2H_2O$
FILVUR	2.347 Å	Rogers, R. D.; Kurihara, L. K. *Inorg. Chim. Acta* **1987**, *130*, 131. $[Lu(H_2O)_8]Cl_3 \cdot 2C_{10}H_{20}O_5$
Mean	**2.318 Å/16 structures**	

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(Lu\text{-}O)_p + d(Lu\text{-}O)_c$	Reference, compound formula
BUVVUJ01	2.287 + 2.520 Å	Chatterjee, A.; Maslen, E. N.; Watson, K. J. *Acta Crystallogr., Sect. B* **1988**, *44*, 381. $[Lu(H_2O)_6](CF_3SO_3)_3$
RAPXUC	2.287 + 2.499 Å	Abbasi, A.; Lindqvist-Reis, P.; Eriksson, L.; Sandström, D.; Lidin, S.; Persson, I.; Sandström, M. *Chem. Eur,. J.* **2005**, *11*, 4065. $[Lu(H_2O)_9](CF_3SO_3)_3$
37208	2.291 + 2.509 Å	Harrowfield, J. B.; Kepert, D. L.; Patrick, J. M.; White, A. H. *Aust. J. Chem.* **1983**, *36*, 483.
BUVVUJ		$[Lu(H_2O)_9](CF_3SO_3)_3$
ZZZARM01	2.318 + 2.497 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* 1984*, 40,* 781. $[Lu(H_2O)_9](C_2H_5SO_4)_3$
Mean	**2.296 + 2.506 Å/4 structures, mean: 2.366 Å**	

Table S1aa. Summary of solid state structures containing a hydrated and solvated thorium(IV) ions and hydroxo complexes. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Th-O bond distance, *d*(Th-O); *d*(Th-O)$_{OH}$ denotes Th-O bond distance to hydroxo ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Thorium(IV)

Eight-coordination

ICSD/CSD code	*d*(Th-O)	Reference, compound formula
N/A	2.404 Å	Torapava, N.; Lundberg, D.; Persson, I. *Eur. J. Inorg. Chem.* **2011**, 5273. $[Th(dmpu)_8]^{4+}$ (solution).

Nine-coordination

ICSD/CSD code	*d*(Th-O)	Reference, compound formula
AHOGAG	2.478 Å	Pohl, R. W. H.; Wiebke, J.; Klein, A.; Dolg, M.; Maggiarosa, N. *Eur. J. Inorg. Chem.* **2009**, 2472. $[(H_2O)_7Th(OH)_2Th(H_2O)_7](C_2N_8)_2C_2HN_8 \cdot 10H_2O$
AXUFAA	2.446 Å	Harrowfield, J. M.; Ogden, M. I.; Skelton, B. W.; White, A. H. *Inorg. Chim. Acta* **1995**, 357. $[Th(OS(CH_3)_2)_9](ClO_4)_4 \cdot 4(CH_3)_2SO$
HUZLOE	2.449 Å	Torapava, N.; Lundberg, D.; Persson, I. *Eur. J. Inorg. Chem.* **2011**, 5273-5278. $[Th(OS(CH_3)_2)_9]_2(CF_3SO_3)_9 \cdot 2H_2O$
Mean	**2.448 Å/2 structures**	

Nine-coordination, double hydroxo bridge

ICSD/CSD code	*d*(Th-O)$_{OH}$ + *d*(Th-O)/d(Th···Th)	Reference, compound formula
AHOGAG	2.371 + 2.508 Å 3.993 Å	Pohl, R. W. H.; Wiebke, J.; Klein,A.; Dolg, M.; Maggiarosa, N. *Eur. J. Inorg. Chem.* **2009**, 2472. $[(H_2O)_7Th(OH)_2Th(H_2O)_7](C_2N_8)_2(C_2HN_8) \cdot 10H_2O$

Ten-coordination

ICSD/CSD code	*d*(Th-O)	Reference, compound formula
418199	2.498 Å	Wilson, R. E.; Skanthakumar, S.; Burns, P.C.; Soderholm, L. *Angew. Chem, Int. Ed.* **2007**, *46*, 8043. $[Th(H_2O)_{10}]Br_4$

ICSD/CSD code	$d(\text{Th-O})_{OH}$ + *d*(Th-O)/d(Th···Th)	Reference, compound formula
HUZLOE	2.471 + 2.410 Å	Torapava, N.; Persson, I.; Eriksson, L.; Lundberg, D. *Inorg,. Chem.* **2009**, *48*, 11712. $[H_5O_2][Th(H_2O)_6(OSO_2CF_3)_3][Th(OSO_2CF_3)_6]$

Table S1ab. Summary of solid state structures containing a hydrated and solvated uranium(III), uranium(IV) and dioxouranium(VI) (uranyl(VI)) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean U-O bond distance, *d*(U-O); $d(U\text{-}O)_p$ denotes ligands forming the prism and $d(U\text{-}O)_c$ the capping ligands in tricapped trigonal prismatic configuration, $d(U\text{-}O)_{SO_4}$ denotes binding to sulfate ion (mono- or bidendate), and $d(U\text{-}O)_O$ denotes binding to oxo groups. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Uranium(III)

Nine-coordination

ICSD/CSD code	$d(U\text{-}O)_p + d(U\text{-}O)_c$	Reference, compound formula
PUTQOL	2.509+2.596 Å	Apostolidis, C.; Schimmelpfennig, B.; Magnani, N.; Lindqvist-Reis, P.; Walter, O.; Sykora, R.; Morgenstern, A.; Colineau, E.; Caciuffo, R.; Klenze, R.; Haire, R. G.; Rebizant, J.; Bruchertseifer, F.; Fanghänel, T. *Angew. Chem., Int. Ed.* **2010**, *49*, 6343. $[U(H_2O)_9](CF_3SO_3)_3$
Mean	**2.509 + 2.596 Å/1 structure; mean 2.538 Å**	

ICSD/CSD code	$d(U\text{-}O)_p$	Reference, compound formula
YEKNEI	2.521 Å	Berthet, J.-C.; Thuery, P.; Ephritikhine, M. *Inorg. Chem.* **2005**, *44*, 1142. $[U(OCHN(CH_3)_2)_9]I_3$

Uranium(IV)

Eight-coordination

ICSD/CSD code	$d(U\text{-}O) + d(U\text{-}O)_{SO_4}$	Reference, compound formula
24057	2.388 + 2.432 Å	Kierkegaard, P. *Acta Chem. Scand.* **1956**, *10*, 599-616. $[U(H_2O)_6(OSO_3)_2]_n$
FIDFEY	2.390 Å	Berthet, J.-C.; Thuery, P.; Ephritikhine, M. *Inorg. Chem.* **2005**, *44*, 1142. $[U(OCHN(CH_3)_2)_9]I_4$
Mean	**2.395 Å/2 structures**	

Ten-coordination

ICSD/CSD code	$d(U\text{-}O) + d(U\text{-}O)_{SO_4}$	Reference, compound formula
EGUQAA	2.416 + 2.504 Å	Burns, A. D.; Patrick, B. O.; Lam, A. E.; Dreisinger, D. *Acta Crystallogr., Sect. C* **2014**, *70*, 726. $[U(H_2O)_4(O_2SO_2]_n$
Mean	**2.416 + 2.504 Å/1 structure; mean 2.451 Å**	

Dioxouranium(VI)/Uranyl(VI)s

Seven-coordination (pentahydration)

ICSD/CSD code	*d*(U-O)$_O$ + *d*(U-O)	Reference, compound formula
NUUDUM	1.751+2.405 Å	Thuery, P *CrystEngComm* **2009**, *11*, 1081. $[UO_2(H_2O)_5][(UO_2)C_{24}H_{18}O_{12}]\cdot 5H_2O$
FIBDOM	1.756+2.392 Å	Thuery, P.; Atoini, Y.; Harrowfield, J. *Cryst Growth Des.* **2018**, *18*, 3167. $[UO_2(H_2O)_5][UO_2(C_9H_{10}O_6)_2]_2\cdot 3C_8H_{16}O_4\cdot 2H_2O$
LEYYOD	1.758+2.408 Å	Deshayes, L.; Keller, N.; Lance, M.; Nierlich, M.; Vigner, J.-D. *Acta Crystallogr., Sect. C* **1994**, *50*, 1541. $[UO_2(H_2O)_5](CF_3SO_3)_2\cdot(C_{12}H_{24}O_6)$
TONSOF	1.759+2.460 Å	Thuery, P *CrystEngComm* **2008**, *8*, 4132. $[UO_2(H_2O)_5](NO3)2\cdot C_{36}H_{36}N_{24}O_{12}\cdot 4H_2O$
FUVFOR	1.762+2.417 Å	Rogers, R. D.; Kurihara, I. K.; Benning, M. M. *J. Inclusion Phenom. Mol. Recog. Chem.* **1987**, *5*, 645. $[UO_2(H_2O)_5](ClO_4)_2\cdot 2(C_{12}H_{24}O_6)\ 2CH_3CN\cdot H_2O$
RORQEW	1.765+2.403 Å	Thuery, P.; Harrowfield, J. *Cryst Growth Des.* **2014**, *14*, 4214. $[UO_2(H_2O)_5][UO_2(C_9H_9O_5)]_2\cdot 3C_4H_8O\cdot 2H_2O$
OLADOW	1.766+2.470 Å	Novikov, S. A.; Peresypkina, E. V.; Serezhkina, L. B.; Virovets, A. V.; Serezhkin, V. N. *Russ. J. Inorg. Chem.* **2014**, *59*, 63. $[UO_2(H_2O)_5][(C_6H_3NO_2)UO_2\text{-}(Cr_2O_7)UO_2\text{-}C_6H_3NO_2)]$
FUVFIL	1.903+2.401 Å	Rogers, R. D.; Kurihara, I. K.; Benning, M. M. *J. Inclusion Phenom. Mol. Recog. Chem.* **1987**, *5*, 645. $[UO_2(H_2O)_5](ClO_4)_2\cdot 3(C_{10}H_{20}O_5)\ CH_3CN\cdot H_2O$
Mean	**1.760+2.422 Å/7 structures**	

Table S1ac. Summary of solid state structures containing a hydrated and solvated neptunium(III), neptunium(IV) and dioxo neptunium(VI) (neptyl(VI)) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Np-O bond distance, *d*(Np-O); $d(\text{Np-O})_p$ denotes ligands forming the prism and $d(\text{Np-O})_c$ the capping ligands in tricapped trigonal prismatic configuration, $d(\text{Np-O})_{SO_4}$ denotes binding to sulfate ion (mono- or bidendate), and $d(\text{Np-O})_O$ denotes binding to oxo groups. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Neptunium(III)

Nine-coordination

ICSD/CSD code	$d(\text{Np-O})_p + d(\text{Np-O})_c$	Reference, compound formula
PUTQIF	2.490+2.571 Å	Apostolidis, C.; Schimmelpfennig, B.; Magnani, N.; Lindqvist-Reis, P.; Walter, O.; Sykora, R.; Morgenstern, A.; Colineau, E.; Caciuffo, R.; Klenze, R.; Haire, R. G.; Rebizant, J.; Bruchertseifer, F.; Fanghänel, T. *Angew. Chem., Int. Ed.* **2010**, *49*, 6343. $[Np(H_2O)_9](CF_3SO_3)_3$
Mean	**2.490 + 2.571 Å/1 structures; mean 2.517 Å**	

Neptunium(IV)

Eight-coordination

ICSD/CSD code	$d(\text{Np-O}) + d(\text{Np-O})_{SO_4}$	Reference, compound formula
92110	2.341 + 2.316 Å	Charushnikova, I. A.; Krot, N. N.; Starikova, Z. A. *Radiokhimiya* **2000**, *42*, 393. $[Np(H_2O)_4(OSO_3)_2]_n$
IRUDII	2.336 Å	Charushnikova, I. A.; Starikova, Z. A.; Shirokova, I. B.; Fedoseev, A. M.; Grigor'ev, M. S.; Budantse, N. A. *Koord. Khim.* **2003**, *29*, 290. $[Np(OCNH_2)_8]W_{12}SiO_{40}\cdot 2OCNH_2\cdot H_2O$
Mean	**2.335 Å/2 structrures**	

Neptunium(VI)/Neptyl(VI)

Seven-coordination (pentahydration)

ICSD/CSD code	$d(\text{Np-O})_O + d(\text{Np-O})$	Reference, compound formula
421143	1.744+2.416 Å	Grigor'ev, M. S.; Krot, N. N. *Radiokhim.* **2010**, *52*, 318. $[NpO_2(H_2O)_5](ClO_4)_2$

Table S1ad. Summary of solid state structures containing a hydrated plutonium(III), plutonium(IV) and dioxoplutonium(VI) (plutonyl(VI)) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Pu-O bond distance, *d*(Pu-O); $d(\text{Pu-O})_p$ denotes ligands forming the prism and $d(\text{Pu-O})_c$ the capping ligands in tricapped trigonal prismatic configuration, $d(\text{Pu-O})_{SO_4}$ denotes binding to sulfate ion (monodendate), and $d(\text{Pu-O})_O$ denotes binding to oxo groups. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Plutonium(III)

Nine-coordination

ICSD/CSD code	$d(\text{Pu-O})_p + d(\text{Pu-O})_c$	Reference, compound formula
MOSBEB	2.476 + 2.574 Å	Matonic, J. H.; Scott, B. L.; Neu, M. P. *Inorg. Chem.* **2001**, *40*, 2638. $[Pu(H_2O)_9](CF_3SO_3)_3$
280848		
MOSBEB01	2.472 + 2.571 Å	Apostolidis, C.; Schimmelpfennig, B.; Magnani, N.; Lindqvist-Reis, P.; Walter, O.; Sykora, R.; Morgenstern, A.; Colineau, E.; Caciuffo, R.; Klenze, R.; Haire, R. G.; Rebizant, J.; Bruchertseifer, F.; Fanghänel, T. *Angew. Chem., Int. Ed.* **2010**, *49*, 6343. $[Pu(H_2O)_9](CF_3SO_3)_3$.
MOSBEB2	2.477+2.568 Å	Apostolidis, C.; Schimmelpfennig, B.; Magnani, N.; Lindqvist-Reis, P.; Walter, O.; Sykora, R.; Morgenstern, A.; Colineau, E.; Caciuffo, R.; Klenze, R.; Haire, R. G.; Rebizant, J.; Bruchertseifer, F.; Fanghänel, T. *Angew. Chem., Int. Ed.* **2010**, *49*, 6343. $[Pu(H_2O)_9](CF_3SO_3)_3$.
Mean	**2.475 + 2.571 Å/3 structures; mean 2.506 Å**	

Plutonium(IV)

Eight-coordination

ICSD/CSD code	$d(\text{Pu-O}) + d(\text{Pu-O})_{SO_4}$	Reference, compound formula
31290	2.331 + 2.341 Å	Jayadevan, N. C.; Singh Mudher, K. D.; Chackraburtty, D. M. *Z. Kristallogr.* **1982**, *161*, 7. $[Pu(H_2O)_4(OSO_3)_2]_n$
Mean	**2.334 Å/1 structure**	

Plutonium(VI)

Seven-coordination

ICSD/CSD code	$d(\text{Pu-O})_O + d(\text{Pu-O})$	Reference, compound formula
421144	1.732 + 2.409 Å	Grigor'ev, M. S.; Krot, N. N. *Radiokhim.* **2010**, *52*, 318. $[PuO_2(H_2O)_5](ClO_4)_2$
Mean	**1.732 + 2.409 Å/1 structure**	

Table S1ae. Summary of solid state structures containing a hydrated americium(III), curium(III) and californium(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean M-O bond distance, d(M-O); $d(\text{M-O})_p$ denotes ligands forming the prism and $d(\text{M-O})_c$ the capping ligands in tricapped trigonal prismatic configuration, and $d(\text{Am-O})_{SO_4}$ denotes binding to sulfate ion (monodendate) Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Americium(III)

Eight-coordination

ICSD/CSD code	d(Am-O) + $d(\text{Am-O})_{SO_4}$	Reference, compound formula
10392	2.450 + 2.446 Å	Burns, J. H.; Baybarz, R. D. *Inorg. Chem.* **1972**, *11*, 2233. $[Am(H_2O)_4(OSO_3)_2]_n \cdot 4H_2O$
Mean	**2.449 Å/1 structure**	

Nine-coordination

ICSD/CSD code	$d(\text{Am-O})_p$ + $d(\text{Am-O})_c$	Reference, compound formula
YEVRUN	2.466 + 2.578 Å	Lindqvist-Reis, P.; Apostolidis, C.; Rebizant, J.; Morgenstern, A.; Klenze, R.; Walter, O.; Fanghaenel, T.; 240737 Haire, R. G. *Angew. Chem., Int. Ed.* **2007**, *46*, 919. $[Am(H_2O)_9](CF_3SO_3)_3$.
Mean	**2.466 + 2.578 Å/1 structure; mean 2.503 Å**	

Curium(III)

Nine-coordination

ICSD/CSD code	$d(\text{Cm-O})_p$ + $d(\text{Cm-O})_c$	Reference, compound formula
YEVROH	2.453 + 2.564 Å	Lindqvist-Reis, P.; Apostolidis, C.; Rebizant, J.; Morgenstern, A.; Klenze, R.; Walter, O.; Fanghaenel,
240738		T.; Haire, R. G. *Angew. Chem., Int. Ed.* **2007**, *46*, 919. $[Cm(H_2O)_9](CF_3SO_3)_3$.
249457	2.453 + 2.545 Å	Skanthakumar, S.; Antonio, M. R.; Wilson, R. E; Soderholm, L. *Inorg. Chem.* **2007**, *46*, 3485. $[Cm(H_2O)_9](CF_3SO_3)_3$.
Mean	**2.453 + 2.555 Å/2 structures; mean 2.487 Å**	

Californium(III)

Nine-coordination

ICSD/CSD code	$d(\text{Cf-O})_p + d(\text{Cf-O})_c$	Reference, compound formula
PUTQEB	2.423+2.550 Å	Apostolidis, C.; Schimmelpfennig, B.; Magnani, N.; Lindqvist-Reis, P.; Walter, O.; Sykora, R.; Morgenstern, A.; Colineau, E.; Caciuffo, R.; Klenze, R.; Haire, R. G.; Rebizant, J.; Bruchertseifer, F.; Fanghänel, T. *Angew. Chem., Int. Ed.* **2010**, *49*, 6343. $[Cf(H_2O)_9](CF_3SO_3)_3$.
Mean	**2.423 + 2.550 Å/1 structure; mean 2.465 Å**	

Table S1af. Summary of solid state structures containing hydrated aluminum(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Al-O bond distance, *d*(Al-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Aluminum(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Al-O)	Reference, compound formula
23614	1.760 Å	Mereiter, K., Naturwissenschaften **1970**, *57*, 670. $[Al(H_2O)_6]Cd_5Fe_3Tl_2(SO_4)_{12}\cdot 12H_2O$
431916	1.765 Å	Wang, G.; Mudring, A.-V. *Solid State Sci.* **2016**, *61*, 58. $[Al(H_2O)_6]F_3$
77599	1.850 Å	Abdeen, A. M.; Will, G.; Schaefer, W.; Kirfel, A.; Bargouth, M.O.; Recker, K.; Weiss, A., *Z. Kristallogr.* **1981**, *157*, 147. $(CH_3NH_3)[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$
96598	1.861 Å	Lovas, G. A., *Acta Geol. Hung.* **1986**, *29*, 389. $[Al(H_2O)_6][Fe(H_2O)_6](SO_4)_4\cdot 4H_2O$
MAMALM	1.864 Å	Fletcher, R. O. W.; Steeple, H., *Acta Crystallogr.* **1964**, *17*, 290. $(CH_3NH_3)[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$
100401	1.869 Å	Abdeen, A. M.; Will, G.; Weiss, A., *Z. Kristallogr.* **1981**, *154*, 45.; *Proc. Royal Soc. London, Ser. A* **1958**, *246*, 78.; *Proc. Royal Soc. London, Ser. A* **1935**, *148*, 664.; *Proc. Royal Soc. London, Ser. A* **1935**, *151*, 347.; *Acta Crystallogr.* **1962**, *15*, 960.; *Acta Crystallogr.* **1967**, *22*, 793.; *Acta Crystallogr., Sect. B* **1968**, *24*, 320.; *Acta Crystallogr., Sect. B* **1969**, *25*, 398. $(H_3NOH)[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$
INUTIX	1.871 Å	Zarychta, B.; Czapla, Z.; Przeslawski, J.; Szklarz, P. *Acta Crystallogr., Sect. B* **2021**, *77*, 225. $[Al(H_2O)_6](C_3H_5N_2)(SO_4)_2$
GUALSU10	1.872 Å	Schein, B. J. B.; Lingafelter, E. C.; Stewart, J. M. *J. Chem. Phys.* **1967**, *47*, 5183. $(C(NH_2)_3[Al(H_2O)_6](SO_4)_2$
71863	1.873 Å	Blackburn, A. C.; Gallucci, J. C.; Gerkin, R. E. *Acta Crystallogr., Sect. C* **1992**, *48*, 1185. $[Al(H_2O)_6](BrO_3)_2\cdot 4H_2O$
EVUWAV	1.873 Å	Vinokur, A. I..; Guzei, I. A. CCDCdeposition number 1507365, **2016**. $[Al(H_2O)_6][K(H_2O)_6](SO_4)_2$
188355	1.873 Å	Majzlan, Juraj; Schlicht, Hannes; Wierzbicka-Wieczorek, Maria; Giester, Gerald; Poellmann, Herbert; Broemme, Beatrix; Doyle, Stephen; Buth, Gernot; Bender Koch, C. *Miner. Petrol.* **2013**, *107*, 221. $K_2[Al(H_2O)_6]Fe_8(SO_4)_{12}\cdot 12\ H_2O$
72671	1.874 Å	Lazar, D.; Ribar, B.; Prelesnik, B., *Acta Crystallogr., Sect. C* **1991**, *47*, 2282. $[Al(H_2O)_6](NO_3)_3\cdot 3H_2O$
280547	1.874 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M., *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $K[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$

XIWMIZ	1.874 Å	Mashiyama, H.; Kajio, N.; Kasano, H.; Gesi, K., *J. Korean Phys. Soc.* **1998**, *32*, 186. $(CH_3NH_3)_2[Al(H_2O)_6]Br_5$
33357	1.875 Å	Li, Y.; Huang, J.; Chen, H. *J Alloys Compd.* **2021**, *856*, 157852. $[Al(H_2O)_6]_3(IO_3)_9{\cdot}6HIO_3$
34621	1.875 Å	Schein, B. J. B.; Lingafelter, E. C.; Stewart, J. M., *J. Chem. Phys.* **1967**, *47*, 5183; *Acta Crystallogr., Sect. B* **1968**, *24*, 1131. $[Al(H_2O)_6][Al(H_2O)_4(OCOCF_3)_2](CF_3COO)_4$
188360	1.875 Å	Majzlan, Juraj; Schlicht, Hannes; Wierzbicka-Wieczorek, Maria; Giester, Gerald; Poellmann, Herbert; Broemme, Beatrix; Doyle, Stephen; Buth, Gernot; Bender Koch, C. *Miner. Petrol.* **2013**, *107*, 221. $(NH_4)_2[Al(H_2O)_6]Fe_8(SO_4)_{12}{\cdot}12\ H_2O$
GUALSU10	1.875 Å	Schein, B. J. B.; Lingafelter, E. C.; Stewart, J. M., *J. Chem. Phys.* **1967**, *47*, 5183. $(CH_6N_3)[Al(H_2O)_6](SO_4)_2]$
GUMWOA	1.875 Å	Samsonenko, D. G.; Sokolov, M. N.; Virovets, A. V.; Pervukhina, N. V.; Fedin, V. P. *Eur. J. Inorg. Chem.* **2001**, 167. $[Al(H_2O)_6]Cl_3{\cdot}C_{36}H_{36}N_{24}O_{12}{\cdot}18H_2O$
YEBTIL	1.875 Å	Morozov, I. V.; Karpova, E. V.; Glazunova, T. Y.; Boltalin, A. I.; Zakharov, M. A.; Tereshchenko, D. S.; Fedorova, A. A.; Troyanov, S. I. *Khoord. Khim.* **2016**, *42*, 647. $[Al(H_2O)_6](SO_4)_2{\cdot}6H_2O$
31832	1.876 Å	Lipson, H., *Philosophical Magazine, Serie 7* **1935**, *19*, 887; *Proc. Royal Soc. London, Ser. A* **1935**, *151*, 347. $((CH_3)NH_3)[Al(H_2O)_6](SO_4)_2{\cdot}6H_2O$
112862	1.876 Å	Wang, D.; Bai, Z.; Liu, L.; Hu, L.; Huang, Y.; Yuan, F.; Wei, D.; Lin, Z.; Zhang, L. *Cryst Growth Des.* **2021**, *21*, 1734. $[Al(H_2O)_6](IO_3)_3{\cdot}2HIO_3$
201215	1.876 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H., *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Al(H_2O)_6](SO_4)_2{\cdot}6H_2O$
280548	1.876 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M., *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $K[Al(H_2O)_6](SO_4)_2{\cdot}6H_2O$
AMAKUW	1.876 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 138. $[Al(H_2O)_6](C_5H_5NH_2)(SO_4)_2{\cdot}4H_2O$
BEBDAO	1.876 Å	Bataille, T. *Acta Crystallogr., Sect. C* **2003**, *59*, m459. $(H_2N(CH_2)_2NH_2)(SO_4)_4{\cdot}8H_2O$
HUWQIA	1.876 Å	Siegler, M. A.; Prewitt, J. H.; Kelley, S. P.;Parkin, S.; Selegue, J. P.; Brock, C. P. *Acta Crysallogr., Sect. B* **2010**, *66*, 213. $[Al(H_2O)_6](NO_3)_3{\cdot}C_{10}H_{20}O_5{\cdot}4H_2O$
68908	1.877 Å	del Favero, P.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **1990**, *43*, 393. $Cs[Al(H_2O)_6](SeO_4)_2{\cdot}6H_2O$
133602	1.877 Å	Svensson, F. *Acta Crystallogr., Sect. E* **2021**, *77*, 58. $[Al(H_2O)_6]NO_3SO_4{\cdot}2H_2O$
261241	1.877 Å	Bao; L.; Ling; Y. Lixin, W. *Acta Crystallogr., Sect. E* **2011**, *67*, i8. $[Al(H_2O)_6][Cr(OH)_6][Mo_6O_{18}]{\cdot}10H_2O$
GEZPAC	1.877 Å	Karlsson, M.; Boström, D.; Öhman, L.-O. *Acta Chem. Scand.* **1998**, *52*, 995. $[Al(H_2O)_6][Al(O_5C_4H_6)_2]Cl_2{\cdot}4H_2O$

OROYAW	1.877 Å	Danylyuk, O.; Lesniewska, B.; Suwinska, K.; Matoussi, N.; Coleman, A. W. *Cryst. Growth Des.* **2010**, *10*, 4542. $[Al(H_2O)_6](C_5H_5N(CH_2)_2C_5H_5N)_{2.5}(C_{28}H_{20}O_{16}S_4)_2 \cdot 7.6H_2O \cdot (CH_3)_2CO$
8225	1.878 Å	Ginderow, D.; Cesbron, F. *Acta Crystallogr., Sect. B* **1979**, *35*, 2499. $[Al(H_2O)_6][CuCl](SO_4)_2 \cdot 8H_2O$
12129	1.878 Å	Fang, J. H.; Robinson, P. D. *Am. Mineral.* **1976**, *61*, 311. $[Al(H_2O)_6]_2(SO_4)_3 \cdot 5H_2O$
26005	1.878 Å	Fang, J. H.; Robinson, P. D. *Am. Mineral.* **1972**, *57*, 1081. $Na[Al(H_2O)_6](SO_4)_2 \cdot 5H_2O$.
96765	1.878 Å	Morozov, I. V.; Marsova, M. V.; Troyanov, S. I. *Zh. Neorg. Khim.* **2002**, *47*, 1055. $[Al(H_2O)_6](NO_3)_3$
121250	1.878 Å	Liu, Y.; Hao, M.; Gao, J.; Liu, J.; Cui, J. *Z. Kristallogr. – New Cryst. Struct.* **2020**, *235*, 1393. $H_3O[Al(H_2O)_6]SO_4 \cdot 6H_2O$
133603	1.878 Å	Svensson, F. *Acta Crystallogr., Sect. E* **2021**, *77*, 58. $[Al(H_2O)_6](Cl)SO_4 \cdot 2H_2O$
280550	1.878 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M., *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $Tl[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
BEBDAO01	1.878 Å	Ghadermazi, M.; Aghabozorg, H.; Sheshmani, S. *Acta Crystallogr., Sect. E* **2007**, *63*, m1919. $(H_2N(CH_2)_2NH_2)(SO_4)_4 \cdot 8H_2O$
GEHKUD	1.878 Å	Pastel, G. R; Chen, Y.; Pollard, T. P.; Schroeder, M. A.; Bowden, M. E. Zheng, A.; Hahn, N.; Ma, L.; Ding, M., Murugesan, V.; Ho, J.; Garaga, M.; Borodin, O.; Müller, K.; Greenbaum, S.; Xu, K. **2022**, CCDC deposit no. 2141675.
IQECEM	1.878 Å	Malone, S. A.; Cooper, P.; Heath, S. L. *Dalton Trans.* **2003**, 4572. $[Al(H_2O)_6][Al_3C_{12}H_{18}O_{20}]_2NO_3 \cdot 6H_2O$
LEHREX01	1.878 Å	Wang, R.; Li, R.; Jiang, H.; Gong, H.; Bi, Y. *J. Coord. Chem.* **2017**, *70*, 1327. $[Al(H_2O)_6](CH_3SO_3)_3$
ZASQIT	1.878 Å	Kiripichnikova, L. F.; Petrashko, A.; Shuvalov, L. A., *Kristallografiya.* **1995**, *40*, 520. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_{1.78}(SeO_4)_{0.22}$
LEHREX	1.879 Å	Trella, T.; Frank, W. *Acta Crystallogr., Sect. E.* **2012**, *68*, m1136. $[Al(H_2O)_6](CH_3SO_3)_3$
4405	1.880 Å	Hopkins, T. E.; Zalkin, A.; Templeton, D. H.; Adamson, M. G. *Inorg. Chem.* **1969**, *8*, 2421. $[Al(H_2O)_6][RuCl_6] \cdot 4H_2O$
30566	1.880 Å	Lingafelter, E. C.; Orioli, P. L.; Schein, B. J. B.; Stewart, J. M. *Acta Crystallogr.* **1966**, *20*, 451, 456. $(C(NH_2)_3)[Al(H_2O)_6](SO_4)_2$
280549	1.880 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M. *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $Tl[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
428449	1.880 Å	Sun, X.; Sun, Y.; Yu, J. *Crystal Res. Technol.* **2015**, *50*, 293. $[Al(H_2O)_6]_2(SO_4)_3 \cdot 4H_2O$
APAPAJ	1.880 Å	Lesniewska, B.: Danylyuk, O.; Suwinska, K.; Wojciechowski, T.; Coleman, A. W. *CrystEngComm* **2011** *13*, 3265. $[Al(H_2O)_6](C_{12}H_{10}N_2)(C_{12}H_9N_2)_3(C_{28}H_{20}O_{16}S_4)_2 \cdot 18H_2O$
SOGGEA01	1.880 Å	John Plater, M.; Harrison, W. T. A. *J. Chem. Res.* **2015**, *39*, 279. $[Al(H_2O)_6]_2(C_6(COO)_6) \cdot 4H_2O$
TAPBOB	1.880 Å	Galesic, N.; Jordanovska, V. B. *Acta Crystallogr., Sect. C* **1992**, *48*, 256. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_2$
TAPBOB02	1.880 Å	Pietraszko, A.; Lukaszewicz, K. *Pol. J. Chem.* **1994**, *68*, 1239. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_2$

14306	1.881 Å	Kay, M. I.; Cromer, D. T. *Acta Crystallogr., Sect. B* **1970**, *26*, 1349; *Acta Crystallogr.* **1967**, *22*, 182. $Na[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
15368	1.881 Å	Cromer, D. T.; Kay, M. I.; Larson, A. C. *Acta Crystallogr.* **1967**, *22*, 182. $Na[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
87339	1.881 Å	Fischer, T.; Kniep, R.; Wunderlich, H. *Z. Kristallogr.* **1996**, *211*, 469. $(H_3O)_2[Al(H_2O)_6]_2(SO_4)_4 \cdot 10H_2O$
96764	1.881 Å	Morozov, I. V.; Marsova, M. V.; Troyanov, S. I. *Zh. Neorg. Khim.* **2002**, *47*, 1055. $[Al(H_2O)_6](NO_3)_3$.
EKOYAG	1.881 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Pietraszko, A. *Acta Crystallogr., Sect. C* **2016**, *72*, 432. $(2\text{-}C_5H_5NH_2)[Al(H_2O)_6](SO_4)_2 \cdot 4H_2O$
HEKMUF	1.881 Å	Steed, J. W.; M^{c}Cool, B. J.; Junk, P. C. *J. Chem. Soc., Dalton Trans.* **1998**, 3417. $[Al(H_2O)_6](NO_3)_3 \cdot C_{12}H_{24}O_6$
9254	1.882 Å	Mereiter, K. *Tschermaks Mineral. Petrogr. Mitteil.* **1972**, *18*, 185. $K_2[Al(H_2O)_6]Fe_5Fe_3(SO_4)_{12} \cdot 12H_2O$
IFEWIA	1.882 Å	Shen, R.; Pan, X.; Wang, H.; Yao, L.; Wu, J.; Tang, N. *Dalton Trans.* **2008**, 3574. $Al(H_2O)_6](ClO_4)_3) \cdot 2C_{21}H_{22}O_7$
MEWZIX01	1.882 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, 6986. $Al(H_2O)_6](ClO_9H_9(SO_3)_3) \cdot CH_3OH$
TAPBOB04	1.882 Å	Kiripichnikova, K.; Petrashko, A.; Lukashevich, K.; Shuvalov, L. A.; Dolbinina, V. V.; Yalovleva, L. M. *Kristallografiya.* **1994**, *39*, 1078. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_2$
TAPBOB11	1.882 Å	Kiosse, G. A.; Razdobreev, I. M.; Kiripichnikova, L. F.; Malinovskii, T. I.; Shuvalov, L. A. *Kristallografiya.* **1994**, *39*, 34. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_2$
244213	1.882 Å	Schmidt, H.; Hennings, E.; Voigtm W. *Acta Crystallogr., Sect. C.* **2014**, *70*, 882. $[Al(H_2O)_6]Br_3 \cdot 9H_2O$
22071	1.883 Å	Buchanan, D. R.; Harris, P. M. *Acta Crystallogr., Sect. B* **1968**, *24*, 954. $[Al(H_2O)_6]Cl_3$
244212	1.883 Å	Schmidt, H.; Hennings, E.; Voigtm W. *Acta Crystallogr., Sect. C.* **2014**, *70*, 882. $[Al(H_2O)_6]Cl_3 \cdot 9H_2O$
244215	1.883 Å	Schmidt, H.; Hennings, E.; Voigtm W. *Acta Crystallogr., Sect. C.* **2014**, *70*, 882. $[Al(H_2O)_6]I_3 \cdot 11H_2O$
250369	1.883 Å	Krivovchev, S. V. *Zapiski Vserossiiskogo Miner. Obshchestva* **2006**, 96. $[Al(H_2O)_6](SeO_4)NO_3 \cdot H_2O$
TAPBOB03	1.883 Å	Kiripichnikova, K.; Petrashko, A.; Lukashevich, K.; Shuvalov, L. A.; Dolbinina, V. V.; Yalovleva, L. M. *Kristallografiya.* **1994**, *39*, 1078. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_2$
100857	1.883 Å	Abdeen, A. M.; Will, G.; Schaefer, W.; Kirfel, A.; Bargouth, M. O.; Recker, K.; Weiss, A. *Z. Kristallogr.* **1981**, *157*, 147. $NH_4[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
200028	1.883 Å	Cradwick, P. D.; de Endredy, A. S. *J. Chem. Soc., Dalton Trans.* **1977**, 146. $H_2[Al(H_2O)_6](IO_3)_5$
200619	1.883 Å	Sorokina, N. I.; Ilyukhin, V. V.; Kalinin, V. R.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1979**, *247*, 360. $[Al(H_2O)_6](IO_3)_3 \cdot 2H_2O$
4038	1.884 Å	Menchetti, S.; Sabelli, C. *Mineral. Magazine* **1976**, *40*, 599. $[Al(H_2O)_6]_2[Mn(H_2O)_6](SO_4)_4 \cdot 4H_2O$

4292	1.884 Å	Menchetti, S.; Sabelli, C. *Tschermaks Mineal. Petrogr. Mitteilungen* **1974**, *21*, 164. $[Al(H_2O)_6]_2(SO_4)_3 \cdot 4.4H_2O$
20163	1.884 Å	Sorokina, N. I.; Ilyukhin, V. V.; Kalinin, V. R.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1979**, *247*, 360. $[Al(H_2O)_6](IO_3)_3 \cdot 2H_2O$
77600	1.884 Å	Abdeen, A. M.; Will, G.; Schaefer, W.; Kirfel, A.; Bargouth, M.O.; Recker, K.; Weiss, A. *Z. Kristallogr.* **1981**, *157*, 147. $(CH_3NH_3)[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
OROXUP	1.884 Å	Danylyuk, O.; Lesniewska, B.; Suwinska, K.; Matoussi, N.; Coleman, A. W. *Cryst. Growth Des.* **2010**, *10*, 4542. $[Al(H_2O)_6](C_5H_5N(CH_2)_2C_5H_5N)_{2.5}(C_{28}H_{20}O_{16}S_4)_2 \cdot 6.6H_2O \cdot CH_3OH$
14316	1.885 Å	Cromer, D. T.; Kay, M. I.; Larson, A. C. *Acta Crystallogr.* **1966**, *21*, 383. $Cs[Al(H_2O)_6](SO_4)_2 \cdot 6H_2O$
188767	1.885 Å	Mereiter, K. *Acta Crystallogr., Sect. E* **2013**, *69*, i63. $Na[Al(H_2O)_6](SO_4)_2$
244214	1.885 Å	Schmidt, H.; Hennings, E.; Voigtm W. *Acta Crystallogr., Sect. C.* **2014**, *70*, 882. $[Al(H_2O)_6]I_3 \cdot 9H_2O$
MEWZIX01	1.885 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, *41*, 6986. $Cs[Al(H_2O)_6](1,3,5\text{-}C_6H_3(CH_2SO_3)_3) \cdot 3CH_3OH$
SOGGEA	1.885 Å	Robl, C.; Kuhs, W. F. *J. Solid State Chem.* **1991**, *92*, 101. $[Al(H_2O)_6]_2(C_6(COO)_6) \cdot 4H_2O$
17061	1.886 Å	Kueppers, H.; Schaefer, W.; Will, G. *Z. Kristallogr.* **1982**, *159*, 231. $H_2[Al(H_2O)_6](IO_3)_5$
41122	1.886 Å	Robl, C.; Kuhs, W. F. *J. Solid State Chem.* **1991**, *92*, 101. $[Al(H_2O)_6]_2(C_6(CO_2)_6) \cdot 4H_2O$
4324	1.887 Å	Cradwick, P. D.; de Endredy, A. S. *J. Chem. Soc., Dalton Trans.* **1975**, 1926. $[Al(H_2O)_6](IO_3)_2(NO_3)$
TAPBOB06	1.887 Å	Kazimirov, V. Yu.; Sarin, V. A.; Ritter, C.; Shuvalov, L. A. *Kristallografiya.* **1999**, *44*, 61. $((CH_3)_2NH_2)[Al(H_2O)_6](SO_4)_2$
86042	1.888 Å	Gobichon, A.-E.; Auffredic, J.-P.; Louer, D. *J. Alloys Compd.* **1998**, *275*, 130. $[Al(H_2O)_6]La(NO_3)_6$
244216	1.888 Å	Schmidt, H.; Hennings, E.; Voigtm W. *Acta Crystallogr., Sect. C.* **2014**, *70*, 882. $[Al(H_2O)_6]Br_3 \cdot 11H_2O$
JAYPII	1.888 Å	Cameron, T. S.; Chute, W. J.; Owen, G.; Aheme, J.; Linden, A. *Acta Crystallogr., Sect. C* **1990**, *46*, 231. $[Al(H_2O)_6](HSO_4)_3$
17060	1.889 Å	Kueppers, H.; Schaefer, W.; Will, G. *Z. Kristallogr.* **1982**, *159*, 231. $H_2[Al(H_2O)_6](IO_3)_5$
HEHZON	1.889 Å	Zhao, X. **2022**, CCDC deposit no. 1045703.
86041	1.890 Å	Gobichon, A.-E.; Auffredic, J.-P.; Louer, D. *J. Alloys Compd.* **1998**, *275*, 130. $[Al(H_2O)_6][La(NO_3)_6] \cdot 6H_2O$
TOZLEB	1.890 Å	Kumar, D.; Ramana, A. CCDC deposition number 1041200, **2014**. $[Al(H_2O)_6][Tb(C_7H_3O_4N)_3] \cdot 10H_2O$
TOZKUQ	1.891 Å	Kumar, D.; Ramana, A. CCDC deposition number 1041198, **2014**. $[Al(H_2O)_6][Gd(C_7H_3O_4N)_3] \cdot 10H_2O$
TOZKIE	1.892 Å	Kumar, D.; Ramana, A. CCDC deposition number 1041196, **2014**. $[Al(H_2O)_6][Dy(C_7H_3O_4N)_3] \cdot 10H_2O$
TOZLAX	1.892 Å	Kumar, D.; Ramana, A. CCDC deposition number 1041199, **2014**. $[Al(H_2O)_6][Sm(C_7H_3O_4N)_3] \cdot 10H_2O$

TOZLIF	1.892 Å	Kumar, D.; Ramana, A. CCDC deposition number 1041201, **2014**. $[Al(H_2O)_6][Tb(C_7H_3O_4N)_3]\cdot 10H_2O$
26139	1.894 Å	Andress, K. R.; Carpenter C., *Z. Kristallogr. Kristallgeom. Kristallphys. Kristallchem.* **1934**, *87*, 446. $[Al(H_2O)_6]Cl_3$
TOZKOK	1.894 Å	Kumar, D.; Ramana, A. CCDC deposition number 1041197, **2014**. $[Al(H_2O)_6][Eu(C_7H_3O_4N)_3]\cdot 10H_2O$
100856	1.898 Å	Abdeen, A. M.; Will, G.; Schaefer, W.; Kirfel, A.; Bargouth, M. O.; Recker, K.; Weiss, A. *Z. Kristallogr.* **1981**, *157*, 147. $NH_4[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$
WISSOG	1.899 Å	Neu, M. P:; Matonic, J. H.; Ruggiero, C.; Scott, B. L. *Angew. Chem., Int. Ed.* **2000**, *39*, 1442. $[Al(H_2O)_6][PuC_{27}H_{51}N_6O_{12}](CF_3SO_3)_5\cdot 14H_2O$
31265	1.903 Å	Khosrawan-Sazedj, F. *Tschermaks Mineralogische und Petrographische Mitteilungen* **1982**, *30*, 111; *Acta Crystallogr., Sect. B* **1979**, *35*, 3017. $[Al(H_2O)_6](UO_2)_2(PO_4)_2(OH)\cdot 8H_2O$
257432	1.905 Å	Kahlenberg, V.; Braun, D. E.; Krueger, H.; Schmidmair, D.; Orlova, M. *Phys. Chem. Miner.* **2017**, *44*, 95. $[Al(H_2O)_6]_2(SO_4)_3\cdot 1.8H_2O$
14394	1.908 Å	Larson, A. C.; Cromer, D. T. *Acta Crystallogr.* **1967**, *22*, 793. $K[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$
14396	1.917 Å	Larson, A. C.; Cromer, D. T. *Acta Crystallogr.* **1967**, *22*, 793. $NH_4[Al(H_2O)_6](SO_{42}\cdot 6H_2O$.
15187	1.917 Å	Robinson, P. D.; Fang, J. H. *Am. Mineral.* **1969**, *54*, 19. $Na[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$.
14395	1.923 Å	Larson, A. C.; Cromer, D. T. *Acta Crystallogr.* **1967**, *22*, 793. $Rb[Al(H_2O)_6](SO_4)_2\cdot 6H_2O$.
26347	1.940 Å	Piret, P.; Declercq, J. P.; Wauters-Stoop, D. *Acta Crystallogr., Sect. B* **1979**, *35*, 3017. $[Al(H_2O)_6](UO_2)_2(PO_4)_2(OH)\cdot 8H_2O$
30245	1.940 Å	Herpin, P.; Sudarsanan, K. *Bull. Soc. Fr. Mineral. Cristallogr.* **1965**, *88*, 595. $[Al(OH_2)_6](NO_3)_3\cdot 3H_2O$
TILXOC	1.946 Å	Happel, O.; Harms, K.; Seubert, A. *Z. Anorg. Allg. Chem.* **2007**, *633*, 1952. $[Al(OH_2)_6][Al_4C_{16}H_{22}O_{26}]NO_3\cdot 13H_2O$
29283	1.979 Å	Beevers, C. A.; Lipson, H. *Nature* **1934**, *134*, 327; *Philosophical Magazine, Serie 6* **1927**, *4*, 688. $K[Al(OH_2)_6](SO_4)_2\cdot 5H_2O$
Mean	**1.882 Å/99 structures**	

Table S1ag. Summary of solid state structures containing hydrated gallium(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ga-O bond distance, *d*(Ga-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Gallium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ga-O)	Reference, compound formula
NABZIA	1.930 Å	Dalgarno, S. J.; Hardie, M. J., Raston, C. L. *Cryst. Growth Des.* **2004***, 4***,** 227. $[Ga(H_2O)_6]_2(C_{12}H_{28}N_2O_4)(C_{28}H_{20}O_{16}S_4)_2{\cdot}20H_2O$
250079	1.938 Å	Kaziev, G. Z.; Dutov, A. A.; Quinones, S. O.; Bel'skii, V. K.; Zavodnik, V. E.; de Ita, A. *Zh. Neorg. Khim.* **2003**, *48*, 1079. $[Ga(H_2O)_6][Co(OH)_6Mo_6O_{18}]{\cdot}10H_2O$
280554	1.942 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M. *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $Tl[Ga(H_2O)_6](SO_4)_2{\cdot}6H_2O$
96100	1.943 Å	Kaziev, G. Z.; Quinones, S. O.; Bel'skii, V. K.; Zavodnik, V. E.; Osminkina, I. V. *Zh. Neorg. Khim.* **2002**, *47*, 18-22. $[Ga(H_2O)_6][Rh(OH)_6Mo_6O_{18}]{\cdot}10H_2O$
95911	1.945 Å	Kaziev, G. Z.; Quinones, H.; Bel'skii, V. K.; Zavodnik, V. E.; Osminkina, I. V.; de Ita, A. *Zh. Neorg. Khim.* **2002**, *47*, 389. $[Ga(H_2O)_6][Cr(OH)_6Mo_6O_{18}]{\cdot}10H_2O$
201216	1.945 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Ga(H_2O)_6](SO_4)_2{\cdot}6H_2O$
280553	1.945 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M. *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $Rb[Ga(H_2O)_6](SO_4)_2{\cdot}6H_2O$
260248	1.946 Å	Hendsbee, A. D.; Pye, C. C.; Masuda, J. D. *Acta Crystallogr., Sect E* **2009**, *65*, i65. $[Ga(H_2O)_6](NO_3)_3{\cdot}3H_2O$
NABZIA	1.946 Å	Dalgarno, S. J.; Hardie, M. J.; Raston, C. L. *Cryst. Growth Des.* **2004**, *4*, 227. $[Ga(H_2O)_6]_2(C_{12}H_{28}N_2O_4)(C_{28}H_{20}O_{16}S_4)_2{\cdot}20\ H_2O$
MAQKEV	1.950 Å	Gerasko, O. A.; Mainicheva, E. A.; Naumov, D. Yu.; Kuratieva, N. V.; Sokolov, M. N.; Fedin, V. P. *Inorg. Chem.* **2005**, *44*, 4133. $[Ga(H_2O)_6](NO_3)_3{\cdot}13\ H_2O{\cdot}C_{36}H_{36}N_{24}O_{12}$
110542	1.951 Å	Pietraszko, A.; Lukaszewicz, K.; Kirpichnikova, L. F. *Pol. J. Chem.* **1995**, *69*, 922. $((CH_3)_2NH_2)[Ga(H_2O)_6](SO_4)_2$

REZXOJ	1.951 Å	Pietraszko, A.; Lukaszawicz, K.; Kiripichnikova, L. F. *Pol. J. Chem.* **1995**, *69*, 922. $((CH_3)_2NH_2)[Ga(H_2O)_6](SO_4)_2$
83654	1.969 Å	Panneerselvam, K.; Soriano-Garcia, M.; Holguin-Quinones, S.; Holt, E. M. *Acta Crystallogr., Sect C* **1996**, *52*, 1605. $[Ga(H_2O)_6][Co(OH)_6Mo_6O_{18}]\cdot 10H_2O$
Mean	**1.946 Å/13 structures**	

Table S1ah. Summary of solid state structures containing hydrated indium(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean In-O bond distance, *d*(In-O).

Indium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(In-O)	Reference, compound formula
417334	2.107 Å	Ilyukhin, A. B.; Malyarik, M. A. *Zh. Neorg. Khim.* **1999**, *44*, 532-535. $[In(H_2O)_6](ClO_4)_3$.
OLURUI	2.110 Å	Tian; Y.-Q.; Cai; C.-X.; Yuan; X.-J.; Li; Y.-Z.; Wang; T.-W.; You, X.-Z. *Chem. Lett.* **2003**, *32*, 796. $[In(OH_2)_6][InC_{36}H_{12}N_{12}O_{24}]\cdot 15H_2O$
201217	2.112 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[In(OH_2)_6](SO_4)_2\cdot 6H_2O$.
429698	2.117 Å	Van, N.-D.; Kleeberg, F. M.; Schleid, T. *Z. Anorg. Allg. Chem.* **2015**, *641*, 2484. $[In(H_2O)_6]B_{12}H_{12}\cdot 15H_2O$
LOHSOT	2.123 Å	Davidovich, R. L.; Gerasimenko, A. V.; Voit, E. I.; Logvinova, V. B. *J. Fluorine Chem.* **2019**, *226*, 109343. $((CH_3)_4N)_6[In(H_2O)_6][InF_6]_3\cdot 18H_2O$
417333	2.124 Å	Ilyukhin, A. B.; Malyarik, M. A. *Zh. Neorg. Khim.* **1999**, *44*, 532-535. $[In(H_2O)_6](ClO_4)_3\cdot 3H_2O$.
68912	2.135 Å	Armstrong, R. S.; Beattie, K. B.; Best, S. P.; Braithwaite, G.P .; del Favero, P.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **1990**, *43*, 393. $Cs[In(OH_2)_6](SeO_4)_2\cdot 6H_2O$.
OLURUI01	2.141 Å	Tian; Y.-Q.; Cai; C.-X.; Yuan; X.-J.; Li; Y.-Z.; Wang; T.-W.; You, X.-Z. *Chem. Lett.* **2003**, *32*, 796. $[In(OH_2)_6][InC_{36}H_{12}N_{12}O_{24}]\cdot 15H_2O$
GUMWIU	2.143 Å	Samsonenko, D. G.; Sokolov, M. N.; Virovets, A. V.; Pervukhina, N. V.; Fedin, V. P. *Eur. J. Inorg. Chem.* **2001**, 167. $[In(OH_2)_6](NO_3)_3\cdot C_{36}H_{36}N_{24}O_{12}\cdot 9H_2O$
Mean	**2.124 Å/9 structures**	

Table S1ai. Summary of solid state structures containing hydrated thallium(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Tl-O bond distance, *d*(Tl-O).

Thallium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(In-O)	Reference, compound formula
31759	2.230 Å	Glaser, J.; Johansson, G. *Acta Chem. Scand., Ser. A* **1981**, *35*, 639. $[Tl(OH_2)_6](ClO_4)_3$
Mean	**2.230 Å/1 structure**	

Table S1aj. Summary of solid state structures containing hydrated a tin(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Sn-O bond distance, *d*(Sn-O).

Tin(II) hydrates

Three-coordination, three-leg configuration

ICSD/CSD code	*d*(Sn-O)	Reference, compound formula, O-Sn-O angle
237716	2.200 Å	Hennings, E.; Schmidt, H.; Köhler, M.; Voigt, W. *Acta Crystallogr., Sect. E* **2014**, *70*, 474. $[Sn(H_2O)_3](ClO_4)_2$;
FOSROW		O-Sn-O angle: 76.9°
253553	2.208 Å	Persson, I.; D'Angelo, P.; Lundberg, D. *Chem. Eur. J.* **2016**, *22*, 18583. $[Sn(H_2O)_3](ClO_4)_2$; O-Sn-O angle: 77.8°
FOSROW01		
Mean	**2.204 Å; mean O-Sn-O angle: 77.4°/2 structures**	

Table S1ak. Summary of solid state structures containing hydrated a lead(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Pb-O bond distance, *d*(Pb-O).

Lead(II)

Three-coordination, three-leg configuration

ICSD/CSD code	*d*(Pb-O)	Reference, compound formula, O-Pb-O angle
422434	2.476 Å	Tiritiris, I.; Nguyen-Duc, V.; Schleid, T. *Z. Anorg. Allg. Chem.* **2011**, *637*, 882. $[Pb(H_2O)_3]B_{12}H_{12}\cdot 3H_2O$: ; O-Pb-O angle: 75.7°
431712	2.413 Å	Zimmermann, Lucas W.; Kleeberg, Fabian M.; Schleid, T. *Z. Anorg. Allg. Chem.* **2017**, *643*, 365. $[Pb(H_2O)_3]_2Pb(B_{10}H_{10})_3\cdot 5.5H_2O$; O-Pb-O angle: 78.1°
431713	2.431 Å	Zimmermann, Lucas W.; Kleeberg, Fabian M.;; Schleid, T. *Z. Anorg. Allg. Chem.* **2017**, *643*, 365. $[Pb(H_2O)_3]_2Pb(B_{10}H_{10})_3\cdot 1.5H_2O$; O-Pb-O angle: 78.1°
Mean	**2.440 Å; mean O-Pb-O angle: 77.3°/3 structures**	

Four-coordination, four-leg configuration

ICSD/CSD code	*d*(Pb-O)	Reference, compound formula, O-Pb-O angle
TATVAO	2.400 Å	Thuery, P.; Harrowfield, J. *Inorg. Chem.* **2017**, *56*, 1455. $[Pb(H_2O)_4]_2[U_4C_{48}H_{60}O_{32}]$; O-Pb-O angle: 71.0 °, 104.9 ° (diagonal)
Mean	**2.400 Å/1 structure**	

Table S1al. Summary of solid state structures containing hydrated a bismuth(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Bi-O bond distance, *d*(Bi-O);); $d(\text{Bi-O})_p$ denotes ligands forming the prism and $d(\text{Bi-O})_c$ the capping ligands in tricapped trigonal prismatic configuration.

Bismuth(III)

Nine-coordination, tricapped trigonal prism

ICSD/CSD code	$d(\text{Bi-O})_p + d(\text{Bi-O})_c$	Reference, compound formula
ZEZTUT	2.448 + 2.577 Å	Frank, W.; Reiss, G. J.; Schneider, J. *Angew. Chem., Int. Ed.* **1995**, *34*, 2416. $[Bi(H_2O)_9](CF_3SO_3)_3$
290930		
ZEZTUT01	2.433 + 2.587 Å	Näslund, J.; Persson, I.; Sandström, M. *Inorg. Chem.* **2000**, *39*, 4012. $[Bi(H_2O)_9](CF_3SO_3)_3$
Mean	**2.440 + 2.582 Å/2 structures (mean 2.487 Å)**	

Table S1am. Summary of solid state structures containing a hydrated titanium(III) or a solvated titanium(IV) ion. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ti-O bond distance, *d*(Ti-O); $d(\text{Ti-O})_{O}$ denotes binding to oxo groups, $d(\text{Ti-O})_{eq}$ denotes the ligands in the equatorial plane versus the oxo group and $d(\text{Ti-O})_{ax}$ denotes the ligand in the axial position versus the oxo group. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Titanium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ti-O)	Reference, compound formula
SIDHAR	1.998 Å	Zhu, B.-C.; Fang, W.-H.; Wang, J.; Du, Y.; Zhou, T.; Wu, K.; Zhang, L.; Zhang, J. *Chem. Eur. J.* **2018**, *24*, 14358. $[Ti(H_2O)_6][Ti_8C_{84}H_{36}O_{48}]\cdot 2CH_3CO(OCH(CH_3)_2$
2043	2.029 Å	Sygusch, J., *Acta Crystallogr., Sect B* **1974**, *30*, 662. $Cs[Ti(H_2O)_6](SO_4)_3\cdot 6H_2O$
LIMPUS	2.034 Å	Aquino, M. A. S.; Clegg, W.; Qiu-Tian Liu, Sykes, A. G., *Acta Crystallogr., Sect. C* **1995**, *52*, 560. $[Ti(H_2O)_6](C_7H_7SO_3)_3\cdot 3H_2O$
Mean	**2.020 Å/3 structures**	
165429	2.014 Å	Davis, P. H.; Wood, J. S. *Inorg. Chem.* **1970**, *9*, 1111. $[Ti(OC(NH_2)_2)_6]I_3$
404087	2.033 Å	Troyanov, S. I.; Stiewe, A.; Kemnitz, E. *Z. Naturforsch., Teil B* **1996**, *51*, 19. $(H_5O_2)[Ti(H_2O)_2(OSO_3)]_n$

Oxotitanium(IV)/Titanyl(IV)

Six-coordination, octahedral configuration

ICSD/CSD code	$d(\text{Ti-O})_{O} + d(\text{Ti-O})_{eq} + d(\text{Ti-O})_{ax}$	Reference, compound formula
RUKDIK	1.646 + 2.033 + 2.232 Å	Rabe, S.; Muller, U., *Z. Naturforsch., Teil B* **1997**, *52*, 1291. $[TiO(OS(CH_3)_2)_5]Cl_2$
RUKDIK01	1.648 + 2.035 + 2.234 Å	Enders, M.; Rudolph, R.; Pritzkow, H., *Z. Naturforsch., Teil B* **1997**, *52*, 496. $[TiO(OS(CH_3)_2)_5]Cl_2$
Mean	**1.647 + 2.034 + 2.233 Å/2 structures**	

Table S1an. Summary of solid state structures containing hydrated zirconium(IV) and hafnium(IV) hydroxo complexes, $[M_4(OH)_8(H_2O)_{16}]^{8+}$. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean M-O bond distance, $d(M\text{-}O)_{aq}$ and $d(Ti\text{-}O)_{OH}$ denotes binding to oxo groups.

Zirconium(IV)
$[Zr_4(OH)_8(H_2O)_{16}]^{8+}$

ICSD/CSD code	$d(Zr\text{-}O)_{OH}$ + $d(Zr\text{-}O)_{aq}$/$d(Zr\cdots Zr)$	Reference, compound formula
IBAZER	2.126 + 2.267 Å	Mit'kina, T. V.; Geras'ko, O. A.; Sokolov, M. N.; Naumov, D. Y.; Fedin, V. P. *Izv. Akad. Nauk*
	3.547 Å	*SSSR, Ser. Khim.* **2008**, 80. $[Zr_4(OH)_8(H_2O)_{16}]Cl_8\cdot(C_{36}H_{36}N_{24}O_{16})\cdot 16H_2O$
Mean	**2.126 + 2.267 Å/1 structure**	

Hafnium(IV)
$[Hf_4(OH)_8(H_2O)_{16}]^{8+}$

ICSD/CSD code	$d(Hf\text{-}O)_{OH}$ + $d(Hf\text{-}O)_{aq}$/$d(Hf\cdots Hf)$	
IBAZIV	2.119 + 2.241 Å	Mit'kina, T. V.; Geras'ko, O. A.; Sokolov, M. N.; Naumov, D. Y.; Fedin, V. P. *Izv. Akad. Nauk*
	3.539 Å	*SSSR, Ser. Khim.* **2008**, 80. $[Hf_4(OH)_8(H_2O)_{16}](CH_3C_6H_4SO_3)_8\cdot 4H_2O$
PEWNAH	2.130 + 2.268 Å	Dalgarno, S. J.; Atwood, J. L.; Raston, C. L. *Inorg. Chim. Acta* **2007**, *360*, 1344.
	3.553 Å	$[Hf_4(OH)_8(H_2O)_{16}](CH_3C_6H_4SO_3)_8\cdot 4H_2O$
Mean	**2.125 + 2.250 Å/2 structures**	

Table S1ao. Summary of solid state structures containing hydrated vanadium(II), vanadium(III) or oxovanadium(IV)/vanadyl(IV) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean V-O bond distance, *d*(V-O); $d(\text{V-O})_{O}$ denotes binding to oxo groups, $d(\text{V-O})_{eq}$ denotes the ligands in the equatorial plane versus the oxo group and $d(\text{V-O})_{ax}$ denotes the ligand in the axial position versus the oxo group. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Vanadium(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(V-O)	Reference, compound formula
YEGSAF	1.958 Å	Wei Shi, Xiao-Yan Chen, Bin Zhao, Ao Yu, Hai-Bin Song, Peng Cheng, Hong-Gen Wang, Dai-Zheng Liao, Shi-Ping Yan, *Inorg. Chem.* **2006**, *45*, 3949. $[V(H_2O)_6][V_2C_{18}H_{24}N_4O_{14}]\cdot 4H_2O$
15232	2.053 Å	Kutoglu, A., *Z. Kristallograph., Kristallgeom., Kristallphys., Kristallchem.* **1973**, *137*, 51. $[V(H_2O)_6]_3[Ni(H_2O)_6](SO_4)_4$
68779	2.118 Å	Holt, D. G. L.; Larkworthy, L. F.; Povey, D. C.; Smith, G. W.; Jeffery Leigh, G., *Inorg. Chim. Acta* **1990**, *169*, 201. $[V(H_2O)_6](CF_3SO_3)_2$
75461	2.129 Å	Cotton, F. A.; Falvello, L. R.; Murillo, C. A.; Pascual, I.; Schultz, A. J.; Tomas, M., *Inorg. Chem.* **1994**, *33*, 5391. $[V(H_2O)_6]SO_4\cdot H_2O$
61263	2.130 Å	Cotton, F. A.; Falvello, L. R.; Llusar, R.; Libby, E.; Murillo, C. A.; Schwotzer, W., *Inorg. Chem.* **1986**, *25*, 3423. $[V(H_2O)_6]SO_4$
14345	2.148 Å	Montgomery, H.; Chastain, R. V.; Natt, J. J.; Witkowska, A. M.; Lingafelter, E. C., *Acta Crystallogr.* **1967**, *22*, 775. $[V(H_2O)_6](NH_4)_2(SO_4)_2$
Mean	**2.131 Å/4 structures**	

Vanadium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(V-O)	Reference, compound formula
FEMHOV	1.988 Å	Tregenna-Piggott, P. L. W.; Spichiger, D.; Carver, G.; Frey, B.; Meier, R.; Weihe, H.; Cowan, J. A.; McIntyre, G. J.; Zahn, G.; Barra, A.-L. *Inorg. Chem.* **2004***, 43*, 8049. $[V(H_2O)_6](C(NH_2)_3)(SO_4)_2$
81830	1.991 Å	Beattie, J. K.; Best, S. P.; del Favero, P.; Skelton, B. W.; Sobolev, A. N.; White, A. H. *J. Chem. Soc., Dalton Trans.*, **1996**, 1481. $K[V(H_2O)_6](SO_4)_2 \cdot 6H_2O$
81832	1.991 Å	Beattie, J. K.; Best, S. P.; del Favero, P.; Skelton, B. W.; Sobolev, A. N.; White, A. H. *J. Chem. Soc., Dalton Trans.*, **1996**, 1481. $Cs[V(H_2O)_6](SO_4)_2 \cdot 6H_2O$
201210	1.993 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105-2111. $Cs[V(H_2O)_6](SO_4)_2 \cdot 6H_2O$
COLNUM	1.995 Å	Cotton, F. A.; Fair, C. K.; Lewis, G. E.; Mott, G. N.; Ross, F. K.; Schultz, A. J.; Williams, J. M. *J. Am. Chem. Soc.* **1984***, 106*, 5319. $[V(H_2O)_6](H_5O_2)(CF_3SO_3)_4$
81831	1.996 Å	Beattie, J. K.; Best, S. P.; del Favero, P.; Skelton, B. W.; Sobolev, A. N.; White, A. H., *J. Chem. Soc., Dalton Trans.* **1996**, 1481. $Rb[V(H_2O)_6](SO_4)_2 \cdot 6H_2O$
74004	2.007 Å	Beattie, J. K.; Best, S. P.; Moore, F. H.; Skelton, B. W.; White, A. H., *Aust. J. Chem*. **1993**, *46*, 1337. $Cs[V(H_2O)_6](SO_4)_2 \cdot 6H_2O$
Mean	**1.994 Å/7 structures**	

Oxovanadium(IV)/Vanadyl(IV)

Six-coordinated (pentahydration)

ICSD/CSD code	d(V-O)$_O$ + d(V-O)$_{eq}$ + d(V-O)$_{ax}$	Reference, compound formula
ZEWXOR	1.569 + 2.021 + 2.184 Å	Hadzovic. A., unpublished data, CCDC code1832273, **2018**.
SIBGEO01	1.569 + 2.027 + 2.183 Å	Krakowiak, J.; Lundberg, D.; Persson, I. *Inorg. Chem.* **2012**, *51*, 9598. $[VO(H_2O)_5](CF_3SO_3)_2$
51489	1.571 + 2.030 + 2.210 Å	Teze, A.; Marchal-Roch, C.; So, H.; Fournier, M. T.; Herve, G., *Solid State Sci.* **2001**, *3*, 329. $[Na(H_2O)_2]_2[VO(H_2O)_5][SiW_{12}O_{40}]\cdot 4H_2O$
OBUZUH	1.576 + 2.037 + 2.171 Å	Lianzhi Li, Tao Xu, Daqi Wang, Meiju Niu, *Acta Crystallogr., Sect. E* **2004**, *60*, m1374. $[VO(H_2O)_5](C_7H_5SO_6).\cdot 2H_2O$
LEYMIL	1.577 + 2.026 + 2.177 Å	De Munno, G.; Bazzicalupi, C.; Faus, J.; Lloret, F.; Julve, M., *J. Chem. Soc., Dalton Trans.* **1994**, *o*1879. $[VO(H_2O)_5][Cu_2C_{16}H_{14}N_8O_{13}S_3]\cdot 7H_2O$
SIBGEO	1.577 + 2.027 + 2.175 Å	Magnussen, M.; Brock-Nannestad, T.; Bendix, J. *Acta Crystallogr., Sect. E* **2007**, *63*, m51. $[VO(H_2O)_5](CF_3SO_3)_2$
92978	1.582 + 2.027 + 2.231 Å	Hawthorne, F. C.; Schindler, M.; Grice, J. D.; Haynes, P., *Can. Miner.* **2001**, *39*, 1325. $[VO(H_2O)_5]SO_4$
10433	1.586 + 2.019 + 2.160 Å	Tachez, M.; Theobald, F. R., *Acta Crystallogr., Sect. B* **1980**, *36*, 249. $[VO(H_2O)_5]SO_4\cdot H_2O$
23308	1.591 + 2.024 + 2.217 Å	Tachez, M.; Theobald, F. R., *Acta Crystallogr. Sect. B* **1980**, *36*, 1757. $[VO(H_2O)_5]SO_4$
69125	1.599 + 2.022 + 2.161 Å	Hjorth, M.; Norrestam, R.; Johansen, H., *Acta Crystallogr., Sect B* **1990**, *46*, 1. $[VO(H_2O)_5]SO_4\cdot H_2O$
Mean	**1x1.580, 4x2.026, 1x2.187 Å/10 structures**	

Table S1ap. Summary of solid state structures containing hydrated chromium(II), chromium(III) and molybdenum(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Cr/Mo-O bond distance, *d*(Cr/Mo-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Chromium(II)

Six-coordination, Jahn-Teller distorted octahedral configuration

ICSD/CSD code	*d*(Cr-O)	Reference, compound formula
80638	2.106 Å	Cotton, F. A.; Falvello, L. R.; Murillo, C. A.; Quesada, J. F. *J. Solid State Chem.* **1992**, *96*, 192. $[Cr(H_2O)_6]SiF_6$
108844	2.080 + 2.341 Å	Figgis, B. N.; Kucharski, E. S.; Reynolds, P. A *Acta Crystallogr. Sect. B* **1990**, *46*, 577. $(NH_4)_2[Cr(H_2O)_6](SO_4)_2$
41344	2.086 + 2.324 Å	Araya, M. A.; Cotton, F. A.; Daniels, M. N.; Falvello, L. R.; Murillo, C. A. *Inorg. Chem.* **1993**, *32*, 4853. $(NH_4)_2[Cr(H_2O)_6](SO_4)_2$
Mean	**2.083 + 2.333 Å/2 structures; mean Cr-O bond distance: 2.166 Å**	

Six-coordination, regular octahedral configuration

ICSD/CSD code	*d*(Cr-O)	Reference, compound formula
80638	2.106 Å	Cotton, F. A.; Falvello, L. R.; Murillo, C. A.; Quesada, J. F. *J. Solid State Chem.* **1992**, *96*, 192. $[Cr(H_2O)_6]SiF_6$
62364	2.049 + 2.435 Å	Ito, H.; Ito, Y.; Kanamaru, F.; Koto, K. *Z. Kristallogr.* **1987**, *181*, 99. $Cr(SO_4)_2{\cdot}5H_2O$
62753	2.047 + 2.441 Å	Hitchman, M. A.; Lichon, M.; McDonald, R. G.; Smith, P. W.; Stranger, R.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1987**, 1817. $Cr(SO_4)_2{\cdot}5H_2O$

Chromium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Cr-O)	Reference, compound formula
34262	1.955 Å	Schein, B. J. B.; Lingafelter, E. C.; Stewart, J. M. *J. Chem. Phys.* **1967**, *47*, 5183. $(C(NH_2)_3)[Cr(H_2O)_6](SO_4)_2$
QUXWAI	1.956 Å	Mariam, I.; Rauf, A.; Sharif, S.; Khan, I. U.; Ng, S. W. *Acta Crystallogr., Sect. E* **2010**, *66*, m843.

2379	1.957 Å	Epple, M.; Massa, W. *Z. Anorg. Allg. Chem.* **1978**, *444*, 47-53. $[Cr(H_2O)_6]F_3 \cdot 3H_2O$.
RUNMOF	1.959 Å	Kohn, R. D.; Coxon, A. G. N.; Chunawat, S.; Heron, C.; Mihan, S.; Lyall, C. L.; Reeksting, S. B.; Kociok-Kohn, G. *Polyhedron* **2020**, *185*, 114572. $[Cr(H_2O)_6](CF_3SO_3)_3 \cdot 3H_2O$
TAPBUH 110573	1.960 Å	Galesic, N.; Jordanovska, V. B. *Acta Crystallogr., Sect. C* **1992**, *48*, 256. $(NH_2(CH_3)_2)[Cr(H_2O)_6]_2(SO_4)_2$
424987	1.961 Å	Rees-Isele, L.; Keller, E. *Z. Naturforsch., Teil B* **2012**, *67*, 1229. $Na[Cr(H_2O)_6](SO_4)_2$
143461	1.962 Å	Weil, M. *Chem.* **2021**, *3*, 45. $NH_4[Cr(H_2O)_6](PO_3F)_2$
429697	1.962 Å	Van, N.-D.; Kleeberg, F. M.; Schleid, T. *Z. Anorg. Allg. Chem.* **2015**, *641*, 2484. $[Cr(H_2O)_6](B_{12}H_{12})Cl_3 \cdot 15H_2O$
AXOCIB	1.962 Å	Oelkers, B.; Schaffner, D.; Sun, Y. *Chem. Sel.* **2016**, *1*, 4440.
TIZMIA 426368	1.962 Å	Rees-Isele, L.; Winkler, H.-P.; Keller, E. *Z. Naturforsch., Teil B* **2013**, *68*, 1288. $Na[Cr(H_2O)_6](SO_4)_2 \cdot 0.6CH_3OH \cdot 1.5H_2O$
HSQCRB	1.962 Å	Chesick, J. P.; Doany, F. *Acta Crystallogr., Sect. B* **1981**, *37*, 1076. $[Cr(H_2O)_6]_2(C_4O_4)_3 \cdot 3H_2O$
AQEMUF	1.963 Å	Xing, Q.-J.; Dai, S. C.; Chen, M.-H.; Ma, J.; Zhang, L.-P.; Zou, J.-P. *Z.Kristallogr. - New Cryst.Struct.* **2011**, *226*, 67.
PUYHIC	1.963 Å	JQiu, J.-Z.; Wang, L.-F.; Chen, Y.-C.; Zhang, Z.-M.; Li, Q.-W.; Tong, M.-L. *Chem. Eur. J.* **2016**, *22*, 802.
VOYYAJ	1.963 Å	Atwood, J. L.; O rr, G. W.; Means, N. C.; Hamada, F.; Hongming Zhang; Bott, S.G.; Robinson, K. D. *Inorg. Chem.* **1992**, *31*, 603. $[Cr(H_2O)_6](NaC_{28}H_{28}O_{20}S_4) \cdot (CH_3)_2CO \cdot 6.5H_2O$
ITUTIA	1.964 Å	Samsonenko, D. G.; Geras'ko, O. A.; Mit'kina, T. V.; Lipkowski, J.; Virovets, A. V.; Fenske, D.; Fedin, V. P. *Koord. Khim. (Russ. J. Coord. Chem.)* **2003**, *29*, 166. $[Cr(H_2O)_6]_2(NO_3)_3 \cdot 13H_2O \cdot C_{36}H_{36}N_{24}O_{12}$
MEWZET01	1.964 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, *41*, 6986. $[Cr(H_2O)_6]_2(C_9H_9O_9S_3) \cdot 3CH_3OH$
1265	1.966 Å	Massa, W. *Z. Anorg. Allg. Chem.* **1977**, *436*, 29. $(NH_4)_2[Cr(H_2O)_6]F_5$
38266	1.966 Å	Marsh, R. E.; Herbstein, F. H. *Acta Crystallogr., Sect. B* **1983**, *39*, 280. $(NH_4)_2[Cr(H_2O)_6]F_5$
66000	1.966 Å	Spundflasche, E.; Fink, H.; Seifert, H. J. *Z. Anorg. Allg. Chem.* **1989**, *579*, 143. $[Cr(H_2O)_6]Cl_3$
69551	1.966 Å	Lazar, D.; Ribar, B.; Divjakovic, V.; Meszaros, C. *Acta Crystallogr., Sect. C* **1991**, *47*, 1060. $[Cr(H_2O)_6](NO_3)_3 \cdot 3H_2O$.
XESXUY	1.966 Å	Taylor, J. M.; Dwyer, P. J.; Reid, J. W.; Gelfand, B. S.; Lim, D.-w.; Donoshita, M.; Veinberg, S. L.; Kitagawa, H.; Vukotic, V. N..; Shimizu, G. K. H. *Chem Cell mPress* **2018**, *4*, 868.
UCOMEE	1.966 Å	Eshel, M.; Bino, A. *Inorg. Chim. Acta* **2001**, *320*, 127-132. $[Cr(H_2O)_6]_2(CH_3COO)_3$
XESYAF	1.967 Å	Taylor, J. M.; Dwyer, P. J.; Reid, J. W.; Gelfand, B. S.; Lim, D.-W.; Donoshita, M.; Veinberg, S. L.; Kitagawa, H.; Vukotic, V. N..; Shimizu, G. K. H. *Chem Cell mPress* **2018**, *4*, 868.
26138	1.968 Å	Andress, K. R.; Carpenter, C. *Z. Kristallogr.* **1934**, *87*, 446. $[Cr(H_2O)_6]Cl_3$

IWOJOT	1.969 Å	Shan Gao; Ji-Wei Liu; Li-Hua Huo; Hui Zhao; Jing-Gui Zhao *Acta Crystallogr., Sect. E* **2004**, *60*, m622. $[Cr(H_2O)_6]_2(NaC_{22}H_{20}O_{15})\cdot 5H_2O$
XEZXOS	1.970 Å	Taylor, J. M.; Dwyer, P. J.; Reid, J. W.; Gelfand, B. S.; Lim, D.-W.; Donoshita, M.; Veinberg, S. L.; Kitagawa, H.; Vukotic, V. N..; Shimizu, G. K. H. *Chem Cell mPress* **2018**, *4*, 868. $[Cr(H_2O)_6]_2((C_6H_5)O_2POHOPO_2(C_6H_5))$
DOJGAL	1.971 Å	Aridomi, T.; Takamura, K.; Igashira-Kamiyama, A.; Kawamoto, T.; Konno, T. *Chem. Eur. J.* **2008**, *14*, 7752.
52531	1.972 Å	Rodek, E.; Sterzel, W.; Theile, N. *Z. Anorg. Allg. Chem.* **1980**, *462*, 42. $[Cr(H_2O)_6]PO_4$
YEPZUR	1.986 Å	Oya, N.; Yamada, M.; Surinwong, S.; Kuwamura, N.; Konno, T. *Dalton Trans.* **2018**, *27*, 2497.
OLUROC	2.015 Å	Tian, Y.-Q.; Cai, C.-X.; X.-J.; Li, Y.-Z.; Wang, T.-W.; You, X.-Z. *Chem. Lett*. **2003**, *32*, 796. $[Cr(H_2O)_6][InC_{36}H_{12}N_{12}O_{24}]\cdot 15H_2O$
Mean	**1.965 Å/24 structures**	

Molybdenum(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Mo-O)	Reference, compound formula
62552	2.089 Å	Brorson, M.; Gajhede, M. Crystal structure of cesium molybdenum alum, $Cs[Mo(H_2O)_6](SO_4)_2\cdot 6H_2O$, at 110 K. *Inorg. Chem.* **1987**, *26*, 2109. $Cs[Mo(H_2O)_6](SO_4)_2\cdot 6H_2O$

Table S1aq. Summary of solid state structures containing hydrated manganese(II) and manganese(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Mn-O bond distance, *d*(Mn-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Manganese(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Mn-O)	Reference, compound formula
CONBEO	2.143 Å	Jia, T.-J.; Li, S.-M.; Cao, W.; Li, L.-C.; Zheng, X.-J.; Yuan, D.-Q. *J. Solid State Chem.* **2013**, *201*, 208. $[Mn(H_2O)_6][Cu_2MnC_{16}H_{12}O_{20}]\cdot 4H_2O$
FURWEV	2.146 Å	Leong, W. L.; Vittal, J. J. *Inorg. Chim. Acta* **2009**, *362*, 2189. $[Mn(H_2O)_6][Mn_2C_{30}H_{28}N_2O_{16}]_2\cdot 2CH_3CN$
FAXFEQ	2.147 Å	Ma, Z.; Tao, J.; Huang, R.-B.; Zhang, L.-S. *Acta Crystallogr., Sect. E* **2005**, *61*, m1. $[Mn(H_2O)_6](C_8H_4N_5)_2$
NUVWOR	2.148 Å	Wang, Y.; Zhang, Z.-J.; Shi, W.; Cheng, P.; Liao, D.-Z.; Yan, S. P. *CrystEngComm* **2010**, *12*, 1086. $[Mn(H_2O)_6][Mn_2La_2C_{24}H_{24}O_{30}]\cdot 3H_2O$
TITNAM	2.149 Å	Liu, C.; Shi, X.; Du, B.; Wu, C.; Zhang, M. *Acta Crystallogr., Sect. E* **2008**, *64*, m270. $[Mn(H_2O)_6](C_6H_2N_3O_7)_2\cdot 2H_2O$
59274	2.151 Å	Torii, A.; Ogawa, K.; Tamura, H.; Osaki, K. *Acta Crystallogr., Sect C* **1997**, *53*, 833. $[Mn(H_2O)_6]SiF_6$
ORINAF	2.151 Å	Wei, M.-L.; Zhuang, P.-F.; Miao, Q.-Z.; Wang, Y. *J. Solid State Chem.* **2011**, *184*, 1472. $[Mn(H_2O)_6][HMo_{12}O_{40}P]_4\cdot C_6H_5NO_3\cdot 4.5H_2O$
PUKJIR	2.153 Å	Gong, Z.-H.; Shi, L.; Gao, X.-M.; Bi, W.-C.; Huang, X.-H.; Sun, Y.-Q.; Sun, R.-Q.; Chen, Y.-P. *J. Mol. Struct.* **2020**, *1206*, 127716. $[Mn(H_2O)_6](C_8H_7N_4)[SiW_{12}O_{40}]\cdot 3H_2O$
IYOHUC	2.154 Å	Surinwong, A. ; Kuwamura, N. ; Kojima, T. ; Yoshinari, N. ; Rujiwatra, A. ; Konno, T. *Inorg. Chem.* **2021**, *60*, 12555. $[Mn(H_2O)_6]_2[Mn(H_2O)_4][Au_3Co_2C_{30}H_{54}N_6O_{12}S_6]_2$
OYOTOM	2.154 Å	Duan, X.; Meng, Q.; Su, Y.; Li, Y.; Duan, C.; Ren, X.; Lu, C. *Chem. Eur. J.* **2011**, *17*, 9936. $[Mn(H_2O)_6]_2[MnC_{24}H_{32}N_4O_4](Mn_4C_{68}H_{50}O_{40}]\cdot 15H_2O$
PUQWUU	2.155 Å	Jeremic, D. A.; Kaluderovic, G. N.; Gomez-Ruiz, S.; Brceski, I.; Kasalica, B.; Leovac, V. M. *Cryst. Growth Des.* **2010**, *10*, 559. $[Mn(H_2O)_6](C_{10}H_{15}O_4S)_2$
BUTBAU	2.156 Å	Wang, Q.-Y.; Zhang, Z.-T. *Guangpu Shiyanshi* **2009**, *26*, 395. $[Mn(H_2O)_6](C_{16}H_{11}O_7S)_2\cdot 10H_2O$
POGGAW	2.156 Å	Ouyang, M., Li, J.-C.; Jiang, Y.-M.; Zhang, Y.-L.; Wei, L.-Q.; Liao, B.-L. CCDC deposition number 984041, **2019**. $[Mn(H_2O)_6](C_{13}H_{10}NO_4S)_2$
FAWBEM	2.157 Å	Reidel, P. J.; Arulsamy, N.; Mehn, M. P. *Inorg. Chem. Commun.* **2011**, *14*, 734. $[Mn(H_2O)_6](CF_3SO_3)_2$

IGOZIP	2.157 Å	Wang, Y.; Wang, X.-G.; Yuan, B.; Shao, C.-Y.; Chen, Y.-Y.; Zhou, B.-B.; Li, M.-S. An, X.-M.; Cheng, P.; Zhao, X.-J. *Inorg. Chem.* **2015**, *54*, 4456. $[Mn(H_2O)_6][CdYbC_{12}H_{12}O_{15}]_2 \cdot 1.5H_2O$
VODBOG	2.157 Å	Xu, G.-F.; Liu, B.; Song, H.-B.; Wang, Q.-L.; Yan, S.-P.; Liao, D.-Z. *Inorg. Chem. Commun.* **2008**, *11*, 714. $[Mn(H_2O)_6][CoC_{18}H_{28}N_4O_{14}] \cdot 4H_2O$
DIXWOX	2.158 Å	Ascherl, L.; Nordheider, A.; Arachchige, K. S. A.; Cordes, D. B.; Karaghiosoff, K.; Buhl, M.; Slawin, A. M. Z.; Woollins, J. D. *Chem. Commun.* **2014**, *50*, 6214. $[Mn(H_2O)_6](SO_4)_2 \cdot 2C_{24}H_{30}N_{10}O_3$
FAFYIX	2.158 Å	Oh, I.-H.; Kim, J. Y.; Park, S.-H. *Z. Kristallogr.-New. Cryst. Struct.* **2016**, *231*, 369. $[Mn(H_2O)_6](C_{14}H_{14}N_3O_3S)_2$
QUKQES	2.158 Å	Fewings, K. R.; Junk, P. C.; Georganopoulou, D.; Prince, P. D.; Steed, J. W. *Polyhedron* **2001**, *20*, 643. $[Mn(H_2O)_6](C_6H_5CH_2SO_3)_2$
SUVBOA	2.158 Å	Leonard, M. A.; Squattrito, P. J.; Dubey, S. N. *Acta Crystallogr., Sect. C* **1999**, *55*, 35. $[Mn(H_2O)_6](C_8H_7O_3S)_2$
170803	2.159 Å	Chen, Z.-L.; Li, S.-B.; Qiu, Z.-H.; Zeng, Q.-F.; Liang, F.-P. *Acta Crystallogr., Sect. E* **2005**, *61*, m1931. $[Mn(H_2O)_6]Cl_2 \cdot 2C_6H_{12}N_4 \cdot 4H_2O$
AGUBIN	2.159 Å	Beauchamp, D. A.; Loeb, S. J. *Chem. Eur. J.* **2002**, *8*, 5084. $[Mn(H_2O)_6](C_{12}H_8N_2)_4(ClO_4)_2 \cdot 4H_2O$
JAXWIP	2.159 Å	Chen, Z.-L.; Li, S.-B.; Qiu, Z.-H.; Zeng, Q.-F.; Liang, F.-P. *Acta Crystallogr., Sect. E* **2005**, *61*, m931. $[Mn(H_2O)_6]Cl_2\ 2C_6H_{12}N_4 \cdot 4H_2O$
POFFEY	2.159 Å	Shi, J.; Zhang, Z. T. *Koord. Khim.* **2019**, *45*, 244. $[Mn(H_2O)_6](C_{16}H_{11}O_7S)_2 \cdot 2H_2O$
LABSAL	2.160 Å	Schneider, A.; Schmidt, H.; Voigt, W. *J. Coord. Chem.* **2016**, *69*, 365. $[Mn(H_2O)_6][FeLi(C_2O_4)_3]$
YELTAN	2.160 Å	Li, W.-W.; Zhang, Z.-T. *Chin. J. Struct. Chem.* **2018**, *37*, 97. $[Mn(H_2O)_6](C_{16}H_{11}O_7S)_2 \cdot 4H_2O$
ASOVEJ	2.161 Å	Chopra, D.; Dagur, P.; Prakash, A. S.; Guru Row, T. N.; Hegde, M. S. *Acta Crystallogr., Sect. E* **2004**, *60*, m346; *J. Cryst. Growth* **2005**, *275*, e2049. $[Mn(H_2O)_6](NO_3)_2 \cdot (C_6H_{12}N_4)_2 \cdot 4H_2O$
IYOBAZ01	2.161 Å	Can, N.; Can, S. E. S.; Atac, A. A.; Bardak, F. *Polyhedron* **2004**, *23*, 1109. $[Mn(H_2O)_6](C_6H_4NO_3)_2$
ZUFGUC01	2.161 Å	Ming-gen Zhao; Cheng-qi Liu; Jin-Chang; Guo *Shanxi Daxue Xuebao,Ziran Kex.* **2003**, *26*, 330. $[Mn(H_2O)_6][Mn_2C_{12}H_{12}O_{18}] \cdot 2H_2O$
ATUPOU	2.162 Å	Liu; X.; Zhang; B.-F.; Wang; X.; Shen; G.; Wang, R.-J.; Shen, D. *Acta Crystallogr., Sect. E* **2004**, *60*, m538. $[Mn(H_2O)_6][CoC_8H_{14}N_{10}O_4]_2 \cdot 2H_2O$
BUTBEY	2.162 Å	Wang, Q.-Y.; Zhang, Z.-T. *Guangpu Shiyanshi* **2009**, *26*, 395. $[Mn(H_2O)_6](C_{19}H_{17}O_7S)_2 \cdot 8H_2O$
FOFJUG	2.162 Å	Qiu, L.-G.; Xie, A.-J.; Zhang, L.-D. *Adv. Mater.* **2005**, *17*, 689. $[Mn(H_2O)_6][MnC_{24}H_{20}N_4O_2]_2(C_9H_3O_6)_2 \cdot 24H_2O$
202786	2.163 Å	Chattopadhyay, T. K.; Devreux, F.; Peters, K.; Peters, E. M.; Gmelin, E.; Ghosh, B. *J. Phys. C* **1988**, *21*, 1321-1334. $[Mn(H_2O)_6]TiF_6$

PAJHEQ	2.163 Å	Sniekers, J.; Malaquias, J. C.; Van Meervelt, L.; Fransaer, J.; Binnemans, K. *Dalton Trans.* **2017**, *46*, 2497. $[Mn(H_2O)_6]((SO_2CF_3)_2N)_2$
GINVIJ	2.164 Å	Deng, Y.-F.; Zhang, H.-L. Hong, Q.-M.; Weng, W.-Z.; Wan, H.-L.; Zhou, Z.-H. *J. Solid State. Chem.* **2007**, *180*, 3152. $(NH_4)_2[Mn(H_2O)_6][Ti_2C_{18}H_{18}O_{21}]\cdot 6H_2O$
NAVKAZ	2.164 Å	Zhao, H.; Zhu, Y.-Q.; Feng, C. *Chin. J. Struct. Chem.* **2017**, *36*, 66. $[Mn(H_2O)_6][MnC_{30}H_{24}N_9O_6]_2\cdot 4H_2O$
YEZSEC01	2.164 Å	Guo, F.-S.; Chen, Y.-C.; Liu, J.-L.; Leng, J.-D.; Meng, Z.-S.; Vrabel, P.; Orendac, M.; Tong, M.-L. *Chem. Commun.* **2012**, *48*, 12219. $[Mn(H_2O)_6][Gd_2Mn_2C_{24}H_{24}O_{30}]\cdot 6H_2O$
66005	2.165 Å	Herdtweck, E.; Massa, W. Z. *Anorg. Allg. Chem.* **1989**, *579*, 191. $[Mn(H_2O)_6][FeF_5H_2O]$
CILMUF	2.165 Å	Tamura, H.; Ogawa, K.; Sakurai, T.; Nakahara, A. *Inorg. Chim. Acta* **1984**, *92*, 107. $[Mn(H_2O)_6][MnC_{18}H_{14}N_2O_6]_2\cdot 2H_2O$
EMIJER	2.165 Å	Lakma, A.; Hossain, S. M.; Pradhan, R. N.; Topwal, D.; Cornia, A.; Singh, A. K. *Eur. J. Inorg. Chem.* **2016**, 2993. $[Mn(H_2O)_6][Mn_{11}C_{78}H_{70}N_{30}O_{44}]\cdot 24H_2O$
IYOBAZ	2.165 Å	Can, N.; Can, S. E. S.; Atac, A.; Bardak, F. *Polyhedron* **2004**, *23*, 1109. $[Mn(H_2O)_6](C_6H_4NO_3)_2$
KIKNIE	2.165 Å	Gao, E.; Xing, J.; Qu, Y.; Qiu, X.; Zhu, M. *Appl. Orhanomet. Chem.* **2018**, e4469. $[Mn(H_2O)_6](C_{14}H_8N_4O_4)\cdot 2H_2O$
OVEXUJ	2.165 Å	Li, B.; Yang, F.; Li, G.; Liu, D.; Zhou, Q.; Shi, Z.; Feng, S. *Cryst. Growth Des.* **2011**, *11*, 1475. $[Mn(H_2O)_6][Mn_6C_{96}H_{78}N_{24}O_{34}]2H_2O$
74964	2.166 Å	Molinier, M.; Massa, W. *Anorg. Allg. Chem.* **1994**, *620*, 833. $[Mn(H_2O)_6][MnF_4(H_2O)_2]\cdot 2H_2O$
GIJXOO	2.166 Å	Martsinko, E. E.; Minacheva, L. K.; Seifullina, I. I.; Chebanenko, E. A.; Sergienko, V. S.; Churakov, A. V. *Zh. Neorg. Khim.* **2013**, *58*, 187. $[Mn(H_2O)_6][Mn_2GeC_{10}H_{14}O_{18}]\cdot CH_3CN\cdot 4H_2O$
ROCGAS	2.166 Å	Bi, J.; Kong, L.; Huang, Z.; Liu, J. *Inorg. Chem.* **2008**, *47*, 4564. $[Mn(H_2O)_6][ZnC_{24}H_{20}N_4O_2]_2(C_6H_3(COO)_3)_2\cdot 22.5H_2O$
RUJVIC	2.166 Å	Miminoshvili, E. B.; Miminoshvili, K. E.; Beridze, L. A. *Zh. Strukt. Khim.* **2009**, *50*, 177. $[Mn(H_2O)_6](C_{10}H_{11}N_4O_2S_2)_2\cdot 5H_2O$
WEHFUL	2.166 Å	Zhang, K.; Lyu, K.; Yang, W. *Izv. Akad. Nauk SSSR, Ser. Khim.* **2005**, 1767. $(NH_4)_{10}[Mn(H_2O)_6][Mo_8C_{14}H_{12}N_2O_{30}]_2\cdot 15H_2O$
MEYKUW	2.167 Å	Junk, P. C.; Smith, M. K.; Steed, J. W. *Polyhedron* **2001**, *20*, 2979. $[Mn(H_2O)_6][MnC_{16}H_{32}O_8]_2(ClO_4)_6\cdot 6H_2O$
ZUFGUC	2.167 Å	Wu, L. P.; Yamamoto, M.; Kuroda-Sowa, T.; Maekawa, M.; Fukui, J.; Munakata, M. *Inorg. Chim. Acta* **1995**, *239*, 165. $[Mn(H_2O)_6][Mn_2C_{12}H_{12}O_{18}]\cdot 2H_2O$
86092	2.167 Å	Gilardi, R. D.; Butcher, R. J. J. Chem. Cryst. 1998, 28, 105. $[Mn(H_2O)_6](N(NO_2)_2)_2\cdot 2H_2O$
JAXWIP	2.168 Å	Zi-Lu Chen; Shi-Bing Li; Zhi-Hui Qiu; Qing-Fen Zeng; Fu-Pei Liang *Acta Crystallogr., Sect. E* **2005**, *61*, m1931. $[Mn(H_2O)_6]Cl_2\cdot 2(C_6H_{12}N_4)\cdot 4H_2O$

LEFYAX	2.168 Å	Seetha Lekshmi, N; Pedireddi, V. R. *Inorg. Chem.* **2006**, *45*, 2400. $[Mn(H_2O)_6](C_7H_6BO_4)_2 \cdot 4H_2O$
MAZFUO	2.168 Å	De Munno, G.; Medaglia, M.; Armentano, D.; Anastassopoulou, J; Theophanides, T. *J. Chem. Soc., Dalton Trans.* **2000**, 1625. $[Mn(H_2O)_6](ClO_4)_2 \cdot 6(C_5H_7N_3O) \cdot H_2O$
REHJEU	2.168 Å	Liu, W.-L.; Lu, Y.; Liu, X.-F.; Zhang, Y.-Y.; Hu, X.-Y. *Acta Crystallogr., Sect. E* **2010**, *66*, m1109. $[Mn(H_2O)_6][CuC_{12}H_{11}N_2O_4]_2 \cdot 12H_2O$
TAHLAQ	2.168 Å	Morris, J. E.; Squattrito, P. J.; Kirschbaum, K.; Pinkerton, A. A. *J. Chem. Cryst.* **2003**, *33*, 307. $[Mn(H_2O)_6](C_{10}H_8NO_3S)_2 \cdot 2H_2O$
YIVTIH	2.168 Å	Ouyang, Y.; Zhang, W.; Ma, Y.; Xu, N.; Liao, D.-Z.; Yoshimura, K.; Yan, S.-P. *Struct. Chem.* **2007**, *18*, 891. $[Mn(H_2O)_6][Cu_3MnC_{30}H_{54}N_{12}O_6](OH)_2(ClO_4)_2 \cdot 4.5H_2O$
NEKLIC	2.169 Å	Huang, L.-F.; Qi, Z.-P.; Li, C.-J. *Res. Chem. Intermed.* **2022**, *48*, 3867. $[Mn(H_2O)_6]MnC_{18}H_{16}O_{18}]_2 3H_2O$
ZOYPEK	2.169 Å	Kumar, G.; Kumar, G.; Gupta, R. *Inorg. Chem.* **2015**, *54*, 2603. $[Mn(H_2O)_6][CoMn_2C_{42}H_{29}N_6O_{16}]_2 20H_2O$
710011	2.170 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 355. $Tl_2[Mn(H_2O)_6](SeO_4)_2$
FAXMAT	2.170 Å	Zhu-Yan Zhang; Shan Gao; Li-Hua Huo; Hui Zhao; Jing-Gui Zhao *Acta Crystallogr., Sect. E* **2005**, *61*, m85. $[Mn(H_2O)_6](C_7H_6NO_3)_2 \cdot 2H_2O$
HULLUV	2.170 Å	Rodriguez-Martin, Y.; Sanchiz, J.; Ruiz-Perez, C.; Lloret, F.; Julve, M. *Cryst. Eng. Comm.* **2002**, *4*, 631. $[Mn(H_2O)_6][Mn(H_2O)_2(C_2O_4)_2]$
IZOHOW	2.170 Å	Jia, J.; Zhang, Y.; Zhang, P.; Ma, P.; Zhang, D.; Wang, J.; Niu, J. *RCS Advances* **2016**, *6*, 108335. $(N(CH_3)_4)_2[Mn(H_2O)_6]_2[Mn_6W_{18}Sb_2C_6H_{20}O_{82}] \cdot 12H_2O$
QILFEW	2.170 Å	Hernandez-Padilla, M.; Chinea, E.; Dominguez, S.; Mederos, A.; Munoz, M. C.; Lloret, F. *Polyhedron* **2000**, *19*, 1175. $[Mn(H_2O)_6][CuC_{11}H_{14}N_2O_8] \cdot 2H_2O$
RUCZEW	2.170 Å	Mahmudov, K. T.; Sutradhar, M.; Martins, L. M. D. R. S; Fatima M.; Guedes da Silva, C.; Ribera, A.; Nunes, A. V. M.; Gahramanova, S. I.; Marchetti, F.; Pombeiro, A. J. L. *RSC Advances* **2015**, *5*, 25979. $[Mn(H_2O)_6](C_9H_7N_4O_4S)_2 \cdot 4H_2O$
HAZSIK	2.171 Å	Goher, M. A. S; Youssef, A. A.; Zhong-Yuan Zhou; Mak, T. C. W. *Polyhedron* **1993**, *12*, 1871. $[Mn(H_2O)_6][Mn_2C_{21}H_{12}N_3O_{12}]_2$
710003	2.171 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 355. $Tl_2[Mn(H_2O)_6](SO_4)_2$
SIDPAZ	2.171 Å	Szimhardt, N.; Wurzenberger, M. H. H.; Zeisel, L.; Gruhne, M. S.; Lommel, M.; Stierstorfer, J. *J. Mater. Chem. A* **2018**, *6*, 16257. $[Mn(H_2O)_6](C_6H_2N_3O_9)_2 \cdot 2CH_3N_5$

JEMYOS	2.172 Å	Naili, H.; Francois, M.; Norquist, A. J.; Rekik, W. *Solid State Sci.* **2017**, *74*, 44. $[Mn(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
POGPUZ	2.172 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A. *Dalton Trans.* **2019**, *48*, 7006. $[Mn(H_2O)_6][MnC_{12}H_{10}N_{14}O_{10}]$
VOHYID	2.172 Å	Skelton, B. W.; Ogden, M. I.; Massi, M.; Reid, B. L. CCDC deposition number 1943664, **2019**. $[Mn(H_2O)_6][Mn_3C_{60}H_{66}N_6O_{12}][Mn\|(NO_3)_4]\cdot C_4H_8O_2\cdot 2H_2O$
SIWPAQ	2.172 Å	Singh, G.; Baranwal, B. P.; Kapoor, I. P. S.; Kumar, D.; Frohlich, R. *J. Phys. Chem. A* **2007**, *111*, 12972. $[Mn(H_2O)_6](ClO_4)_2(C_6H_{12}N_4)_2\cdot H_2O$
WITNEU	2.172 Å	Zhang, R.; Zhao, Y.; Wang, J.; Ji, L.; Yang, X.-J.; Wu, B. *Cryst. Growth Des.* **2014,** *14*, 544. $[Mn(H_2O)_6](C_{24}H_{30}N_{10}O_3)_2Cl_2$
7944	2.173 Å	Kiriukhina, G. V.; Yakubovich, O. V.; Kochetkova, E. M.; Dimitova, O. V.; Volkov, A. S. *Acta Crystalogr., Sect. C* **2018**, *74*, 936. Cs[Mn(H2O)$_6$]PO$_4$
KAGMOV	2.173 Å	Jian-Fang Ma; Jin Yang; Jing-Fu Liu *Acta Crystallogr., Sect. E* **2003**, *59*, m478. $[Mn(H_2O)_6](C_7H_5O_6S)_2\cdot 2H_2O$
OYOTEC	2.173 Å	Duan, X.; Meng, Q.; Su, Y.; Li, Y.; Duan, C.; Ren, X.; Lu, C. *Chem. Eur. J.* **2011**, *17*, 9936. $[Mn(H_2O)_6]_2[MnC_{32}H_{28}N_4O_4](Mn_4C_{68}H_{50}O_{40}]\cdot 11H_2O$
TADTIF	2.173 Å	Yang, M. CCDC deposition number 2044114, **2020**. $[Zn(H_2O)_6][Dy_2MnC_{54}H_{50}N_{36}O_{24}]\cdot 4H_2O$
UDOPAG	2.173 Å	Oguey, S.; Jacquier, Y.; Neels, A.; Stoeckli-Evans, H. CCDC deposition number 936399, **2013**. $[Mn(H_2O)_6][MnC_4H_{18}N_2O_8)(SO_4)_2$
VIDGIZ	2.173 Å	Hui-Hua Song; Bao-Qing Ma *Acta Crystallogr., Sect. C* **2007**, *63*, m1010. $[Mn(H_2O)_6](C_{10}H_8N_2O_2)_2Cl_2\cdot 2H_2O$
YOSZEM	2.173 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M.; Rodriguez-Dieguez, A. *Inorg. Chim. Acta* **2009**, *362*, 1553. $[Mn(H_2O)_6](C_6H_6N_5O_2)_2$
COCXIC	2.174 Å	Zhang, S.-G.; Feng, Y.-L.; Wen, Y.-H. *Wuji Huaxue Xuebao* **2008**, *24*, 581. $[Mn(H_2O)_6](C_9H_7N_4O_3S)_2$
LEZCIE	2.174 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M. *Dalton Trans.* **2012**, *41*, 10390. $[Mn(H_2O)_6](C_6H_6N_5O_2)_2\cdot C_{10}H_8N_2$
YOBWOC	2.174 Å	Kolotilov, S. V.; Schollmeyer, D.; Thompson, L. K.; Golub, V.; Addison, A. W.; Pavlishchuk, V. V. *Dalton Trans.* **2008**, 3007. $[Mn(H_2O)_6][Cu_3C_{18}H_{14}N_{12}O_9]\cdot 4H_2O$
409747	2.175 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2003**, *218*, 405. $Cs_2[Mn(H_2O)_6](SeO_4)_2$
HAZSIK01	2.175 Å	A.; Jablonska, A; Wawrzycka, A.; Zienkiewicz, M.; Hodorowicz, M.; Rogala, P.; Barszcz, B. *J. Therm. Anal. Calorimetry* **2012**, *110*, 1367. $[Mn(H_2O)_6][Mn_2C_{21}H_{12}N_3O_{12}]_2$
MNCITD02	2.175 Å	Bolte, M. CCDC deposition number 235116, **2004**. $[Mn(H_2O)_6][Mn_2C_{12}H_{14}O_{16}]\cdot 2H_2O$

QEQTAI	2.175 Å	Downer, S. M.; Squattrito, P. J.; Bestaoui, N.; Clearfield, A. *J. Chem. Cryst.* **2006**, *36*, 487. $[Mn(H_2O)_6](C_{10}H_8NO_3S)_2 \cdot 6H_2O$
UBURIV	2.175 Å	Smith, G.; Wermuth, U. D. *IUCrData* **2016**, *1*, x161985. $[Mn(H_2O)_6](AsC_6H_7NO_3)_2 \cdot 4H_2O$
409721	2.176 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2003**, *218*, 265. $Rb_2[Mn(H_2O)_6](SeO_4)_2$
421459	2.176 Å	Erbe, M.; Koehler, D.; Ruck, M. *Z. Anorg. Allg. Chem.* **2010**, *636*, 1513. $[Mn(H_2O)_6][BiI_4]_2 \cdot 2H_2O$
BEMWUM	2.176 Å	Piggot, P. M. T.; Hall, L. A.; White, A. J. P.; Williams, D. J.; Thompson, L. K. *Inorg. Chem.* **2004**, *43*, 1167. $[Mn(H_2O)_6](C_{11}H_7O_4)_2$
EMIJAN	2.176 Å	Lakma, A.; Hossain, S. M.; Pradhan, R. N.; Topwal, D.; Cornia, A.; Singh, A. K. *Eur. J. Inorg. Chem.* **2016**, 2993. $[Mn(H_2O)_6][Mn_{10}C_{84}H_{76}N_{30}O_{47}] \cdot 11H_2O$
FEYTIN	2.176 Å	Zhi-Jie Ma; Jun Tao; Rong-Bin Huang; Lan-Sun Zheng *Acta Crystallogr., Sect. E* **2005**, *61*, m361. $[Mn(H_2O)_6](C_8H_4N_8)_2$
WIMXOG	2.176 Å	Hu, B.; Xu, X.-B.; Li, Y.-X.; Ye, H.-Y. *Acta Crystallogr., Sect. E* **2007**, *63*, m2698. $[Mn(H_2O)_6](C_7H_4N_5O_2)_2$
409492	2.177 Å	Euler, H.; Barbier, B.; Klumpp, S.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2000**, *215*, 473. $Rb_2[Mn(H_2O)_6](SO_4)_2$
424300	2.177 Å	Zimmermann, L. W.; Schield, T. *Z. Kristallogr.-Cryst. Mater.* **2013**, *228*, 558. $[Mn(H_2O)_6](B_{10}H_{10}) \cdot 2H_2O$.
AMAVAN	2.177 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 136. $[Mn(H_2O)_6](4\text{-}NH_2\text{-}C_5H_4N)_2(SO_4)_2$
AMIPAP	2.177 Å	Zhao, Y.; Li, S.-H.; Zhang, L. *Z. Kristallogr.-New Cryst. Struct.* **2016**, *231*, 165. $[Mn(H_2O)_6](C_6H_3O_4S)_2$
BAWKIV	2.177 Å	Marino, N.; Armentano, D.; De Munno, G.; Cano, C.; Lloret, F.; Julve, M. *Inorg. Chem.* **2012**, *51*, 4323. $[Mn(H_2O)_6][Cu_2C_8H_8N_4O_2](SO_4)_2 \cdot 4H_2O$
HEHSIW	2.177 Å	Marioni, P.-A.; Marty, W.; Stoeckli-Evans, H.; Whitaker, C. *Inorg. Chim. Acta* **1994**, *219*, 161. $[Mn(H_2O)_6](C_8H_2N_2O_8)$
JAVZUB	2.177 Å	Chan, M. K.; Armstrong, W. H. *Inorg. Chem.* **1989**, *28*, 3777. $[Mn(H_2O)_6][MnC_{18}H_{20}B_2N_{12}](ClO_4)_4$
MNCITD MNCITD01	2.177 Å	Carrell, H. L.; Glusker, J. P. *Acta Crystallogr., Sect. B* **1973**, *29*, 638; *J. Mol. Struc.* **1973**, *15*, 151. $[Mn(H_2O)_6][Mn_2C_{12}H_{14}O_{16}] \cdot 2H_2O$
OYOTUS	2.177 Å	Duan, X.; Meng, Q.; Su, Y.; Li, Y.; Duan, C.; Ren, X.; Lu, C. *Chem. Eur. J.* **2011**, *17*, 9936. $[Mn(H_2O)_6]_2[MnC_{32}H_{28}N_4O_4](Mn_4C_{68}H_{50}O_{40}] \cdot 16H_2O$
PIWKEN	2.177 Å	Zimmermann, L. W.; Schleid, T. *Z. Kristallogr.* **2013**, *228*, 558. $[Mn(H_2O)_6](H_{10}B_{10})_2 \cdot 2H_2O$
QUXQIK	2.177 Å	Hao, C.-J.; Cao, Y.-L. *Acta Crystallogr., Sect. E* **2010**, *66*, m609. $[Mn(H_2O)_6](C_{16}H_{12}O_6) \cdot H_2O$

SIDPED	2.177 Å	Szimhardt, N.; Wurzenberger, M. H. H.; Zeisel, L.; Gruhne, M. S.; Lommel, M.; Stierstorfer, J. *J. Mater. Chem. A* **2018**, *6*, 16257. $[Mn(H_2O)_6](C_6H_2N_3O_8)_2 \cdot 2CH_3N_5$
31599	2.178 Å	Bareiss, K. U.; Goerigk, F. B.; Schleid, T. *Z. Kristallogr., Suppl. Issue* **2021**, *41*, 68. $[Mn(H_2O)_6]B_{10}Cl_{10} \cdot 2H_2O$
409738	2.178 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2003**, *218*, 409. $Cs_2[Mn(H_2O)_6](SO_4)_2$
CIPMEU	2.178 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B.; Huang R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 10620. $[Mn(H_2O)_6][Eu_2C_{64}H_{40}N_{16}O_{16}] \cdot H_2O$
COHSUP	2.178 Å	Esteves, D.; Tedesco, J. C. D.; Pedro, S. S.; Cruz, C.; Reis, M. S.; Brandao, P. *Mater. Chem. Phys.* **2014**, *147*, 611. $[Mn(H_2O)_6](C_7H_3Cl_2O_2)_2$
JEMYIM	2.178 Å	Naili, H.; Francois, M.; Norquist, A. J.; Rekik, W. *Solid State Sci.* **2017**, *74*, 44. $[Mn(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
ACIJAY	2.179 Å	Heng-jun Ma; De-zhong Niu *Xuzhou Shifan Daxue Xuebao,Ziran Kexueban* **2003**, *21*, 29-2. $[Mn(H_2O)_6](C_{10}H_{14}N_2O_8)$
BIKRAO	2.179 Å	Cingi, M. B.; Lanfredi, A. M. M.; Tiripicchio, A.; Bandoli, G.; Clemente, D. A. *Inorg. Chim. Acta* **1981**, *52*, 237. $[Mn(H_2O)_6]I_3I \cdot 2(C_8H_{10}N_4O_2)$
BURSEN	2.179 Å	Kostakis, G. E.; Mondal, K. C.; Anson, C. E.; Powell, A. K. *Polyhedron* **2010**, *29*, 24. $[Mn(H_2O)_6](C_8H_5N_8)_2 \cdot 2H_2O$
CIPMAQ	2.179 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B.; Huang R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 10620. $[Mn(H_2O)_6]$ $[Mn(H_2O)_6][Gd_2C_{64}H_{40}N_{16}O_{16}] \cdot H_2O$
DAMXUL	2.179 Å	Xiang Ge; Jie Sun; Yue-Qing Zheng *Z. Kristallogr. - New Cryst. Struct.* **2004**, *219*, 237. $[Mn(H_2O)_6](O_2CCH_2CO_2)_2 \cdot 2(C_6H_{12}N_4) \cdot 4H_2O$
ILULEG	2.179 Å	Patrick, B. O.; Stevens, C. L.; Storr, A.; Thompson, R. C. *Polyhedron* **2003**, *22*, 3025. $[Mn(H_2O)_6][CuC_{14}H_6N_2O_8] \cdot 2H_2O$
JIRQUX	2.179 Å	Genther, D. J.; Squattrito, P. J.; Kirschbaum, K.; Yearley, E. J.; Pinkerton, A. A. *Acta Crystallogr., Sect. E* **2007**, *63*, m604. $[Mn(H_2O)_6](C_{10}H_8NO_3S)_2 \cdot 3H_2O$
SIVRAQ	2.179 Å	Hosein, H.-A.; Hall, L. A.; Lough, A. J.; Desmarais, W.; Vela, M. J.; Foxman, B. M. *Inorg. Chem.* **1998**, *37*, 4184. $[Mn(H_2O)_6](C_4H_2NO_3)_2 \cdot 2H_2O$
YADTOO	2.179 Å	Zhang, L.-W.; Gao, S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2011**, *67*, m1520. $[Mn(H_2O)_6](C_{13}H_{10}NO_3)_2 \cdot 2H_2O$
YEZSEC	2.179 Å	Prasad, T. K.; Rajasekharan, M. V.; Costes, J.-P. *Angew. Chem., Int. Ed.* **2007**, *46*, 2851. $[Mn(H_2O)_6][Gd_2Mn_2C_{24}H_{24}O_{30}] \cdot 6H_2O$

DIQKUL03	2.180 Å	Capelli, S. C.; Falvello, L. R.; Forcen-Vazquez, E.; McIntyre, G. J.; Palacio, F.; Sanz, S.; Tomas, M. *Angew, Chem., Int. Ed.* **2013**, *52*, 13463. $[Mn(H_2O)_6][Mn(H_2O)_6]_2[Mn_6C_{24}H_{34}O_{37}]\cdot 8H_2O$
LEZBUP	2.180 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M. *Dalton Trans.* **2012**, *41*, 10390. $[Mn(H_2O)_6](C_6H_6N_5O_2)_2\cdot C_{12}H_{12}N_2$
RODSIN	2.180 Å	Kurawa, M. A.; Adams, C. J.; Orpen, A. G. *Acta Crystallogr., Sect. E* **2008**, *64*, m1005. $[Mn(H_2O)_6](C_6H_8N_4)(SO_4)_2$
SOVLEV	2.180 Å	Wang, M.; Ma, C.-B.; Li, X.-Y.; Chen, C.-N.; Liu, Q.-T. *J. Mol. Struct.* **2009**, *920*, 242. $[Mn(H_2O)_6]((CH_3)_3CPO_2(OH))_2\ 6H_2O$
14378	2.181 Å	Montgomery, H.; Chastain, R. V.; Lingafelter, E. C. *Acta Crystallogr.* **1966**, *20*, 731. $(NH_4)_2[Mn(H_2O)_6](SO_4)_2$
22367	2.181 Å	Ribar, B.; Petrovic, D.; Djuric, S.; Krstanovic, I. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1976**, *144*, 334. $[Mn(H_2O)_6](NO_3)_2$
250493	2.181 Å	Liu; B.; Jia; Y.-Y.; Yang; H.-Q.; Yang; J.-H.; Xue, G.-L. *Dalton Trans.* **2013**, *42*, 16742. $[Mn(H_2O)_6][LaMn(H_2O)_2Ru_2CO_3)_4Cl_2]\cdot 4H_2O$
CIPLUJ	2.181 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B.; Huang R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 10620. $[Mn(H_2O)_6][La_2C_{64}H_{40}N_{16}O_{16}]\cdot H_2O$
DUJXEM	2.181 Å	Huo, L.-H.; Gao, S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2009**, *65*, m1504. $[Mn(H_2O)_6][Mn(H_2O)_4(C_4H_5N_3)_2](SO_4)_2\cdot 2H_2O$
AWAHEM	2.182 Å	Alsobrook, A. N.; Alekseev, E. V.; Depmeier, W.; Albrecht-Schmitt, T. E. *Cryst. Growth Des.* **2011**, *11*, 2358. $[Mn(H_2O)_6][Mn_3U_5C_{12}H_{24}O_{46}P_6]\cdot 3.75H_2O$
EXENOK	2.182 Å	Yi He; Hui-Zhong Kou; Ming Xiong; Ru-Ji Wang *Jiegou Huaxue* **2004**, *23*, 574. $[Mn(H_2O)_6][Cu_3MnC_{30}H_{54}N_{12}O_6](ClO_4)_2\cdot 2CH_3CN\cdot 4H_2O$
IDAGEB	2.182 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Turnbull, M. M.; Mhiri, T.; Bataille, T. *Dalton Trans.* **2011**, *40*, 11613. $[Mn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
LALVUP01	2.182 Å	Huang, X.; Gu, X.; Zhang, H.; Shen, G.; Gong, S.; Yang, B.; Wang, Y. Chen, Y. *J. CO_2 Utilization* **2021**, *45*, 101419. $((CH_3)_4N)_2[Mn(H_2O)_6]_2[V_{10}O_{28}]\cdot 2H_2O$
NUNPAO	2.182 Å	Lei, L.-W.; Jiang, Y.-Z.; Zou, Y. *Acta Crystallogr., Sect. E* **2010**, *66*, m520. $[Mn(H_2O)_6][CuC_{12}H_{11}N_2O_5]_2\cdot 6H_2O$
VAQDEY	2.182 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal. Chem.* **2012**, *700*, 110. $[Mn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
VAQFAW	2.182 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal. Chem.* **2012**, *700*, 110. $[Mn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$

ZITLOF	2.182 Å	Capelli, S. C.; Falvello, L. R.; Forcen-Vazquez, E.; McIntyre, G. J.; Palacio, F.; Sanz, S.; Tomas, M. *Angew. Chem., Int. Ed.* **2013**, *52*, 13463. $[Mn(H_2O)_6]_2[Mn_6C_{24}H_{34}O_{37}]\cdot 5H_2O$
61676	2.183 Å	Villella, M.; Faggiani, R.; Brown, I. D. *Acta Crystallogr., Sect. C* **1986**, *42*, 771. $[Mn(H_2O)_6][ZnBr_4]$
DIQKUL02	2.183 Å	Capelli, S. C.; Falvello, L. R.; Forcen-Vazquez, E.; McIntyre, G. J.; Palacio, F.; Sanz, S.; Tomas, M. *Angew, Chem., Int. Ed.* **2013**, *52*, 13463. $[Mn(H_2O)_6][Mn(H_2O)_6]_2[Mn_6C_{24}H_{34}O_{37}]\cdot 8H_2O$
EQIMOJ	2.183 Å	Zhao, G.; Liu, W.; Yuan, F.; Liu, J. *New. J. Chem.* **2021**, *45*, 6787. $[Mn(H_2O)_6](C_6H_2O_4S)\cdot 2(C_{12}H_{10}N_2O_2)\cdot 3H_2O$
EQIMUP	2.183 Å	Zhao, G.; Liu, W.; Yuan, F.; Liu, J. *New. J. Chem.* **2021**, *45*, 6787. $[Mn(H_2O)_6](C_8H_4O_4)\cdot 2(C_{12}H_{10}N_2O_2)\cdot 2H_2O$
EQINAW	2.183 Å	Zhao, G.; Liu, W.; Yuan, F.; Liu, J. *New. J. Chem.* **2021**, *45*, 6787. $[Mn(H_2O)_6](C_8H_4O_4)\cdot 2(C_{12}H_{10}N_2O_2)\cdot 2H_2O$
KAGMOV	2.183 Å	Ma, J.-F.; Yang, J.; Liu, J.-F. *Acta Crystallogr., Sect. E* **2003**, *59*, m478. $[Mn(H_2O)_6](C_7H_5O_6S)_2\cdot 2H_2O$
MEHKUG	2.183 Å	Jebas, S. R.; Nayagam, B. R. D.; Balasubramanian, T. *Acta Crystallogr., Sect. E* **2006**, *62*, m1069. $[Mn(H_2O)_6](C_7H_6NO_3S)_2$
PEGLUI	2.183 Å	Auerbach, U.; Stockheim, C.; Weyhermuller, T.; Wieghardt, K.; Nuber, B. *Angew. Chem., Int. Ed.* **1993**, *32*, 714. $[Mn(H_2O)_6](C_{24}H_{20}B)_2\cdot 2[CrC_{39}H_{54}N_3O_3]\cdot 4CH_3COCH_3$
WEWZEE	2.183 Å	Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *J. Chem. Cryst.* **2007**, *37*, 147. $[Mn(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$
KAFKUA	2.184 Å	Kerber, W. D.; Goheen, J. T.; Perez, K. A.; Siegler, M. A. *Inorg. Chem.* **2016**, *55*, 848. $[Mn(H_2O)_6][Mn_2C_{16}H_{22}FN_2O_{13}]_2\cdot 14H_2O$
UMAPAZ	2.184 Å	Dalrymple, S. A.; Shimizu, G. K. H. *Supramol. Chem.* **2003**, *15*, 591. $[Mn(H_2O)_6]_3(C_{12}H_{12}O_{18}S_6)_3\cdot C_4H_8O_2$
110329	2.185 Å	Shan Yongkui; Huang Songping *J. Chem. Cryst.* **1999**, *29*, 93. $(CH_3)_4N)_2[Mn(H_2O)_6][V_{10}O_{28}]\cdot 2H_2O$
424951	2.185 Å	Mestiri, I.; Ayed, B.; Haddad, A. *J. Cluster Sci.* **2013**, *24*, 85. $(NH_4)_2[Mn(H_2O)_6][V_{10}O_{28}]\cdot 4H_2O$
CICRAH10	2.185 Å	Sabat, M.; Cini, R.; Haromy, T.; Sundaralingam M. *Biochemistry* **1985**, *24*, 7827. $[Mn(H_2O)_6]$
CIPMIY	2.185 Å	Wang, P.; Ma, J.-P.; Dong, Y.-B.; Huang R.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 10620. $[Mn(H_2O)_6][TbC_{64}H_{40}N_{16}O_{16}]\cdot 0.5H_2O$
DEBRAH	2.185 Å	Li, D.-P.; Xu, Z.-H.; Ye, L-W.; Cao, T.-F.; Zhuang, X.-X. *Chin. J. Struct. Chem.* **2021**, *40*, 1169. $[Mn(H_2O)_6][Mn(H_2O)_4(C_6H_{12}N_4)_2](SO_4)_2\cdot 6H_2O$
LALVUP	2.185 Å	Yongkui Shan; Songping D. Huang *J. Chem. Cryst.* **1999**, *29*, 93. $(N(CH_3)_4)_2[Mn(H_2O)_6][V_{10}O_{28}]\cdot 2H_2O$
SIDJOF	2.185 Å	Sun, R.; Li, Y.-Z.; Bai, J.; Pan, Y. *Cryst. Growth Des.* **2007**, *7*, 890. $[Mn(H_2O)_6][Mn_2C_{30}H_{36}N_6O_{24}]\cdot 3H_2O$
UVOQIH	2.185 Å	Hassan, D. B.; Rekik, W.; Roza, A. O.; Mefteh, F. B.; Roisnel, T.; Bataille, T.; Naili, H. *Polyhedron* **2016**, *119*, 238. $[Mn(H_2O)_6](C_4H_{12}N_2)_3(NO_3)_8$

ATUNAE	2.186 Å	Liu, J.-W.; Gao, S.; Huo, L.-I.; Hui ; Zhao, H.; Ng; S. W. *Acta Crystallogr., Sect. E* **2004**, *60*, m517. $[Mn(H_2O)_6](C_{10}H_8O_6)$
AWAHEM	2.186 Å	Alsobrook, A. N.; Alekseev, E. V.; Depmeier, W.; Albrecht-Schmitt, T. E. *Cryst. Growth Des.* **2011**, *11*, 2358. $[Mn(H_2O)_6][Mn_3UC_{12}H_{24}O_{46}P_6]\cdot 3.75H_2O$
COLWUV	2.186 Å	Shnulin, A. N.; Nadzhafov, G. N.; Mamedov, K. S. *Zh. Strukt. Khim.* **1984**, *25*, 91-3. $[Mn(H_2O)_6](C_7H_5O_3)_2\cdot 2H_2O$
IYOHOW	2.186 Å	Surinwong, A. ; Kuwamura, N. ; Kojima, T. ; Yoshinari, N. ; Rujiwatra, A. ; Konno, T. *Inorg. Chem.* **2021**, *60*, 12555. $[[Mn(H_2O)_6]_3[Au_3Co_2C_{30}H_{60}N_6O_{12}S_6]_2$
WIFZEQ01	2.187 Å	Li-Ya Wang; Yu Zhu; Chen-Xia Du; Huai-Bo Ma *J. Mol.Struc.* **2002**, *610*, 191. $[Mn(H_2O)_6](C_{10}H_4O_8)$
ILAGAD	2.188 Å	Tretyakov, E. V.; Fokin, S. V.; Romanenko, G. V.; Ovcharenko, V. I. *Polyhedron* **2003**, *22*, 1965. $[Mn(H_2O)_6][Mn_2C_{24}H_{36}N_{18}O_6]_2$
OCMNHP	2.189 Å	Vance Jr., T. B.; Holt, E. M.; Varie, D. L.; Holt, S. L. *Acta Crystallogr., Sect. B* **1980**, *36*, 153. $[Mn(H_2O)_6](ClO_4)_2\cdot C_{12}H_{24}O_6$
WUYHON	2.189 Å	Lin-Ping Zhang; Hai-Bin Song; Quan-Min Wang; Mak, T. C. W. *Polyhedron* **2003**, *22*, 811. $[Mn(H_2O)_6]Cl_2\cdot C_{22}H_{20}N_2O_6\cdot 2H_2O$
WIFZEQ	2.190 Å	Rochon, F. R.; Massarweh G. *Inorg. Chim. Acta* **2000**, *304*, 190. $[Mn(H_2O)_6](C_{10}H_4O_8)$
430741	2.190 Å	Li, P.; Fan, C.-H.; Ge, J.-F. *Z. Kristallogr. – New. Cryst. Struct.* **2016**, *231*, 533.
EMEHIP		$[Mn(H_2O)_6][MnH_{12}B_{12}O_{26}]\cdot 2H_2O$
IZOHUC	2.191 Å	Jia, J.; Zhang, Y.; Zhang, P.; Ma, P.; Zhang, D.; Wang, J.; Niu, J. *RCS Advances* **2016**, *6*, 108335. $(N(CH_3)_4)_2[Mn(H_2O)_6]_2[Mn_6W_{18}Bi_2C_6H_{20}O_{82}]\cdot 12H_2O$
DIQKUL	2.192 Å	Capelli, S. C.; Falvello, L. R.; Forcen-Vazquez, E.; McIntyre, G. J.; Palacio, F.; Sanz, S.; Tomas, M. *Angew, Chem., Int. Ed.* **2013**, *52*, 13463. $[Mn(H_2O)_6]_2[Mn_6C_{24}H_{34}O_{37}]\cdot 8H_2O$
MIKHOE	2.192 Å	Sun, W.-W.; Cheng, A.-L.; Jia, Q.-X.; Gao, E.-Q. *Inorg. Chem.* **2007**, *46*, 5471. $[Mn(H_2O)_6][Mn_2C_{18}H_6N_6O_{12}]$
LIMXOW	2.193 Å	Gao, Q.; Wang, X.; Tapp, J.; Möller, A.; Jacobson, A. J. *Inorg. Chem.* **2013**, *52*, 6610. $[Mn(H_2O)_6][Fe_4Mn_4Sb_6C_{24}H_{28}O_{52}]\cdot 10.5H_2O$
NETPEK	2.192 Å	Shi, J.; Xiong, Y.; Zhou, M. J.; Chen, L.; Xu, Y. *RSC Advances* **2017**, *7*, 55427. $Na_6[Mn(H_2O)_6][MnC_{11}H_{19}N_7O_4]_4[Mn_2W_{30}C_{22}H_{37}N_{14}O_{116}P_5]_2\cdot 21H_2O$
ZOGRAQ	2.193 Å	Sivanesan, D.; Kannan, S.; Thangadurai, T. D.; Jung, K.-D.; Yoon, S. *Dalton Trans.* **2014**, *43*, 11465. $[Mn(H_2O)_6](C_{19}H_{11}F_2O_2)_2\cdot 2C_4H_8O$
EBILAE	2.194 Å	Shi, L.-X.; Xu, X.; Wu, C.-D. *CrystEngComm* **2011**, *13*, 6027. $[Mn(H_2O)_6][Gd_2C_{18}H_{10}N_2O_{20}]\cdot 3H_2O$
OHITOR	2.194 Å	Qin, H.-F.; Li, Y.; Qin, X.-M.; Li, H.-Y.; Bian, H.-D.; Yu, Q.; Huang, F.-P. *J. Coord. Chem.* **2020**, *73*, 375. $[Mn(H_2O)_6][Mn_2C_{18}H_{30}N_{24}S_6]_2\cdot H_2O$

WOHPUG	2.195 Å	Kundu, T.; Jana, A. K.; Natarajan, S. *Cryst. Growth Des.* **2014**, *14*, 4531. $[Mn(H_2O)_6][Cu_3MnC_{18}H_{15}N_3O_9S_3]_2 \cdot 6H_2O$
EZUTUP	2.196 Å	Sarma, R.; Baruah, J. B. *Inorg. Chim. Acta* **2011**, *377*, 50. $[Mn(H_2O)_6](C_6H_5COO)_2 \cdot 4C_{10}H_8N_2O_2$
NARLAV	2.197 Å	Yoshida, R.; Ogasahara, S.; Akashi, H.; Shibahara, T. *Inorg. Chim. Acta* **2012**, *383*, 157. $[Mn(H_2O)_6][Mo_2C_6H_{10}N_2O_6S_4] \cdot H_2O$
SAPHUP	2.197 Å	Torres, J.; Gonzalez-Platas, J.; Dominguez, S.; Kremer, C. *Commun. Inorg. Synth.* **2013**, *1*, 24. $[Mn(H_2O)_6][MnCeC_{12}H_{12}O_{15}]_2 \cdot 3H_2O$
NUVLEW	2.208 Å	Fang, X.; Speldrich, M.; Schilder, H.; Cao, R.; O'Halloran, K. P.; Hill, C. L.; Kogerler, P. *Chem. Commun.* **2010**, *46*, 2760. $(H_2N(CH_3)_2)_{16}[Mn(H_2O)_6][Mn_4W_{15}C_6H_9O_{65}P_2]_3 \cdot 48H_2O$
TIZSED	2.222 Å	Didelot, E.; Sadikin, Y.; Lodziana, Z.; Cerny, R. *Solid State Sci.* **2019**, *90*, 86. $[Mn(H_2O)_6](H_{12}B_{12})$
111999	2.265 Å	Jørgensen, M.; Lee, Y.-S.; Paskevicius, M.; Hansen, B. R. S.; Jensen, T. R. *J. Solid State Chem.* **2021**, 298, 122133. $[Mn(H_2O)_6]B_{10}H_{10}$
Mean	**2.174 Å/166 structures**	

Manganese(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Mn-O)	Reference, compound formula
13018	1.906 Å	Chukanov, N. V.; Zubkova, N. V.; Pautov, L. A.; Göttlicher, J.; Kasatkin, A. V.; Van, K. V.; Ksenofontov, D. A.; Pekov, I. V.; Vozchikova, S. A.; Pushcharovsky, D. Y. *Phys. Chem. Miner.* **2019**, *46*, 417. $[Mn(H_2O)_6]Ca_3(SO_4)(CO_3)(OH)_6 \cdot 6H_2O$
201212	1.991 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Mn(H_2O)_6](SO_4)_2 \cdot 6H_2O$

Table S1ar. Summary of solid state structures containing hydrated iron(II) and iron(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Fe-O bond distance, *d*(Fe-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Iron(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Fe-O)	Reference, compound formula
110001	2.051 Å	Zhu H.; Xian D.; Zeng Q.; Wang Z.; Wang D. *Acta Crystallogr., Sect. E* **2003**, *59*, m1020.
AMITAR		$[Fe(H_2O]_6(NO_3)_2((CH_2)_6N_4)_2 \cdot 4H_2O$
FEPPOG	2.066 Å	Gao; H.-L.; Ding, B.; Yi; L.; Cheng; P.; Liao; D.-Z.; Yan; S.-P.; Jiang, Z.-H. *Inorg. Chem. Commun.* **2005**, *8*, 151. $[Fe(H_2O)_6][Fe_2(C_{16}H_{12}N_2O_{16})] \cdot 4H_2O$
GINVOP	2.094 Å	Deng, Y.-F.; Zhang, H.-L.; Hong, Q.-M.; Weng, W.-Z.; Wan, H.-L.; Zhou, Z.-H. *J. Solid State Chem.* **2007**, *180*, 3152. $(NH_4)_2[Fe(H_2O)_6][Ti(C_6H_6O_7)_3] \cdot 6H_2O$
ICEJOQ	2.095 Å	Yuan-Fu Deng, Zhao-Hui Zhou, Hui-Lin Wan *Inorg. Chem.* **2004**, *43*, 6266. $(NH_4)_5[Fe(H_2O)_6][Ti(C_{18}H_{18}O_{21}][TiC_{18}H_{15}O_{21}] \cdot 3H_2O$
EJATEO	2.096 Å	Abu-Shandi, K.; Winkler, H.; Biao Wu; Janiak, C., *Cryst. Eng. Comm.* **2003**, 5, 180. $[Fe(H_2O)_6](C_4H_{12}N_2)_2(HPO_4)_2$
63449	2.101 Å	Hoskins, B. F.; Linden, A., *Aust. J. Chem.* **1987**, *40*, 565. $[Fe(H_2O)_6][GeF_6]$
AJOTAX	2.101 Å	Bolte, M. CCDC deposition number 2001153, **2020**. $[Fe(H_2O)_6](4\text{-}SO_3\text{-}C_6H_4Cl)_2$
UYOSAF	2.102 Å	Yang, Z.; Lu, S.; Lan, L.; Liu, X.; Zhao, S.; Sun, S.; Zhang, Z.; Chen, X.; Yang, Z.; Jia, X. *Mol. Cryst. Liq. Cryst.* **2019**, *680*, 96. $[Fe(H_2O)_6]SO_4 \cdot H_2O$
JOHCIT	2.103 Å	Silva, R. M.; Gwengo, C.; Lindeman, S. V.; Smith, M. D.; Long, G. J.; Grandjean, F.; Gardinier, J. R. *Inorg. Chem.* **2008**, *47*, 7233. $][Fe(H_2O)_6](BH(C_2HN_2S_2)_3)_2 \cdot 6H_2O$
280328	2.104 Å	Hagen, K. S. *Inorg. Chem.* **2000**, *39*, 5867. $[Fe(H_2O)_6](CF_3(SO_3)_2$
184623	2.104 Å	Abrahams, B. F.; Abrahams, C. T.; Haywood, M. G.; Hudson, T. A.; Moubaraki, B.; Murray, K. S.; Robson, R. *Dalton Trans.* **2012**, *41*, 4091. $[Na(H_2O)_6][Fe(H_2O)_6][(Cu(SO_3)_4)_2(Fe(H_2O)_3)_3O] \cdot H_2O$
AJOTAX	2.104 Å	Bolte, M. CCDC deposition number 2001153, **2020**. $[Fe(H_2O)_6](4\text{-}Cl\text{-}C_6H_4\text{-}SO_3)_2$
DIJRUK	2.104 Å	Jakonen, M.; Hirva, P.; Nivajarvi, T.; Kallinen, M.; Haukka, M. *Eur. J. Inorg. Chem.* **2007**, 3497. $[Fe(H_2O)_6][OsCl_3(CO)_3]_2$
QEDCOR 280328	2.105 Å	Hagen, K. S. *Inorg. Chem.* **2000**, *39*, 5867. $[Fe(H_2O)_6](CF_3SO_3)_2$

QUKQIW	2.106 Å	Fewings, K. R.; Junk, P. C.; Georganopoulou, D.; Prince, P. D.; Steed, J. W., *Polyhedron* **2001**, *20*, 643. $[Fe(H_2O)_6](C_7H_7SO_3)_2$
109429	2.108 Å	Kaduk, J. A. *Powder Diffraction* **1999**, *14*, 166. $[Fe(H_2O)_6](CF_3SO_3)_2$
EZAWIL	2.109 Å	Armentano, D.; De Munno, G.; Mastropietro, T. F..; Julve, M.; Lloret, F. *Chem. Commun.* **2004**, 1160. $(C_2H_5NH_3)_2[Fe(H_2O)_6]_2[Fe_8C_{20}Cl_8O_{42}]\cdot 12H_2O$
150183	2.111 Å	Do, J.; Wang, X.; Jacobson, A. J. *J. Solid State Chem.* **1999**, *143*, 77. $(N(CH_3)_4)_2[Fe(H_2O)_6][Mo_8O_{26}]$
HIXMOS	2.111 Å	Yang, D.; Yang, F.-L. *Acta Crystallog., Sect. E* **2014**, *70*, m169. $[Fe(H_2O)_6](C_{12}H_{12}N_2)(SO_4)_2\cdot H_2O$
KABTOW	2.111 Å	Do, J.; Wang, X.; Jacobson, A. J., *J. Solid State Chem.* **1999**, *143*, 77. $[Fe(H_2O)_6](N(CH_3)_4)_2[Mo_8O_{26}]$
WEKXOA	2.111 Å	Haukka, M.; Jakonen, M.; Nivajarvi, T.; Kallinen, M. *Dalton Trans.* **2006**, 3213. $[Fe(H_2O)_6][RuCl_3(CO)_3]_2\cdot 2H_2O$
YEKPAG	2.111 Å	Chunyang Jia; Shi-Xia Liu; Ambrus, C.; Labat, G.; Neels, A.; Decurtins, S. *Polyhedron* **2006**, *25*, 1613. $(C_{18}H_4N_4S_4)[Fe(H_2O)_6][FeBr_4]_3$
99949	2.112 Å	Fleck, M.; Bohaty, L.; Tillmanns, E., *Solid State Sci.* **2004**, *6*, 469. $(C(NH_2)_3)_2[Fe(H_2O)_6](SO_4)_2$
DAYCUC	2.112 Å	Zun-Ting Zhang, Xin-Li Cheng *Acta Crystallog., Sect. C* **2005**, *61*, m529. $[Fe(H_2O)_6](C_{17}H_{13}O_7S)_2\cdot 8H_2O$
WAJKAU	2.112 Å	Fleck, M.; Bohaty, L.; Tillmanns, E. *Solid State Sci.* **2004**, *6*, 469. $(CH_6N_3)_2[Fe(H_2O)_6](SO_4)$
GIDGUX	2.113 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $((CH_3)_4N)_{1.8}[Fe(H_2O)_6]_{1.1}[Fe_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot 0.1CHCl_3\cdot 47.27H_2O$
PUQWOO	2.113 Å	Jeremic, D. A.; Kaluderovic, G. N.; Gomez-Ruiz, S.; Brceski, I.; Kasalica, B.; Leovac, V. M. *Cryst. Growth Des.* **2010**, *10*, 559. $[Fe(H_2O)_6](C_{10}H_{15}O_4S)_2$
TAKVIO	2.113 Å	Kumar, V.; Fusaro, L.; Aprile, C.; Robeyns, K.; Garcia, Y. *Cryst. Growth Des.* **2020**, *20*, 7850. $[Fe(H_2O)_6](4\text{-}SO_3\text{-}C_6H_4CHCHCOOH)_2\cdot 2H_2O$
WAHPIG	2.113 Å	Boonmak, J.; Nakano, M. ; Chaichit, N. ; Pakawatchai, C. ; Youngme, S. *Dalton Trans.* **2010**, *39*, 8161. $[Fe(H_2O)_6][Co(H_2O)_4(NC_4H_5N_2)_2](SO_4)_2\cdot 2H_2O$
WEPQOY	2.113 Å	Zun-Ting Zhang, Xin-Li Cheng, Yun He *Acta Crystallog., Sect. C* **2006**, *62*, m484. $(C_4H_{12}N_2)$ $[Fe(H_2O)_6](SO_4)_2$
ZUGLAQ	2.113 Å	Huxel, T.; Skaisgirski, M.; Klingele, J. *Polyhedron* **2015**, *93*, 28. $[Fe(H_2O)_6](N(SO_2CF_3)_2)_2\cdot 2H_2O$
NATGEV	2.114 Å	Yun-Long Fu; Zhi-Wei Xu; Jia-Lin Ren; Ng, S. W. *Acta Crystallog., Sect. C* **2005**, *61*, m1639. $(C_{10}H_{10}N_2)[Fe(H_2O)_6](SO_4)\cdot 2H_2O$
XAZLAM	2.114 Å	Zhi-Wei Xu; Yun-Long Fu; Jia-Lin Ren *Acta Crystallog., Sect. E* **2006**, *62*, m161. $(C_{10}H_{10}N_2)[Fe(H_2O)_6](SO_4)\cdot 2H_2O$
CASHEN	2.115 Å	Heinemann, F. W.; MCDC deposition number 2155470. $[Fe(H_2O)_6][FeC_{14}H_{20}N_2O_{14}]\cdot 4H_2O$

WEKXOA01	2.115 Å	Haukka, M.; Jakonen, M.; Nivajarvi, T.; Kallinen, M. *Dalton Trans.* **2006**, 3213. $[Fe(H_2O)_6][RuCl_3(CO)_3]_2 \cdot 2H_2O$
68452	2.116 Å	Benghalem, A.; le Blanc, M.; Calage, Y., *Acta Crystallog., Sect. C* **1990**, *46*, 2453. $[Fe(H_2O)_6][SnF_6]$
JIZJIM	2.116 Å	Yahyaoui, S.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *J. Solid State Chem.* **2007**, *180*, 3560. $Fe(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$
DIJRIY	2.117 Å	Jakonen, M.; Hirva, P.; Nivajarvi, T.; Kallinen, M.; Haukka, M. *Eur. J. Inorg. Chem.* **2007**, 3497. $[Fe(H_2O)_6][RuI_3(CO)_3]_2 \cdot 2H_2O$
EJELIO	2.117 Å	Honda, K.; Yamwaki, H.; Matsukawa, M.; Goto, M.; Matsunaga, T.; Aoki, K.; Yoshida, M.; Fujiwara, S., *Acta Crystallogr. Sect. C* **2003**, *59*, m319. $[Fe(H_2O)_6](C_6H_2N_3O_7)_2 \cdot 2H_2O$
ONOTER	2.118 Å	Wagner, C.; Merzweiler, K. *Z. Anorg. Allg. Chem.* **2010**, *636*, 557. $[Fe(H_2O)_6](p\text{-}HOOC\text{-}C_6H_4\text{-}SO_3)_2$
CIVCER	2.119 Å	Shi, J.; Wang, Y.-C.; Wang, Q.-Y.; Zhang, Z.-T. *Inorg. Chim. Acta* **2014**, *409*, 259. $[Fe(H_2O)_6](C_{17}H_{12}BrO_9S)_2 \cdot 2H_2O$
BACVOR	2.120 Å	Gaspar, A. B.; Munoz ; M. C.; Real, J. A., *C. R. Acad. Sci., Ser. IIc: Chim* **2001**, *4*, 193. $[Fe(H_2O)_6][Fe(C_6H_3NO)_6](ClO_4)_6$
DIMPOE10	2.120 Å	Hämäläinen, R.; Turpeinen, U., *Acta Chem. Scand.* **1989**, *43*, 15. $[Fe(H_2O)_6][FeC_{18}H_{14}N_2O_6]_2 \cdot 2H_2O$
260555	2.121 Å	Becker, E.; Kirchner, K.; Mereiter, K. *Acta Crystallogr., Sect. E* **2009**, *65*, i71. $[Fe(H_2O)_6)][FeBr_3(CO)_3]_2$
GIDGOR	2.121 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $((CH_3)_4N)_{1.4}[Fe(H_2O)_6]_{1.3}[Fe_4C_{144}H_{96}N_{24}O_{36}S_{12}] \cdot 0.12CHCl_3 \cdot 49.68H_2O$
GLYCFE02	2.121 Å	Shu, X.-G.; Zhang, M.; Fan, M.-Z.; Tian, Y.-B.; Teng, B.; Li, D.-G.; Xu, X.; Wu, C.-L. *Jiangxi Nongye Xuebao* **2014**, *26*, 103. $[Fe(H_2O)_6][Fe(H_2O)_4(C_2H_9NO_4)](SO_4)_2$
YUPJOJ	2.121 Å	Fiolka, C.; Striebinger, R.; Walter, T.; Walbaum, C.; Pantenburg, I. *Z. Anorg. Allg. Chem.* **2009**, *635*, 855. $[Fe(H_2O)_6](I_3)_2 \cdot 6C_8H_{16}O_4$
424299	2.122 Å	Zimmermann, L. W.; Schleid, T. *Z. Kristallogr. – Cryst. Mater.* **2013**, *228*, 558. $[Fe(H_2O)_6]B_{10}H_{10} \cdot 2H_2O$
AMAVOB	2.122 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 138. $[Fe(H_2O)_6](4\text{-}NH_2C_5H_5N)_2(SO_4)_2$
GLYCFE01	2.122 Å	Oguey, S.; Jacquier, Y.; Neels, A.; Stoeckli-Evans, H. CCDC deposition number 936397, **2013**. $[Fe(H_2O)_6][Fe(H_2O)_4(C_2H_9NO_4)](SO_4)_2$
PIWKAJ	2.122 Å	Zimmermann, L. W.; Schleid, T. *Z. Krist. Cryst. Mater.* **2013**, *228*, 558. $[Fe(H_2O)_6]B_{10}H_{10} \cdot 2H_2O$
WEKXIU	2.122 Å	Haukka, M.; Jakonen, M.; Nivajarvi, T.; Kallinen, M. *Dalton Trans.* **2006**, 3213. $[Fe(H_2O)_6][RuCl_3(CO)_3]_2$
ZOPFUH	2.122 Å	Kammoun, O.; Rekik, W.; Naili, H.; Bataille, T. *New. J. Chem.* **2015**, *39*, 2682. $[Fe(H_2O)_6](C_7H_7N_2)_2(SO_4)_2 \cdot 3H_2O$

FEACIT	2.123 Å	Stouse, J.; Layten, S. W.; Strouse, C. E., *J. Am. Chem. Soc.* **1977**, *99*, 562. $[Fe(H_2O)_6][FeC_6H_7O_8]_2 \cdot 2H_2O$
100372	2.123 Å	Ghosh, M.; Ray, S., *Z. Kristallogr.* **1981**, *155*, 129-137. $[Fe(H_2O)_6](ClO_4)_2$ *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1961**, *115*, 97. $[Fe(H_2O)_6](ClO_4)_2$ *Z. Kristallogr.* **1977**, *145*, 146. $[Fe(H_2O)_6](ClO_4)_2$ *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1935**, *91*, 480. $[Fe(H_2O)_6](ClO_4)_2$
172379	2.123 Å	Carver, G.; Dobe, C.; Jensen, T. B.; Tregenna-Piggott, P. L. W.; Janssen, S.; Bill, E.; McIntyre, G. J.; Barra, A. L. *Inorg. Chem.* **2006**, *45*, 4695. $Cs[Fe(D_2O)_6]PO_4$
IDAGAX	2.123 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Turnbull, M. M.; Mhiri, T.; Bataille, T. *Dalton Trans.* **2011**, *40*, 11613. $[Fe(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
16589	2.124 Å	Baur, W. H., *Acta Crystallogr.* **1964**, *17*, 1167. $[Fe(H_2O)_6]SO_4 \cdot H_2O$
423075	2.124 Å	Ganesh, G.; Ramadoss, A.; Kannan, P. S.; SubbiahPandi, A. *Pharma Chem.* **2011**, *3*, 433. $(NH_4)_2[Fe(H_2O)_6](SO_4)_2$
AXEHOC	2.124 Å	Chen, H.-L. ; Dong, Y.-Q. ; Lai, H.-F. ; Wei, L.-Q. ; Qin, Z.-L. ; Yao, D.-M. *Hechi Xueyuan Xuebao* **2016**, *36*, 29. $[Fe(H_2O)_6](C_{15}H_9O_7S)_2 \cdot 2(C_{15}H_{10}O_7S) \cdot 7H_2O$
AWAHUC	2.124 Å	Alsobrook, A. N.; Alekseev, E. V.; Depmeier, W.; Albrecht-Schmitt, T. E. *Cryst. Growth Des.* **2011**, *11*, 2358. $[Fe(H_2O)_6][(UO_2)_2C_4H_4O_{10}P_2] \cdot 8H_2O$
NOWVEC	2.124 Å	Said, S.; Naili, H. CCDC deposition number 1039279, **2014**. $[Fe(H_2O)_6](C_5H_8N_3)_2(SO_4)_2 \cdot 2H_2O$
WAHPEC	2.124 Å	Boonmak, J.; Nakano, M. ; Chaichit, N. ; Pakawatchai, C. ; Youngme, S. *Dalton Trans.* **2010**, *39*, 8161. $[Fe(H_2O)_6][Fe(H_2O)_4(NC_4H_5N_2)_2](SO_4)_2 \cdot 2H_2O$
ZILZID	2.124 Å	Laine, P.; Gourdon, A.; Launay, J.-P., *Inorg. Chem.* **1995**, *34*, 5138. $[Fe(H_2O)_6](NH_4)_2[FeC_{14}H_6N_2O_8]_2 \cdot 2C_7H_5NO_4 \cdot 4H_2O$
280578	2.125 Å	Fronczek, F. R.; Collins, S. N.; Chan, J. Y., *Acta Crystallogr., Sect. E* **2001**, *57*, 26. $[Fe(H_2O)_6]SO_4 \cdot H_2O$
KEKCIO	2.125 Å	Martsinko, E. E.; Minacheva, L. K.; Pesaroglo, A. G.; Seifullina, I. I.; Churakov, A. V.; Sergienko, V.S. *Zh. Neorg. Khim.* **2011**, *56*, 1313. $[Fe(H_2O)_6][Ge(C_6H_5O_7)_2] \cdot 4H_2O$
14346	2.126 Å	Montgomery, H.; Chastain, R. V.; Natt, J. J.; Witkowska, A. M.; Lingafelter, E. C., *Acta Crystallogr.* **1967**, *22*, 775. $[Fe(H_2O)_6](NH_4)_2(SO_4)_2$
TIZRAY	2.126 Å	Didelot, E.; Sadikin, Y.; Lodziana, Z.; Cerny, R. *Solid State Sci.* **2019**, *90*, 86. $[Fe(H_2O)_6]B_{12}H_{12}$
UCETAX	2.127 Å	Chuan-De Wu; You-Hong Guo; Xiang Lin; Sheng Wang; Can-Zhong Lu; Hong-Hui Zhuang, *Jiegou Huaxue* **2000**, *19*, 395. $[Fe(H_2O)_6][Mo_2C_{10}H_{12}N_2O_{12}] \cdot 5H_2O$
136877	2.128 Å	Wang, S.-Y.; Xin, D.; Zhou, Z.-H. J. Solid State Chem. 2022, 306, 122784. $[Fe(H_2O)_6](HSO_4)_2 \cdot 2H_2O$
172378	2.128 Å	Carver, G.; Dobe, C.; Jensen, T. B.; Tregenna-Piggott, P. L. W.; Janssen, S.; Bill, E.; McIntyre, G. J.; Barra, A. L. *Inorg. Chem.* **2006**, *45*, 4695. $Cs[Fe(D_2O)_6]PO_4$

AWAHUC	2.128 Å	Alsobrook, A. N.; Alekseev, E. V.; Depmeier, W.; Albrecht-Schmitt, T. E. *Cryst. Growth Des.* **2011**, *11*, 2358. $[Fe(H_2O)_6][(UO_2)_2C_4H_8O_{12}P_2]\cdot 4H_2O$
409739	2.129 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A., *Z. Kristallogr. - New Crystal Structures* **2003**, *218*, 409. $Cs_2[Fe(H_2O)_6](SO_4)_2$
CEZCOC	2.129 Å	Tejeda-Serrano, M.; Mon, M.; Ross, B.; Gonell, J.; Ferrando-Soria, J.; Corma, A.; Leyva-Perez, A.; Armentano, D.; Pardo, E. *J. Am. Chem. Soc.* **2018**, *140*, 8827. $[Fe^{II}(H_2O)_6][Fe^{III}(H_2O)_6]_2[Cu3Ni_2C_{39}H_{36}N_6O_{21}]_2\cdot 66H_2O$
KOFVIM	2.129 Å	Darmograi, G.; Jouffret, L.; Hemon-Ribaud, A.; Leblanc, M.; Maisonneuve, V.; Lhoste, J. *Z. Anorg. Allg. Chem.* **2014**, *640*, 1385. $[Fe(H_2O)_6](C_6H_3N_2)[FeF_6]$
VAQDUO	2.129 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal. Chem.* **2012**, *700*, 110. $[Fe(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
409493	2.130 Å	Euler, H.; Barbier, B.; Klumpp, S.; Kirfel, A., *Z. Kristallogr. - New Crystal Structures* **2000**, *215*, 473. $Rb_2[Fe(H_2O)_6](SO_4)_2$
409984	2.130 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Structures* **2009**, *224*, 171. $K_2[Fe(H_2O)_6](SO_4)_2$
710004	2.130 Å	Euler, H.;Barbier, B.;Meents, A.;Kirfel, A. *Z. Kristallogr. - New Crystal Structures* **2009**, *224*, 355. $Tl_2[Fe(H_2O)_6](SO_4)_2$
GOLSUX	2.130 Å	Soares Jr., A. L.; Junior, A. R. F.; Diniz, R.; Leitao, A. A.; de Oliveira, L. F. C. CCDC deposition number 776414, **2010**. $[Fe(H_2O)_6]$(*2,5*-(HOOC)-*1,4*-(OOC)-C_6H_2)
KAFKOU	2.130 Å	Kerber, W. D.; Goheen, J. T.; Perez, K. A.; Siegler, M. A. *Inorg. Chem.* **2016**, *55*, 848. $[Fe(H_2O)_6][Fe_2(H_2O)_4C_{16}H_{14}FN_2O_9]_2\cdot 14H_2O$
GIDHAE	2.131 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $[Fe(H_2O)_6]_2[Fe_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot 49.68H_2O$
163595	2.132 Å	Capobianchi, A.; Colapietro, M.; Fiorani, D.; Foglia, S.; Imperatori, P.; Laureti, S.; Palange, E. *Chem. Mater.* **2009**, *21*, 2007. $[Fe(H_2O)_6](PtCl_6)$
420080	2.132 Å	Capobianchi, A.; Campi, G.; Camalli, M.; Veroli, C. *Z. Kristallogr.* **2009**, *224*, 384. $[Fe(H_2O)_6](PtCl_6)$
FEMTAT	2.132 Å	Sungho Yoon, S.J.Lippard *J. Am. Chem. Soc.* **2004**, *126*, 16692. $[Fe(H_2O)_6](C_{19}F_{11}F_2O_2)_2\cdot 2C_4H_8O$
172062	2.135 Å	Ballirano, P.; Belardi, G. *Acta Crystallogr., Sect. E* **2006**, *62*, i58. $K_2[Fe(H_2O)_6](SO_4)_2$
JEYPIN	2.135 Å	Cakir, S.; Bicer, E.; Aoki, K.; Coskun, E. *Cryst. Res. Technol.* **2006**, *41*, 314. $[Fe(H_2O)_6][Fe(C_{12}H_{20}N_4O_6](SO_4)_2\cdot 2H_2O$
162314	2.136 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Mineral.* **2009**, *94*, 74. $K_2[Fe(H_2O)_6](SO_4)_2$
CEYRIH	2.136 Å	Ruiz-Valero, C.; Monge, A.; Gutierrez-Puebla, E.; Gutierrez-Rios, E., *Acta Crystallogr. Sect. C* **1984**, *40*, 811. $[Fe(H_2O)_6][FeC_{18}H_{18}N_9O_{12}]_2\cdot 12H_2O$

AVISAA	2.137 Å	Hatfield, T. L.; Staples, R. J.; Pierce, D. T. *Inorg. Chem.* **2010**, *49*, 9312. $[Fe(H_2O)_6][FeC_{12}H_{18}N_3O_6]_2$
FESRAX	2.138 Å	Noro, S.; Kitagawa, S.; Wada, T. *Inorg. Chim. Acta* **2005**, *358*, 423. $[Fe(H_2O)_6]_2[Cu_2(C_{28}H_{12}N_4O_{16}]$
23885	2.140 Å	Hamilton, W. C., *Acta Crystallogr.* **1962**, *15*, 353. $[Fe(H_2O)_6][SiF_6]$
172377	2.141 Å	Carver, G.; Dobe, C.; Jensen, T. B.; Tregenna-Piggott, P. L. W.; Janssen, S.; Bill, E.; McIntyre, G. J.; Barra, A. L. *Inorg. Chem.* **2006**, *45*, 4695. $Cs[Fe(H_2O)_6]PO_4$
41535	2.143Å	Chevrier, G.; Hardy, A.; Jehanno, G., *Acta Crystallogr, Sect. A* **1981**, *37*, 578. $[Fe(H_2O)_6][SiF_6]$
24909	2.167 Å	Baur, W. H.; Rao, B. R., *Naturwissenschaften* **1967**, *54*, 561. $[Fe(H_2O)_6][Al_2(PO_4)_2(OH)_2]\cdot H_2O$
GLYCFE03	2.169 Å	Gallo, G.; Bette, S.; Dinnebier, R. E. *Z. Anorg. Allg. Chem.* **2019**, *645*, 1350. $[Fe(H_2O)_6][Fe(H_2O)_4(C_2H_9NO_4)](SO_4)_2$
GLYCFE	2.176 Å	Lindqvist, I.; Rosenstein, R., *Acta Chem. Scand.* **1960**, *14*, 1228. $[Fe(H_2O)_6][Fe(H_2O)_4(C_2H_9NO_4)](SO_4)_2$
DIMPOE	------	Hämäläinen, R.; Turpeinen, U.; Ahlgren, M., *Eur. Cryst. Meeting* **1985**, *9*, 204. $[Fe(H_2O)_6][FeC_{18}H_{14}N_2O_6]_2\cdot 2H_2O$
OGATOF	------	Ahmad, R.; Hardie, M. J., *Cryst. Eng. Comm.* **2002**, *4*, 227. $[Fe(H_2O)_6][CoC_4H_{22}B_{18}]_2\cdot 4C_{27}H_{30}O_6\cdot 4CH_3CN\cdot 4H_2O$
Mean	**2.120 Å/92 structures**	

Iron(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Fe-O)	Reference, compound formula
EMEBEF	1.940 Å	Sabirov, V. K. *Zh. Strukt. Khim.* **2015**, *56*, 747. $NH_4[Fe(H_2O)_6](SO_4)_2\cdot 6\cdot 6H_2O$
DEDYUK	1.984 Å	Zheng, J.; Ma, Y.; Yang, X.; Ma, P. *RSC Adv.* **2022**, *12*, 18736. $[Fe(H_2O)_6]_2(ClO_4)_6\cdot C_{54}H_{60}N_{24}O_{12}$
1002	1.986 Å	Hair, N. J.; Beattie, J. K., *Inorg. Chem.* **1977**, *16*, 245. $[Fe(H_2O)_6](NO_3)_3\cdot 3H_2O$
252899	1.988 Å	Fischer, A. *Acta Crystallogr., Sect. E* **2006**, *62*, i9. $[Fe(H_2O)_6](ClO_4)_3\cdot 3H_2O$
68910	1.989 Å	Armstrong, R. S.;Beattie, K. B.; Best, S. P.; Braithwaite, G. P.; del Favero, P.; Skelton, B. W.; White, A. H., *Aust. J. Chem.* **1990**, *43*, 393. $Cs[Fe(H_2O)_6](SeO_4)_2\cdot 6H_2O$
262788	1.990 Å	Schmidt, H.; Asztalos, A.; Bik, F.; Voigt, W. *Acta Crystallogr., Sect. C* **2012**, *68*, i29. $[Fe(H_2O)_6](NO_3)_3$
420959	1.990 Å	Nitschke, C.; Kockerling, M. *Inorg. Chem.* **2011**, *50*, 4313. $[Fe(H_2O)_6](B(CN)_4)_3$
XIGSEL	1.991 Å	$[Fe(H_2O)_6]_2[Fe_2H_{20}O_{11}](NO_3)_{10}\cdot 4C_{10}H_{20}O_5\cdot 6H_2O$
69132	1.991 Å	Li, J.-J.;Zhou, J.-L.;Dong, W. *Chin. Sci. Bull.* **1990**, *35*, 2073. $Na[Fe(H_2O)_6](SO_4)_2$
81103	1.992 Å	Giester, G.; Miletich, R. *Neues Jahrbuch Miner. Monatsh.* 1995, 211. $Cs[Fe(H_2O)_6][Fe_3(H_2O)_6(SeO_4)_6]\cdot 6H_2O$
69435	1.994 Å	Best, S. P.; Bruce Forsyth, J. *J. Chem. Soc., Dalton Trans.* **1990**, 395. $Cs[Fe(H_2O)_6](SO_4)_2\cdot 6H_2O$

201213	1.995 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Fe(H_2O)_6](SO_4)_2 \cdot 6H_2O$
QOYGIX	1.995 Å	Berdiell, I. C.; Hochdorffer, T.; Desplanches, C.; Kulmaczewski, R.; Shahid, N.; Wolny, J. A.; Warriner, S. L.; Cespedes, O.; Schunemann, V.; Chastanet, G.; Halcrow, M. A. *J. Am. Chem. Soc.* **2019**, *141*, 18759. $[Fe(H_2O)_6][Fe_8C_{144}H_{132}N_{72}O_{12}](BF_4)_7 \cdot 2.5CH_3CN \cdot 2.5(CH_3)_2CO$
MEWZAP	1.996 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Chem. Commun.* **2001**, 2672. $[Fe(H_2O)_6](C_9H_9O_9S_3)_3 \cdot 3CH_3OH$
MEWZAP01	1.996 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, 6986. $[Fe(H_2O)_6](C_9H_9O_9S_3)_3 \cdot 3CH_3OH$
QOYHAQ	1.996 Å	Berdiell, I. C.; Hochdorffer, T.; Desplanches, C.; Kulmaczewski, R.; Shahid, N.; Wolny, J. A.; Warriner, S. L.; Cespedes, O.; Schunemann, V.; Chastanet, G.; Halcrow, M. A. *J. Am. Chem. Soc.* **2019**, *141*, 18759. $[Fe(H_2O)_6][Fe_8C_{144}H_{132}N_{72}O_{12}](BF_4)_7 \cdot 1.8CH_3CN \cdot 1.3(CH_3)_2CO$
187488	1.997 Å	Skogareva, L. S.; Shilov, G. V.; Karelin, A. I. *J. Struct. Chem.* **2012**, *53*, 907. $[Fe(H_2O)_6](ClO_4)_3 \cdot 3H_2O$
QOYHEU	1.998 Å	Berdiell, I. C.; Hochdorffer, T.; Desplanches, C.; Kulmaczewski, R.; Shahid, N.; Wolny, J. A.; Warriner, S. L.; Cespedes, O.; Schunemann, V.; Chastanet, G.; Halcrow, M. A. *J. Am. Chem. Soc.* **2019**, *141*, 18759. $[Fe(H_2O)_6][Fe_8C_{144}H_{132}N_{72}O_{12}](BF_4)_7 \cdot 2.5CH_3CN \cdot 1.5(CH_3)_2CO$
69435	2.001 Å	Best, S. P.; Bruce Forsyth, J., *J. Chem. Soc., Dalton Trans.* **1990**, 395-400. $Cs[Fe(H_2O)_6](SO_4)_2 \cdot 6H_2O$
QOYFES02	2.005 Å	Berdiell, I. C.; Hochdorffer, T.; Desplanches, C.; Kulmaczewski, R.; Shahid, N.; Wolny, J. A.; Warriner, S. L.; Cespedes, O.; Schunemann, V.; Chastanet, G.; Halcrow, M. A. *J. Am. Chem. Soc.* **2019**, *141*, 18759. $[Fe(H_2O)_6][Fe_8C_{120}H_{84}N_{72}O_{12}](BF_4)_7 \cdot 6CH_3CN$
QOYFIW	2.006 Å	Berdiell, I. C.; Hochdorffer, T.; Desplanches, C.; Kulmaczewski, R.; Shahid, N.; Wolny, J. A.; Warriner, S. L.; Cespedes, O.; Schunemann, V.; Chastanet, G.; Halcrow, M. A. *J. Am. Chem. Soc.* **2019**, *141*, 18759. $[Fe(H_2O)_6][Fe_8C_{120}H_{84}N_{72}O_{12}](BF_4)_7 \cdot 6CH_3CN$
237717	2.007 Å	Hennings, E.; Schmidt, H.; Voigt, W. *Acta Crystallogr., Sect. E* **2014**, *70*, 477. $[Fe(H_2O)_6](ClO_4)_3 \cdot 3H_2O$
Mean	**1.995 Å/21 structures**	

Table S1as. Summary of solid state structures containing hydrated ruthenium(II) and ruthenium(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ru-O bond distance, *d*(Ru-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Rutenium(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ru-O)	Reference, compound formula
BONPEZ	2.122 Å	Bernhard, P.; Burgi, H.-B.; Hauser, J.; Lehmann, H.; Ludi, A. *Inorg. Chem.* **1982**, *21*, 3936. $[RuH_2O)_6](p\text{-}CH_3C_6H_4SO_3)_2$
413219	2.090 Å	Taimisto, M.; Oilunkaniemi, R.; Laitinen, R. S.; Ahlgren, M. *Z. Naturforsch., Teil B* **2003**, *58*, 959.
OLUXAU		$[RuH_2O)_6][RuCl_3(CO)_3]_2{\cdot}2H_2O$
67828	2.121 Å	Bürgi, H. B.; Raselli, A. *Struct. Chem.* **1993**, *4*, 23. $K_2[Ru(H_2O)_6](SO_4)_2$
Mean	**2.111 Å/3 structures**	

Ruthenium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ru-O)	Reference, compound formula
BONPID	2.028 Å	Bernhard, P.; Burgi, H.-B.; Hauser, J.; Lehmann, H.; *Ludi, A. Inorg. Chem.* **1982**, *21*, 3936. $[RuH_2O)_6](p\text{-}CH_3C_6H_4SO_3)_3$
69437	2.014 Å	Best, S. P.; Bruce Forsyth, J. B. *J. Chem. Soc., Dalton Trans* **1990**, 3507. $Cs[Ru(H_2O)_6](SO_4)_2{\cdot}6H_2O$
WISCAF	2.157 Å	Mon, M.; Adam, R.; Ferrando-Soria, J.; Corma, A.; Armentano, D.; Pardo, E.; Leyva-Perez, A. *ACS Catalysis* **2018**, *8*, 10401. $[RuH_2O)_6]_4[Cu_6Ni_4C_{78}H_{72}N_{12}O_{42}]_3{\cdot}164.19H_2O$
Mean	**2.021 Å/2 structures**	

Table S1at. Summary of solid state structures containing hydrated cobalt(II) and cobalt(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Co-O bond distance, *d*(Co-O); $d(\text{Co-O})_b$ denotes bridging ligands and $d(\text{Co-O})_t$ terminal ligands.. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Cobalt(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Co-O)	Reference, compound formula
GOPJOM	2.019 Å	Miao, H.; Wan, H.-X.; Liu, M.; Zhang, Y.; Xu, X.; Ju, W.-W.; Zhu, D.-R.; Xu, Y. *J. Mater. Chem. C* **2014**, *2*, 6554. $[Co(H_2O)_6][Co_{16}Mo_{16}C_{76}H_{106}N_{18}O_{122}P_{24}]\cdot 5H_2O$
IXEJOL	2.035 Å	Yu, K.; Zhou, B.-B.; Yu, Y.; Su, Z.-H.; Yang, G.-Y. *Inorg. Chem.* **2011**, *50*, 1862. $Na_2[Co(H_2O)_6][Co_{16}Mo_{16}C_{50}H_{80}N_{10}O_{138}P_{24}]\cdot 4H_2O$
EGOCUZ	2.040 Å	Cao, M.-L.; Hao, H.-G.; Zhang, W.-X.; Ye, B.-H. *Inorg. Chem.* **2008**, *47*, 8126. $[Co(H_2O)_6][Co_8C_{156}H_{96}N_{60}O_{12}](HCO_3)_6\cdot 24H_2O$
400491	2.042 Å	Abrahams, I.; Clark, S. J.; Donaldson, J. D.; Khan, Z.; Grimes, S. M. *Z. Kristallogr.* **1994**, *209*, 619. $[Co(H_2O)_6][SnF_6]$
OJOPEI	2.042 Å	Harrison, R. G.; Burrows, J. L.; Dalley, N. K. *Inorg. Chim. Acta* **2003**, *351*, 399. $Ba_4[Co(H_2O)_6][Co_{11}C_{224}H_{232}N_{16}O_{108}]\cdot 79H_2O$
SIWHUD	2.044 Å	Chatterjee, R.; Paul, L.; Hazra, D. K.; Pal, N.; Jana, A. D.; Mukherjee, M.; Ali, M. *Polyhedron* **2014**, *68*, 265. $[Co(H_2O)_6](C_5H_6N)[CoW_{12}O_{40}]NO_3\cdot 3H_2O$
BAVYOM01	2.045 Å	Du; M.; Zhao; X.-J.; Guo, J.-H. *Acta Crystallogr., Sect. E* **2004**, *60*, m788. $[Co(H_2O)_6](4\text{-}OOC\text{-}C_5H_4NH)_2$
XOKWEB	2.049 Å	Zou, J.-Y.; Shi, W.; Zhang, J.-Y.; He, Y.-F.; Gao, H.-L.; Cui, J.-Z.; Cheng P. *CrystEngComm* **2014**, *16*, 7133. $(H_3O)_6((CH_3)_2NH_2)_9Li_3[Co(H_2O)_6][Co_8C_{48}N_{36}O_{48}]\cdot 14H_2O$
BAVYOM02	2.052 Å	Baruah J. B. CCDC deposition number 749998, **2016**. $[Co(H_2O)_6](4\text{-}OOC\text{-}C_5H_4NH)_2$
DURPIQ	2.054 Å	Zhang, Y.-H.; Han, J.-M.; Li, Z.-Z. *Acta Crystallogr., Sect. E* **2010**, *66*, m1007. $[Co(H_2O)_6]C_{16}H_8O_8$
112645	2.059 Å	Ahmed, S. *J. Mol. Struct.* **2021**, *1227*, 129334. $K_2[Co(H_2O)_6](HPO_4)_2$
FOWLIN	2.059 Å	Jiang, J.; Lu, Y.; Yuan, L.; Liu, W. *Acta Crystallogr., Sect. E* **2009**, *65*, m952. $[Co(H_2O)_6][NiC_{12}H_{11}N_2O_5]\cdot 6H_2O$
AZAREB	2.060 Å	Das, J.; Shem-Tov, D.; Wang, S.; Zhang, L.; Flaxer, E.; Zhang, S.; Stierstorfer, J.; Wang, K.; Yan, Q.-L.; Dobrovetsky, R.; Gozin, M. *Chem. Eng. J.* **2021**, *426*, 131806. $[Co(H_2O)_6][Co_2Na_2C_{12}H_{24}N_{54}O_8]\cdot 4H_2O$
POVSID	2.060 Å	Cao, M.-L.; Mo, H.-J.; Ye, B.-H. *Cryst. Growth Des.* **2009**, *9*, 546. $[Co(H_2O)_6][Co_8C_{156}H_{108}N_{72}](NO_3)_6\cdot 12H_2O$

VAHCIR	2.060 Å	Zhang; Z.-T.; Liu; Q.-G.; Liu; X.-H.; Yang; B.-L.; Duan; Y.-F.; Gao; Z.-W.; Yu, K.-B. *Huaxue Xuebao* **2002**, *60*, 1846. $[Co(H_2O)_6](C_{16}H_{11}O_7S)_2\cdot 10H_2O$
POVSUP	2.062 Å	Cao, M.-L.; Mo, H.-J.; Ye, B.-H. *Cryst. Growth Des.* **2009**, *9*, 546. $[Co(H_2O)_6][Co_8C_{156}H_{108}N_{72}](3,5\text{-}(COOH)_2\text{-}1\text{-}COO\text{-}C_6H_3)_6\cdot 6C_2H_5OH\cdot 3H_2O$
XOLGEM	2.062 Å	Zou, J.-Y.; Shi, W.; Zhang, J.-Y.; He, Y.-F.; Gao, H.-L.; Cui, J.-Z.; Cheng, P. *CrystEngComm* **2014**, *16*, 7133. $(H_3O)_{15}[Co(H_2O)_6][Co_8Li_3C_{48}N_{36}O_{48}]\cdot 10H_2O$
POVSOJ	2.063 Å	Cao, M.-L.; Mo, H.-J.; Ye, B.-H. *Cryst. Growth Des.* **2009**, *9*, 546. $[Co(H_2O)_6][Co_8C_{156}H_{108}N_{72}](HCO_3)_6\cdot 24H_2O$
CONBOY	2.064 Å	Jia, T.-J.; Li, S.-M.; Cao, W.; Li, L.-C.; Zheng, X.-J.; Yuan, D.-Q. *J. Solid State Chem.* **2013**, *201*, 208. $[Co(H_2O)_6][CoCu_2C_{16}O_{20}]\cdot 4H_2O$
EBUGAM	2.064 Å	Zhang, X.; Lu, T.; Xu, X.; Wang, Y. *J. Coord. Chem.* **2017**, *70*, 60. $[Co(H_2O)_6][Co_8C_{156}H_{96}N_{60}O_{12}](NO_3)_6\cdot 12H_2O$
EGOCOT	2.064 Å	Cao, M.-L.; Hao, H.-G.; Zhang, W.-X.; Ye, B.-H. *Inorg. Chem.* **2008**, *47*, 8126. $[Co(H_2O)_6][Co(N_2C_{12}H_{12})_3][CoW_{12}C_{12}H_{16}N_2O_{42}]$
FEPPUM	2.064 Å	Gao; H.-L.; Ding; B.; Yi; L.; Cheng; P.; Liao; D.-Z.; Yan; S.-P.; Jiang, Z.-H. *Inorg. Chem. Commun.* **2005**, *8*, 151. $[Co(H_2O)_6][Co_2C_{16}H_{12}N_2O_{16}]\cdot 2H_2O$
260411	2.065 Å	Yotnoi, B.; Luachan, S.; Prior, T. H.; Rujiwatra, A. *Acta Crystallogr., Sect. E* **2009**, *65*, i52. $[Co(H_2O)_6]_{0.35}[Co_2(OH)_3SO_4)]$
YOYPIM	2.065 Å	Cao, M.-L.; Wu, J.-J.; Mo, H.-J.; Ye, B.-H. *J. Am. Chem Soc.* **2009**, *131*, 3458. $[Co(H_2O)_6][Co_8C_{156}H_{96}N_{60}O_{12}]Br_6\cdot 12C_3H_4N_2\cdot 56H_2O$
YOYPOS	2.065 Å	Cao, M.-L.; Wu, J.-J.; Mo, H.-J.; Ye, B.-H. *J. Am. Chem Soc.* **2009**, *131*, 3458. $[Co(H_2O)_6][Co_8C_{156}H_{96}N_{60}O_{12}]Br_6\cdot 12C_3H_4N_2\cdot 58H_2O$
FONQUV	2.066 Å	Zhang, X.-L.; Weng Ng, S. *Acta Crystallogr., Sect. E* **2005**, *61*, m1140. $[Co(H_2O)_6](C_6H_4NO_3)_2$
GAXLEY	2.066 Å	Liu, M.-J.; Cao, D.-K.; Liu, B.; Li, Y.-Z.; Huang, J.; Zheng, L.-M. *CrystEngComm* **2012**, *14*, 4699. $[Co(H_2O)_6][Co_2C_{10}H_{14}N_2O_{12}P_2]\cdot 2H_2O$
JEHKOW01	2.066 Å	Li; B.-L.; Song; L.-X.; Ding; J.-G.; Bian; G.-Q.; Yu; K.-B.; You, X.-Z. *Jiegou Huaxue* **1998**, *17*, 209. $[Co(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
OYOTAY	2.066 Å	Duan, X.; Meng, Q.; Su, Y.; Li, Y.; Duan, C.; Ren, X.; Lu, C. *Chem. Eur. J.* **2011**, *17*, 9936. $[Co(H_2O)_6]_2[CoC_{12}H_{20}N_2O_4][CoC_{34}H_{16}O_{16}]\cdot 7H_2O$
SUJQET	2.066 Å	Kepert, C. J.; Hesek, D.; Beer, P. D.; Rosseinsky, M. J. *Angew. Chem., Int. Ed.* **1998**, *37*, 3158. $[Co(H_2O)_6](C_{10}H_2O_8S_4)$
UDEDEM	2.067 Å	Masaoka, S.; Furukawa, S. ; Chang, H.-C.; Mizutani, T.; Kitagawa, S. *Angew. Chem., Int. Ed.* **2001**, *40*, 3817. $[Co(H_2O)_6]_{10}[CoC_{108}H_{12}N_{36}O_{78}]\cdot 74H_2O$

VIWPEX	2.067 Å	Leong, W. L.; Vittal, J. J. *Cryst. Growth Des.* **2007**, *7*, 2112. $[Co(H_2O)_6][Co_2C_{30}H_{28}N_2O_{16}]\cdot 2CH_3CN$
WELQOW	2.068 Å	Liao, J.-Z.; Wang, S.-S.; Wu, X.-Y.; Yu, R.; Lu, C.-Z.; Chen, X.-L. *Dalton Trans.* **2018**, *47*, 1027. $[Co(H_2O)_6](C_{18}H_{12}N_2O_{10}S)$
SETQOX	2.069 Å	Wolodkiewicz, W.; Brzyska, W.; Glowiak, T. *Pol. J. Chem.* **1996**, *70*, 409. $[Co(H_2O)_6](C_7H_3Cl_2O_2)_2\cdot[CoC_{14}H_{14}Cl_4O_8]\cdot 3H_2O$
VONNES	2.069 Å	Limei, Z.; Jiannan, Z.; Yunqian, Z.; Qianjiang, Z.; Saifeng, X.; Zhu, T.; Jianxin, Z.; Xin, Z.; Zhanbin, W.; Lasheng, L.; Day, A. I. *Supramol. Chem.* **2008**, *20*, 709. $[Co(H_2O)_6]_2Cl_2(NO_3)_2\cdot 3C_{44}H_{48}N_{24}O_{12}\cdot 37H_2O$
VUNFIV	2.069 Å	Ding, R.; Wei, T.; Wang, Q.-Y.; Wang, T.; Zhang, Z.-T. *Z. Anorg. Allg. Chem.* **2015**, *641*, 1130. $[Co(H_2O)_6](C_{16}H_{11}O_7S)_2\cdot 2H_2O$
LIYYAT	2.070 Å	Cabaleiro-Martinez, S.; Castro, J.; Romero, J.; Garcia-Vazquez, J. A.; Sousa, A. *Acta Crystallogr., Sect. E* **2006**, *62*, e249. $[Co(H_2O)_6](p\text{-}CH_3C_6H_4SO_3)_2$
EGUNIF	2.071 Å	Tang, S.-F.; Li, L.-J.; Lv, X.-X.; Wang, C.; Zhao, X.-B. *CrystEngComm* **2014**, *16*, 7043. $[Co(H_2O)_6](C_8H_{11}O_6P_2)_2\cdot 2H_2O$
EKOYEK01	2.071 Å	Siva, V. ; Asath Bahadur, A. ; Shameem, A. ; Athimoolam, S.; Udaya Lakshmi, K.; Vinitha, G. *J. Mol. Struct.* **2019**, *1191*, 110. $[Co(H_2O)_6]_3(2\text{-}C_5H_4NNH_2)_2(SO_4)_4\cdot 2H_2O$
WIKYEX	2.071 Å	Yan, M.; Chen, S.; Zhang, S.-L.; Ru, J. ; Zhang, R.-F. *Inorg. Chim. Acta* **2019**, *484*, 8. $[Co(H_2O)_6][CoC_{18}H_9F_6O_6Se_3]$
IHEQAP	2.071 Å	Lin, H.-B. ; Wang, Q.-H.; Zhou, Z.-H. *J. Inorg. Organomet. Polym. Mater.* **2014**, *24*, 819. $[Co(H_2O)_6][CuC_{12}H_{12}N_2O_{12}]\cdot 2H_2O$
JIRREI	2.071 Å	Genther, D. J. ; Squattrito, P. J; Kirschbaum, K. ; Yearley, E. J. ; Pinkerton, A. A. *Acta Crystallogr., Sect. C* **2006**, *63*, m604. $[Co(H_2O)_6](C_{10}H_8NO_3S)_2\cdot 2H_2O$
SIJJOL	2.071 Å	Fabelo, O. ; Pasan, J. ; Lloret, F. ; Julve, M.; Ruiz-Perez, C. *Cryst. Growth Des.* **2007**, *9*, 815. $[Co(H_2O)_6](C_{10}H_4O_8)\cdot C_{10}H_8N_2O_2\cdot 4H_2O$
XIYMEY	2.071 Å	Tai, X.-S. ; Feng, Y.-M. ; Kong, F.-Y. *Acta Crystallogr., Sect. C* **2008**, *64*, m645. $[Co(H_2O)_6](C_{13}H_{10}NO_4S)_2$
BAVYOM	2.072 Å	Knuuttila, P. *Inorg. Chim. Acta* **1981**, 52, 141. $[Co(H_2O)_6](4\text{-}OOC\text{-}C_5H_4NH)_2$
BIFWAP	2.072 Å	Xue; L. ; DesMarteau, D. D.; Pennington, W. T CCDC deposition number, 247563, **2004**. $[Co(H_2O)_6](N(SO_2CF_3)_2)_2\cdot 2H_2O$
OCDCOC	2.072 Å	Vance Jr., T. B.; Holt, E. M.; Pierpont, C. G.; Holt, S. L. *Acta Crystallogr., Sect. B* **1980**, *36*, 150. $[Co(H_2O)_6][CoCl_4]\cdot C_{12}H_{24}O_6\cdot((CH_3)_2CO$
SUVBUG	2.072 Å	Leonard, M. A.; Squattrito, P. J.; Dubey, S. N. *Acta Crystallogr., Sect. C* **1999**, *55*, 35. $[Co(H_2O)_6](1\text{-}SO_3\text{-}4\text{-}CHCH_2\text{-}C_6H_4)_2\cdot 2H_2O$

XOBKOO	2.072 Å	Hu, M.-L.; Fang, L.-P.; Cheng, Y.-Q.; Jin, Z.-M. *Z. Kristallogr. - New Cryst. Struct.* **2002**, *217*, 121. $[Co(H_2O)_6]Br_2 \cdot 2C_6H_{12}N_4 \cdot 4H_2O$
39425	2.073 Å	Gulya, A. P.; Shova, S. G.; Mazus, M. D.; Rakov, I. E.; Kokunov, Y. V.; Buslaev, Y. A. *Koord. Khim.* **1991**, *17*, 492. $[Co(H_2O)_6][Sn_6F_3]_2$
BIPBUY	2.073 Å	Xin-Hua Li; Qian Miao; Hong-Ping Xiao; Mao-Lin Hu *Acta Crystallogr., Sect. E* **2004**, *60*, m1784. $[Co(H_2O)_6](C_{10}H_{10}N_2)(SO_4)_2$
DUQFUS	2.073 Å	Das, D.; Bhattacharjee, M. *Polyhedron* **2015**, *99*, 122. $[Co(H_2O)_6][MoC_{28}H_{38}N_2O_{13}] \cdot 2(CH_3)_2NCHO \cdot H_2O$
LIYYAT02	2.073 Å	Baruah, J. B. CCDC deposition number 809377, **2016**. $[Co(H_2O)_6](p\text{-}CH_3C_6H_4SO_3)_2$
NERGEY	2.073 Å	Dordevic, M.; Jeremic, D.; Andelkovic, K.; Gruden-Pavlovic, M.; Divjakovic, V.; Ristovic, M. S.; Brceski, I. *J. Serb. Chem. Soc.* **2012**, *77*, 1391. $[Co(H_2O)_6](C_{10}H_{15}O_3S)_2$
NUTMEU	2.073 Å	Schwarz, T.; Petri, A.; Schilling, J.; Lentz, A. *Acta Crystallogr., Sect. C* **1998**, *54*, 1104. $[Co(H_2O)_6](C_5H_5O_4)_2$
PUQWII	2.073 Å	Jeremic, D. A.; Kaluderovic, G. N.; Gomez-Ruiz, S.; Brceski, I.; Kasalica, B.; Leovac, V. M. *Cryst. Growth Des.* **2010**, *10*, 559. $[Co(H_2O)_6](C_{10}H_{15}O_4S)_2$
WABLIU10	2.073 Å	Kosnic, E. J.; McClymont, E. L.; Hodder, R. A.; Squattrito, P. J. *Inorg. Chim. Acta* **1996**, *253*, 253. $[Co(H_2O)_6][C_6H_5SO_3)_2$
22899	2.074 Å	Qu, X.-J.; Guo, H.-L.; Wang, Y.-K.; Yang, H.-X.; Bai, Y.; Dang, D.-B. *Inorg. Chem. Commun.* **2020**, *119*, 108083. $[Co(H_2O)_6][(Co(H_2O)_5)_2Co_2((Mo_{16}O_{32})Co_{16}(HPO_4)_{14}(PO_4)_{10}(H_2O)_{15})] \cdot 38H_2O$
73349	2.074 Å	Martin-Frere, J.; Jeannin, Y. P.; Robert, F.; Vaissermann, J. *Inorg. Chem.* **1991**, *30*, 3635. $K_2[Co(H_2O)_6][As_6CoMo_6O_{30}]$
159012	2.074 Å	Ganesh, V.; Seshasayee, M.; Aravamudan, G.; Heijdenrijk, D.; Schenk, H. *Acta Crystallogr., Sect. C* **1990**, *46*, 949. $[Co(H_2O)_6]Cl_2(C_6H_{12}N_4)_2 \cdot 4H_2O$
AXOCOH	2.074 Å	Oelkers, B.; Schaffner, D.; Sun, Y. *Chem. Sel.* **2016**, *1*, 4440. $[Co(H_2O)_6][Co(H_2O)_4(CH(SO_3)_3]_2$
EFATOX	2.074 Å	AlDamen, M. A.; Juwhari, H. K.; Al-zuheiri, A. M.; Alnazer, L. A. *Kristallografiya* **2017**, *62*, 1160. $[Co(H_2O)_6][Li(UO_2(OOCCH_3)_3)_3]$
ENIYOQ	2.074 Å	Stavila, V.; Bulimestru, I.; Gulea, A.; Colson, A. C.; Whitmire, K. H. *Acta Crystallogr., Sect. C* **2011**, *67*, m65. $[Co(H_2O)_6][BiC_{28}H_{12}N_4O_{16}] \cdot 2H_2O$
JEHKOW	2.074 Å	Ganesh, V.; Seshasayee, M.; Aravamudan, G.; Heijdenrijk, D.; Schenk, H. *Acta Crystallogr., Sect. C* **1990**, *46*, 949. $[Co(H_2O)_6]Cl_2 \cdot 2C_6H_{12}N_4 \cdot 4H_2O$
LIYYAT01	2.074 Å	Fewings, K. R.; Junk, P. C.; Georganopoulou, D.; Prince, P. D.; Steed, J. W. *Polyhedron* **2001**, *20*, 643. $[Co(H_2O)_6](p\text{-}CH_3C_6H_4SO_3)_2$
OYUCER	2.074 Å	Lin, H.; Mu, B.; Wang, X. *J. Coord. Chem.* **2011**, *64*, 3465. $[Co(H_2O)_6][CoC_{42}H_{34}N_8O_{20}] \cdot 10H_2O$

130264	2.075 Å	Felder, J. B.; Smith, M.; Zur Loye, H.-C. *Cryst. Growth Des.* **2018**, *18*, 1236. $[Co(H_2O)_6][U_2O_4F_7]$
280891	2.075 Å	Kuratieva, N. V.; Naumova, M. I.; Naumov, D. Yu. *Acta Crystallogr., Sect. C* **2002**, *58*, i129. $[Co(H_2O)_6](H_2PO_2)_2$
AJIDON	2.075 Å	Zhang, W.; Chen, Y.-T. *Acta Crystallogr., Sect. E* **2009**, *65*, m1548. $[Co(H_2O)_6](C_7H_8NO_3S)_2$
AQURAG	2.075 Å	Huang, L.-F.; Ji, C.-C.; Lu, Z.-Z.; Yao, X.-Q.; Hu, J.-S.; Zheng, H.-G. *Dalton Trans.* **2011**, *40*, 3183. $[Co(H_2O)_6][Co_3C_{18}H_{16}O_{18}]\cdot 3H_2O$
CAGLAZ	2.075 Å	Wu, G.-P.; Wei, S.-H.; Ren, W.-M.; Lu, X.-B.; Xu, T.-Q.; Darensbourg, D. J. *J. Am. Chem. Soc.* **2011**, *133*, 15191. $[Co(H_2O)_6](C_{12}H_{20}N_3O_3)_2Cl_4\cdot 2CH_2Cl_2$
CAGVOV	2.075 Å	Ward, D. L.; Luehrs, D. C. *Acta Crystallogr., Sect. C* **1983**, *39*, 1370. $[Co(H_2O)_6](C_{10}H_4O_8)$
CAGVOV04	2.075 Å	Bo, O. B; Zhao, S. Y.; Zhang, Z. W.; Sheng, Y. L.; Sun, Z. X.; Sun, G. X.; Chen, C. L.; Li, Y.- X. *Koord. Khim* **2007**, *33*, 483. $[Co(H_2O)_6](C_{10}H_4O_8)$
LICPIX	2.075 Å	Yan-Cheng Liu; Tao Yuan; Zhen-Feng Chen; Hong Liang; Yong Zhang *Acta Crystallogr., Sect. E* **2007**, *63*, m1397. $[Co(H_2O)_6][CoC_{38}H_{30}N_2O_{12}S_2]\cdot 4H_2O$
PAVXIU	2.075 Å	Zun-Ting Zhang; Qiu-Ya Wang *Struct. Chem.* **2005**, *16*, 415. $[Co(H_2O)_6](C_{19}H_{17}O_7S)_2\cdot 8H_2O$
POCGUL	2.075 Å	Yun, Y.-W.; Yang, P.; Han, W.-H. *Z. Kristallogr. – New Cryst Struct.* **2009**, *224*, 639. $[Co(H_2O)_6](C_4H_{12}N_2)[GaF_6]Cl$
SUJQET01	2.075 Å	Kepert, C. J.; Hesek, D.; Beer, P. D.; Rosseinsky, M. J. *Angew. Chem., Int. Ed.* **1998**, *37*, 3158. $[Co(H_2O)_6](C_{10}H_2O_8S_4)\cdot 2H_2O$
WABLIU	2.075 Å	Kosnic, E. J.; McClymont, E. L.; Hodder, R. A.; Squattrito, P. J. *Inorg. Chim. Acta* **1992**, *201*, 143. $[Co(H_2O)_6][C_6H_5SO_3)_2$
63451	2.076 Å	Hoskins, B. F.; Linden, A. *Aust. J. Chem.* **1987**, *40*, 565. $[Co(H_2O)_6][GeF_6]$
ATEQOH	2.076 Å	Feng, C.; Zhang, D.; Zhou, S.-Y.; Chen, J.-M.; Zuo, Z.-H.; Zhao, H. *Chin. J. Inorg. Chem.* **2016**, *32*, 1215. $[Co(H_2O)_6][CoC_{30}H_{24}N_9O_6]_2\cdot 4H_2O$
EBOPIW	2.076 Å	Park, I.-H.; Lee, S. S. *CrystEngComm* **2011**, *13*, 6520. $[Co(H_2O)_6](ClO_4)_2\cdot[Cu_2I_2(C_{12}H_{24}I_2O_4S_2)_2]\cdot H_2O$
IJUPOU	2.076 Å	Dotsenko, V. V.; Netreba, E. E. *Zh. Strukt. Khim.* **2015**, *56*, 319. $[Co(H_2O)_6]$ $[Co_2C_{11}H_{26}N_4O_5]_2(NO_3)_6$
LERSEI	2.076 Å	Shi, H. F.; Wu, T.; Jiang, P. G.; Hao, Z.; Zhang, M. M. *Acta Crystallogr., Sect. E* **2013**, *69*, m103. $[Co(H_2O)_6]C_{14}H_{10}O_6\cdot 2H_2O$
UYIQOL	2.076 Å	de Campos, N. R.; Simosono, C. A.; Rosa, I. M. L.; da Silva, R. M. R.; Doriguetto, A. C.; do Pim, W. D.; Simoes, T. R. G.; Valdo, A. K. S. M.; Martins, F. T.; Sarmiento, C. V.; Nunes, W. C.; Guedes, G. P.; Pedroso, E. F.; Pereira, C. L. M.; Stumpf, H. O.; Lloret, F.; Julve, M.; Marinho, M. V. *Dalton Trans.* **2021**, *50*, 10707. $[Co(H_2O)_6]_2[Co_2C_{30}H_{18}N_6O_{18}]_2\cdot C_{10}H_8N_2S_2\cdot 6H_2O$
YEJQIR	2.076 Å	Li, C.; Jiang, H.-Y.; Wang, J.-L.; Kang, R.-K.; Mei, H.; Xu, Y. *Dalton Trans.* **2022**, *51*, 9616. $(C_{11}H_{10}N)_2[Co(H_2O)_6][Co_{16}Mo_{16}H_{61}O_{148}P_{24}](H_2PO_4)\cdot 25H_2O$

75984	2.077 Å	Mikenda, W.; Pertlik, F.; Steinboeck, S. *Monatsh. Chem.* **1995**, *126*, 61. $[Co(H_2O)_6][SnF_6]$
AYAZUW	2.077 Å	Koval'chukova, O. V.; Strashnova, S. B.; Ilyukhin, A. B.; Sergienko, V. S.; Zaitsev, B. E.; Volyansky, O. V.; Korolev, O. V.; Dutova, T. Y. *Koord. Khim.* **2010**, *36*, 760. $[Co(H_2O)_6](NO_3)_2 \cdot C_{10}H_{13}N_5O_2$
EHICAA	2.077 Å	Bera, M.; Musie, G. T.; Powell, D. R. *Inorg.Chem. Comun.* **2010**, *13*, 1029. $[Co(H_2O)_6][Co_4C_{46}H_{50}N_4O_{22}] \cdot 2CH_3CN(NO_3)_2 \cdot 8H_2O$
GIJXII	2.077 Å	Martsinko, E. E.; Minacheva, L. K.; Seifullina, I. I.; Chebanenko, E. A.; Sergienko, V. S.; Churakov, A. V. *Zh. Neorg. Khim.* **2013**, *58*, 187. $[Co(H_2O)_6][Co_2Ge_4C_{10}H_{14}O_{18}] \cdot 4H_2O$
GUBTAZ	2.077 Å	Chen, Z.; Li, Y.; Jiang, C.; Liang, F.; Song, Y. *Dalton Trans.* **2009**, 5290. $[Co(H_2O)_6](ClO_4)_2 \cdot 2[Co_3C_{30}H_{36}N_6O_{15}] \cdot 4H_2O$
OXIVUO	2.077 Å	Li, Y. H.; Ma, Z. G.; Yuan, B.; Ding, B. B.; Li, X. Z.; Zhu, L. N. *Koord. Khim.* **2016**, *42*, 546. $[CoNi_2C_{50}H_{32}N_8O_{14}] \cdot 2.8H_2O$
QUPQEY	2.077 Å	Li, C.-P.; Yu, Q.; Chen, J.; Du, M. *Cryst. Growth Des.* **2010**, *10*, 2650. $[Co(H_2O)_6][Co_2C_{40}H_{34}N_8O_{22}S_2] \cdot 10H_2O$
YIXYIP	2.077 Å	Tripuramallu, B. K.; Manna, P.; Das, S. K. *CrystEngComm* **2014**, *16*, 4816. $[Co(H_2O)_6][CoC_{15}H_{11}N_6O_4]_2 \cdot 2H_2O$
9263	2.078 Å	Prelesnik, P. V.; Gabela, F.; Ribar, B.; Krstanovic, I. *Crystal Struc. Comm.* **1973**, *2*, 581. $[Co(H_2O)_6][NO_3)_2$
DUVNEP	2.078 Å	Klepov, V. V.; Serezhkina, L. B.; Pushkin, D. V.; Alekseev, E. V.; Grigor'ev, M. S.; Sergeeva, O. A.; Shimin, N. A.; Serezhkin, V. N. *Eur. J. Inorg. Chem.* **2016**, 118. $[Co(H_2O)_6][UO_2(OOCCHCH_2)_3]_2$
ESOHIE	2.078 Å	Wei, M.-L.; Zhuang, P.-F.; Li, H.-H.; Yang, Y.-H. *Eur. J. Inorg. Chem.* **2011**, 1473. $[Co(H_2O)_6][HMo_8O_{40}P] \cdot 4(4\text{-}C_5H_4OCOOH) \cdot 4.5H_2O$
GIYDAU	2.078 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.;; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Co(H_2O)_6]SO_4 \cdot 2(C_{24}H_{30}N_{10}O_3)$
HEKDOQ	2.078 Å	Steed, J. W.; McCool, B. J.; Junk, P. C. *J. Chem. Soc., Dalton Trans.* **1998**, 3417. $[Co(H_2O)_6](ClO_4)_2 \cdot C_{12}H_{24}O_6$
IQOZUK	2.078 Å	Li, Y.; Zou, W.-Q.; Wu, M.-F.; Lin, J.-D.; Zheng, F.-K.; Liu, Z.-F.; Wang, S.-H.; Guo, G.-C.; Huang, J.-S. *CrystEngComm* **2011**, *13*, 3868. $[Co(H_2O)_6][Co_2C_{22}H_{20}N_6O_{18}] \cdot 2H_2O$
LATNIG	2.078 Å	Sohmiya, A.; Okuyama, T.; Suzuki, R.; Yamanishi, K.; Sugimoto, K.; Kondo, M. *Chem. Lett.* **2017**, *46*, 485. $[Co(H_2O)_6][CoC_{46}H_{232}Cl_4O_{14}] \cdot 9H_2O$
LEFXUQ	2.078 Å	SeethaLekshmi, N.; Pedireddi, V. R. *Inorg. Chem.* **2006**, *45*, 2400. $[Co(H_2O)_6](p\text{-}(OH)_2BC_6H_4COO)_2 \cdot 4H_2O$
NAZVOZ	2.078 Å	Jirong Song; Rongzu Hu; Fuping Li; Tonglai Zhang; Zhihua Mao; Zonghua Zhou; Zhou Hong *Chin. Sci. Bull.* **1996**, *41*, 1806. $[Co(H_2O)_6](C_2HN_4O_3)_2 \cdot 2H_2O$

PICDOW	2.078 Å	Klepov, V. V.; Peresypkina, E. V.; Serezhkina, L. B.; Karasev, M. O.; Virovets, A. V.; Serezhkin, V. N. *Polyhedron* **2013**, *61*, 137. $[Co(H_2O)_6][UO_2(O_2CCH_3)_3]_2$
WILROB	2.078 Å	Lou, X. CCDC deposition number 1583977, **2018**. $[Co(H_2O)_6][CoC_{12}H_{12}O_{18}]\cdot 2H_2O$
RUDVES	2.078 Å	Yao, G.-B.; Jiang, J.-X.; Yuan, L.-M.; Ren, X.-M. *Acta Crystallogr., Sect. E* **2009**, *65*, m1316. $[Co(H_2O)_6][CuC_{12}H_{11}N_2O_5]_2\cdot H_2O$
2900	2.079 Å	Lynton, H.; Siew, P. Y. *Can. J. Chem.* **1973**, *51*, 227. $[Co(H_2O)_6][SiF_6]$
262613	2.079 Å	Donakowski, M. D.; Gautier, R.; Jeongho, Y.; Moore, D. T.; Nino, J. C.; Shiv Halasyamani, P.; Poeppelmeier, K. R. *J. Am. Chem. Soc.* **2012**, *134*, 7679. $[Co(H_2O)_6][VOF_6(H_2O)]$
760218	2.079 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinšek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14893. $[Co(H_2O)_6]B_{12}F_{12}$
AZINEE	2.079 Å	SeethaLekshmi, S.; Mangalampalli, K. S. R. N.; Hareesh, U. N. S; Ramamurty, U.; Varughese, S. *Cryst. Growth Des.* **2016**, *16*, 7271. $[Co(H_2O)_6]_2[Co(H_2O)_4(C_5H_6N_5)_2](1,3,5\text{-}C_6H_3(COO)_3)_2\cdot 10H_2O$
FIWTUA	2.079 Å	Shan; Y.; Huang, D. *Acta Crystallogr., Sect. C* **1999**, *55*, 921. $[Co(H_2O)_6](H_3N(CH_2)_2NH_3)(HPO_4)_2$
GOMVAG	2.079 Å	Qiu, L.-G.; Gu, L.-N.; Hu, G.; Zhang, L. D. *J. Solid State Chem.* **2009**, *182*, 502. $[Co(H_2O)_6][CoC_{24}H_{20}N_4O_2]_2(1,3,5\text{-}C_6H_3(COO)_3)_2\cdot 22H_2O$
KOMHAX	2.079 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Co(H_2O)_6][CoErC_{12}H_{12}O_{15}]\cdot 6H_2O$
MOJBUL	2.079 Å	Kumar, S. S.; Sreepriya, R. S.; Biju, S.; Sadasivan, V. *J. Mol. Struct.* **2019**, *1197*, 235. $[Co(H_2O)_6][CoC_{24}H_{20}N_4O_{10}]_2\cdot 12H_2O$
OGAFUZ	2.079 Å	Tian, D.; Liu, S.-J.; Chang, Z.; Zhang, Y.-H.; Zhao, J.-P.; Bu, X.-H. *CrystEngComm* **2013**, *15*, 9344. $Na_{18}[Co(H_2O)_6][Co_8C_{48}N_{36}O_{48}]\cdot 33H_2O$
POGPOT	2.079 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A. *Dalton Trans.* **2019**, *48*, 7006. $[Co(H_2O)_6][Co(H_2O)_2(C_6H_3N_7O_3)_2]$
YIRVUT	2.079 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinsek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Co(H_2O)_6]B_{12}F_{12}$
YIVSUS	2.079 Å	Wang, Y.-C.; Zhang, Z.-T.; Chang, Y. *Struct. Chem.* **2007**, *18*, 951. $[Co(H_2O)_6](C_{16}H_{11}O_9S)_2\cdot 4H_2O$
84282	2.080 Å	Baudrin, E.; Denis, S.; Touboul, M.; Nowogrocki, G. *Eur. J. Solid State Inorg. Chem.* **1997**, *34*, 1011. $[Co(H_2O)_6]_2[CoDyC_{12}H_{12}O_{15}]_2\cdot 3H_2O$
143824	2.080 Å	Colliard, I.; Nyman, M. *Angew. Chem, Int. Ed.* **2021**, *60*, 7308. $[Zn(H_2O)_6]_2Co_2Ce_2[Ce_{70}(OH)_{36}O_{64}(SO_4)_{66}(H_2O)_{63}]250.5\cdot H_2O$
242284	2.080 Å	Klepov, V. V.; Peresypkina, E. V.; Serezhkina, L. B.; Karasev, M. O.; Virovets, A. V.; Serezhkin, V. N. *Polyhedron* **2013**, *61*, 137. $[Co(H_2O)_6]_2[UO_2(CH_3COO)_3]_2$
AVATAT	2.080 Å	Li, J.-X.; Du, Z.-X.; Zhu, B.-L.; An, H.-Q.; Dong, J.-X.; Hu, X.-J.; Huang, W.-P. *Inorg. Chem. Commun.* **2011**, *14*, 522. $(NH_4)_2[Co(H_2O)_6]_2[V_{10}O_{28}]\cdot 4H_2O$

EGOFOY	2.080 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Co(H_2O)_6](C_{18}H_{14}N_2O_7S_2)\cdot(CH_3)_2NCHO$
GUHMUU	2.080 Å	Liu, J.; Lu, Y.; Li, J.; Lu, W. *Dyes Pigm.* **2020**, *177*, 108266. $[Co(H_2O)_6][CoC_{26}H_{28}N_4O_6](C_{10}H_4O_8)_2\cdot 2H_2O$
HEFSAM	2.080 Å	Shubnell, A. .J.; Kosnic, E. J.; Squattrito, P. J. *Inorg. Chim. Acta* **1994**, *216*, 101. $[Co(H_2O)_6]_2(2\text{-}NO_2\text{-}4\text{-}SO_3\text{-}C_6H_3OH)_2$
JIKYAG	2.080 Å	Zhu, S.; Hu, H.; Hu, J.; Li, J.; Hu, F.; Wang, Y. *J. Coord. Chem.* **2018**, 2441. $[Co(H_2O)_6]_2(C_{10}H_7O_3S)_2$
ODIMEU	2.080 Å	Wang, Y.; Cheng, P.; Chen, J.; Liao, D.-Z.; Yan, S.-P. *Inorg. Chem.* **2007**, *46*, 4530. $[Co(H_2O)_6][Co_2Sm_2C_{24}H_{24}O_{30}]\cdot 3H_2O$
TERKIK	2.080 Å	Gunderman, B. J.; Dubey, S. N.; Squattrito, P. J. *Acta Crystallogr., Sect. C* **1997**, *53*, 17. $[Co(H_2O)_6](C_7H_8NO_3S)_2$
TICPOL	2.080 Å	Schull, T. L.; Henley, L.; Deschamps, J. R.; Butcher, R. J.; Maher, D. P.; Klug, C. A.; Swider-Lyons, K.; Dressick, W. J.; Bujoli, B.; Greenwood, A. E.; Congiardo, L. K. B.; Knight, D. A. *Organometallics* **2007**, *26*, 2272. $[Co(H_2O)_6][Co_5C_{39}H_{59}O_{38}P_8]\cdot 22.87H_2O$
VETYEB	2.080 Å	Felder, J. B.; Smith, M.; zur Loye, H.-C. *Cryst. Growth Des.* **2018**, *18*, 1236. $[Co(H_2O)_6]_3[U_2O_4F_7]_2$
WABFAI	2.080 Å	Song, H.-Y.; Wang, X.-J.; Qiu, S.-Z.; Feng, Y.-L. *Acta Crystallogr., Sect. E* **2010**, *66*, m1577. $[Co(H_2O)_6][CoC_{12}H_{16}N_2O_4]_2(C_{11}H_7O_8)_2\cdot 4H_2O$
WIGTUC	2.080 Å	Aghabozorg, H.; Gharamaleki, J. A.; Ghadermazi, M.; Ghasemikhah, P.; Soleimannejad; J. *Acta Crystallogr., Sect. E* **2007**, *63*, m1803.
34759	2.081 Å	Ray, S.; Zalkin, A.; Templeton, D. H. *Acta Crystallogr., Sect. B* **1973**, *53*, 2741. $[Co(H_2O)_6]SiF_6$
59902	2.081 Å	Chen, S.-M.; Lu, C.-Z.; Yu, Y.-Q.; Zhang, Q.-Z.; He, X. *Acta Crystallogr., Sect. E* **2004**, *60*, m723. $(N(CH_3)_4)_2[Co(H_2O)_6][Mo_8O_{26}]$
69393	2.081 Å	Waizumi, K.; Masuda, H.; Ohtaki, H.; Tsukamoto, K.; Sunagawa, I. *Bull. Che. Soc. Jpn.* **1990**, *63*, 3426. $[Co(H_2O)_6]Cl_2$
109741	2.081 Å	Imanakunov, B. I.; Ivashinkhorloogiyn, S.; Baydina, I. A.; Stabnikov, P. A.; Toktomatov, T. A. *Izv. Akad. Nauk Resp. Kyrg. Khim. Tek. Biol. Nauki* **1991**, 7. $[Co(H_2O)_6](HCOO)_2(CH_2)_6N_4)_2\cdot 4H_2O$
AQCOAM01	2.081 Å	Chopra, D.; Dagur, P.; Prakash, A. S.; Row, T. N. G.; Hegde, M. S. *J. Cryst. Growth* **2005**, 275, e-2049. $[Co(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
AXEKEW	2.081 Å	Zhao, G. Liu, J. *RSC Adv.* **2021**, 11, 24500. $[Co(H_2O)_6](p\text{-}C_6H_4(COO)_2)\cdot C_{14}H_{12}N_2O_4\cdot 3H_2O$
CAGVOV01	2.081 Å	Rochon, F. R.; Massarweh, G. *Inorg. Chim. Acta* **2000**, *304*, 190. $[Co(H_2O)_6](C_{10}H_4O_8)$
CAGVOV02	2.081 Å	Kumagai, H.; Kepert, C. J.; Kurmoo, M. *Inorg. Chem.* **2002**, *41*, 3410. $[Co(H_2O)_6](C_{10}H_4O_8)$
EWOPEL	2.081 Å	Chen; S.-M.; Lu; C.-Z.; Yu; Y.-Q.; Zhang; Q.-Z.; He, X. *Acta Crystallogr., Sect. E* **2004**, *60*, m723. $((CH_3)_4N)_2[Co(H_2O)_6][Mo_8O_{26}]$

EYARON	2.081 Å	Bin, Z. CCDC deposition number 739541, **2016**. $[Co(H_2O)_6](ClO_4)_2 \cdot 5C_4H_8O_2$
GUHMUU	2.081 Å	Liu, J.; Lu, Y.; Li, J.; Lu, W. *Dyes Pigm.* **2020**, *177*, 108266. $[Co(H_2O)_6][CoC_{26}H_{28}N_4O_6](C_{10}H_4O_8)_2 \cdot 2H_2O$
IWONIR	2.081 Å	Zhang, Z.-Y.; Gao, S.; Huo, L.-H.; Zhao, H.; Zhao, J.-G.; Ng, S. W. *Acta Crystallogr., Sect. E* **2004**, *60*, m723. $[Co(H_2O)_6](C_7H_6NO_3)_2 \cdot 2H_2O$
PDACCO	2.081 Å	McCandlish, E. F. K.; Michael, T. K.: Neal, J. A.; Lingafelter, E. C.; Rose, N. J. *Inorg. Chem.* **1978**, *17*, 1383. $Na_2[Co(H_2O)_6][CoC_{14}H_{12}N_2O_8)_2 \cdot 4H_2O$
QIZFUA01	2.081 Å	Sakane, G.; Kawasaki, H.; Oomori, T.; Yamasaki, M.; Adachi, H.; Shibahara, T. *J. Cluster Sci.* **2002**, *13*, 75. $[Co(H_2O)_6]_2[CdMo_6C_{36}H_{42}N_6O_{36}S_8] \cdot 22H_2O$
SUJPES	2.081 Å	Kepert, C. J.; Hesek, D.; Beer, P. D.; Rosseinsky, M. J. *Angew. Chem., Int. Ed.* **1998**, *37*, 3158. $[Co(H_2O)_6](C_{10}H_2O_8S_4) \cdot 2H_2O$
UZIFER	2.081 Å	Huang, Y.-R.; Lin, X.-L.; Chen, B.; Zheng, H.-D.; Chen, Z.-R.; Li, H.-H.; Zheng, S.T. *Angew. Chem., Int. Ed.* **2021**, *60*, 16911. $[Co(H_2O)_6]_2[Co_7W_{18}P_2C_{40}H_{56}N_8O_{88}]_2 \cdot 2ONC_5H_4C_5H_4NO \cdot 16H_2O$
VIXCAH	2.081 Å	Gu, J.; Zhu, Q.-Y.; Zhang, Y.; Lu, W.; Niu, G.-Y.; Dai, J. *Inorg. Chem. Commun.* **2008**, *11*, 175. $[Co(H_2O)_6][Co(OCHN(CH_3)_2)_2(C_{10}H_6N_2O_4S_6)_2] \cdot 2(CH_3)_2NCHO \cdot H_2O$
VOPMOC	2.081 Å	Perez, J. M. G.; Gutierrez, J. N..; Dung, N.-H.; Voissat, B.; Busnot, A.; Wintenberger, M. *Inorg. Chim. Acta* **1991**, *184*, 243. $[Co(H_2O)_6][Co_2C_{14}H_{20}N_2O_{14}] \cdot 4H_2O$
YITNOE	2.081 Å	Imanakunov, B. I.; Ivashinkhorloogiyn, S.; Baydina, I. A.; Stabnikov, P. A.; Toktomatov, T. A. *Izv. Akad. Nauk Resp. Kyrg. Khim. Tek. Biol. Nauki* **1991**, 7. $[Co(H_2O)_6](HCOO)_2 \cdot 2C_6H_{12}N_4 \cdot 4H_2O$
BEZYUA	2.082 Å	Chuklanova, E. B.; Polynova, T. N.; Porai-Koshits, M.A.; Konstantinovskaya, M. A.; Sinyavskaya, E. I. *Koord. Khim.* **1982**, *8*, 236. $[Co(H_2O)_6](HO_3PCCHCHPO_3H) \cdot 2H_2O$
BIZSOT	2.082 Å	Akashi, H.; Ichikawa. M. *Acta Crystallogr., Sect. E* **2008**, *64*, m797. $[Co(H_2O)_6]_2(C_{24}H_{12}O_{16}S_8) \cdot H_2O$
COHDPH	2.082 Å	Adiwidjaja, G.; Rossmanith, E.; Kuppers, H. *Acta Crystallogr., Sect. B* **1978**, *34*, 3079. $[Co(H_2O)_6](m\text{-}C_6H_4COO(COOH))_2$
DIJSIZ	2.082 Å	Jakonen, M.; Hirva, P.; Nivajarvi, T.; Kallinen, M.; Haukka, M. *Eur. J. Inorg. Chem.* **2007**, 3497. $[Co(H_2O)_6][OsCl_3(CO)_3]_2$
FIWTUA01	2.082 Å	You, X.; Zhu, L. *Ind. J. Chem., Sect. A* **2010**, *49*, 1478. $[Co(H_2O)_6](H_3N(CH_2)_2NH_3)(HPO_4)_2$
GAYTOS	2.082 Å	Yerra, S.; Das, S. K. *J. Mol. Struct.* **2017**, *1146*, 23. $[Co(H_2O)_6][CoNa_2H_{24}V_{10}O_{40}] \cdot 4H_2O$
GINVUV	2.082 Å	Deng, Y.-F.; Zhang, H.-L.; Hong, Q.-M.; Weng, W.-Z.; Wan, H.-L.; Zhou, Z.-H. *J. Solid State Chem.* **2007**, *180*, 3152. $(NH_4)_2[Co(H_2O)_6][Ti(C_6H_6O_7)_3]_2 \cdot 6H_2O$
IMAFIL	2.082 Å	Radanovic, D. D.; Rychlewska, U.; Djuran, M. I.; Draskovic, N. S.; Vasojevic, M. M.; Hodzic, I. M.; Radanovic, D. J. *Polyhedron* **2003**, *22*, 2745. $[Co(H_2O)_6][CoC_{11}H_{14}N_2O_8] \cdot 2H_2O$

PUNSIA	2.082 Å	Braga, D.; Angeloni, A.; Tagliavini, E.; Grepioni, F. *J. Chem. Soc., Dalton Trans.* **1998**, 1961. $[Co(H_2O)_6][Co(C_5H_5)_2](1,3,5\text{-}(COO)_3C_6H_3)$
QODBOB	2.082 Å	Wu, M.; Yuan, D.; Jiang, F.; Chen, B.; Gao, Q.; Wei, W.; Hong, M. *Supramol. Chem.* **2008**, *20*, 289. $[Co(H_2O)_6](C_{12}H_{14}N_2)_3[Co_2C_{48}H_{48}O_{36}S_{16}]\cdot 14H_2O$
SUDGOQ	2.082 Å	Amanchi, S. R.; Das, S. K. *Front. Chem.* **2018**, *6*, 469. $[Co(H_2O)_6]_3(4\text{-}C_5H_4N\text{-}NH_2)_6[V_{10}O_{28}]_2\cdot 14H_2O$
UGENUQ	2.082 Å	Jing Han, Yong J. H.; Xing, Y. H.; Bai, F. Y.; Zhang, X. J.; Zeng, X. Q.; Ge, M.-F. *J. Coord. Chem.* **2009**, *62*, 2917. $[Co(H_2O)_6][Co(C_9H_7NO_3)_2]\cdot H_2O$
89820	2.083 Å	Friedrich, A.; Wildner, M.; Tillmanns, E.; Merz, P. L. *Am. Mineral.* **2000**, *85*, 593. $[Co(H_2O)_6][Sb(OH)_6]_2$
AVOLII	2.083 Å	Klepov, V. V.; Serezhkina, L. B.; Serezhkin, V. N.; Alekseev, E. V. *J. Solid State Chem.* **2016**, *244*, 100. $[Co(H_2O)_6][Na(UO_2(OOCCH_3)_3)_3]$
AQCOAM03	2.083 Å	Singh, G.; Baranwal, B. P.; Kapoor, I. P. S.; Kumar, D.; Singh, C. P.; Frohlich, R. *J. Thermal Anal. Calorimetry* **2008**, *91*, 971. $[Co(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
BIYTUY	2.083 Å	Egharevba, G. O; Megnamisi-Belombe, M.; Endres, H.; Rossato, E. *Acta Crystallogr., Sect. B* **1982**, *38*, 2901. $[Co(H_2O)_6][CoC_4H_6Br_2N_4O_4]_2\cdot 2(CH_3)_2CO$
GEPGUE	2.083 Å	De-Wu Sun; Qi Zhang; Hong-Ju Zhai *Acta Crystallogr., Sect. E* **2006**, *62*, m2270. $(H_3O)_4[Co(H_2O)_6][CoC_{11}H_{14}N_2O_8]_2[Mo_8O_{26}]\cdot 6H_2O$
KAGMUB	2.083 Å	Jian-Fang Ma; Jin Yang; Jing-Fu Liu *Acta Crystallogr., Sect. E* **2003**, *59*, m481. $[Co(H_2O)_6]_2(C_7H_5O_6S)_2\cdot 4H_2O$
KEJVUU	2.083 Å	Bettinger, R. T.; Squattrito, P. J.; Aulakh, D.; Gianopoulos, C. G. *Acta Crystallogr., Sect. E* **2022**, *78*, 961. $[Co(H_2O)_6](m\text{-}C_6H_4COOH(SO_3))_2\cdot 2H_2O$
KUYPIE	2.093 Å	Kennedy, A. R.; McKellar, S. C.; Okoth, M. O. *Acta Crystallogr., Sect. E* **2010**, *66*, m1330. $[Co(H_2O)_6]C_{16}H_{10}N_2O_6S_7\cdot 4H_2O$
QEYZOK	2.083 Å	Manna, S. C.; Zangrando, E.; Ribas, J.; Chaudjuri, N. R. *Dalton Trans.* **2007**, 1383. $[Co(H_2O)_6][CoC_{18}H_{16}N_2O_8](p\text{-}C_6H_4(COO)_2)_2\cdot 6H_2O$
WANREJ	2.083 Å	Zhao-Hui Zhou; Yuan-Fu Deng; Hui-Lin Wan *Cryst. Growth Des.* **2005**, *5*, 1109. $[Co(H_2O)_6][CoC_{12}H_{14}O_{16}]\cdot 2H_2O$
73397	2.084 Å	Blackburn, A. C.; Gerkin, R. E. *Acta Crystallogr., Sect. C* **1993**, *49*, 1271. $[Co(H_2O)_6](BrO_4)_2$
121698	2.084 Å	Sahu, P. K.; Mondal, A.; Konar, S. *Dalton Trans.* **2021**, *50*, 3825. $[Co(H_2O)_6][Na_4(H_2O)_{16}][V_{10}O_{28}]\cdot 2H_2O$
AJETEO	2.084 Å	Lee; U.; Jung; Y.-H.; Joo; H.-C.; Park, K.-M. *Acta Crystallogr., Sect. E* **2003**, *59*, m421. $[Co(H_2O)_6]_3[V_{10}O_{28}]\cdot 2C_{12}H_{24}O_6\cdot 10H_2O$
AQCOAM	2.084 Å	Viossat, B.; Khodadad, P.; Rodier, N. *Bull. Chem. Soc. Fr.* **1981**, 69. $[Co(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$

ASGLCO	2.084 Å	Nassimbeni, L. R.; Percy, G. C.; Rodgers, A. L. *Acta Crystallogr., Sect. B* **1976**, *32*, 1252. $[Co(H_2O)_6][CoC_{18}H_{14}N_2O_6]_2 \cdot H_2O$
COHDPH01	2.084 Å	Kuppers, H. *Z. Kristallogr.* **1990**, *192*, 97. $[Co(H_2O)_6](m\text{-}C_6H_4COO(COOH))_2$
DIYHUR	2.084 Å	Hou, Y.; An, H.; Chang, S.; Zhang, J. *Cat Sci. Tech.* **2019**, *9*, 2445. $Rb_2[Co(H_2O)_6][CoAs_2Mo_{12}C_{16}H_{42}N_4O_{57}] \cdot 12H_2O$
FEGMAF	2.084 Å	Brach, I.; Roziere, J.; Anselment, B.; Peters, K. *Acta Crystallogr., Sect. C* **1987**, *43*, 458. $[Co(H_2O)_6]_2(C_4HO_4)_2 \cdot 2H_2O$
IRONIM	2.084 Å	Dao-Li An; Shan Gao; Zhi-Biao Zhu; Li-Hua Huo; Hui Zhao *Acta Crystallogr., Sect. E* **2004**, *60*, m111. $[Co(H_2O)_6]C_{10}H_6O_6S_2$
NOPDIH	2.084 Å	Mobin, S. M.; Mohammad, A. *Dalton Trans.* **2014**, *43*, 13032. $[Co(H_2O)_6]SO_4$
RAXHAC	2.084 Å	Pavliuk, M. V. Mijangos, E.; Makhankova, V. G.; Kokozay, V. N.; Pullen, S.; Liu, J.; Zhu, J.; Styring, S.; Thapper, A. *ChemSusChem* **2016**, *9*, 2957. $(NH_4)_2[Co(H_2O)_6]_2[V_{10}O_{28}] \cdot 4H_2O$
UZIFER	2.084 Å	Huang, Y.-R.; Lin, X.-L.; Chen, B.; Zheng, H.-D.; Chen, Z.-R.; Li, H.-H.; Zheng, S.T. *Angew. Chem., Int. Ed.* **2021**, *60*, 16911. $[Co(H_2O)_6]_2[Co_7W_{18}P_2C_{40}H_{56}N_8O_{88}]_2 \cdot 2ONC_5H_4C_5H_4NO \cdot 14H_2O$
VAWXAS03	2.084 Å	Atria, A. M.; Garland, M. T.;.; Baggio, R. *J. Chil. Chem. Soc.* **2013**, *58*, 1576. $[Co(H_2O)_6][CoC_{10}H_{10}O_{12}] \cdot 8H_2O$
WURRIM	2.084 Å	Palmucci, J.; Mahmudov, K. T.; Fatima M.; Guedes da Silva, C.; Martins, L. M. D. R. S.; Marchetti, F.; Pettinari, C.; Pombeiro, A. J. L. *RSC Adv.* **2015**, *5*, 84142. $[Co(H_2O)_6](C_{10}H_7N_4O_6S)_2 \cdot 8H_2O$
WUZNEL	2.084 Å	Zhang, M.-L.; Xing, F.-G.; Wang, Z.-L. *Jiegou Huaxue* **2010**, *29*, 592. $[Co(H_2O)_6](C_8H_7O_4)_2 \cdot 2H_2O$
62985	2.085 Å	Elerman, Y. *Acta Crystallogr., Sect. C* **1988**, *44*, 599. $[Co(H_2O)_6]SO_4$
281298	2.085 Å	Lee, U.; Jung, Y.-H.; Joo, H.-C. *Acta Crystallogr., Sect. E* **2003**, *59*, i72. $K_2[Co(H_2O)_6]_2[V_{10}O_{28}] \cdot 4H_2O$
427973	2.085 Å	Yerra, S.; Das, S. K. *J. Mol. Struct.* **2017**, *1146*, 23. $[Co(H_2O)_6][(Na_2(H_2O)_6(H_2O)_4Co(H_2O)_2][V_{10}O_{28}] \cdot 4H_2O$
AKEHAA	2.085 Å	Wilk, M.; Janczak, J.; Videnova-Adrabinska, V. *Acta Crystallogr., Sect. C* **2011**, *67*, m9. $[Co(H_2O)_6](p\text{-}HOOCC_6H_4PO_3)_2 \cdot 2(p\text{-}HOOCC_6H_4PO_3H] \cdot 2H_2O$
AWONAC	2.085 Å	Sahbani, T.; Sta, W. S.; Al-Deyab, S. S.; Rzaigui, M. *Acta Crystallogr., Sect. E* **2011**, *67*, m1079. $[Co(H_2O)_6]_2(C_5H_{14}N_2)(SO_4)_3$
BAFBAN	2.085 Å	Zhang, M.-S.; Sun, B.-W.; Fang, R.-B.; Zhao, Q.-H. *Zh. Strukt. Khim.* **2010**, *51*, 1180. $[Co(H_2O)_6]_2[CoC_{14}H_6N_2O_8]_2 \cdot 2C_2H_4N_4 \cdot 2H_2O$
FAKVEU	2.085 Å	Kammoun, O.; Loulou, N.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *J. Chem. Cryst.* **2012**, *42*, 103. $[Co(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
FUNQAG	2.085 Å	Horn, E.; Botello, A. F.; Salas, J. M.; Tiekink, E. R. T. *Z. Kristallogr. - New Cryst. Struc.* **2000**, *215*, 441. $[Co(H_2O)_6](C_9H_9N_4O_4)_2 \cdot 4H_2O$

HIDTAS	2.085 Å	Wang, X.; Bai, X.; Lin, H.; Sun, J.; Wang, X.; Liu, G. *RSC Adv.* **2018**, *8*, 22676. $[Co(H_2O)_6][CoMo_6TeC_{18}H_{22}N_{14}O_{28}]\cdot 3H_2O$
JEDXOJ	2.085 Å	de J.Velazquez-Garcia, J.; Techert, S. *Acta Crystallogr., Sect. E* **2022**, *78*, 814. $(C_4H_7N_2)_2[Co(H_2O)_6][CoC_{18}H_{14}O_{16}]$
KOMGUQ	2.085 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Co(H_2O)_6][CoDyC_{12}H_{12}O_{15}]\cdot 6H_2O$
LASJEX	2.085 Å	Rui, W.; Yuchen, Y.; Xin, D.; Zhaohui, Z. *Yingyong Huaxue* **2016**, *33*, 70. $[Co(H_2O)_6][CoC_8H_{13}N_2O_7]\cdot 2H_2O$
MAZGAV	2.085 Å	De Munno, G.; Medaglia, M.; Armentano, D.; Anastassopoulou, J.; Theophanides, T. *J. Chem. Soc., Dalton Trans.* **2000**, 1625. $[Co(H_2O)_6](ClO_4)_2\cdot 6C_5H_7N_3O\cdot H_2O$
PUMDIM	2.085 Å	Zhao, J.; Liu, B.; Wu, Y.-P.; Bai, L.; Zhang, J.; Li, D.-S. *CrystEngComm* **2015**, *17*, 7034. $H_3O[Co(H_2O)_6][Co(OC_{17}H_9O_{12}]_3\cdot 0.5H_2O$
WACZOQ	2.085 Å	Jian-Xin Pan; Guo-Yu Yang; Yan-Qiong Sun *Acta Crystallogr., Sect. E* **2003**, *59*, m286. $[Co(H_2O)_6](C_4H_{12}N_2)(SO_4)_2$
WIZGIW	2.085 Å	Li, W.-W.; Zhang, Z.-T. *Acta Crystallogr., Sect. C* **2008**, *64*, m176. $[Co(H_2O)_6](C_{16}H_{11}O_7S)_2]\cdot 4H_2O$
WUTGOH01	2.085 Å	Hidaoui, S.; Hamdi, N.; Akouibaa, M.; Benali-Cherif, R.; Vaclav, E.; Dusek, M.; Lachkar, M.; El Bali, B. *J. Mol. Struct.* **2022**, *1265*, 133296. $[Co(H_2O)_6](C_4H_{12}N_2)(HPO_4)_2$
XUYJIL	2.085 Å	Chen, Y.; Li, C.-H.; Wang, C.-F.; Wu, D.; Zuo, J.-L.; You, X.-Z. *Sci. Chin, Ser. B* **2009**, *52*, 1596. $[Co(H_2O)_6][Co(OCHN(CH_3)_2)_2(C_{11}H_6O_4S_6)_2]\cdot(CH_3)_2NCHO\cdot CH_3OH$
YAJVIQ	2.085 Å	Wang, Q.-Y.; He, Y.; Zhang, Z.-T. *Hecheng Huaxue* **2010**, *18*, 31. $[Co(H_2O)_6](C_{17}H_3O_7S)_2\cdot 8H_2O$
710009	2.086 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2009**, *224*, 355. $Tl_2[Co(H_2O)_6](SeO_4)_2$
DIJREU	2.086 Å	Jakonen, M.; Hirva, P.; Nivajarvi, T.; Kallinen, M.; Haukka, M. *Eur. J. Inorg. Chem.* **2007**, 3497. $[Co(H_2O)_6][RuCl_3(CO)_3]_2\cdot 2H_2O$
JAYGUP	2.086 Å	Mrad, M. L.; Ben Nasr, C.; Rzaigui, M. *E.-Jour. Chem.* **2010**, *7*, 887. $[Co(H_2O)_6](H_3N(CH_2)_3NH_3)(NO)_4$
QAXFAX	2.086 Å	Potgieter, H.; Purcell, W.; Visser, H. G.; Niclos-Gutierrez, J. *Polyhedron* **2005**, *24*, 1968. $[Co(H_2O)_6][CoC_{14}H_{18}N_2O_{12}]_2\cdot 2H_2O$
SOVBOV	2.086 Å	Wang, J.; Morra, N. A.; Zhao, H.; Gorman, J. S. T.; Lynch, V.; McDonald, R.; Reichwein, J. F.; Pagenkopf, B. L. *Can. J. Chem.* **2009**, *87*, 328. $[Co(H_2O)_6][Co(C_{21}H_{22}NO_3)_3]_2\cdot C_6H_6\cdot(CH_3)_2CO$
380476	2.087 Å	Zimmermann, L. W.; Schleid, T. Z. Anorg. Allg. Chem. 2010, 636, 2067. $[Co(H_2O)_6]B_{10}H_{10}\cdot 2H_2O$
AQURIO	2.087 Å	Huang, L.-F.; Ji, C.-C.; Lu, Z.-Z.; Yao, X.-Q.; Hu, J.-S.; Zheng, H.-G. *Dalton Trans.* **2011**, *40*, 3183. $[Co(H_2O)_6][CoZn_2C_{18}H_{16}O_{18}]\cdot 3H_2O$
CALDAW	2.087 Å	Falvello, I. R.; Forcen-Vazquez, E.; Mayoral, I.; Tomas, M.; Palacio, F. *Acta Crystallogr., Sect. C* **2011**, *67*, m359. $Cs_2[Co(H_2O)_6][CoC_{24}H_{32}O_{36}]\cdot 12H_2O$

CIVCOB	2.087 Å	Shi, J.; Wang, Y.-C.; Wang, Q.-Y.; Zhang, Z.-T. *Inorg. Chm. Acta* **2014**, *409*, 259. $[Co(H_2O)_6](C_{17}H_{12}BrO_9S]_2\cdot 2H_2O$
CUBXED	2.087 Å	Yang, L.-L.; Dang, Z.-H.; Xu, L. *Chin. J. Struct. Chem.* **2009**, *28*, 493. $[Co(H_2O)_6][Co(C_{13}H_9NO_2]_2\cdot 2.25H_2O$
HIKLEU	2.087 Å	Saha, S.; Kottalanka, R. K.Panda, T. K.; Harms, K.; Dehnen, S.; Nayek, H. P. *J. Organometal. Chem.* **2013**, *745*, 329. $[Co(H_2O)_6](ClO_4)_2\cdot 2C_6H_{12}N_4\cdot 2H_2O$
LERVUB	2.087 Å	Mirzaei, M.; Eshtiagh-Hosseini, H.; Zarghami, S.; Karrabi, Z.; Saeedi, M.; Mague, J. T. *Acta Crystallogr., Sect. E* **2013**, *69*, m128. $[Co(H_2O)_6](C_5H_8N_3)_2(SO_4)_2\cdot 2H_2O$
QEQTEM	2.087 Å	Downer, S. M.; Squattrito, P. J.; Bestaoui, N.; Clearfield, A. *J. Chem. Cryst.* **2006**, *36*, 487. $[Co(H_2O)_6](C_{10}H_8NO_3S)_2\cdot 6H_2O$
ECEPEH	2.087 Å	Nathan, L. C.; Mai, T. D. *J. Chem. Cryst.* **2000**, *30*, 509. $[Na_4(H_2O)_{18}][Co(H_2O)_6][CoC_{14}H_6N_2O_8][CoNa_2C_{28}H_{24}N_4O_{22}]\cdot 4H_2O$
HISLUS	2.087 Å	Shen, L.; Li, W.-X.; Xia, Q.-J.; Yang, J.; Liu, Y.; Ji, C.; Wu, C.-Y.; Zhai, Y.-S.; Yang, G.-W.; Li, Q.-Y. *J. Chem. Cryst.* **2013**, *43*, 585. $[Co(H_2O)_6][CoC_{13}H_{10}ClN_2O_5]_2\cdot 2H_2O$
NIWDUT	2.087 Å	Yan, X.; Liu, Y.; Li, J.-M.; Yan, H.-Q.; Zheng, Z.-B.; Si, S.-F. *Huaxue Xuebao* **2006**, *64*, 935. $[Co(H_2O)_6](C_{14}H_{11}O_7S)_2\cdot 6H_2O$
OLOLIK	2.087 Å	Li-Jun Song; Jie Zhang; Zi-Rong Tang; Wen-Guo Wang; Zhan-Feng Ju *Acta Crystallogr., Sect. E* **2003**, *59*, m867. $[Co(H_2O)_6][Co_2C_{18}H_{28}N_4O_{14}]_2\cdot 4H_2O$
PIWKUD	2.087 Å	Zimmermann, L. W.; Schleid, T. *Z. Krist. Cryst. Mater.* **2013**, *228*, 558. $[Co(H_2O)_6]B_{10}H_{102}\cdot 2H_2O$
SEVTIX	2.087 Å	Zhao-Peng Deng; Shan Gao; Peng-Gang Chen *Acta Crystallogr., Sect. E* **2007**, *63*, m296. $[Co(H_2O)_6](C_{10}H_9O_5)_2\cdot 3H_2O$
UNAGEV01	2.087 Å	Liu; Q.; Yu, K.-B. CCDC deposition number, 256354, **2006**. $[Co(H_2O)_6](OOC(CH)_2COO)\cdot 2C_6H_{12}N_4\cdot 2H_2O$
VAWXAS02	2.087 Å	Zeller, M.; Chema, A. R.; Szalay, P. S.; Hunter, A. D. *J. Chem. Cryst.* **2005**, *35*, 433. $[Co(H_2O)_6][CoC_{10}H_{10}O_{12}]\cdot 7.7H_2O$
YADTUU	2.087 Å	Wang, H.; Gao, S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2011**, *67*, m1521. $[Co(H_2O)_6][CoC_8H_8O_8S_2]\cdot 2H_2O$
70447	2.088 Å	Mamdouh, A.-A.; Ibrahim, A. B. M.; Reyad, N. E.-H. A.; Elsayed, Tarek R.; Cordeiro Santos, I.; Paulo, A.; Mahfouz, R. M. *J. Cluster. Sci.* **2023**, *34*, 1535-1546. $(NH_4)_2[Co(H_2O)_6]_2V_{10}O_{28}\cdot 4H_2O$
AQCOAM02	2.088 Å	Afanasiev, P.; Chouzier, S.; Czeri, T.; Pilet, G.; Pichon, C.; Roy, M.; Vrinat, M. *Inorg. Chem.* **2008**, *47*, 2303. $[Co(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
BAKNEI	2.088 Å	Colak, A. T.; Pamuk, G.; Yesilel, O. Z.; Yilmaz, F.; Buyukgungor, O. *J. Chem. Cryst.* **2012**, *42*, 76. $[Co(H_2O)_6][CoC_{15}H_{15}N_4O_8]_2\cdot 13H_2O$

BECREH	2.088 Å	Fu; R.-B.; Wu; X.-T.; Hu; S,-M.; Zhang; J.-J.; Fu, Z.-Y.; Du, W.-X.; *Polyhedron* **2003**, *22*, 2739. $[Co(H_2O)_6](HO_3P(CH_2)_4PO_3H)\cdot 2H_2O$
DIJSEV	2.088 Å	Jakonen, M.; Hirva, P.; Nivajarvi, T.; Kallinen, M.; Haukka, M. *Eur. J. Inorg. Chem.* **2007**, 3497. $[Co(H_2O)_6][OsCl_3(CO)_3]_2\cdot 2H_2O$
DOTRAI	2.088 Å	Hosseini-Hashemi, Z.; Mirzaei, M.; Jafari, A.; Hosseinpour, P.; Yousefi, M.; Frontera, A.; Dashtbayaz, M. L.; Shamsipur, M.; Ardalani, M. *RSC Adv.* **2019**, *9*, 25382. $[Co(H_2O)_6][CoC_{14}H_{10}N_2O_{12}]\cdot 2H_2O$
FAKKEJ	2.088 Å	Lv, Y.-K.; Jiang, Z.-G.; Gan, L.-H.; Liu, M.-X.; Feng, Y.-L. *CrystEngComm* **2012**, *14*, 314. $[Co(H_2O)_6](C_6H_{12}N_4)_2[H_2W_{10}O_{28}]\cdot 6H_2O$
HTBZCO	2.088 Å	Ottersen, T.; Warner, L. G.; Seff, K. *Acta Crystallogr., Sect. B* **1974**, *30*, 1188.
JEYMUW	2.088 Å	Mateescu, A.; Gabriel, C.; Raptis, R. G.; Baran, P.; Salifoglou, A. *Inorg. Chim. Acta* **2007**, *360*, 638. $(NH_4)_4[Co(H_2O)_6][CoC_4H_{10}NO_{10}P_2]_2\cdot 2[Co_2C_4H_{23}N_3O_{13}P_2]\cdot 1.36C_2H_5OH\cdot 4H_2O$
LIWJEH	2.088 Å	Morzyk-Ociepa, B. *J. Mol. Struct.* **2007**, *846*, 74. $[Co(H_2O)_6](C_8H_5N_2O_2)_2\cdot 6H_2O$
NESFIB	2.088 Å	Zhao-Peng Deng; Shan Gao; Ng, S. W. *Acta Crystallogr., Sect. E* **2006**, *62*, m3423. $[Co(H_2O)_6](OOCC_6H_4CHO)_2\cdot 2H_2O$
QUCPOV	2.088 Å	Kammoun, O. ; Naili, H. ; Rekik, W. ; Bataille, T. *Inorg. Chim. Acta* **2015**, *434*, 209. $[Co(H_2O)_6](C_4H_7N_2)_2(SO_4)_2\cdot 2H_2O$
UYIQUR	2.088 Å	de Campos, N. R.; Simosono, C. A.; Rosa, I. M. L.; da Silva, R. M. R.; Doriguetto, A. C.; do Pim, W. D.; Simoes, T. R. G.; Valdo, A. K. S. M.; Martins, F. T.; Sarmiento, C. V.; Nunes, W. C.; Guedes, G. P.; Pedroso, E. F.; Pereira, C. L. M.; Stumpf, H. O.; Lloret, F.; Julve, M.; Marinho, M. V. *Dalton Trans.* **2021**, *50*, 10707. $[Co(H_2O)_6]_2[Co_2C_{30}H_{18}N_6O_{18}]_2\cdot (CH_3)_2SO\cdot 4H_2O$
WUTGOH	2.088 Å	Craven, E.; Abu-Shandi, K.; Janiak, C. *Z. Anorg. Allg. Chem.* **2003**, *629*, 195. $[Co(H_2O)_6](C_4H_{12}N_2)(HPO_4)_2$
WADBEJ	2.088 Å	Li; X. ; Bi; W. ; Daqiang; Y. ; Youfu; Z.; Cao, R. *Acta Crystallogr., Sect.* $[Co(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
XILNOW	2.088 Å	Du, J.-M. ; Li, Q. ; Li, W. ; Lin, H.-M. ; Guo, G.-C. *Acta Crystallogr., Sect. E* **2007**, *62*, m3423. $[Co(H_2O)_6](p\text{-}O_3SC_6H_4OH)_2\cdot 2H_2O$
27799	2.089 Å	Maury, F.; Gleizes, A. *Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences, Serie C, Sciences Chimiques* **1980**, *290*, 105. $[Co(H_2O)_6][SnF_3]_2$
59856	2.089 Å	Li, X.-H. ; Li, Z.-G. *Acta Crystallogr., Sect. E* **2004**, *60*, i114. $(NH_4)_2[Co(H_2O)_6](SO_4)_2$
195091	2.089 Å	Held, P. *Acta Crystallogr., Sect. E* **2015**, *71*, m77. $((CH_3)_2NH_2)_2[Co(H_2O)_6](SO_4)_2\cdot 2H_2O$
710005	2.089 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2009**, *224*, 355. $Tl_2[Co(H_2O)_6](SO_4)_2$

AMIWOK	2.089 Å	Zhang, Z.-M.; Zangana, K. H.; Kostopoulos, A. K.; Tong, M.-L.; Winpenny, R. E. P. *Dalton Trans.* **2016**, *45*, 9041. $[Co(H_2O_6]((CH_3)_3NH)_4[GdC_{132}H_{282}N_{12}O_{90}P_{12}]\cdot 8CH_3CN\cdot 18H_2O$
DUDYAE	2.089 Å	Held, P. *Acta Crystallogr., Sect. E* **2015**, *71*, m3423. $((CH_3)_2NH_2)_2[Co(H_2O_6](SO_4)_2\cdot 2H_2O$
EKOYEK	2.089 Å	Bednarchuk, T. J. ; Kinzhybalo, V.; Pietraszko, A. *Acta Crystallogr., Sect. C* **2016**, *72*, 432. $[Co(H_2O)_6]_3(2\text{-}C_5H_4NNH_2)_2(SO_4)_4\cdot 2H_2O$
IWOXAU	2.089 Å	Wang, Q.-Y. ; Jiao, H. ; Zhu, H.-Y. *Rengong Jingti Xuebao* **2010**, *39*, 823. $[Co(H_2O_6](C_{18}H_{15}O_7S)_2\cdot 4H_2O$
MAZVIT01	2.089 Å	Tepavitcharova, S. ; Rabadjieva, D. ; Havlicek, D. ; Nemec, I. ; Vojtisek, P. ; Plocek, J. ; Koleva Z. *J. Mol. Struct.* **2012**, *1018*, 113. $[Co(H_2O)_6][Co(H_2O)_4(OCOCHNH_3)_2](SO_4)_2$
TAFYEG	2.089 Å	Zang, H.-Y.; Tan, K.; Guan, W.; Li, S.-L.; Yang, G.-S.; Shao, K.-Z.; Yan, L.-K.; Su, Z.-M. *CrystEngComm* **2010**, *12*, 3684. $[Co(H_2O)_6][CoMo_8C_{36}H_{40}N_{12}O_{28}]\cdot[Mo_8O_{26}]\cdot 6H_2O$
TAQXUF	2.089 Å	Paz, F. A. A.; Fa-Nian Shi;Mafra, L.; Makal, A.; Wozniak, K.; Trindade, T.; Klinowski, J.; Rocha, J. *Acta Crystallogr., Sect. E* **2005**, *61*, m1628. $[Co(H_2O)_6][CoV_2C_{14}H_{20}N_4O_{18}P_2]\cdot 2H_2O$
VOPLOD	2.089 Å	Garczarek, P.; Janczak, J.; Duczmal, M.; Zon, J. *Polyhedron* **2014**, *81*, 132. $[Co(H_2O)_6]_3(C_{12}H_{18}O_9P_3)_2\cdot 11H_2O$
ZAHVUD	2.089 Å	Uvarova, M. A.; Nefedov, S. E. *Koord. Khim.* **2020**, *46*, 608. $[Co(H_2O)_6](CF_3COO)_2\cdot C_4H_8O_2$
ZATXIE	2.089Å	Qin, L. ; Chen, H.-Z. ; Wang, Y.-Q. ; Ye, T.-Q. ; Zheng, H. G. *Inorg. Chem. Commun.* **2017**, *85*, 89. $[Co(H_2O)_6][Co_3C_{22}H_{32}O_{26}]\cdot 3H_2O$
916	2.090 Å	Vicat, J.; Qui, D. T.; Aleonard, S. *Acta Crystallogr. Sect. B* **1977**, *33*, 1180. $(NH_4)_2[Co(H_2O)_6][BeF_4]$
DIJROE	2.090 Å	Jakonen, M.; Hirva, P.; Nivajarvi, T.; Kallinen, M.; Haukka, M. *Eur. J. Inorg. Chem.* **2007**, 3497. $[Co(H_2O)_6][RuI_3(CO)_3]_2\cdot 2H_2O$
MAZVIT	2.090 Å	Fleck, M.; Bohaty, L. *Acta Crystallogr., Sect. C* **2006**, *62*, m22. $[Co(H_2O)_6][Co(H_2O)_4(OCOCHNH_3)_2](SO_4)_2$
MAZVIT03	2.090 Å	Oguey, S. ; Jacquier, Y. ; Neels, A. ; Stoeckli-Evans, H.CCDC deposition number 936396, **2013**. $[Co(H_2O)_6][Co(H_2O)_4(OCOCHNH_3)_2](SO_4)_2$
NIQGID	2.090 Å	In, Y.; Hayashi, C.; Ishida, T. *Inorg. Chim. Acta* **1997**, *260*, 111. $[Co(H_2O)_6](C_8H_9NO_7P)_2\cdot 4H_2O$
ULAXAI	2.090 Å	Golovnev, N. N.; Molokeev, M. S.; Lesnikov, M. K.; Atuchin, V. V. *Chem. Phys. Lett.* **2016**, *653*, 54. $[Co(H_2O)_6](C_8H_{11}N_2O_2S)_2\cdot 2H_2O$
VURWOW	2.090 Å	Naili, H. ; Said, S. CCDC deposition number 1433263, **2015**. $[Co(H_2O)_6](C_6H_9N_2)_2(SO_4)_2\cdot 2H_2O$
YAKLUT	2.090 Å	Xian, H.-D.; Liu, J.-F.; Zhao, G.-L. *Sci. Chin. Chem.* **2010**, *53*, 2539. $[Co(H_2O)_6][Co(C_{12}H_8N_2)_3]_2(C_{10}H_{16}O_8)_3\cdot 30H_2O$
YEJFUQ	2.090 Å	Zhang, W.-M.; Lu, Z.-M.; Li, W.; Chen, M. ; Caom, D.-M. *Z. Kristallogr. – New Cryst Struct.* **2012**, *227*, 311. $[Co(H_2O)_6][Co(H_2O)_2(C_7H_3NO_4)_2]\cdot 4H_2O$

66004	2.091 Å	Herdtweck, E.; Massa, W. *Z. Anorg. Allg. Chem.* **1989**, *579*, 191. $[Co(H_2O)_6][AlF_5(H_2O)]$
84310	2.091 Å	Lorenzo-Luis, P. A.; Martin-Zarza, P.; Gili, P.; Saez-Puche, R.; Jimenez-Jimenez, J.; Rodriguez-Castellon, E.; Ruiz-Perez, C.; Gonzalez-Platas, J.; Solans, X. *Eur. J. Solid State Inorg. Chem.* **1997**, *34*, 1259. $[Co(H_2O)_6]_3[TeMo_6O_{24}]$
99950	2.091 Å	Fleck, M.; Bohaty, L.; Tillmanns, E. *Solid State Sci.* **2004**, *6*, 469. $(C(NH_2)_3)_2[Co(H_2O)_6](SO_4)_2$
AMATOZ	2.091 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 138. $[Co(H_2O)_6](4\text{-}C_5H_4NNH_2)_2(SO_4)_2$
COHDPH02	2.091 Å	Kariuki, B. M; .Jones, W. *Acta Crystallogr., Sect. C* **1993**, *49*, 2100. $[Co(H_2O)_6](m\text{-}C_6H_4COO(COOH))_2$
COCXOI	2.091 Å	Zhang, S.-G.; Feng, Y.-L.; Wen, Y.-H. *Chin. J. Inorg. Chem.* **2008**, *24*, 581. $[Co(H_2O_6](C_6H_7N_4O_3S)_2$
FEGRAO	2.091 Å	Zhao, G.; Yuan, F.; Li, H.; Liu, J. *J. Mater. Sci.* **2021**, *56*, 6912. $(C_{22}H_{34}N_2)[Co(H_2O_6](p\text{-}C_6H_4(COO)_2)_2\cdot(CH_3)_2NCHO\cdot H_2O$
HTBZCO	2.091 Å	Ottersen, T.; Warner, L. G.; Seff, K. *Acta Crystallogr. Sect. B* **1974**, *30*, 1188. $[Co(H_2O)_6](C_{14}H_9O_4S_2)_2\cdot 4CH_3OH\cdot 6H_2O$
ININUP	2.091 Å	Liu, C.-B.; Wen, H.-L.; Gong, Y.-N.; Liu, X.-M.; Tan, S.-S. *Z. Anorg. Allg. Chem.* **2011**, *637*, 122. $[Co(H_2O)_6][CoC_{24}H_{24}N_2O_{16}]\cdot 2H_2O$
MAZVIT02	2.091 Å	Smolin, Y. I. ; Lapshin, A. E. ; Pankova, G. A. *J. Mol. Struct.* **2012**, *1018*, 113. $[Co(H_2O)_6][Co(H_2O)_4(OCOCHNH_3)_2](SO_4)_2$
ONOSUG	2.091 Å	Wagner, C.; Merzweiler, K. *Z. Anorg. Allg. Chem.* **2010**, *636*, 557. $[Co(H_2O)_6](p\text{-}O_3SC_6H_4COOH)_2$
UNAGEV	2.091 Å	Konar, S.; Zangrando, E.; Chaudhuri, N. R. *Inorg. Chim. Acta* **2003**, *355*, 264. $[Co(H_2O)_6](OOC(CH)_2COO)\cdot 2C_6H_{12}N_4\cdot 2H_2O$
WAJKUO	2.091 Å	Fleck, M.; Bohaty, L.; Tillmanns, E. *Solid State Sci.* **2004**, *6*, 469. $[Co(H_2O)_6](C(NH_2)_3)_2(SO_4)_2$
WEXJIV	2.091 Å	Gu, J.-Z.; Cai, Y.; Qian, Z.-Y.; Wen, M.; Shi, Z.-F.; Lv, S.-D. ; Kirillov, A. M. *Dalton Trans.* **2018**, *47*, 7431. $[Co(H_2O)_6][Co_2C_{60}H_{48}N_8O_{22}]\cdot 8H_2O$
XIQGIP	2.091 Å	Poleti, D. ; Rogan, J. *Acta Crystallogr., Sect. C* **2013**, *69*, 841. $Rb_2[Co(H_2O)_6](2\text{-}OOCC6H4COOH)_4\cdot 4H_2O$
XUXGUT	2.091 Å	Wu, J.; Pan, X.; Yao, L.; Wang, L.; Tang, N. *Supramol. Chem.* **2009**, *21*, 707. $[Co(H_2O)_6](ClO_4)_2\cdot 2(C_{21}H_{22}O_7)\cdot 2CH_3CN$
ZASREQ	2.091 Å	Porai-Koshits, M. A.; Antsyshkina, A. S.; Shkol'nikova, L. M.; Sadikov, C. G.; Davidovich, R. L. *Koord. Khim.* **1995**, *21*, 311. $[Co(H_2O)_6][BiC_{20}H_{24}N_4O_{16}]\cdot 3H_2O$
ZERCIK	2.091 Å	Luo, S.-Y. ; Wu, X.-L. ; Hu, Q.-P. ; Wang, J.-X. ; Liu, C.-Z. ; Sun, Y.-Y. *Zh. Strukt. Khim.* **2012**, *53*, 935. $[Co(H_2O)_6]_3[V_{10}O_{28}]\cdot 2C_8H_{18}N_2O_6S_2\cdot 3H_2O$
ZOYPOU	2.091 Å	Kumar, G. ; Kumar, G. ; Gupta, R. *Inorg. Chem.* **2015**, *54*, 2603. $[Co(H_2O)_6][Co_3C_{42}H_{29}N_6O_{16}]_2\cdot 22H_2O$

170042	2.092 Å	El Bali, B.; Essehli, R.; Capitelli, F.; Lachkar, M. *Acta Crystallogr. Sect. E* **2005**, *61*, i52. $NH_4[Co(H_2O)_6]PO_4$
419316	2.092 Å	Lu Yaokang; Feng Yunlong *Chin. J. Chem.* **2009**, *25*, 447. $Na_2[Co(H_2O)_6](SO_4)_2$
AFEXOA	2.092 Å	Martsinko, E. E.; Minacheva, L. K.; Chebanenko, E. A.; Seifullina, I. I.; Sergienko, V. S.; Churakov, A. V. *Zh. Neorg. Khim.* **2013**, *58*, 588. $[Co(H_2O)_6][GeC_{12}H_{10}O_{14}]\cdot 4H_2O$
CAGVOV03	2.092 Å	Li-Ya Wang; Yu Zhu; Chen-Xia Du; Huai-Bo Ma *J. Mol. Struct.* **2002**, *610*, 191. $[Co(H_2O)_6](C_{10}H_4O_8)$
FIYLAD	2.092 Å	Bazhina, E. S.; Gogoleva, N. V.; Aleksandrov, G. G.; Kiskin, M. A.; Efimov, N. N.; Bogomyakov, A. S.; Ugolkova, E. A.; Minin, V. V.; Sidorov, A. A.; Eremenko, I. L. *Chem. Sel.* **2018**, *3*, 13765. $[Co(H_2O)_6][CuC_{12}H_{14}O_9]$
GAWNAX	2.092 Å	Divekar, S. K.; Nagabhusan Achary, S.; Ajgaonkar, V. R. *Solid State Sci.* **2021**, *122*, 106768. $(CH_3)_4N)_2[Co(H_2O)_6](SeO_4)_2\cdot 4H_2O$
QEQTAH	2.092 Å	Furmanova, N. G.; Eremina, T. A.; Okhrimenko, T. M.; Kuznetsov, V. A. *Kristallografiya* **2000**, *45*, 842. $K_2[Co(H_2O)_6](1\text{-}COO\text{-}2\text{-}COOHC_6H_4)_4\cdot 4H_2O$
RENRIM	2.092 Å	Kumaresan, S. ; Ramadevi, P. ; Walsh, R. D. ; McAneny, A. ; Lake, C. H. *J. Chem. Sci.* **2006**, *118*, 243. $[Co(H_2O)_6](C_7H_6NO_3S)_2$
SAYVEU	2.092 Å	Abdelhak, J. ; Cherni, S. N. ; Jouini, T. *Z. Kristallogr. - New Cryst. Struct.* **2005**, *220*, 183. $[Co(H_2O)_6](C_7H_4O_6S)_2\cdot 2H_2O$
VAWXAS01	2.092 Å	Robl, C.; Hentschel, S. *Mater. Res. Bull.* **1991**, *26*, 1355. $[Co(H_2O)_6][CoC_{10}H_{10}O_{12}]\cdot 8H_2O$
110303	2.093 Å	Galloway, K. W.; Parkin, A.; Harte, S. M.; Ferguson, A.; Murrie, M. *Cryst. Eng. Comm.* **2006**, *8*, 346. $((CH_3)_4N)_2[Co(H_2O)_6](SO_4)_2\cdot 4H_2O$
170780	2.093 Å	Quarsal, R.; El Bali, B.; Lachkar, M.; Dusek, M.; Fejfarova, K. *Acta Crystallogr., Sect. E* **2005**, *61*, i168. $[Co(H_2O)_6][Co(HPO_3)_4]$
DUJXAI	2.093 Å	Kang, W.; Huo, L.-H.; Gao, S.; W.Ng, S. W. *Acta Crystallogr., Sect. E* **2009**, *65*, m1503. $[Co(H_2O)_6][CoC_8H_{18}N_6O_4](SO_4)_2\cdot 2H_2O$
EGUNEB	2.093 Å	Tang, S.-F.; Li, L.-J.; Lv, X.-X.; Wang, C.; Zhao, X.-B. *CrystEngComm* **2014**, *16*, 7043. $[Co(H_2O)_6]C_8H_{10}O_6P_2\cdot 2H_2O$
FIVHUP	2.093 Å	Liang, Y.; Zhang, Z.-M.; Liu, Z.-J.; Zhang, Y.; Zhang, J.; Wang, E.-B. *CrystEngComm* **2014**, *16*, 1187. $[Co(H_2O)_6]_2[Co_3V_{11}C_6H_{20}N_4O_{34}]\cdot 11H_2O$
IDAPAF	2.093 Å	Galloway, K. W.; Parkin, A.; Harte, S. M.; Ferguson, A.; Murrie, M. *CrystEngComm* **2006**, *8*, 346. $((CH_3)_4)_2[Co(H_2O)_6](SO_4)_2\cdot 4H_2O$
IDEBOK	2.093 Å	Han, L.-J.; Yang, S.-P.; Fu, L.-L.; Gao, H.-L. *Acta Crystallogr., Sect. E* **2011**, *67*, m1733. $[Co(H_2O)_6](C_9H_7O_4)_2\cdot 2H_2O$
KUYNEY	2.093 Å	Tang, P.; Ma, D.; Chen, Z.-Q. *Acta Crystallogr., Sect. E* **2010**, *66*, m1322. $[Co(H_2O)_6]C_{16}H_{12}O_6\cdot H_2O$

NAMNIZ	2.093 Å	Ya-Juan Zhao; Xin-Hua Li; Shun Wang *Acta Crystallogr., Sect. E* **2005**, *61*, m671. $C_6H_{14}N_2[Co(H_2O)_6](SO_4)_2$
NIHSOM01	2.093 Å	Genther, D. J.; Squattrito, P. J.; Kirschbaum, K.; Pinkerton, A. A. *Acta Crystallogr. Sect. E* **2007**, *63*, m2260. $[Co(H_2O)_6](C_{10}H_8NO_6S_2)_2\cdot 4H_2O$
QOQYEB	2.093 Å	Qian, X.-B.; Sun, W.-W.; Zhang, J.-Y.; Gao, E.-Q. *Wuji Huaxue Xuebao* **2009**, *25*, 171. $[Co(H_2O)_6]Co(H_2O)_4(C_{12}H_5O_7S_2)_2]\cdot 4H_2O$
UVOQUT	2.093 Å	Hassan, D. B.; Rekik, W.; Roza, A. O.; Mefteh, F. B.; Roisnel, T.; Bataille, T.; Naili, H. *Polyhedron* **2016**, *119*, 238. $[Co(H_2O)_6](C_4H_{12}N_2)_3(NO_3)_8\cdot 4H_2O$
WEMYOD	2.093 Å	Aloui, Z.; Abid, S.; Rzaigui, M. *Phosphorus, Sulfur, Silicon, Relat. Elem.* **2006**, *181*, 1725. $[Co(H_2O)_6](C_{12}H_{19}N_2)_2(P_4O_{12})_2$
WUCYOI	2.093 Å	Branco, L.; Costa, J.; Delgado, R.; Drew, M. G. B.; Felix, V.; Goodfellow, B. J. *J. Chem. Soc., Dalton Trans.* **2002**, 3539. $[Co(H_2O)_6][CoC_{20}H_{30}N_6]_2(SO_4)_4\cdot 2CH_3OH\cdot 8H_2O$
YEYYAC	2.093 Å	Podlaha, J.; Podlahova, J.; Stepnicka, P. *Poyhedron* **1994**, *13*, 2847. $[Co(H_2O)_6][Co_2C_{18}H_{24}O_{12}P_2]\cdot 6H_2O$
11440	2.094 Å	Ayer, G. B.; Klepov, V. V.; Smith, M. D.; Zur Loye H.-C. *Inorg. Chem. 58*, **2019**, 13049. $K_2[Co(H_2O)_6][Hf_2F_{12}]$
14347	2.094 Å	Montgomery, H.; Chastain, R. V.; Natt, J. J.; Witkowska, A. M.; Lingafelter, E. C. *Acta Crystallogr. Sect. B* **1967**, *22*, 775. $(NH_4)_2[Co(H_2O)_6](SO_4)_2$
51641	2.094 Å	Kockelmann, W.; Schäfer, W.; Kirfel, A.; Klapper, H.; Euler, H. *Mater. Sci. Forum* **2001**, *378*, 274. $Cs_2[Co(H_2O)_6][Hf2(SO_4)_2$
51643	2.094 Å	Kockelmann, W.; Schäfer, W.; Kirfel, A.; Klapper, H.; Euler, H. *Mater. Sci. Forum* **2001**, *378*, 274. $K_2[Co(H_2O)_6](SO_4)_2$
409494	2.094 Å	Euler, H.; Barbier, B.; Klumpp, S.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2000**, *215*, 473. $Rb_2[Co(H_2O)_6](SO_4)_2$
BEVSIH	2.094 Å	Liu, J. *Dyes Pigm.* **2018**, *154*, 92. $[Co(H_2O)_6](C_{12}H_{14}N_2)(p\text{-}C_6H_4(COO)_2)_2\cdot 4H_2O$
OBUPOT	2.094 Å	Felder, J.; Yeon, J.: Smith, M.; zur Loye, H.-C. *Inorg. Chem. Front.* **2017**, *4*, 368. $[Co(H_2O)_6][UF_5]_2\cdot 2H_2O$
OVIWEW	2.094 Å	Alsobrook, A. N.; Hauser, B. G.; Hupp, J. T.; Alekseev, E. V.; Depmeier, W.; Albrecht-Schmitt, T. E. *Cryst. Growth Des.* **2011**, *11*, 1385.
PIGRED	2.094 Å	Indrani, M.; Kumaresan, S.; Ramasubramanian, M.; Soriano-Garcia, M. *Anal.Sci.: X-Ray Struct. Anal. Online* **2007**, *23*, x127. $[Co(H_2O)_6](C_8H_8NO_3S)_2$
PIWFOQ	2.094 Å	Chavez, F. A.; Olmstead, M. M.; Mascharak, P. K. *Inorg. Chem.* **1997**, *36*, 6323. $[Co(H_2O)_6][CoC_{34}H_{34}N_{14}O_4]_2\cdot 10.8H_2O$

VUHQIA	2.094 Å	Wang, H.; Chu, W.; Yin, F.; Chen, B. CCDC deposition number 1406609, **2015**. $[Co(H_2O)_6](C_3H_5N_2)_2[Co(H_2O)_4(C_9H_3O_6)_2]$
ZADSOP	2.094 Å	An, H.; Wang, L.; Hu, Y.; Xu, T.; Hou, Y. *Inorg. Chem.* **2016**, *55*, 144. $[Co(H_2O)_6](C_8H_8NO_2)_4[Co_2Mo_{10}H_4O_{38}]\cdot 5H_2O$
1934	2.095 Å	Vicat, J.; Qui, D. T.;Filhol, A.; Roudaut, E.; Thomas, M.; Aleonard, S. *Acta Crystallogr. Sect. B* **1975**, *31*, 1895. $(NH_4)_2[Co(H_2O)_6][BeF_4]$
29829	2.095 Å	Liu, Y.; Deng, J.-X.; Pan, C.-Y. *J. Cluster Sci.* **2021**, *32*, 469. $[Co(H_2O)_6](NO_3)_2\cdot [Co(B_3O_3(OH)_4)]_2(H_2O)_4]\cdot 2H_2O$
68733	2.095 Å	Blackburn, A. C.; Gallucci, J. H.; Gerkin, R. E. *Acta Crystallogr., Sect. B* **1990**, *46*, 712. $[Co(H_2O)_6](BrO_3)_2$
92162	2.095 Å	Ishaque Khan, M.; Tabussum, S.; Zheng, C. *Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry* **2000**, 30, 1773. $(H_3O)_2[Co(H_2O)_6]_2[V_{10}O_{28}H_6]\cdot 4H_2O$
409648	2.095 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr. - New Cryst. Struc.* **2003**, *218*, 265. $(NH_4)_2[Co(H_2O)_6](SeO_4)_2$
AGOJUB	2.095 Å	Lee; U.; Joo; H.-C.; Cho, M.-A. *Acta Crystallogr., Sect. E* **2002**, *58*, m599. $K_4[Co(H_2O)_6][CoC_{10}H_{12}N_2O_8][Mo_8O_{26}]\cdot 6H_2O$
AGOKOZ	2.095 Å	Oleshkevich, E.; Romero, I.; Teixidor, F.; Vinas, C. *Dalton Trans.* **2018**, *47*, 14785. $[Co(H_2O)_6](C_2B_{12}H_2PO_2)_2$
CAWTEZ	2.095 Å	Riley, P. E.; Pecoraro, V. L.; Carrano, C. J.; Raymond, K. N. *Inorg. Chem.* **1983**, *22*, 3096. $[Co(H_2O)_6][CoC_{18}H_{16}N_2O_6]\cdot 4H_2O$
DEYVOU	2.095 Å	Chen, Z.; An, H.; Zhang, H.; Hu, Y. *CrystEngComm* **2013**, *15*, 4711. $[Co(H_2O)_6][Mo_8C_{12}H_{30}N_4O_{30}]\cdot 4H_2O$
DUJXAI01	2.095 Å	Boonmak, J.; ;Nakano, M.; Chaichit, N.; Pakawatchai, C.; Youngme, S. *Dalton Trans* **2010**, *39*, 8161. $[Co(H_2O)_6][CoC_8H_{18}N_6O_4](SO_4)_2\cdot 2H_2O$
DURBIC	2.095 Å	Al-Dajani, M. T. M.; Wahab, H. A.; Mohamed, N.; Goh, J. H..; Fun, H.-K. *Acta Crystallogr., Sect. E* **2010**, *66*, m917. $[Co(H_2O)_6](C_5H_8N_3)_2(SO_4)_2\cdot 2H_2O$
ENSUCO	2.095 Å	Pavelcik, F.; Soldanova, J.; Majer, J. *Collect. Czech. Chem. Commun.* **1980**, *45*, 1766. $[Co(H_2O)_6][Co_2C_{20}H_{24}N_4O_{16}]\cdot 8H_2O$
FIWQOR	2.095 Å	Karanovic, L.; Poleti, D.; Bogdanovic, G. A.; Spasojevic-De Bire, A. *Acta Crystallogr., Sect. C* **1999**, *55*, 911. $Na_2[Co(H_2O)_6](C_{10}H_4O_8)_2\cdot 4H_2O$
FOQLOM	2.095 Å	Yue-Qing Zheng; Jian-Li Lin; Ai-Ya Pan *Z. Allg. Anorg. Allg. Chem.* **2000**, *626*, 1718.
IDAFUQ	2.095 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Turnbull, M. M.; Mhiri, T.; Bataille, T. *Dalton Trans.* **2011**, *40*, 11613. $[Co(H_2O)_6](C_5H_{14}N_2)_2(SO_4)_2$

NETQOU	2.095 Å	Liu, B.; Li, X.-M.; Zhou, S.; Wang, Q.-W.; Li, C.-B. *Wuji Huaxue Xuebao* **2012**, *28*, 1019. $[Co(H_2O)_6][CoC_{12}H_{20}N_4O_6](C_6H_2O_4S)_2\cdot 2H_2O$
OYOSUR	2.095 Å	Duan, X.; Meng, Q.; Su, Y.; Li, Y.; Duan, C.; Ren, X.; Lu, C. *Chem. Eur. J.* **2011**, *17*, 9936. $[Co(H_2O)_6][CoC_{24}H_{36}N_4O_8][CoC_{34}H_{20}O_{18}]\cdot 12H_2O$
QANFUH	2.095 Å	Li; X.-H.; Xiao; H.-P.; Yang, S.-Z. *Acta Crystallogr., Sect. C* **2005**, *61*, m112. $[Co(H_2O)_6][CoC_{36}H_{48}N_6O_8](SO_4)_4\cdot 8H_2O$
RAXMEJ	2.095 Å	Bourne, S. A.; Moitsheki, L. J. *CrystEngComm.* **2005**, *7*, 674. $[Co(H_2O)_6]Br_2\cdot 2C_{10}H_8N_2O_2\cdot 2H_2O$
TELBAN	2.095 Å	Xiao-Ming Chen; Hui-An Chen; Bo-Mu Wu; Mak, T. C. W. *Acta Crystallogr., Sect. C* **1996**, *52*, 2693. $[Co(H_2O)_6][CoC_{11}H_{14}N_2O_9]_2$
VAQDOI	2.095 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal. Chem.* **2012**, *700*, 110. $[Co(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
ZISHIV	2.095 Å	Ying, L. CCDC depostion number 1886919, **2018**. $[Co(H_2O)_6](NO_3)_2\cdot[CoC_{16}B_6O_{18}]\cdot 2H_2O$
ZOPDEP	2.095 Å	Kammoun, O.; Naili, H.; Rekik, W.; Bataille, T.; Mhiri, T. *New J. Chem.* **2014** *39*, 2682. $[Co(H_2O)_6](C_7H_7N_2)_2)(SO_4)_2\cdot 4H_2O$
50582	2.096 Å	Kirfel, A.; Klapper, H.; Schaefer, W.; Schwabenlaender, F. *Z. Kristallogr.* **1998**, *213*, 456. $K_2[Co(H_2O)_6](SO_4)_2$
409720	2.096 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2003**, *218*, 265. $Rb_2[Co(H_2O)_6](SeO_4)_2$
409748	2.096 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2003**, *218*, 405. $Cs_2[Co(H_2O)_6](SeO_4)_2$
422597	2.096Å	Kaziev, G. Z.; Oreshikina, A. V.; Stepnova, A. F.; Holguin Quinones, S.; Stash, A. I.; Morales Sanchez, L. A. *Koord. Khim.* **2011**, *37*, 768. $(NH_4)_2[Co(H_2O)_6][HV_{10}O_{28}]\cdot 8H_2O$
BECTUA	2.096 Å	Zhong, K.-L.; Qian, M.-Y. *Acta Crystallogr., Sect. C* **2012**, *68*, m265. $[Co(H_2O)_6][CoC_{10}H_{12}N_2O_{10}S_2]\cdot[CoC_{10}H_{14}N_2O_7S]$
KERNEB	2.096 Å	Gao; J.-S.; Li; B.-Y.; Hou; G.-F.; Zhang; Y.-M.; Yan, P.-F. *Acta Crystallogr., Sect. E* **2006**, *62*, m3029. $[Co(H_2O)_6]C_8H_6NO_5\cdot 5H_2O$
KOLHOK	2.096 Å	Diaz-Gallifa, P.; Fabelo, O.; Pasan, J.; Canadillas-Delgado, L.; Lloret, F. L.; Julve, M.; Ruiz-Perez, C. *Inorg. Chem.* **2014**, *53*, 6299. $[Co(H_2O)_6][EuC_{10}H_6O_{10}]_2\cdot 10H_2O$
NENDOA	2.096 Å	Ning-Yi Jiang; Song-Lin Li *Jiegou Huaxue* **2006**, *25*, 957. $[Co(H_2O)_6]_2(ClO_4)_2\cdot 2C_{15}H_{14}N_2O_4\cdot 2H_2O$
OHINOL	2.096 Å	Tugba, A. CCDC deposition number 1566694, **2020**. $[Co(H_2O)_6][Co(H_2O)_4(C_6H_6N_2O)_2](SO_4)_2\cdot 2H_2O$
TANMIH	2.096 Å	Mao, N.; Zhang, B.; Yu, F.; Chen, X.; Zhuang, G.-L.; Wang, Z.; Ouyang, Z.; Zhang, T.; Li, B. *Dalton Trans.* **2017**, *46*, 4786. $[Co(H_2O)_6][Co(H_2O)_2(C_{13}H_7N_2O_6)_2]$

VAQCUN	2.096 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal. Chem.* **2012**, *700*, 110. $[Co(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
VAQCUN01	2.096 Å	Chen, L.-Z.; Huang, D.-D.; Pan, Q.-J.; Wang, F.-M. *Chin. Chem. Lett.* **2014**, *25*, 967. $[Co(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
VATHIJ	2.096 Å	Kumar, D.; Kapoor, I. P. S.; Singh, G.; Goel, N.; Singh, U. P. *Thermal Anal. Calorimetry* **2012**, *107*, 325. $[Co(H_2O)_6][Co(C_{10}H_8N_2)_3]2(NO_3)_8\cdot 7H_2O$
VATHIJ01	2.096 Å	Henling, L. M.; Marsh, R. E. *Acta Crystallogr., Sect. C* **2014**, *70*, 834. $[Co(H_2O)_6][Co(C_{10}H_8N_2)_3]2(NO_3)_8\cdot 7H_2O$
VOCDAS	2.096 Å	Zhang Hualin; Li Peiyi; Wang Boyi; Wu Jianhua; Zheng Peiju *Polyhedron* **1990**, *9*, 2873. $[Co(H_2O)_6][CoC_{12}H_{10}NO_7]_2\cdot 8H_2O$
WOQZUX	2.096 Å	Matovic, Z. D.; Ristic, B.; Joksovic, M.; Trifunovic, S. R.; Pelosi, G.; Ianelli, S.; Ponticelli, G. *Transition Met. Chem.* **2000**, *25*, 720. $[Co(H_2O)_6][CuC_7H_6N_2O_6]\cdot 2H_2O$
WURQUX	2.096 Å	Palmucci, J.; Mahmudov, K. T.; Fatima M.; Guedes da Silva, C.; Martins, L. M. D. R. S.; Marchetti, F.; Pettinari, C.; Pombeiro, A. J. L. *RSC Adv.* **2015**, *5*, 84142. $[Co(H_2O)_6][CoC_{20}H_{12}N_8O_8]_2\cdot 8H_2O$
WUYHUT	2.096 Å	Lin-Ping Zhang; Hai-Bin Song; Quan-Min Wang; Mak, T. C. W. *Polyhedron* **2003**, *22*, 811. $[Co(H_2O)_6]Cl_2\cdot(C_{22}H_{20}N_2O_6)\cdot 2H_2O$
XACMOG	2.096 Å	Wang, X.; Liu, D.; Lin, H.; Liu, G.; Wang, X.; Le, M.; Rong, X. *CrystEngComm* **2016**, *18*, 888. $[Co(H_2O)_6][CoMo_4C_{24}H_{19}N_6O_{20}]_2\cdot 10H_2O$
YOBWUI	2.096 Å	Kolotilov, S. V.; Schollmeyer, D.; Thompson, L. K.; Golub, V.; Addison, A. W.; Pavlishchuk, V. V. *Dalton Trans.* **2008**, 3007. $[Co(H_2O)_6][Cu_3C_{18}H_{14}N_{12}O_9]\cdot 4H_2O$
409740	2.097 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2003**, *218*, 409. $Cs_2[Co(H_2O)_6](SO_4)_2$
161176	2.097 Å	Abrahams, B. F.; Haywood, M. G.; Robson, R. *Crystal Growth Design* **2008**, *8*, 1288. $[Na_4(H_2O)_{17}][Co(H_2O)_6]_2[(Co(H_2O)_2)_{1.5}Cu(SO_3)_4]_2$
CUCKIV	2.097 Å	Zhou, Z.; He, X.; Zhao, Y.; Shao, M.; Zhu, S. *Dalton Trans.* **2009**, 2802. $[Co(H_2O)_6][Co_3C_{28}H_{12}N_4O_{18}]\cdot 10H_2O$
DUBYIJ	2.097 Å	Liang, W.-L.; Yu, Q.; Zhang, X.-Q.; Qin, J.-K.; Liang, H. *Acta Crystallogr., Sect. E* **2007**, *63*, m1006. $[Co(H_2O)_6](C_9H_{10}N_8O_4S_2)$
EJULEC	2.097 Å	Zhang, Z.-M.; Duan, X.; Yao, S.; Wang, Z.; Lin, Z.; Li, Y.-G.; Long, L.-S.; Wang, E.-B.; Lin, W. *Chem. Sci.* **2016**, *7*, 4220. $(NH_4)_8(C_6H_{13}N_4)_5[Co(H_2O)_6]_2[Co_4Sb_9W_{24}C_{18}H_{42}N_{12}O_{100}]\cdot 29H_2O$
IDERIV	2.097 Å	Liu, J. *Chem Sel.* **2018**, *3*, 8356. $[Co(H_2O)_6](C_{14}H_{18}N_2)(p\text{-}C_6H_4(COO)_2)_2\cdot 4H_2O$
KOLHIE	2.097 Å	Diaz-Gallifa, P.; Fabelo, O.; Pasan, J.; Canadillas-Delgado, L.; Lloret, F. L.; Julve, M.; Ruiz-Perez, C. *Inorg. Chem.* **2014**, *53*, 6299. $[Co(H_2O)_6][NdC_{10}H_6O_{10}]_2\cdot 10H_2O$

PACJUZ	2.097 Å	Guo-Li Zheng; Jian-Fang Ma; Jin Yang *J. Chem. Res.* **2004**, 387. $[Co(H_2O)_6][CoC_{20}H_{60}N_4O_{28}P_8]\cdot 12H_2O$
PEVYAT	2.097 Å	Santoso, S. P.; Ismadji, S.; Angkawijaya, A. E.; Soetaredjo, F. E.; Go, A. W.; Ju, Y. H. *J. Mol. Liq.* **2016**, *221*, 617. $[Co(H_2O)_6][2,6\text{-}(OH)_2C_4H_3COOH)_2\cdot 2H_2O$
TEVQIV	2.097 Å	Ai-E Shi; Shuang Zhang; Bai-Yan Li; Yan-Jun Hou; Guang-Feng Hou *Acta Crystallogr., Sect. E* **2009**, *65*, m1006. $[Co(H_2O)_6](4\text{-}SCH_2COOH\text{-}C_6H_4NO_2)_2$
YADTII	2.097 Å	Zhang, L.-W.; Gao, S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2011**, *67*, m1519. $[Co(H_2O)_6](C_{10}H_{13}NO_3)_2\cdot 2H_2O$
50583	2.098 Å	Kirfel, A.; Klapper, H.; Schaefer, W.; Schwabenlaender, F. *Z. Kristallogr.* **1998**, *213*, 456. $K_2[Co(H_2O)_6](SO_4)_2$
GIMPEZ	2.098 Å	Kovalchukova, O. V.; Stash, A. I.; Nguen, D. D.; Strashnova, S. B.; Belsky, V. K. *Koord. Khim.* **2013**, *39*, 136. $[Co(H_2O)_6](C_5HN_2O_6)_2\cdot 2H_2O$
HULMAC	2.098 Å	Rodriguez-Martin, Y.; Sanchiz, J.; Ruiz-Perez, C.; Lloret, F.; Julve, M. *Cryst. Eng. Comm.* **2002**, *4*, 631. $[Co(H_2O)_6][Cu(H_2O)_2(C_2O_4)_2]$
ZEBSII	2.098 Å	Lukes, I.; Cisarova, I.; Vojtisek, P.; Bazakas, K. *Polyhedron* **1995**, *14*, 3163. $[Co(H_2O)_6](C_6H_{14}N_2O_4P_2)_2$
162315	2.099 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 74. $K_2[Co(H_2O)_6](SO_4)_2$
409999	2.099 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struc.* **2009**, *224*, 351. $K_2[Co(H_2O)_6](SeO_4)_2$
BUGFEO	2.099 Å	Gatehouse, B. M. *Cryst. Struct. Commun.* **1982**, *11*, 1793. $[Co(H_2O)_6](C_{13}H_{10}NO_4S)_2$
QESFUP	2.099 Å	Ammar, M. K.; Jouini, T.; Driss, A. *J. Chem. Cryst.* **2000**, *30*, 265. $[Co(H_2O)_6][CoC_{12}H_{32}N_8O_4](SO_4)_2\cdot 6H_2O[Co(H_2O)_6][CoC_{12}H_{32}N_8O_4](SO_4)_2\cdot 6H_2O$
QESFUP01	2.099 Å	Chew Hee Ng; Siang Guan Teoh; N.Moris; Siaw Yang Yap *J. Coord. Chem.* **2004**, *57*, 1037.
RISPEP	2.099 Å	Aghabozorg, H.; Gharamaleki, J. A.; Daneshvar, S.; Ghadermazi, M.; Khavasi, H. R. *Acta Crystallogr., Sect. E* **2008**, *64*, m187. $[Co(H_2O)_6](C_3H_7N_6)_2[CoC_{14}H_6N_2O_8]_2\cdot 4H_2O$
SIWWIE10	2.099 Å	Yue Guan; Yi-Gui Gao; Yen-Chywan Liaw; Robinson, H..; Wang, A. H.-J. *J. Biomol. Struct. Dyn.* **1993**, *11*, 253. $[Co(H_2O)_6][Co(H_2O)_4(C_{22}H_{22}N_{10}O_{14}P_2)_2]\cdot 12H_2O$
VILQIR	2.099 Å	Khatua, S.; Harada, T.; Kuroda, R.; Bhattacharjee, M. *Chem. Commun.* **2007**, 3927. $[Co(H_2O)_6][MoC_{19}H_{26}NO_7]_2\cdot[CoMo_2C_{38}H_{60}NO_{18}]\cdot 2(CH_3)_2CHOH\cdot 4H_2O$
APOWUZ	2.100 Å	Paul, L.; Dolai, M.; Panja, A. ; M.Ali, M. *New J. Chem.* **2016**, *40*, 6931. $[Co(H_2O)_6](C_6H_{16}N_2O)_2[Mo_5O_{23}P_2]\cdot 4H_2O$
ZZZPAU01	2.100 Å	Morris, J. E.; Squattrito, P. J.; Kirschbaum, K.; Pinkerton, A. A. *J. Chem. Cryst.* **2003**, *33*, 307. $[Co(H_2O)_6](C_{10}H_8NO_3S)_2\cdot 3H_2O$
143144	2.101 Å	Si, C.; Ma, P.; Han, Q.; Jiao, J.; Du, W.; Wu, J.; Li, M.; Niu, J. *Inorg. Chem.* **2021**, *60*, 682. $[Co(H_2O)_6]_2[Co(H_2O)_4(WZn_3(H_2O)_2)(ZnW_9O_{34})_2]\cdot 8H_2O$

AYOFAX	2.101 Å	Baruah, J. B. CCDC deposition number 749993, **2016**. $[Co(H_2O)_6](p\text{-}OCCC_6H_4OH)_2\cdot 2C_7H_4NO_4\cdot 3H_2O$
MOTMIS	2.101 Å	Wang, J.; Ma, P.; Shen, Y; Niu, J. *Cryst. Growth Des.* **2008**, *8*, 3130. $(H_3N(CH_2)_6NH_3)_4[Co(H_2O)_6][Co_4Ge_2W_{18}H_6O_{70}]\cdot 5.5H_2O$
VAWXAS	2.101 Å	Poleti, D.; Karanovic, L. *Acta Crystallogr., Sect. C* **1989**, *45*, 1716. $[Co(H_2O)_6][CoC_{10}H_{10}O_{12}]\cdot 7.36H_2O$
VONRAT	2.101 Å	Garczarek, P.; Janczak, J.; Duczmal, M.; Zon, J. *Polyhedron* **2014**, *81*, 132. $[Co(H_2O)_6](C_{12}H_{19}O_9P_3)\cdot 6H_2O$
162999	2.102 Å	Zheng Guoli; Ma Jianfang; Yang Jin *J. Chem. Res.* **2004**, 387. $[Co(H_2O)_6][Co(H_2O)_4(((CH_2)(PO_3H))_2(NH)(CH_2)_6(NH)((CH_2)(PO_3H))_2)_2]\cdot 12H_2O$
ASUDIB	2.102 Å	Ji-Wei Liu; J.-W.; Huo; L.-H.; Gao; S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2004**, *60*, m439. $[Co(H_2O)_6]p\text{-}C_6H_4(OCH_2COO)_2$
AZIHIC	2.102 Å	Gong, T.; Lou, X.; Fang, J.-J.; Gao, E.-Q.; Hu, B. *Dalton Trans.* **2016**, *45*, 10109. $[Co(H_2O)_6][Co_3C_{26}H_{18}N_{17}O_{10}]_2\cdot 4H_2O$
DOWFUS	2.102 Å	Clegg, W.; Holcroft, J. M. *Cryst Growth Des.* **2014**, *14*, 6282. $[Co(H_2O)_6][Co_5C_{24}H_{40}O_{44}]\cdot 4H_2O$
EBIKUX	2.102 Å	Shi, L.-X.; Xu, X.; Wu, C.-D. *CrystEngComm* **2011**, *13*, 6027. $[Co(H_2O)_6][GdC_{18}H_{10}N_2O_{20}]\cdot 3H_2O$
FEMHEN	2.102 Å	Shankar, K.; Baruah, J. B. *Chem. Sel.* **2016,** *1*, 5152. $[Co(H_2O)_6][CoC_{52}H_{58}N_{10}O_8]Cl_4\cdot 5H_2O$
KOMGOK	2.102 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Co(H_2O)_6][CoGdC_{12}H_{12}O_{15}]\cdot 6H_2O$
TUGCEG	2.102 Å	Liu, J.; Lu, Y.; Lu, W. *Dalton Trans.* **2020**, *49*, 4044. $[Co(H_2O)_6][CoC_{10}H_{10}O_{12}]\cdot C_{26}H_{20}N_2O_4\cdot 4H_2O$
VENDIB	2.102 Å	Burstein, I. F.; Gerbeleu, N. V.; Bologa, O. A.; Verezhan, A. V.; Malinovskii, T. I. *Dokl. Akad. Nauk SSSR* **1988**, *300*, 1382. $[Co(H_2O)_6][CoC_6H_4N_6O_4S_2]_2\cdot 3H_2O$
YUJCOY	2.102 Å	Chen, X.-L.; Shen, Y.-J.; Gao, C.; Yang, J.; Sun, X.; Zhang, X.; Yang, Y.-D.; Wei, G.-P.; Xiang, J.-F.; Sessler, J. L; Gong, H.-Y. *J. Am. Chem. Soc.* **2020**, *142*, 7443. $[Co(H_2O)_6](C_{38}H_{34}N_{10})(1,4\text{-}(OOC)C_6H_4))_3\cdot 2(CH_3)_2NCHO\cdot 2H_2O$
ZADSUV	2.102 Å	An, H.; Wang, L.; Hu, Y.; Xu, T.; Hou, Y. *Inorg. Chem.* **2016**, *55*, 144. $[Co(H_2O)_6](C_8H_8NO_2)_4[Co_2Mo_{10}H_4O_{38}]\cdot 5H_2O$
418030	2.103 Å	Mestiri, I.; Aved, B.; Haddad, A. *J. Cluster Sci.* **2013**, *24*, 85. $Na_4[Co(H_2O)_6][V_{10}O_{28}]\cdot 18H_2O$
AYABOR	2.103 Å	Guo; Q.-L.; Zhu; W.-X.; Ma; S.-L.; Dong; S.-J.; Xu, M.-Q.; *Polyhedron* **2004**, *23*, 1461. $[Co(H_2O)_6](C_{12}H_{28}N_2O_4)[CoC_{24}H_{18}O_{19}S_8]_2\cdot 2C_{12}H_{26}N_2O_4\cdot 12H_2O$
DUNJON	2.103 Å	Song, B.-Q.; Wang, X.-L.; Sun, C.-Y.; Zhang, Y.-T.; Wu, X.-S.; Yang, L.; Shao, K.-Z.; Zhao, L.; Su, Z.-M. *Dalton Trans.* **2015**, *44*, 13818. $[Co(H_2O)_6][CoW_9C_{36}H_{36}N_{12}O_{40}P]_2\cdot 10H_2O$
IDANUX	2.103 Å	Galloway, K. W.; Parkin, A.; Harte, S. M.; Ferguson, A.; Murrie, M. *CrystEngComm* **2006**, *8*, 346. $((C_2H_5)_4)_2[Co(H_2O)_6](SO_4)_2\cdot 4H_2O$
LUVMIZ	2.103 Å	Kunnas-Hiltunen, S.; Laurila, E.; Haukka, M.; Vepsalainen, J.; Ahlgren, M. *Z. Anorg. Allg. Chem.* **2010**, *636*, 710. $[Co(H_2O)_6](C_{15}H_{10}Cl_2O_8P_2)\cdot[Co(H_2O)_5(C_{15}H_{10}Cl_2O_8P_2)]\cdot 2H_2O$

SEFXEH	2.103 Å	Sheshmani, S.; Aghabozorg, H. ; Panah, F. M. ; Alizadeh, R. ; Kickelbick, G. ; Nakhjavan, B. ; Moghimi, A., Ramezanipour, F. ; Aghabozorg, H. R. *Z. Anorg. Allg. Chem.* **2006**, *632*, 469. $C(NH_2)_3[Co(H_2O)_6][CoC_{14}H_6N_2O_8]$
ZIQGEN	2.103 Å	Niu, Z.; Ma, J.-G.; Shi, W.; Cheng, P. *Chem. Commun.* **2014**, *50*, 1839. $[Co(H_2O)_6][Co_3Gd_2C_{42}H_{28}N_6O_{36}]\cdot 6H_2O$
HADXES	2.104 Å	Falaise, C.; Delille, J. ; Volkringer, C. ; Vezin, H.; Rabu, P. ; Loiseau, T. *Inorg. Chem.* **2016**, *55*, 10453. $[Co(H_2O)_6][U_2C_{24}H_{12}O_{16}]\cdot 3H_2O$
RAXMIN	2.104 Å	Bourne, S. A.; Moitsheki, L. J. *CrystEngComm* **2005**, *7*, 674. $[Co(H_2O)_6]Cl_2\cdot 2C_{10}H_8N_2O_2\cdot 8H_2O$
VILQUD	2.099 Å	Khatua, S.; Harada, T.; Kuroda, R.; Bhattacharjee, M. *Chem. Commun.* **2007**, 3927. $[Co(H_2O)_6][MoC_{19}H_{26}NO_7]_2\cdot 3H_2O$
COXSIR	2.106 Å	Zviedre, I. I.; Fundamenskii, V. S.; Kolesnikova, G. P. *Koord. Khim.* **1984**, *10*, 1408. $[Co(H_2O)_6]_2(C_{12}H_{12}BO_{14})_2\cdot 2H_2O$
GENBIO	2.106 Å	Serezhkin, V. N.; Shimin, N. A.; Grigoriev, M. S.; Serezhkina, L. B. *Russ. J. Coord. Chem.* **2022**, *48*, 579. $[Co(H_2O)_6][UO_2(O_2C_4H_5)_3]_2\cdot 8H_2O$
MOBFIT	2.106 Å	Campo, J.; Falvello, L. R.; Mayoral, I.; Palacio, F.; Soler, T.; Tomas, M. *J. Am. Chem. Soc.* **2008**, *130*, 2932. $Cs_4[Co(H_2O)_6]_2[Co_{13}C_{48}H_{68}O_{74}]\cdot 3H_2O$
SIDKAS	2.106 Å	Sun, R.; Li, Y.-Z.; Bai, J.; Pan, Y. *Cryst. Growth Des.* **2007**, *7*, 890. $[Co(H_2O)_6]_2[Co_2C_{30}H_{36}N_6O_{24}]\cdot 3H_2O$
10216	2.107 Å	Rau, V. G.; Kurkutova, E. N. *Kristallografiya* **1972**, *17*, 1124. $(NH_4)_2[Co(H_2O)_6](SO_4)_2$
POGQIO	2.107 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A. *Dalton Trans.* **2019**, *48*, 7006. $[Co(H_2O)_6][Co(H_2O)_2(C_6H_3N_7O_3)_2]_{0.26}[Co(H_2O)_2(C_6H_3N_7O_3)_2]_{0.74}$
CAFHAU	2.108 Å	Zhang, Y.-N.; Zhou, B.-B.; Sha, J.-Q.; Su, Z.-H. *Fenzi Kexue Xuebao* **2011**, *27*, 7. $[Co(H_2O)_6]_2(C_5H_6N)_6[CoMo_{12}H_6O_{62}P_8]\cdot 10H_2O$
23934	2.109 Å	Zalkin, A.; Ruben, H.; Templeton, D. H. *Acta Crystallogr.* **1962**, *15*, 1219. $[Co(H_2O)_6]SO_4$
GADPAF	2.109 Å	Surinwong, S.; Yoshinari, N.; Yotnoi, B.; Konno, T. *Chem. Asian J.* **2016**, *11*, 486. $[Co(H_2O)_6]_2[Co(H_2O)_4][Au_3Co_2C_{30}H_{54}N_6O_{12}S_6]_2\cdot xH_2O$
TIZQAX	2.110 Å	Wolodkiewicz, W.; Brzyska, W.; Rzaczynska, Z.; Glowiak, T. *Pol. J. Chem.* **1995**, *69*, 1392. $[Co(H_2O)_6]B_{12}H_{12}$
AHIWUM	2.111 Å	Jiang, Z.-G.; Mao, W.-T.; Huang, D.-P.; Wang, Y.; Wang, X.-J.; Zhan, C. H. *Nanoscale* **2020**, *12*, 10166. $Na[Co(H_2O)_6][H_2W_{12}O_{40}P]Co(H_2O)_4]_3\cdot 3C_{48}H_{80}O_{40}\cdot 6H_2O$
BILWEB	2.112 Å	Duan, Y.; Clemente-Juan, J. M.; Gimenez-Saiz, C.; Coronado, E. *Front. Chem.* **2018**, *6*, 231.
MGHBZB10	2.112 Å	Nadzhafov, G. N.; Mamedov, K. S.; Shnulin, A. N.; Movsumov, E. M.; Amiraslanov, I. R.; Usubaliev, B. T.; Akhmedov, A. I. *Dokl. Akad. Nauk Az. SSR* **1980**, *36*, 36. $[Co(H_2O)_6]_2(p\text{-}OOCC_6H_4OH)_2\cdot 2H_2O$

MGHBZB20	2.112 Å	Shnulin, A. N.; Nadzhafov, G. N.; Amiraslanov, I. R.; Usubaliev, B. T.; Mamedov, K. S. *Koord. Khim.* **1981**, *7*, 1409. $[Co(H_2O)_6]_2(p\text{-}OOCC_6H_4OH)_2\cdot 2H_2O$
VUXVEQ	2.114 Å	Palacios, M. A.; Rodriguez-Dieguez, A.; Sironi, A.; Herrera, J. M.; Mota, A. J.; Cano, J.; Colacio, E. *Dalton Trans.* **2009**, 8538. $[Co(H_2O)_6][NiC_{54}H_{36}N_{12}O_6]\cdot C_4H_8O\cdot 10H_2O$
HAHKOR	2.118 Å	Worl, S.; Hellwinkel, D.; Pritzkow, H.; Hofmann, M.; Kramer, R. *Dalton Trans.* **2004**, 2750. $[Co(H_2O)_6]_2[CoC_{21}H_{14}NO_7]_2\cdot 6H_2O$
XAJPOO	2.118 Å	Milway, V. A.; Thompson, L. K.; Miller, D. O. *Chem. Commun.* **2004**, 1790. $[Co(H_2O)_6][Co_{12}C_{207}H_{138}Cl_9N_{51}O_{48}](NO_3)_8\cdot 3CH_3CN\cdot 6H_2O$
HIGQIA	2.119 Å	Hou, Y.; An, H.; Zhang, Y.; Hu, T.; Yang, W.; Chang, S. *ACS Catal.* **2018**, *8*, 6062. $K_{10}[Co(H_2O)_6]_2[AsMo_6C_{21}H_{15}O_{30}]_2\cdot 23H_2O$
166931	2.120 Å	Tang J.; Yang X.; Zhang X.; Wang M.; Wu, W. *Dalton Trans.* **2010**, *39*, 3396. $[Co(H_2O)_6]_2\{[Co(H_2O)_4]_2[Co(H_2O)_5)_2]WZn[Co(H_2O)]_2\ (ZnW_9O_{34})_2]\cdot 10H_2O$
IQUDON	2.124 Å	Kom-Bei Shiu; Chia-Hung Yen; Fen-Ling Liao; Sue-Lein Wang *Acta Crystallogr., Sect. E* **2004**, *60*, m35. $[Co(H_2O)_6][CoC_{14}H_6N_2O_8]\cdot 2H_2O$
418653	2.131 Å	Driss, H.; Thouvenot, R.; Debbabi, M. *Polyhedron* **2008**, *27*, 2059. $K_2[Co(H_2O)_6][V_2W_4O_{19}]$
418652	2.132 Å	Driss, H.; Thouvenot, R.; Debbabi, M. *Polyhedron* **2008**, *27*, 2059. $K_2[Co(H_2O)_6][V_2W_4O_{19}]$
HIGRIB	2.137 Å	Hou, Y.; An, H.; Zhang, Y.; Hu, T.; Yang, W.; Chang, S. *ACS Catal.* **2018**, *8*, 6062. $K_6(H_3O)_2[Na(H_2O)_6]_2[Co(H_2O)_6][AsMo_6C_9H_{21}N_3O_{27}]_4\cdot 27H_2O$
28662	2.146 Å	Ferrari, A.; Colla, C. *Gazz. Chim. Ital.* **1937**, *67*, 294. $[Co(H_2O)_6](H_2PO_4)_2$
MAJREX	2.160 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y., Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Co(H_2O)_6][KNdC_{30}H_{36}Cl_2N_{20}O_{13}]_2Cl_6\cdot 21H_2O$
GIMPAV	2.162 Å	Kovalchukova, O. V.; Stash, A. I.; Nguen, D. D.; Strashnova, S. B.; Belsky, V. K. *Koord. Khim.* **2013**, *39*, 136. $[Co(H_2O)_6][C_5HN_2O_6)_2\cdot 2H_2O$
MAJRAT	2.163 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y., Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Co(H_2O)_6][KPrC_{30}H_{36}Cl_2N_{20}O_{13}]_2Cl_6\cdot 19H_2O$
ROSSID	2.164 Å	Zhu, Z.; Bai, Y.-L.; Zhang, L.; Sun, D.; Fang, J.; Zhu, S. *Chem. Commun.* **2014**, *50*, 14674. $((CH_3)_2NH_2)_6[Co(H_2O)_6]3[CoC_{54}H_{36}N_{12}O_{30}]_2\cdot 6H_2O$
CIKYAY	2.174 Å	Shankar, K.; Das, B.; Baruah, J. B. *Eur. J. Inorg. Chem.* **2013**, 6147. $[Co(H_2O)_6][CuC_{14}H_6N_2O_8]\cdot 2H_2O$
ROCFUL	2.177 Å	Bi, J.; Kong, L.; Huang, Z.; Liu, J. *Inorg. Chem.* **2008**, *47*, 4564. $[Co(H_2O)_6][CoC_{24}H_{20}N_4O_2](C_9H_3O_6)_2\cdot 21.5H_2O$
ESECOW	2.178 Å	Tian, D.; Xu, J.; Xie, Z.; Yao, Z.-Q.; Fu, D.-L.; Zhou, Z.; Bu, X.-H. *Adv. Sci.* **2016**, *3*, 1500283. $[Co(H_2O)_6][Co_6C_{168}H_{134}N_{12}O_8]$

249616	2.197 Å	Xiaobing; C.; Kechang; L.; Ling; Y.; Yan; C.; Jiqing; X.; Weijie; D.; Haihui; Y.; Zhihui; J.; Jiwen, C. *J. Solid State Chem.* **2008**, *181*, 221. $[H_2As_6V_{15}O_{42}(H_2O)][Co(H_2O)_6]_2 \cdot 2H_2O$
GADPAF	2.241 Å	Surinwong, S.; Yoshinari, N.; Yotnoi, B.; Konno, T. *Chem. Asian J.* **2016**, *11*, 486. $[Co(H_2O)_6]_3[Au_3Co_2C_{30}H_{54}N_6O_{12}S_6]_2 \cdot xH_2O$
Mean	**2.088 Å/446 structures**	

Dimeric hydrate

Six-coordination, octahedral configuration

ICSD/CSD code	d(Co-O)$_b$ + d(Co-O)$_t$/d(Co···Co)	Reference, compound formula
$[Co_2(H_2O)_{10}]^{4+}$		
KOMWOZ	2.174 + 2.033 Å	Han, Y.-F.; Li, M.; Wang, T.-W.; Li, Y.-Z.; Shen, Z.; Song, Y.; You; X.-Z. *Inorg. Chem. Comm.* **2008**,
	3.355 Å	*11*, 945. $[Co_2(H_2O)_{10}](C_{10}H_2O_8S_2)_2 \cdot 2H_2O$

Cobolt(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Co-O)	Reference, compound formula
201214	1.873 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Co(H_2O)_6](SO_4)_2 \cdot 6H_2O$

Table S1au. Summary of solid state structures containing hydrated rhodium(III) and iridium ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Rh/Ir-O bond distance, *d*(Rh/Ir-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Rhodium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Rh-O)	Reference, compound formula
186466	2.013 Å	Vorob'eva, S. N.; Baidina, I. A.; Belyaev, A. V.; Alferova, N. I. *J. Struct. Chem.* **2012**, *53*, 125. $[Rh(H_2O)_6]PO_4$
186465	2.014 Å	Vorob'eva, S. N.; Baidina, I. A.; Belyaev, A. V.; Alferova, N. I. *J. Struct. Chem.* **2012**, *53*, 125. $[Rh(H_2O)_6]_2(SO_4)_3 \cdot 5H_2O$
30747	**2.016 Å**	**Armstrong, R. S.; Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* 1983, 1973. $Cs[Rh(H_2O)_6](SO_4)_2 \cdot 6H_2O$**
136172	2.043 Å	Albrecht, R; Bretschneider, V.; Doert, T.; Ruck, M. Z. Anorg. Allg. Chem. 2021, 647, 1702. $Ba_3[Rh(H_2O)_6] \cdot H_2O$
69059	2.132 Å	Fallon, G. D.; Spiccia, L. *Aust. J. Chem.* **1989**, *42*, 2051. $[Rh(H_2O)_6](ClO_4)_3 \cdot 3H_2O$
Mean	**2.022 Å/4 structures**	

Iridium(III)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ir-O)	Reference, compound formula
30748	**2.042 Å**	**Armstrong, R. S.; Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* 1983, 1973. $Cs[Ir(H_2O)_6](SO_4)_2 \cdot 6H_2O$**
Mean	**2.042 Å/1 structure**	

Table S1av. Summary of solid state structures containing hydrated nickel(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ni-O bond distance, *d*(Ni-O); ; *d*(Ni-O)$_b$ denotes bridging ligands and *d*(Ni-O)$_t$ terminal ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Nickel(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Ni-O)	Reference, compound formula
GIDGAD	2.008 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $[Ni(H_2O)_6]_2[Ni_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot 68.08H_2O$
KAXLEB	2.024 Å	Wang, X.-B.;, Z.-T.; Wang, Q.-Y. *Struct. Chem.* **2005**, *16*, 461. $[Ni(H_2O)_6](C_{16}H_{11}O_7S)_2\cdot 10H_2O$
QOBTUX	2.024 Å	Zhang, Z.-T.; Guo, Y.-N.; Liu, Q.-G. *Chin. J. Chem.* **2004**, *22*, 971. $[Ni(H_2O)_6](C_{17}H_{13}O_9S)_2\cdot 10H_2O$
CUYHEJ	2.025 Å	Silin, E. Y.; Bel'skii, V. K.; Zinchenko, R. V.; Tetere, I. V.; Ozolin'sh, G. V. *Latv. PSR Zinat. Akad. Vestis, Khim. Ser.* **1984**, 369. $[Ni(H_2O)_6](C_6H_{24}B_{12}O_{26})$
QOQGEP	2.025 Å	Hu, B.-W.; Zhao, J.-T.; Tao, J.; Sun, X.-J.; Yang, Q.; Zhang, X.-F.; Bu, X.-H. *Cryst. Growth Des.* **2010**, *10*, 2829. $[Ni(H_2O)_6]Ni_{12}C_{72}H_{60}N_{48}O_{30})\cdot 2H_2O$
151980	2.026 Å	Tiritiris, I.; Van, N.-D.; Schleid, T. *Z. Anorg. Allg. Chem.* **2004**, *630*, 1763. $[Ni(H_2O)_6]B_{12}H_{12}\cdot 6H_2O$
XOXGID	2.026 Å	Thuery, P.; Atoini, Y.; Harrowfield, J. *Cryst. Growth Des.* **2019**, *19*, 6611. $[Ni(H_2O)_6]_2(NH_4)_6[U_4C_{60}H_{48}O_{32}]_2[UC_{50}H_{48}O_{32}]$
68364	2.029 Å	Jouini, A.; Dabbabi, M. *Rev. Chim. Min.* **1986**, *23*, 776. $Ag_4[Ni(H_2O)_6](P_3O_9)_2$
FONDOC	2.029 Å	Zhang, X.-L.; Ng, S. W. *Acta Crystallogr., Sect. E* **2005**, *61*, m1142. $[Ni(H_2O)_6](C_6H_4NO_3)_2$
ESOHOK	2.030 Å	Wei, M.-L.; Zhuang, P.-F.; Li, H.-H.; Yang, Y.-H. *Eur. J. Inorg. Chem.* **2011**, *50*, 1473. $[Ni(H_2O)_6][HMo_{12}O_{40}P]\cdot 4(4\text{-}HOOC\text{-}C_5H_4NO)\cdot 4.5H_2O$
NOHHEZ	2.033 Å	Liao, S.-Y.; Li, T.-H.; Tian, J.-L.; Yang, L.-Y.; Gu, W.; Liu, X. *RSC Adv.* **2014**, *4*, 29877. $[Ni(H_2O)_6][Ni_2C_{22}H_{20}N_6O_{18}]\cdot 2H_2O$
SUVCAN	2.033 Å	Leonard, M. A.; Squattrito, P. J.; Dubey, S. N. *Acta Crystallogr., Sect. C* **1999**, *55*, 35. $[Ni(H_2O)_6](C_8H_7O_3S)_2$
30284	2.035 Å	Beevers, C. A.; Lipson, H. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1932**, *83*, 123. $[Ni(H_2O)_6]SO_4$
404274	2.036 Å	Halasyamani, P.; Willis, M. J.; Stern, C. L.; Poeppelmeier, K. R. *Inorg. Chim. Acta* **1995**, *240*, 109. $[Ni(H_2O)_6][ZrF_6]$

LEZWOE	2.036 Å	Wei, M.-L.; Wang, X.-X.; Li, H.-H. *Wuji Huaxue Xuebao* **2012**, *28*, 2485. $(H_3O)[Ni(H_2O)_6][W_{12}PO_{40}]\cdot 4(4\text{-}HOOC\text{-}C_5HNO)\cdot 4H_2O$
MUWJUM	2.036 Å	Igoa, F.; Romero, M.; Peinado, G.; Castiglioni, J.; Gonzalez-Platas, J.; Faccio, R.; Suescun, L.; Kremer, C.; Torres, J. *CrystEngComm* **2020**, *22*, 5638. $[Ni(H_2O)_6][LuNi(C_4H_4O_5)_3]_2\cdot 2.52H_2O$
QELXEK	2.036 Å	Sidorov, A. A.; Reshetnikov, A. V.; Deomidov, S. M.; Nefedov, S. E.; Eremenko, I. L. *Zh. Neorg. Khim.* **2000**, *45*, 793. $[Ni(H_2O)_6](CF_3SO_3)_2$
15878	2.037 Å	Grimes, N. W.; Kay, H. F.; Webb, M. W. *Acta Crystallogr.* **1963**, *16*, 823. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
DAWHOC	2.037 Å	Jana, D.; Kolli, H. K.; Das, S. K. *Inorg. Chem.* **2022**, *61*, 3816. $(NH_4)_2[Ni(H_2O)_6][Mo_2C_2H_5O_8]_2\cdot 2H_2O$
QURCEL	2.037 Å	Escobal, J.; Pizarro, J. L.; Mesa, J. L.; Arriortua, M. I.; Rojo, T. *J. Solid State Chem.* **2000**, *154*, 460. $(C_2H_{10}N_2)[Ni(H_2O)_6](HPO_4)_2$
15980	2.038 Å	Beevers, C. A.; Schwartz, C. M. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1935**, *91*, 157; *Acta Crystallogr., Sect. B* **1968**, *24*, 1131. $[Ni(H_2O)_6][Cu_2C_{12}H_{12}N_2O_{12}]\cdot 2H_2O$
IHEQET	2.038 Å	Lin, H.-B.; Wang, Q.-H.; Zhou, Z.-H. *J. Inorg. Organomet. Polym. Mater.* **2014**, *24*, 819. $[Ni(H_2O)_6]SO_4\cdot H_2O$
NODKUO	2.038 Å	Golovnev, N. N.; Molokeev, M. S.; Vereshchagin, S. N.; Atuchin, V. V.; Sidorenko, M. Y.; Dmitrushkov, M. S. *Polyhedron* **2014**, *70*, 71. $[Ni(H_2O)_6](C_4H_3N_2O_2S)_2\cdot 4H_2O$
QIXKUE	2.038 Å	Zhang, H.-K.; Gao, J.-S.; Jiang, X.-H.; Hou, G.-F. *Acta Crystallogr., Sect. E* **2008**, *64*, m585. $[Ni(H_2O)_6](C_{11}H_7ClNO_3S)_2\cdot 2H_2O$
XEMGIF02	2.038 Å	Siegler, M. A.; Hao, X.; Parkin, S.; Brock, C. P. *Acta Crystallogr., Sect. B* **2011**, *67*, 486. $[Ni(H_2O)_6](NO_3)_2(C_{10}H_{20}O_5)\cdot 2H_2O$
84684	2.039 Å	Tepavitcharova, S.; Macicek, J.; Balarew, C.; Tzvetkova, C.; Angelova, O. *J. Solid State Chem.* **1997**, *129*, 200. $(NH_4)[Ni(H_2O)_6]Br_3$
98957	2.039 Å	Altybaeva, D. T.; Imanakunov, B. I. *Izvestiya Natsional'noi Akademii Nauk Kyrgyzskoi Respubliki* **2003**, 33. $[Ni(H_2O)_6]Cl_2\cdot((CH_2)_6N_4)_2\cdot 4H_2O$
ASAXAU	2.039 Å	Stein, I.; Ruschewitz, U. *Z. Naturforsch., Teil B* **2011**, *66*, 471. $[Ni(H_2O)_6](OOCCCOOH)_2\cdot 2H_2O$
JERNID	2.039 Å	Groh, S. E.; Riggs, P. J.; Baldacchini, C. J.; Rheingold, A. L. *Inorg. Chim. Acta* **1990**, *174,* 17. $[Ni(H_2O)_6](C_6H_5O_3S)_2$
1835	2.040 Å	Black, W. H.; Griffith, E. A. H.; Robertson, B. E. *Acta Crystallogr., Sect. B* **1975**, *31*, 615. $[Ni(H_2O)_6]S_2O_6$
69045	2.040 Å	Moron, M. C.; Le Bail, A.; Pons, J. *J. Solid State Chem.* **1990**, *88*, 498. $(NH_4)_{0.5}[Ni(H_2O)_6][Cr(NH_3)_6]Cl_{5.5}$
PAHXIF	2.040 Å	Jessen, S. M.; Kuppers, H., Luehrs, D. C. *Z. Naturforsch., Teil B* **1992**, *47*, 1141. $[Ni(H_2O)_6](C_{10}H_4O_8)$

SOFWIU	2.040 Å	Tai, X.-S.; Xu, J.; Feng, Y.-M.; Liang, Z.-P. *Acta Crystallogr., Sect. E* **2008**, *64*, m893. $[Ni(H_2O)_6](C_{13}H_{10}NO_4S)_2$
54212	2.041 Å	Zhu, H.-L.; You, Z.-l.; Qu, Y.; Liu, W.-S.; Tan, M.-Y.; Ma, J.-L. *Acta Crystallogr., Sect. E* **2003**, 59, m924. $[Ni(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
760216	2.041 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinšek, M.; Folsom, T. C.; Newell, B. S.; Yong, L.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Ni(H_2O)_6]B_{12}F_{12}$
TAKHIX	2.041 Å	Kokunov, Y. V.; Khmelevskaya, L.V.; Gorbunova, Y. E.; Mikhailov, Y. N. *Zh. Neorg. Khim.* **2002**, *47*, 1600. $[Ni(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
TAKHIX03	2.041 Å	Agwara, M O.; Ndifon, P. T.; Yufanyi, M. D.; Tendo, J. N. F.; Atamba, M. A.; Awawou, P. G.; Galindo, A.; Alvarez, E. *Rasayan J, Chem.* **2010**, *3*, 207. $[Ni(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
TAMBIW	2.041 Å	Matsia, S.; Kaoulla, A.; Menelaou, M.; Hatzidimitriou, A.; Papadopoulos, T.; Reimann, M. K.; Pottgen, R.; Salifoglou, A. *Polyhedron* **2021**, *212*, 115577. $[Ni(H_2O)_6][Ni(N_2C_{12}H_8)_3]_2(NO_3)_6\cdot 4.5CH_3CN\cdot H_2O$
YIRWEE	2.041 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinsek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Ni(H_2O)_6]B_{12}F_{12}$
433350	2.042 Å	Kleeberg, F. M.; Dinnebier, R. E.; Schleid, T. *Inorg. Chim. Acta* **2017**, 147. $[Ni(H_2O)_6]B_{12}Cl_{12}\cdot 6H_2O$
BAVYUS	2.042 Å	Knuuttila, P. *Inorg. Chim Acta* **1981**, *52*, 141. $[Ni(H_2O)_6](C_6H_4NO_3)_2$
GOLZIT	2.042 Å	Kleeberg, F. M.; Dinnebier, R. E.; Schleid, T. *Inorg. Chim. Acta.* **2017**, *467*, 147. $[Ni(H_2O)_6]B_{12}Cl_{12}\cdot 6H_2O$
GOPJUS	2.042 Å	Miao, H.; Wan, H.-X.; Liu, M.; Zhang, Y.; Xu, X.; Ju, W.-W.; Zhu, D.-R.; Xu, Y. *J. Mater. Chem. C* **2014**, *2*, 6554. $[Ni(H_2O)_6][C_3H_5N_2)_4[Mo_{16}C_{76}H_{102}N_{18}O_{126}P_{22}]\cdot 2C_5H_5N\cdot 11H_2O$
NAFYAU	2.042 Å	Faus, J.; Lloret, F.; Julve, M.; Clemente-Juan, J. M.; Munoz, M. C.; Solans, X.; Font-Bardia, M. *Angew. Chem., Int. Ed. Engl.* **1996**, *35*, 1485. $K_4[Ni(H_2O)_6][Ni_8C_{48}H_{24}O_{48}]\cdot 20H_2O$
NQXSNI	2.042 Å	Korvenranta, J.; Saarinen, H.; Nasakkala, E. *Finn. Chem. Lett.* **1977**, 61. $[Ni(H_2O)_6](C_{10}H_6NO_5S)_2\cdot 4H_2O$
QUKQUI02	2.042 Å	Mondragon, A. Flores-Alamo, M.; Martinez-Alanis, P. R.; Aullon, G.; Ugalde-Saldivar, V. M.; Castillo, I. *Inorg. Chem.* **2015**, *54*, 619. $[Ni(H_2O)_6](p\text{-}C_6H_5SO_3)_2$
UMOWOJ	2.042 Å	Shi, Z.; Li, L.; Niu, S.; Jin, J.; Chi, Y.; Zhang, L.; Liu, J.; Xing, Y. *Inorg. Chim. Acta* **2011**, *366*, 101. $[Ni(H_2O)_6][Ni(H_2O)_2(C_{12}H_8N_2)_2]_2(1,3,5\text{-}(OOC)C_6H_3)_2\cdot 18H_2O$
TAKHIX02	2.042 Å	Banerjee, S.; Choudhury, A. R.; Row, T. N. G.; Chaudhuri, S.; Ghosh, A. *Polyhedron* **2007**, *26*, 24. $[Ni(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
VEMSAK	2.042 Å	Oh, I.-W.; Park, G.; Park, S.-H. *Z. Kristallogr.-New Cryst Struct.* **2017**, *232*, 803. $[Ni(H_2O)_6](C_{14}H_{14}N_3O_3S)_2$

CAXCUD	2.043 Å	Chang, Q.; Meng, X.; Ruan, W.; Feng, Y.; Li, R.; Zhu, J.; Ding, Y.; Lv, H.; Wang, W.; Chen, G.; Fang, X. *Angew. Chem, Int. Ed.* **2022**, *61*, e202117637. 22 $(NH_4)_{22}Na_8[Ni(H_2O)_6][Ni_{16}C_{36}H_{24}O_{178}Si_4W_{36}]\cdot 155H_2O$
KIXLIM	2.043 Å	Pech, R.; Pickardt, J. *Acta Crystallogr., Sect. C* **1991**, *47*, 1731. $[Ni(H_2O)_6](C_9H_5O_6)_2\cdot 4H_2O$
LALPIY	2.043 Å	Chew Hee Ng, C. H.; Teoh, S. G.; Ng, S. W. *Malaysian J. Chem.* **2004**, *4*, 20. $[Ni(H_2O)_6](N(CN)_2)_2\cdot 2C_6H_{12}N_4\cdot 2H_2O$
POGQOU	2.043 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A.*Dalton Trans.* **2019**, *48*, 7006. $[Ni(H_2O)_6][NiC_{12}H_{10}N_{14}O_{10}]$
YELSUG	2.043 Å	Li, W.-W.; Zhang, Z.-T. *Jiegou Huaxue* **2018**, *37*, 97. $[Ni(H_2O)_6](C_{16}H_{11}O_7S)_2\cdot 4H_2O$
26339	2.044 Å	Leclaire, A.; Borel, M. M. *Acta Crystallogr., Sect. B* **1980**, *36*, 3088. $[Ni(H_2O)_6][Cd_2Cl_6]\cdot 6H_2O$
63450	2.044 Å	Hoskins, B. F.; Linden, A. *Aust. J. Chem.* **1987**, *40*, 565. $[Ni(H_2O)_6][GeF_6]$
281216	2.044 Å	Kuratieva, N. V.; Naumova, M. I.; Naumov, D. Yu.; Podberezskaya, N. V. *Acta Crystallogr., Sect. C* **2003**, *59*, 1. $[Ni(H_2O)_6](H_2PO_2)_2$
262614	2.044 Å	Donakowski, M. D.; Gautier, R.; Jeongho, Y.; Moore, D. T.; Nino, J. C.; Shiv Halasyamani, P.; Poeppelmeier, K. R. *J. Am. Chem. Soc.* **2012**, *134*, 7679. $[Ni(H_2O)_6][VOF_4(H_2O)]$
404273	2.044 Å	Halasyamani, P.; Willis, M. J.; Stern, C. L.; Poeppelmeier, K. R. *Inorg. Chim. Acta* **1995**, *240*, 109. $[Ni(H_2O)_6][TiF_6]$
BAVYUS01	2.044 Å	Baruah, J. B. CCDC deposition number 749992, **2016**. $[Ni(H_2O)_6](C_6H_4NO_3)_2$
HEYBET	2.044 Å	Junk, P. C.; Moubaraki, B.; Murray, K. S. *Polyhedron* **2007**, *26*, 237. $[Ni(H_2O)_6]Cu_3(H_2O)_2Cl_8]\cdot 2C_{10}H_{20}O_5\cdot 2H_2O$
QUKQUI	2.044 Å	Fewings, K. R.; Junk, P. C.; Georganopoulou, D.; Prince, P. D.; Steed, J. W. *Polyhedron* **2001**, *20*, 643. $[Ni(H_2O)_6](C_7H_7N_4SO_3)_2$
UGUDIJ01	2.044 Å	Ma, J.-L.; Qiu, X.-Y.; Shao, S.-C.; Yang, S.; Sun, L.; Zhu, H.-L. *Z. Kristallogr.-New Cryst Struct.* **2003**, *218*, 501. $[Ni(H_2O)_6](NO_3)_2\cdot 2(C_6H_{12}N_4)\cdot 4H_2O$
75985	2.045 Å	Mikenda, W.; Pertlik, F.; Steinboeck, S. *Monatsh. Chem. Teile Wissenschaften* **1995**, *126*, 61. $[Ni(H_2O)_6][SnF_6]$
249152	2.045 Å	Rafizadeh, M.; Amani, V. *Acta Crystallogr., Sect. E* **2006**, *62*, m1776. $[Ni(H_2O)_6](O_2P(OCH_3)_2)_2$
404275	2.045 Å	Halasyamani, P.; Willis, M. J.; Stern, C. L.; Poeppelmeier, K. R. *Inorg. Chim. Acta* **1995**, *240*, 109. $[Ni(H_2O)_6][HfF_6]$
BIZJEA	2.045 Å	Guo, M.-L.; Wang, F.-Q.; Zang, H.-J. *Acta Crystallogr., Sect. E* **2008**, *64*, m198. $[Ni(H_2O)_6](C6H_{10}N_2O_6PS)_2\cdot 6H_2O$
ENIYUW	2.045 Å	Stavila, V.; Bulimestru, I.; Gulea, A.; Colson, A. C.; Whitmire, K. H. *Acta Crystallogr., Sect. C* **2011**, *67*, m65. $[Ni(H_2O)_6][Bi_2C_{28}H_{12}N_4O_{16}]\cdot 2H_2O$

JINPOO	2.045 Å	Xu, H.; Feng, L.; Huang, W.; Wang, Q.; Zhou, H. *New J. Chem.* **2018**, *43*, 807. $[Ni(H_2O)_6][NiC_9H_{15}FNO_8P_2]_2 \cdot 4H_2O$
RELJIE	2.045 Å	Caoa, M.; Lin, J.; Lu, J.; You, Y.; Liu, T.; Cao, R. *J. Hazard. Mater.* **2011**, *186*, 948. $[Ni(H_2O)_6][W_{12}SiKHO_{40}] \cdot C_{36}H_{36}N_{24}O_{12} \cdot 7H_2O$
TOKBUR	2.045 Å	Chagas, L. H.; Janczak, J.; Gomes, F. S.; Fernandes, N. G.; de Oliveira, L. F. C.; Diniz, R. *J. Mol. Struct.* **2008**, *892*, 305. $[Ni(H_2O)_6](C_7H_5N_5O)_2$
XATMEM	2.045 Å	Kaabi, K.; Zeller, M.; Ferretti, V.; Silva, P. S. P.; Nasr, C. B. *Inorg. Chim. Acta* **2012**, *388*, 52. $[Ni(H_2O)_6][Ni((C_{10}H_{14}N_6O_2)_2](ClO_4)_4 \cdot 5H_2O$
281584	2.046 Å	Dagur, P.; Chopra, D.; Prakash, A.; Guru Row, T. N.; Hegde, M. S. *Acta Crystallogr., Sect. E* **2003**, *59*, m1129. $[Ni(H_2O)_6]Cr_2O_7((CH_2)_6N_4)_2)_2 \cdot H_2O$
AYABUX	2.046 Å	Guo, Q.-L.; Zhu, W.-X.; Ma, S.-L.; Dong, S.-J.; Xu, M.-Q. *Polyhedron* **2004**, *23*, 1461. $[Ni(H_2O)_6](C_{12}H_{28}N_2O_4)[NiC_{24}H_{18}O_{19}S_8]_2 \cdot 2C_{12}H_{26}N_2O_4 \cdot 14H_2O$
BUNMOP	2.046 Å	Liang, L.-L.; Zhang, R.-L.; Zhao, J.-S. *Inorg. Chem.* **2020**, *59*, 7980. $(H_3O)[Ni(H_2O)_6]_2[UC_{12}H_{12}N_3O_{11})_3 \cdot 6H_2O$
HEKDIK	2.046 Å	Steed, J. W.; McCool, B. J.; Junk, P. C. *J. Chem. Soc., Dalton Trans.* **1998**, 3417. $[Ni(H_2O)_6](ClO_4)_2 \cdot C_{12}H_{24}O_6$
FEHWUL	2.046 Å	Chikunov, I. E.; Kravchenko, A. N.; Belyakov, P. A.; Lyssenko, K. A.; Baranov, V. V.; Lebedev, O. V.; Makhova, N. N. *Mendeleev Commun.* **2004**, 253. $[Ni(H_2O)_6](C_9H_{13}N_4O_4S)_2 \cdot 4H_2O$
RORQUM	2.046 Å	Thuery, P.; Harrowfield, J. *Cryst. Growth Des.* **2014**, *14*, 4214. $[Ni(H_2O)_6][UC_9H_9O_8]_2 \cdot 2H_2O$
UGUDIJ03	2.046 Å	Singh, G.; Baranwal, B. P.; Kapoor, I. P. S.; Kumar, D.; Singh, C. P.; Frohlich, R. .*Therm. Anal. Calorimetry* **2008**, *91*, 971. $[Ni(H_2O)_6](NO_3)_2 \cdot 2(C_6H_{12}N_4) \cdot 4H_2O$
VELQEJ	2.046 Å	Rafizadeh, M.; Amani, V. *Acta Crystallogr., Sect. E* **2006**, *62*, m1776. $[Ni(H_2O)_6]((CH_3O)_2PO_2)$
34758	2.047 Å	Ray, S.; Zalkin, A.; T·empleton, D. H. *Acta Crystallogr., Sect. B* **1973**, *29*, 2741. $[Ni(H_2O)_6]SiF_6$
65047	2.047 Å	Gallucci, J. C.; Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1988**, *44*, 1345. $[Ni(H_2O)_6](BrO_4)_2$
84568	2.047 Å	Ptasiewicz-Bak, H.; Olovsson, I.; McIntyre, G. J. *Acta Crystallogr., Sect. B* **1997**, *53*, 325. $[Ni(H_2O)_6]SO_4 \cdot H_2O$
110016	2.047 Å	Maolin, H.; Mingde, Y.; Weng, N. S. *Acta Crystallogr., Sect. E* **2002**, *58*, m486. $[Ni(H_2O)_6](NO_3)_2 \cdot 2(CH_2)_6N_4 \cdot 4H_2O$
280960	2.047 Å	Sun, Z.-G.; Long, L.-S.; Ren, Y.-P.; Huang, R.-B.; Zheng, L.-S.; Ng, S.W. *Acta Crystallogr., Sect. E* **2002**, *58*, 34. $[Ni(H_2O)_6]_2[Na_4(H_2O)_{14}]_2[V_{10}O_{28}] \cdot 3H_2O$
DEDZEV	2.047 Å	Zheng, J.; Ma, Y.; Yang, X.; Ma, P. *RSC Adv.* **2022**, *12*, 18736. $[Ni(H_2O)_6]_2(ClO_4)_4 \cdot C_{54}H_{60}N_{24}O_{12} \cdot H_2O$

EGOFUE	2.047 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Ni(H_2O)_6](C_{18}H_{14}N_2O_7S_2)\cdot((CH_3)_2NCHO$
FEGLUY	2.047 Å	Brach, I.; Roziere, Anselment, B.; Peters, K. *Acta Crystallogr., Sect. C* **1987**, *43*, 458. $[Ni(H_2O)_6](C_4HO_4)_2\cdot 2H_2O$
FONDOC01	2.047 Å	Perez-Aguirre, R.; Perez-Yanez, S.; Beobide, G.; Castillo, O.; Gutierrez-Zorrilla, J. M.; Luque, L. *Acta Crystallogr., Sect. E* **2015**, *71*, m238. $[Ni(H_2O)_6](C_6H_4NO_3)_2$
IYUKOC	2.047 Å	Zou, Y.; Liu, W.-L.; Xie, J.-L.; Ni, C.-L.; Ni, Z.-P.; Li, Y.-Z.; Meng, Q.-J.; Yao, Y.-G. *J. Coord. Chem.* **2004**, *57*, 381. $[Ni(H_2O)_6][CuC_{11}H_9N_2O_4]_2\cdot 2H_2O$
KAGNAI	2.047 Å	Ma, J.-F.; Yang, J.; Liu, J.-F. *Acta Crystallogr., Sect. E* **2003**, *59*, m483. $[Ni(H_2O)_6](C_7H_5O_6S)_2\cdot 4H_2O$
KEJVOO	2.047 Å	Bettinger, R. T.; Squattrito, P. J.; Aulakh, D.; Gianopoulos, C. G. *Acta Crystallogr., Sect. E* **2022**, *78*, 961. $[Ni(H_2O)_6](m\text{-}C_6H_4COOH(SO_3))_2\cdot 2H_2O$
QUKQUI01	2.047 Å	Batsanov, A. S.; Howard, J. A. K.; Moore, N. S.; Kilner, M. *Acta Crystallogr., Sect. E* **2001**, *57*, m485. $[Ni(H_2O)_6](C_7H_7N_4SO_3)_2$
TUJROG	2.047 Å	Xiao, W.; Zhang, N.; Deng, S.; Mao, X.; Chen, C. *Z. Anorg. Allg. Chem.* **2009**, *635*, 1511. $[Ni(H_2O)_6]C_{16}H_8O_8$
UGUDIJ	2.047 Å	Mao-Lin Hu; Ming-De Ye; Ng, S. W. *Acta Crystallogr., Sect. E* **2002**, *58*, m486. $[Ni(H_2O)_6](NO_3)_2\cdot 2(C_6H_{12}N_4)\cdot 4H_2O$
UJEDOD01	2.047 Å	Liu, C.-B.; Wen, H.-L.; Gong, Y.-N.; Liu, X.-M.; Tan, S.-S. *Z. Anorg. Allg. Chem.* **2011**, *637*, 122. $[Ni(H_2O)_6][Ni(H_2O)_3((C_{12}H_{10}NO_8)]\cdot 6H_2O$
UVUVOY	2.047 Å	Kathiravan, P.; Balakrishnan, T.; Srinath, C.; Ramamurthi, K.; Thamotharan, S. *Karbala Int. J. Modern Sci.* **2016**, *2*, 226. $[Ni(H_2O)_6]SO_4$
WABMER	2.047 Å	Kosnic, E. J.; McClymont, E. L.; Hodder, R. A.; Squattrito, P. J. *Inorg. Chim. Acta* **1992**, *201*, 143. $[Ni(H_2O)_6](4\text{-}O_3SC_6H_4OH)_2\cdot 2H_2O$
XEMGIF01	2.047 Å	Siegler, M. A.; Parkin, S.; Selegue, J. P.; Brock, C. P. *Acta Crystallogr., Sect. E* **2008**, *64*, 725. $[Ni(H_2O)_6](NO_3)_2(C_{10}H_{20}O_5)\cdot 2H_2O$
65103	2.048 Å	Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1988**, *44*, 1486. $[Ni(H_2O)_6]SO_4$
242128	2.048 Å	Klepov, V. V.; Serezhkina, L. B.; Serezhkin, V. N.; Alekseev,, E. V. *J. Solid State Chem.* **2016**, *244*, 100. $Na[Ni(H_2O)_6][UO_2(CH_3COO)_3]_3$
GUHMOO	2.048 Å	Liu, J.; Lu, Y.; Li, J.; Lu, W. *Dyes Pigm.* **2020**, *177*, 108266. $[Ni(H_2O)_6][NiC_{26}H_{28}N_4O_6](C_{10}H_4O_8)_2\cdot 2H_2O$
LOVKUE	2.048 Å	Yin, H.-L.; Zhou, T.-N.; Ao, Y.-Y. *Jiegou Huaxue* **2015**, *34*, 1908. $[Ni(H_2O)_6][Mo_2C_{10}H_2O_{10}S_2]\cdot 2LH_2O$
XEMGIF	2.048 Å	Steed, J. W.; Sakellariou, E.; Junk, P. C.; Smith, M. K. *Chem. Eur. J.* **2001**, *7*, 1240. $[Ni(H_2O)_6](NO_3)_2(C_{10}H_{20}O_5)\cdot 2H_2O$

YOSCUF	2.048 Å	Qiu, L.-G.; Gu, L.-N.; Hu, G.; Zhang, L.-D. *J. Solid State Chem.* **2009**, *182*, 502. $[Ni(H_2O)_6][Ni(H_2O)_2(C_{12}H_8N_2)_2](1,3,5\text{-}(OOC)_3C_6H_3)_2\cdot 22H_2O$
89697-89699	2.049 Å	Rousseau, B.; Maes, S. T.; Lenstra, A. T. H. *Acta Crystallogr., Sect. A* **2000**, *56*, 300. $[Ni(H_2O)_6]SO_4$
DEZPEF	2.049 Å	Belosevic, S.; Vasojevic, M. M.; Jeremic, M. S.; Meetsma, A.; Matovic, Z. D. *J. Coord. Chem.* **2013**, *66*, 1730. $[Ni(H_2O)_6][NiC_{11}H_{14}N_2O_8]\cdot 2H_2O$
KEXKAA	2.049 Å	Banerjee, S.; Choudhury, A. R.; Row, T.N. G.; Chaudhuri, S.; Ghosh, A. *Polyhedron* **2007**, *26*, 24. $[Ni(H_2O)_6](ClO_4)_2\cdot 2(C_6H_{12}N_4)\cdot 2H_2O$
LEFYEB	2.049 Å	Seetha Lekshmi, N.; Pedireddi, V. R. *Inorg. Chem.* **2006**, *45*, 2400. $[Ni(H_2O)_6](p\text{-}(OH)_2BC_6H_4COO)_2\cdot 2H_2O$
LIJSOM	2.049 Å	Henderson, W.; Nicholson, B. K. *Acta Crystallogr., Sect. C* **1995**, *51*, 37. $[Ni(H_2O)_6](C_{10}H_{15}O_4S)_2$
LIMWUB	2.049 Å	Gao, Q.; Wang, X.; Tapp, J.; Moeller, A.; Jacobson, A. J. *Inorg. Chem.* **2013**, *52*, 6610. $(H_3O)[Ni(H_2O)_6][CrNiSb_{12}C_{24}H_{12}O_{47}]\cdot 6H_2O$
LOJWEP	2.049 Å	Xanthopoulos, K.; Anagnostou, Z.; Chalkiadakis, S.; Choquesillo-Lazarte, D.; Mezei, G.; Zareba, J. K.; Zon, J.; Demadis, K. D. *Crystals* **2019**, *9*, 301. $[Ni(H_2O)_6](HO_3P(CH_2)_2PO_3H)\cdot 2H_2O$
LUMVAQ	2.049 Å	Chen; C.-H.; Cai; J.; Feng; X.-L.; Chen, X.-M. *J. Chem. Cryst.* **2001**, *31*, 271. $[Ni(H_2O)_6]C_{10}H_6O_6S_2$
KIDMAM	2.049 Å	Mastropietro, T. F.; Armentano, D.; Marino, N.; De Munno, G.; Anastassopoulou, J.; Theophanides, T. *Cryst. Growth Des.* **2007**, *7*, 609. $[Ni(H_2O)_6]Cl_2\cdot 2(C_5H_7N_3O)_2$
QAFQOF	2.049 Å	Guo, H.; Li, J.; Zhang, F.-X. *Wuji Huaxue Xuebao* **2010**, *26*, 2006. $[Ni(H_2O)_6](ClO_4)_2\cdot 2[NiC_{13}H_{21}N_3O_6)_2\cdot 4H_2O$
QOSWEC	2.049 Å	Gudenschwager, M.; Wickleder, M. S. CCDC deposition number 1047103, **2015**. $[Ni(H_2O)_6][N,N\text{-}C_4H_4N_2(Ni(H_2O)_5)_2](C_6(SO_3)_6)\cdot 2H_2O$
ROLBOK24	2.049 Å	Siegler, M. A.; Parkin, S.; Angel, R. J..; Brock, C. P. *Acta Crystallogr., Sect. B* **2011**, *67*, 130. $[Ni(H_2O)_6](NO_3)_2\cdot 2C_{10}H_{20}O_5\cdot H_2O$
ROLBUQ	2.049 Å	Siegler, M. A.; Parkin, S.; Selegue, J. P.; Brock, C. P. *Acta Crystallogr., Sect. B* **2008**, *64*, 725. $[Ni(H_2O)_6][Ni(H_2O)_4(CH_3OH)_2](NO_3)_4\cdot 2C_{10}H_{20}O_5\cdot H_2O$
WIVCOU	2.049 Å	Zhang, Y.-Q.; Zhen, L.-M.; Yu, D.-H.; Zhao, Y.-J.; Xue, S.-F.; Zhu, Q.-J.; Tao, Z. *J. Mol Struct.* **2008**, *875*, 435. $[Ni(H_2O)_6]_3(NO_3)_6\cdot C_{44}H_{48}N_{24}O_{12}\cdot (CH_3)_2CO\cdot 4H_2O$
14258	2.050 Å	Chan, J.; Stanley, E. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1970**, *132*, 404. $[Ni(H_2O)_6]S_2O_6$
34794	2.050 Å	Montgomery, H. *Acta Crystallogr., Sect. B* **1979**, *35*, 155. $(NH_4)_2[Ni(H_2O)_6](CrO_4)_2$
82741	2.050 Å	Bonazzi, P.; Mazzi, F. *Am. Mineral.* **1996**, *81*, 1494. $[Ni(H_2O)_6](Sb(OH)_6)_2$
AROMIE	2.050 Å	Tandon, S. S.; Dul, M.-C.; L.Lee, J.; Dawe, L.N.; Anwar, M. U.; Thompson, L. K. *Dalton Trans.* **2011**, *40*, 3466. $[Ni(H_2O)_6]_2[NiC_{28}H_{32}N_{16}O_{16}S_4]\cdot 4.5H_2O$

EYARIH	2.050 Å	Bin, Z. CCDC deposition number 739542, **2016**. $[Ni(H_2O)_6](ClO_4)_2 \cdot 5(C_4H_8O_2)$
LOPNAH	2.050 Å	Nkhili, N. L.; Rekik, W.; Naili, H. *Monatsh. Chem.* **2014**, *145*, 931. $[Ni(H_2O)_6](C_4H_{12}N_2)(SeO_4)_2$
MAXDIA	2.050 Å	Wang, H.-S.; Zhang, W.-Q.; Li, G.-C. *Huaxue Yanjiu* **2010**, *21*, 18-4. $[Ni(H_2O)_6]_3[Ni(C_8H_3O_6)(C_8H_2O_6)]_2 \cdot 7H_2O$
VIXCEL	2.050 Å	Gu, J.; Zhu, Q.-Y.; Zhang, Y.; Lu, W.; Niu, G.-Y.; Dai, J. *Inorg. Chem. Commun.* **2008**, *11*, 175. $[Ni(H_2O)_6][Ni(OCHN(CH_3)_2)_2(C_{10}H_6O_4S_6)_2]_2 \cdot 2(CH_3)_2NCHO \cdot H_2O$
WABMER	2.050 Å	Kosnic, E. J.; McClymont, E. L.; Hodder, R. A.; Squattrito, P. J. *Inorg. Chim. Acta* **1992**, *201*, 143. $[Ni(H_2O)_6](C_6H_5O_4S)_2 \cdot 2H_2O$
ZERDUX	2.050 Å	Miminoshvili, E. B.; Sakvarelidze, T. N.; Miminoshvili, K. E. *Zh. Strukt. Khim.* **2012**, *53*, 1024. $[Ni(H_2O)_6][TiF_6] \cdot 2C_6H_{12}N_4 \cdot H_2O$
39420	2.051 Å	Iskhakova, L. D.; Dubrovinskii, L. S.; Charushnikova, I. A. *Kristallografiya* **1991**, *36*, 650. $[Ni(H_2O)_6]SO_4 \cdot H_2O$
72415	2.051 Å	Ptasiewicz-Bak, H.; Olovsson, I.; McIntyre, G. J. *Acta Crystallogr., Sect. B* **1993**, *49*, 192. $[Ni(H_2O)_6]SO_4$
84569	2.051 Å	Ptasiewicz-Bak, H.; Olovsson, I.; McIntyre, G. J. *Acta Crystallogr., Sect. B* **1997**, *53*, 325. $[Ni(H_2O)_6]SO_4 \cdot H_2O$
109777	2.051 Å	Herrmann, W. A.; Mihalios, D.; Oefele, K.; Kiprof, P.; Belmedjahed, F. *Chem. Ber.* **1992**, *125*, 1795. $((CH_3)_4N)_2[Ni(H_2O)_6][Mo_8O_{26}]$
132273	2.051 Å	Mbiangué, Y. A.; Ndinga, M. L.; Nduga, J. P.; Wenger, E.; Lecomte, C. *Acta Crystallogr., Sect. E* **2020**, *76*, 1316. $[Ni(H_2O)_6][BaCr(C_2O_4)_3(H_2O)_3]_2 \cdot 4H_2O$
419502	2.051 Å	Aleksandrova, M.; Haeuseler, H.; Jacquet, R.; Wagener, M. *Z. Naturforsch., Teil B* **2008**, *63*, 1367. $[Ni(H_2O)_6]H_4I_2O_{10}$
ATUQAH	2.051 Å	Zhang, Z.-Y.; Gao, S.; Huo, L.-H.; Zhao, H.; Zhao, J.-G.; Ng, S. W. *Acta Crystallogr., Sect. E* **2004**, *60*, m544. $[Ni(H_2O)_6](C_7H_6NO_3)_2 \cdot 2H_2O$
AXOCUN	2.051 Å	Oelkers, B.; Schaffner, D.; Sun, Y. *Chem. Sel.* **2016**, *1*, 4440. $[Ni(H_2O)_6][Ni(H_2O)_4(CH(SO_3)_3)]$
GINWAC	2.051 Å	Deng, Y.-F.; Zhang, H.-L.; Hong, Q.-M.; Weng, W.-Z.; Wan, H.-L.; Zhou, Z.-H. *J. Solid State Chem.* **2007**, *180*, 3152. $(NH_4)_2[Ni(H_2O)_6][Ti(C_6H_6O_7)_3] \cdot 6H_2O$
MAPHER	2.051 Å	Pan, T.-T.; Su, J.-R.; Xu, D.-J. *Acta Crystallogr., Sect. E* **2005**, *61*, 1316. $[Ni(H_2O)_6][Ni(C_4H_4O_4S)_2] \cdot 4H_2O$
MEYLAD	2.051 Å	Junk, P.C.; Smith, M. K.; Steed, J. W. *Polyhedron* **2001**, *20*, 2979. $[Ni(H_2O)_6](ClO_4)_2 \cdot C_8H_{16}O_4$
NUTTII	2.051 Å	Mbiangue, Y. A.; Ndinga, M. L.; Nduga, J. P.; Wenger, E.; Lecomte, C. *Acta Crystallogr. Sect. E* **2020**, *76*, 1316. $[Ni(H_2O)_6][BaCr(C_6H_6O_{15}]_2 \cdot 4H_2O$
OJEBOU	2.051 Å	Lu, S.; Ke, Y.; Li, J.; Zhang, Y. *Solid State Sci.* **2003**, *5*, 317. $((CH_3)_4N)_2[Ni(H_2O)_6][Mo_8O_{26}]$

PEJVAC	2.051 Å	Liu, Q.; Xu, Z.; Yu, K.-B. *Wuji Huaxue Xuebao* **2006**, *22*, 1095. $[Ni(H_2O)_6](OOC(CH)_2COO)_2 \cdot 2C_6H_{12}N_4 \cdot 4H_2O$
PEYDAZ	2.051 Å	Deng, Z.-P.; Gao, S.; Chen, P.-G. *Acta Crystallogr., Sect. E* **2007**, *63*, m553. $[Ni(H_2O)_6](C_{10}H_9O_5)_2 \cdot 3H_2O$
TINRAK	2.051 Å	Yasodha, V.; Govindarajan, S.; Manivannan, V.; Buyukgungor, O. *Acta Crystallogr., Sect. E* **2007**, *63*, m2720. $[Ni(H_2O)_6]C_7H_2O_6 \cdot H_2O$
XEMGAX	2.051 Å	Steed, J. W.; Sakellariou, E.; Junk, P. C.; Smith, M. K. *Chem. Eur. J.* **2001**, *7*, 1240. $[Ni(H_2O)_6]Br_2(C_{10}H_{20}O_5) \cdot 2H_2O$
XOHJAF	2.051 Å	Barton, M. R.; Yuegang Zhang; Atwood, J. D. *J. Coord. Chem.* **2002**, *55*, 969. $[Ni(H_2O)_6](3\text{-}SO_3\text{-}C_6H_4P(C_6H_5)_2)_2 \cdot H_2O$
WEPKUY	2.051 Å	Xie, Y.-R.; Yang, Y.-C.; Yuan, X.-Y.; Yang, R.-Q. *Acta Crystallogr., Sect. E* **2006**, *62*, m2683. $[Ni(H_2O)_6](5\text{-}NO_2\text{-}2\text{-}CH_3\text{-}C_6H_3SO_3)_2 \cdot 4H_2O$
XOHJAF	2.051 Å	Barton, M. R.; Zhang, Y.; Atwood, J. D. *J. Coord. Chem.* **2002**, *55*, 969. $[Ni(H_2O)_6]((C_6H_5)_2(3\text{-}SO_3\text{-}C_6H_4)P)_2 \cdot H_2O$
15232	2.052 Å	Kutoglu, A. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1973**, *137*, 51. $[Ni(H_2O)_6][V(H_2O)_6]_3(SO_4)_4$
20226	2.052 Å	Ivanov, S. B.; Mikhailov, Yu. N.; Kuznetsov, V. G.; Davidovich, R. L. *Zh. Strukt. Khim.* **1981**, *22*, 188 $[Ni(H_2O)_6]_3[(UO_2)_2F_7]$
39419	2.052 Å	Iskhakova, L. D.; Dubrovinskii, L. S.; Charushnikova, I. A. *Kristallografiya* **1991**, *36*, 650. $[Ni(H_2O)_6]SO_4 \cdot H_2O$
68493	2.052 Å	Gallucci, J. C.; Gerkin, R. E.; Reppart, W. J. *Acta Crystallogr., Sect. C* **1990**, *46*, 1580. $[Ni(H_2O)_6](BrO_4)_2$
70446	2.052 Å	Mamdouh, A.-A.; Ibrahim, A. B. M.; Reyad, N. E.-H. A.; Elsayed, Tarek R.; Cordeiro Santos, I.; Paulo, A.; Mahfouz, R. M. *J. Cluster. Sci.* **2023**, *34*, 1535-1546. $(NH_4)_2[Ni(H_2O)_6]_2V_{10}O_{28} \cdot 4H_2O$
143443	2.052 Å	Mahmoud, G. A.-E.; Ibrahim, A. B. M.; Mayer, P. *Chem. Select* **2021**, *6*, 3782. $(NH_4)_2[Ni(H_2O)_6]_2[V_{10}O_{28} \cdot 4H_2O$
AJIQOZ	2.052 Å	Zheng, Y.-Q.; Kong, Z.-P. *J. Coord. Chem.* **2003**, *56*, 967. $[Ni(H_2O)_6][Ni(H_2O)_2(C_4H_2O_4)_2] \cdot 4H_2O$
AWELAQ	2.052 Å	Pan, T.; Liang, Q.; Liu, D.; Huang, C. *J. Chem. Cryst.* **2011**, *41*, 1133. $[Ni(H_2O) \cdot_6][Ni_2C_{24}H_{24}N_2O_{16}]$
GIYNOR	2.052 Å	Haussuhl, E.; Giester, G.; Tillmanns, E. *Z. Kristallogr – New Cryst. Struct.* **1997**, *212*, 171. $[Ni(H_2O)_6][Zr(C_6H_6NO_6)_2] \cdot 2.5H_2O$
IDUSEG	2.052 Å	Xu, B.; Zhang, Y.-Y.; Liu, W.-L; Hu, X.-Y. *Acta Crystallogr., Sect. E* **2006**, *62*, m1508. $[Ni(H_2O)_6][CuC_{12}H_{11}N_2O_4]_2 \cdot 12H_2O$

INAZEC	2.052 Å	Dagur, P.: Chopra, D.: Prakash, A. S.; Row, T. N. G.; Hegde, M. S. *Acta Crystallogr., Sect. E* **2003**, *59*, m1129. $[Ni(H_2O)_6]Cr_2O_7 \cdot 2C_6H_{12}N_2 \cdot 6H_2O$
KEXKAA01	2.052 Å	Singh, G.; Baranwal, B. P.; Kapoor, I. P.S.; Kumar, D.; Frohlich, R. *J. Phys. Chem. A* **2007**, *111*, 12972. $[Ni(H_2O)_6](ClO4)2 \cdot 2(C_6H_{12}N_4) \cdot 2H_2O$
YOQGES	2.052 Å	Amendola, V.; Boiocchi, M.; Fabbrizzi, L.; Fusco, N.; Valeri, E. *Chem. Eur. J.* **2014**, *20*, 11994. $[Ni(H_2O)_6][Ni(C_6H_{15}N_3)_2](NO_3)_4$
84570	2.053 Å	Ptasiewicz-Bak, H.; Olovsson, I.; McIntyre, G. J. *Acta Crystallogr., Sect. B* **1997**, *53*, 325. $[Ni(H_2O)_6]SO_4 \cdot H_2O$
112565	2.053 Å	Colliard, I.; Brown, J. C.; Fast, D. B.; Sockwell, A. K.; Hixon, A. E.; Nyman, M. *J. Am. Chem. Soc.* **2021**, *143*, 9612.
263113	2.053 Å	Babaryk, A. A.; Kozachkova, A. N.; Tsaryk, N. V.; Dudko, A. V.; Pekhnyo, V. I. *Acta Crystallogr., Sect. E* **2012**, *68*, m242. $K_2[Ni(H_2O)_6][Pd_3(CH_2O_6P_2)_3] \cdot 6H_2O$
424301	2.053 Å	Zimmermann, L. W.; Schleid, T. *Z. Kristallogr – New Cryst. Struct.* **2013**, *228*, 558. $[Ni(H_2O)_6]B_{10}H_{10} \cdot 2H_2O$
BAZLAP	2.053 Å	Zalkin, A.; Ruben, H.; Templeton, D. H. *Acta Crystallogr., Sect. B* **1982**, *38*, 610. $[Ni(H_2O)_6][U(C_6H_9O_8)]_2$
DUVNIT	2.053 Å	Klepov, V. V.; Serezhkina, L. B.; Pushkin, D. V.; Alekseev, E. V.; Grigor'ev, M. S.; Sergeeva, O. A.; Shimin, N. A.; Serezhkin, V. N. *Eur. J. Inorg. Chem.* **2016**, 118. $[Ni(H_2O)_6][UO_2(OOCCHCH_2)_3]_2$
IYUKIW	2.053 Å	Zou, Y.; Liu, W.-L.; Xie, J.-L.; Ni, C.-L.; Ni, Z.-P.; Li, Y.-Z.; Meng, Q.-J.; Yao, Y.-G. *J. Coord. Chem.* **2004**, *57*, 381. $[Ni(H_2O)_6][CuC_{11}H_9N_2O_4]_2 \cdot 10H_2O$
KEMWOQ	2.053 Å	Tabatabaee, M.; Amini, M. M.; Saheli, S.; Vakilia, F. *Acta Chim. Slov.* **2012**, *59*, 375. $[Ni(H_2O)_6][Ni(H_2O)_4(C_{10}H_8N_2)][NiC_{14}H_6N_2O_8]_2 \cdot 6H_2O$
MACHOO	2.053 Å	Falvello, L. R.; Ferrer D.; Soler, T.; Tomas, M. *Acta Crystallogr., Sect. C* **2003**, *59*, m149. $[Ni(H_2O)_6](C_5H_3N_2O_2)_2 \cdot 2H_2O$
MARFEU	2.053 Å	Nkhili, N. L.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Arab. J. Chem.* **2017**, *10*, S2509. $(C_6H_{14}N_2)[Ni(H_2O)_6](SeO_4)_2$
MEHZEE	2.053 Å	Zhaohui; Z.; Yongqing; H.; Yaqi, J.; Yiji; L.; Guodong, L.; Hongbin, Z.*Wuji Huaxue Xuebao* **1997**, *13*, 385. $(NH_4)_2[Ni(H_2O)_6][Ni(C_6H_5O_4)_2(H_2O)_2]_2 \cdot 10H_2O$
PIWKIR	2.053 Å	Zimmermann, L. W.; Schleid, T. *Z. Krist. Cryst. Mater.* **2013**, *228*, 558. $[Ni(H_2O)_6]B_{10}H_{10} \cdot 2H_2O$
QALVAA	2.053 Å	Williams, A. R.; Alleyne, B. D.; Hall, L. A.; White, A. J. P.; Williams, D. J.; Thompson, L. K. *Inorg. Chem.* **2000**, *39*, 5265. $[Ni(H_2O)_6](C_{16}H_{10}NO_3)_2 \cdot 2H_2O$
ROLBOK	2.053 Å	Siegler, M. A.; Parkin, S.; Selegue, J. P.; Brock, C. P. *Acta Crystallogr., Sect. B* **2008**, *64*, 725. $[Ni(H_2O)_6](NO_3)_2 \cdot 2C_{10}H_{20}O_5 \cdot H_2O$

VUQZOY	2.053 Å	Naili, H.; BenHassan, D.; Rekik, W. CCDC deposition number 1433260, **2015**. $[Ni(H_2O)_6](C_4H_{12}N_2)_2(NO_3)_6$
YUDDAC	2.053 Å	Salas, J. M.; Quiros, M.; Romero, M. A.; Sanches, M. P.; Salas M. A., *Polyhedron* **1995**, *14*, 611. $[Ni(H_2O)_6](C_9H_9N_4O_5)_2{\cdot}4H_2O$
ZASRIU	2.053 Å	Porai-Koshits, M. A.; Antsyshkina, A. S.; Shkol'nikova, L. M.; Sadikov, G. G.; Davidovich, R. L. *Koord. Khim.* **1995**, *21*, 311. $[Ni(H_2O)_6][BiC_{20}H_{24}N_4O_{16}]{\cdot}3H_2O$
ULAXEM	2.053 Å	Golovnev, N. N.; Molokeev, M. S.; Lesnikov, M. K.; Atuchin, V. V. *Chem. Phys. Lett.* **2016**, *653*, 54. $[Ni(H_2O)_6](C_8H_{11}N_2O_2S)_2{\cdot}2H_2O$
WUZNAH	2.053 Å	Zhang, M.-L.; Xing, F.-G.; Wang, Z.-L. *Jiegou Huaxue* **2010**, *29*, 592. $[Ni(H_2O)_6](C_8H_7O_4)_2{\cdot}2H_2O$
20885	2.054 Å	Ivanov, S. B.; Mikhailov, Yu. N.; Davidovich, R. L. *Koord. Khim.* **1982**, *8*, 1250. $[Ni(H_2O)_6]_3[(UO_2)F_4]{\cdot}H_2O$
23271	2.054 Å	Montgomery, H. *Acta Crystallogr., Sect. B* **1980**, *36*, 2121. $(NH_4)_2[Ni(H_2O)_6](SeO_4)_2$
26342	2.054 Å	Leclaire, A.; Borel, M. M. *Acta Crystallogr., Sect. B* **1980**, *36*, 3090. $(NH_4)_2[Ni(H_2O)_6][BeF_4]_2$
710006	2.054 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2009**, *224*, 355. $Tl_2[Ni(H_2O)_6](SO_4)_2$
710012	2.054 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2009**, *224*, 355. $Tl_2[Ni(H_2O)_6](SeO_4)_2$
FOLZIQ	2.054 Å	Wang, Q.-Y.; Zhang, Z.-T. *Acta Crystallogr., Sect. E* **2005**, *61*, m215. $[Ni(H_2O)_6](C_{17}H_{13}O_7S)_2{\cdot}8H_2O$
HEKKOX	2.054 Å	Steed, J. W.; McCool, B. J.; Junk, P. C. *J. Chem. Soc., Dalton Trans.* **1998**, 3417. $[Ni(H_2O)_6]_3[NiBr_2(H_2O)_4]Br_6{\cdot}4C_{12}H_{24}O_6{\cdot}2H_2O$
IMIQAW	2.054 Å	Antsyshkina, A. S.; Sadikov, G. G.; Poznyak, A. L.; Shkol'nikova, L. M.; Sergienko, V. S. *Zh. Neorg. Khim.* **1996**, *41*, 1456. $[Ni(H_2O)_6]_3[NiC_{32}H_{44}N_4O_{24}S_4]{\cdot}12H_2O$
KUVZUZ	2.054 Å	Seals, W.; Arman, H.; Batha, S.; Musie, G. T. *Inorg. Chim. Acta* **2016**, *448*, 16. $[Ni(H_2O)_6][NiC_2H_8O_4S_2]_2[NiC_{23}H_{27}N_2O_{11}]{\cdot}12H_2O$
LOFGUK	2.054 Å	Hundal, G.; Hundal, M. S.; Hwang, Y. K,; Chang, J. S. *Cryst. Growth Des.* **2014**, *14*, 172. $[Ni(H_2O)_6][Ni(H2O)_2(C_7H_3NO_8)_2]{\cdot}4H_2O$
LUMVAQ01	2.054 Å	Chen, P.-G.; Gu, C.-S.; Gao, S.; Zhu, Z.-B.; Zhao, J.-G. *Harbin Ligong Daxue Xuebao* **2004**, *9*, 67. $[Ni(H_2O)_6]C_{10}H_6O_6S_2$
NOXBOR	2.054 Å	Duda, A. M.; Karaczyn, A.; Kozlowski, H.; Fritsky, I. O.; Glowiak, T.; Prisyazhnaya, E. V.; Sliva, T. Yu.; Swiatek.Kozlowska, J. *J. Chem. Soc., Dalton Trans.* **1997**, 3853. $[Ni(H_2O)_6][NiC_9H_{13}N_4O_4]_2$
PEKWUX	2.054 Å	Muller, A.; Johanmnes, K. U.; Straube, M.; Krickemeyer, E. *Z. Anorg. Allg. Chem.* **1993**, *619*, 1037. $Tl_2[Ni(H_2O)_6][NiC_2H_8O_4S_2][NiC_{10}H_{18}N_2O_4S_2]$

ZUTCOG	2.054 Å	Apblett, A. W.; Cubano, L. A.; Georgieva, G. D.; Mague, J. T. *Chem. Mater.* **1996**, *8*, 650. $[Ni(H_2O)_6][FeC_{10}H_{13}ClN_2O_8]\cdot 2H_2O$
XAFFEQ	2.054 Å	Suzuki, J.; Yamauchi, T.; Akashi, H. *Shiz. Kag. Kenk. Kenkyo Hokoku, Okayama Rika Daig.* **2001**, 13. $[Ni(H_2O)_6][Na_2C_{24}H_{28}O_{24}S_8]\cdot 4H_2O$
10435	2.055 Å	Montgomery, H. *Acta Crystallogr., Sect. B* **1980**, *36*, 440. $(NH_4)_2[Ni(H_2O)_6](SeO_4)_2$
62051	2.055 Å	Stadnicka, K.; Glazer, A. M.; Koralewski, M. *Acta Crystallogr., Sect. B* **1987**, *43*, 319; **1993**, *49*, 641. $[Ni(H_2O)_6]SO_4$
67106	2.055 Å	Gallucci, J. C.; Gerkin, R. E. *Acta Crystallogr., Sect. C* **1990**, *46*, 350. $[Ni(H_2O)_6](ClO_3)_2$
72414	2.055 Å	Ptasiewicz-Bak, H.; Olovsson, I.; McIntyre, G. J. *Acta Crystallogr., Sect. B* **1993**, *49*, 192. $[Ni(H_2O)_6]SO_4$
82741	2.055 Å	Bonazzi, P.; Mazzi, F. *Am. Mineral.* **1996**, *81*, 1494. $[Ni(H_2O)_6](Sb(OH)_6)_2$
300003	2.055 Å	Hodgson. P. G.; Montgomery, H.; Moore, F. H.; Smith, G.; Eggins, R.; Kennard, C. H. L. *Cryst. Struct. Commun.* **1978**, *7*, 127. $(NH_4)_2[Ni(H_2O)_6](CrO_4)_2$
BECRIL	2.055 Å	Fu, R.-B.; Wu, X.-T.; Hu, S.-M.; Zhang, J.-J.; Fu, Z.-Y.; Du, W.-X. *Polyhedron* **2003**, *22*, 2739. $[Ni(H_2O)_6](HO_3P(CH_2)_4PO_3H)\cdot 2H_2O$
DURQOX	2.055 Å	Safaei-Ghomi, J.; Motieiyan, E.; Manteghi, F.; Ghadermazi, M.; Aghabozorg, H. *Acta Crystallogr., Sect. E* **2010**, *66*, m1016. $[Ni(H_2O)_6][Ni_3C_{28}H_{20}N_4O_{20}]\cdot 8H_2O$
FAMKIP	2.055 Å	Tabatabaee, M.; Tahriri, M. Tahriri, M.; Ozawa, Y.; Neumuller, B.; Fujioka, H.; Toriumi, K. *Polyhedron* **2012**, *33*, 336. $[Ni(H_2O)_6]_3[Ni(C_7H_3NO_4)_2]_2[NiC_{12}H_{13}NO_{11}]\cdot 20H_2O$
ITUTEW	2.055 Å	Samsonenko, D. G.; Geras'ko, O. A.; Mit'kina, T. V.; Lipkowski, J.; Virovets, A. V.; Fenske, D.; Fedin, V. P. *Koord. Khim.* **2003**, *29*, 178. $[Ni(H_2O)_6]_2(SO_4)_2\cdot C_{26}H_{536}N_{24}O_{12}\cdot 16H_2O$
JEQMIC	2.055 Å	Zhang, Z.-T.; Zhang, X.-L.; Zhang, Y. H. *J. Cryst. Chem.* **2006**, *36*, 517. $[Ni(H_2O)_6](C_{19}H_{17}O_9S_2)\cdot 2H_2O$
JIRRAE	2.055 Å	Genther, D. J.; Squattrito, P. J.; Kirschbaum, K.; Yearley, E. J.; Pinkerton, A. A. *Acta Crystallogr., Sect. E* **2007**, *63*, m604. $[Ni(H_2O)_6](C_{10}H_8NO_3S)_2\cdot 3H_2O$
NAKTEA	2.055 Å	Li, S.-J.; Hu, S.-W.; Song, W.-D.; Qin, P.-W.; Ma, X.-T. *Acta Crystallogr., Sect. E* **2010**, *66*, m1383. $[Ni(H_2O)_6](C_{16}H_{12}O_6)\cdot H_2O$
OBUPIN	2.055 Å	Felder, J.; Yeon, J.; Smith, M.; zur Loye, H.-C. *Inorg. Chem. Front.* **2017**, *4*, 368. $[Ni(H_2O)_6][UF_5]_2\cdot 2H_2O$
QOSJEQ	2.055 Å	Tu, X.; Chen, H.; Zhang, S.; Ma, P. *J. Cluster Sci.* **2019**, 10.1007/s10876-019-01726-1. $[Ni(H_2O)_6]_3[Ni_3C_{24}H_{34}N_2O_{26}][NiC_{12}H_{13}NO_{11}]\cdot 20H_2O$
QOSJIU	2.055 Å	Tu, X.; Chen, H.; Zhang, S.; Ma, P. *J. Cluster Sci.* **2019**, 10.1007/s10876-019-01726-1. $[Ni(H_2O)_6]_3[Ni_3C_{24}H_{34}N_2O_{26}][NiC_{12}H_{13}NO_{11}]\cdot 20H_2O$

SAVXUL	2.055 Å	Soleimannejad, J.; Moghzi, F.; Hooshmand, S.; Dankoob, Z.; Ardalani, M.; Shamsipur, M. *Polyhedron* **2017**, *133*, 24. $[Ni(H_2O)_6](4\text{-}NH_2\text{-}C_5H_5N)_2[Ni(C_7H_3NO_4)_2]_2\cdot 2C_2H_5OH\cdot 4H_2O$
SOQTOI	2.055 Å	Palenik, R. C.; Abboud, K. A.; Palenik, G. J. *Inorg, Chim. Acta* **2009**, *362*, 1374. $(H_3O)_4[Ni(H_2O)_6]_4[Ni_2Sb_6C_{24}H_{32}O_{34}S_{12}]_3(Sb_6C_{24}H_{12}O_{24}S_{12})\cdot 68H_2O$
XEMGEB	2.055 Å	Steed, J. W.; Sakellariou, E.; Junk, P. C.; Smith, M. K. *Chem. Eur. J.* **2001**, *7*, 1240. $[Ni(H_2O)_6](ClO_4)_2(C_{10}H_{20}O_5)\cdot 2H_2O$
19045	2.056 Å	Louer, M.; Grandjean, D.; Weigel, D. *J. Solid State Chem.* **1973**, *7*, 222; *Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences, Serie B* **1967**, *264*, 895. $[Ni(H_2O)_6]I_2$
40982	2.056 Å	Fender, B. E. F.; Figgis, B. N.; Forsyth, J. B. *Aust. J. Chem.* **1986**, *39*, 1023. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$, $(ND_4)_2[Ni(D_2O)_6](SO_4)_2$
61461, 62816	2.056 Å	Jouini, A.; Dabbabi, M.; Durif, A. *J. Solid State Chem.* **1985**, *60*, 6. $(NH_4)_2[Ni(H_2O)_6](P_4O_{12})\cdot H_2O$
91541	2.056 Å	Pietraszko, A.; Perekalina, Z. B.; Soboleva, L. B.; Kirpichnikova, L. F. *Kristallografiya* **2000**, *45*, 525. $K_2[Ni(H_2O)_6](SO_4)_2$
143465	2.056 Å	Weil, M. *Chem.* **2021**, *3*, 45. $(NH_4)_2[Ni(H_2O)_6](PO_3F)_2$.
170781	2.056 Å	Quarsal, R.; El Bali, B.; Lachkar, M.; Dusek, M.; Fejfarova, K. *Acta Crystallogr., Sect. E* **2005**, *61*, i171. $(NH_4)_2[Ni(H_2O)_6](HPO_3)_4$
190007	2.056 Å	Gjikaj; M.; Wu; P.; Pook, N.-P. *Acta Crystallogr., Sect. E* **2013**, *69*, i83. $[Ni(H_2O)_6]H_2P_2O_6$
193806	2.056 Å	Held, P. *Acta Crystallogr., Sect. E* **2014**, *70*, 403. $((CH_3)_2NH_2)_2[Ni(H_2O)_6](SO_4)_2\cdot 2H_2O$
391376	2.056 Å	Li, D.-H.; Liu S.-X.; Peng J.; Shao K.-Z.; Xu H.-B.; Zhai H.-J.; Wang, E.-B. *Wuji Huaxue Xuebao* **2004**, *20*, 1076. $K[Ni(H_2O)_6][V_{10}O_{28}]\cdot 2H_2O$
409495	2.056 Å	Euler, H.; Barbier, B.; Klumpp, S.; Kirfel, A. *Z. Kristallogr.* **2000**, *215*, 473. $Rb_2[Ni(H_2O)_6](SO_4)_2$
412263	2.056 Å	Fleck, M.; Bohaty, L.; Tillmanns, E. *Solid State Sci.* **2004**, *6*, 469. $(C(NH_2)_3)_2[Ni(H_2O)_6](SO_4)_2$
AFEYAN	2.056 Å	Martsinko, E. F.; Minacheva, L. K.; Chebanenko, E. A.; Seifullina, I. I.; Sergienko, V. S.; Churakov, A. V. *Zh. Neorg. Khim.* **2013**, *58*, 588. $[Ni(H_2O)_6][Sn(C_6H_5O_7)_2]\cdot 4H_2O$
AYODUP	2.056 Å	Baruah, J. B. CCDC deposition number 749994, **2016**. $[Ni(H_2O)_6](C_7H_4NO_4)_2\cdot 2(4\text{-}NO_2C_6H_4COO)\cdot 2H_2O$
CICHIG	2.056 Å	Hou, Y.-J.; Sun, Z.-Z.; Yu, Y.-H.; Li, B.-Y.; Hou, G.-F. *Acta Crystallogr., Sect. E* **2007**, *63*, m1519. $[Ni(H_2O)_6](C_8H_6NO_5)_2\cdot 5H_2O$
EGUNOL	2.056 Å	Tang, S.-F.; Li, L.-J.; Lv, X.-X.; Wang, C.; Zhao, X.-B. *CrystEngComm* **2014**, *16*, 7043. $[Ni(H_2O)_6](1,4\text{-}(PO_3H)_2\text{-}2,5\text{-}(CH_3)_2C_6H_2)\cdot 2H_2O$
EKOYOU	2.056 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Pietraszko, A. *Acta Crystallogr., Sect. C* **2016**, *72*, 432. $[Ni(H_2O)_6](2\text{-}NH_2\text{-}C_5H_5N)_2(SO_4)_2$

FIYLEH	2.056 Å	Bazhina, E. S.; Gogoleva, N. V.; Al4ksandrov, G. G.; Kiskin, M. A.; Efimov, N. N.; Bogomyakov, A. S.; Ugolkova, E. A.; Minin, V. V.; Sidorov, A. A., Eremenko, I. L. *Chem. Sel.* **2018**, *3*, 13765. $[Ni(H_2O)_6][Cu(H_2O)(C_6H_6O_6)]\cdot 2H_2O$
GUHMOO	2.056 Å	Liu, J.; Lu, Y.; Li, J.; Lu, W. *Dyes Pigm.* **2020**, *177*, 108266. $[Ni(H_2O)_6][NiC_{26}H_{28}N_4O_6]\cdot 2H_2O$
NIGUAS01	2.056 Å	Fleck, M.; Bohaty, L.; Tillmanns, E. *Solid State Sci.* **2004**, *6*, 469. $[Ni(H_2O)_6](C(NH_2)_3)_2(SO_4)_2$
NUMTIY	2.056 Å	Zhiqiang Xu; Thompson, L. K.; Miller, D. O.; Clase, H. J.; Howard, J. A. K.; Goeta, A. E. *Inorg. Chem.* **1998**, *37*, 3620. $[Ni(H_2O)_6][Ni_2C_{36}H_{36}N_{18}](NO_3)_6\cdot 4.5H_2O$
NANPIC	2.056 Å	Kong, D.; Clearfield, A. *Cryst. Growth Des.* **2005**, *5*, 1263. $[Ni(H_2O)_6][Ni(H_2O)_3(C_6H_3NO_3)]_2\cdot 5H_2O$
PAHXIF01	2.056 Å	Rochon, F. R.; Massarweh, G. *Inorg. Chim. Acta* **2000**, *304*, 190. $[Ni(H_2O)_6](C_{10}H_4O_8)$
POGQEK	2.056 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A.*Dalton Trans.* **2019**, *48*, 7006. $[Ni(H_2O)_6]_{0.92}[Zn(H_2O)_6]_{0.08}[NiC_{12}H_{10}N_{14}O_{10}]_{0.49}[MnC_{12}H_{10}N_{14}O_{10}]_{0.51}$
POPBUT	2.056 Å	Held, P. *Acta Crystallogr., Sect. E* **2014**, *70*, 403. $((CH_3)_2NH_2)_2[Ni(H_2O)_6](SO_4)_2\cdot 2H_2O$
RITKOW	2.056 Å	Sahbani, T.; Smirani Sta, W.; Rzaigui, M. *Acta Crystallogr., Sect. E* **2014**, *70*, m6. $[Ni(H_2O)_6](4\text{-}NH_2C_5H_5N)_2(SO_4)_2$
TUTHUL	2.056 Å	Sileo, E. E.; de Araujo, A. S.; Rigott, G.; Piro, O. E.; Castellano, E. E. *J. Mol. Struct.* **2003**, *644*, 67. $[Ni(H_2O)_6][NiC_{14}H_{10}N_2O_{10}]$
TUFPAM	2.056 Å	Melanou, M.; Dakanali, M.; Raptopoulou, C. P.; Drouza, C.; Lalioti, N.; Salifoglou, A. *Polyhedron* **2009**, *28*, 3331. $[Ni(H_2O)_6][Ni(C_3H_6NO_5P]\cdot 3.3H_2O$
63026	2.057 Å	Maslen, E. N.; Ridout, S. C.; Watson, K. J.; Moore, F. H. *Acta Crystallogr., Sect. C* **1988**, *44*, 412. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
63027	2.057 Å	Maslen, E. N.; Ridout, S. C.; Watson, K. J.; Moore, F. H. *Acta Crystallogr., Sect. C* **1988**, *44*, 412. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
409749	2.057 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2003**, *218*, 405. $Cs_2[Ni(H_2O)_6](SeO_4)_2$
418857	2.057 Å	Liu, F.; Marchal- Roch, C. Dambournet, D.; Acker, A.; Marrot, J.; Secheresse, F. *Eur. J. Inorg. Chem.* **2008**, 2191. $[Ni(H_2O)_6][Ag_2(Ni(OH)_6Mo_6O_{18}]\cdot 8H_2O$
429170	2.057 Å	Breternitz, J.; Farrugia, L. J.; Godula-Jopek, A.; Saremi-Yarahmadi, S.; Malka, I. E.; Hoang, T. K. A; Gregory, D. H. *J. Cryst. Growth* **2015**, *412*, 1. $[Ni(H_2O)_6](NO_3)_2$
BEMXAT	2.057 Å	Piggot, P. M. T.; Hall, L. A.; White, A. J. P.; Williams, D. J.; Thompson, L. K. *Inorg. Chem.* **2004**, *43*, 1167. $[Ni(H_2O)_6](C_{11}H_7O_4)_2$
HAHYUL	2.057 Å	Dalgarno, S. J.; Hardie, M. J.; Atwood, J. L.; Raston, C. L. *Inorg. Chem.* **2004**, *43*, 6351. $[Ni(H_2O)_6]_3(C_{42}H_{30}O_{24}S_6)\cdot 2C_5H_5NO\cdot 7H_2O$

SAHPOH	2.057 Å	Kong, D.; Medvedev, D. G.; Clearfield, A. *Inorg. Chem.* **2004**, *43*, 7308. $[Ni(H_2O)_6][Ni(C_{12}H_{28}N_4O_{12}P_4]\cdot 2C_5H_5NO\cdot 7H_2O$
WUTGUN	2.057 Å	Craven, E.; Abu-Shandi, K.; Janiak, C. *Z. Anorg. Allg. Chem.* **2003**, *629*, 195. $(C_4H_{12}N_2)[Ni(H_2O)_6](HPO_4)_2$
2428	2.058 Å	Elerman, Y.; Uraz, A. A.; Armagan, N. *Acta Crystallogr., Sect. B* **1978**, *34*, 3330. $[Ni(H_2O)_6]S_2O_6$
11436	2.058 Å	Ayer, G. B.; Klepov, V. V.; Smith, M. D.; zur Loye, H.-C. *Inorg. Chem.* **2019**, *58*, 13049. $[Ni(H_2O)_6][Hf_2F_{12}]$
59149	2.058 Å	Jouini, A.; Dabbabi, M., *Acta Crystallogr., Sect. C* **1986**, *42*, 266. $Na_4[Ni(H_2O)_6](P_3O_9)_2$
63072	2.058 Å	Jouini, A.; Dabbabi, M. *Acta Crystallogr., Sect. C* **1986**, *42*, 268. $Na_4[Ni(H_2O)_6](P_3O_9)_2$
64876	2.058 Å	Treushnikov, E. N.; Kuskov, V. I.; Soboleva, L. V.; Belov, N. V. *Kristallografiya* **1978**, *23*, 30. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
71561	2.058 Å	Berraho, M.; R'Kha, C.; Vegas, A.; Rafiq, M. *Acta Crystallogr., Sect. C* **1992**, *48*, 1350. $(NH_4)_2[Ni(H_2O)_6](PO_3F)_2$
74552	2.058 Å	Tahirov, T. H.; Lu, T.-H.; Huang, C.-C.; Chung, C.-S., *Acta Crystallogr., Sect. C* **1994**, *50*, 668. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
78995	2.058 Å	Zhang, Z.; Suchanek, E.; Esser, D.; Lutz, H. D.; Nikolova, D.; Maneva-Petrova, M. *Z. Anorg. Allg. Chem.* **1996**, *622*, 845. $[Ni(H_2O)_6](H_3IO_6)_2$
79718	2.058 Å	Abrahams, I.; Donaldson, J. D.; Khan, Z. I. *Acta Crystallogr., Sect. C* **1995**, *51*, 345. $[Ni(H_2O)_6][SnF_3]_2$
172401	2.058 Å	Rudneva, E. B.; Manomenova, V. L.; Malakhova, L. F. Voloshin, A. E.; Smirnova, T. N. *Kristallografiya* **2006**, *51*, 372. $Cs_2[Ni(H_2O)_6](SO_4)_2$
409114	2.058 Å	Staples, R. J.; Hatfield, T. L.; Peirce, D. T. *Z. Kristallogr.* **1998**, *213*, 243. $[Ni(H_2O)_6](ClO_4)_2\cdot 2H_2O$
409741	2.058 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2003**, *218*, 409. $Cs_2[Ni(H_2O)_6](SO_4)_2$
710000	2.058 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Cryst. Struct.* **2009**, *224*, 351. $K_2[Ni(H_2O)_6](SeO_4)_2$
AWELEU	2.058 Å	Pan, T.; Liang, Q.; Liu, D.; Huang, C. *J. Chem. Cryst.* **2011**, *41*, 1133. $[Ni(H_2O)_6][NiC_{12}H_{16}NO_{10}]_2\cdot 4.3H_2O$
AXUKAG	2.058 Å	Rousseau, G.; Oms, O.; Dolbecq, A.; Marrot, J.; Mialane, P. *Inorg. Chem.* **2011**, *50*, 7376. $K_{54}Na_4[Ni(H_2O)_6]_3[Ni_{16}Si_4W_{36}C_{30}H_{48}O_{172}]_2\cdot 152H_2O$
CAKPIP	2.058 Å	Wang, R.-X.; Qi, Y.-J.; Yuan, X.-D. *Fenzi Kexue Xuebao* **2010**, *26*, 163. $[Ni(H_2O)_6][NiC_{42}H_{30}N_4O_{16}]\cdot 4H_2O$
DUQGAZ	2.058 Å	Das, D.; Bhattacharjee, M. *Polyhedron* **2015**, *99*, 122. $[Ni(H_2O)_6][Mo_2C_{28}H_{38}N_2O_{13}]\cdot 2(CH_3)_2NCHO\cdot H_2O$

NIHSAY	2.058 Å	Gunderman, B. J.; Kabell, I. D.; Squattrito, P. J.; Dubey, S. N. *Inorg. Chim. Acta* **1997**, *258*, 237. $[Ni(H_2O)_6](C_{10}H_8NO_6S_2)_2 \cdot 4H_2O$
NOSRUL	2.058 Å	Skelton, B. W.; Kokozay, V. N.; Vassilyeva, O. Y.; Buvaylo, E. A. CCDC deposition number 1960023, **2019**. $[Ni(H_2O)_6](C_{13}H_{12}N_3)_2Cl_4 \cdot 4H_2O$
QUKLIT	2.058 Å	Thuery, P.; Harrowfield, J. *Polyhedron* **2015**, *98*, 5. $[Ni(H_2O)_6][UO_2(C_{12}H_6O_{14}] \cdot 1.5H_2O$
YAGCIT01	2.058 Å	Ibragimov, A. B.; Englert, U.; Ashurov, J. M.; Wang, A. *Zh. Strukt. Khim.* **2018**, *59*, 411. $[Ni(H_2O)_6](4\text{-}NO_2\text{-}C_6H_4COO)_2 \cdot 2H_2O$
ZOPGAO	2.058 Å	Kammoun, O.; Naili, H.; Rekik, W.; Bataille, T.; Mhiri, T. CCDC deposition number 1033936, **2014**. $[Ni(H_2O)_6](C_7H_7N_2)_2(SO_4)_2 \cdot 4H_2O$
16228	2.059 Å	Fuess, H. *Z. Anorg. Allg. Chem.* **1970**, *379*, 204. $[Ni(H_2O)_6]SeO_4$
65018	2.059 Å	Angel, R. J.; Finger, L. W. *Acta Crystallogr., Sect. C* **1988**, *44*, 1869. $[Ni(H_2O)_6]SO_4$
99951	2.059 Å	Fleck, M.; Bohaty, L.; Tillmanns, E. *Z. Solid State Sci.* **2004**, *6*, 469. $(C(NH_2)_3)_2[Ni(H_2O)_6](SO_4)_2$
234573	2.059 Å	Karadjova, V.; Wildner, M.; Stoilova, D. *Int. Res. Pure Appl. Chem.* **2015**, *5*, 245. $Rb_{1.605}(NH_4)_{0.395}[Ni(H_2O)_6](SO_4)_2$
409591	2.059 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr.* **2002**, *217*, 15. $Rb_2[Ni(H_2O)_6](SeO_4)_2$
CIVCAN	2.059 Å	Shi, J.; Wang, Y.-C.; Wang, Q.-Y.; Zhang, Z.-T. *Inorg. Chim. Acta* **2014**, *409*, 259. $[Ni(H_2O)_6](C_{17}H_{12}BrO_9S)_2 \cdot 2H_2O$
COCXUO	2.059 Å	Zhang, S.-G.; Feng, Y.-L.; Wen, Y.-H. *Wuji Huaxue Xuebao* **2008**, *24*, 581. $[Ni(H_2O)_6](C_9H_7N_4O_3S)_2$
QOSJIU	2.059 Å	Tu, X.; Chen, H.; Zhang, S.; Ma, P. *J. Cluster Sci.* **2019**, 10.1007/s10876-019-01726-1. $[Ni(H_2O)_6]_2[Ni_6C_{48}H_{60}N_4O_{48}] \cdot 15H_2O$
SESSUF	2.059 Å	Gao, J.-S.; Li, B.-Y.; Hou, G.-F.; Hou, Y.-J.; Yan, P.-F. *Acta Crystallogr., Sect. E* **2006**, *62*, m3473. $[Ni(H_2O)_6](4\text{-}NO_2\text{-}C_6H_4SCH_2COOH)_2$
YADGUH	2.059 Å	Schau-Magnussen, M. Gorbanev, Y. Y.; Kegnaes, S.; Riisager, A. *Acta Crystallogr., Sect. C* **2011**, *67*, m327. $[Ni(H_2O)_6](C_6H_2O_5)$
65019	2.060 Å	Angel, R. J.; Finger, L. W. *Acta Crystallogr., Sect. C* **1988**, *44*, 1869. $[Ni(H_2O)_6]SO_4$
161175	2.060 Å	Abrahams, B. F.; Haywood, M. G.; Robson, R. *Cryst Growth Des.* **2008**, *8*, 1288. $[Na_4(H_2O)_{17}][Ni(H_2O)_6][(Ni(H_2O)_2]_{1.5}[Cu(SO_3)_4]_2$
234575	2.060 Å	Karadjova, V.; Wildner, M.; Stoilova, D. *Int. Res. Pure Appl. Chem.* **2015**, *5*, 245. $Rb_{1.099}(NH_4)_{0.991}[Ni(H_2O)_6](SeO_4)_2$
239300	2.060 Å	Belogub, E. V.; Krivovichev, S. V.; Pekov, I. V.; Kuznetsov, A. M.; Yapaskurt, V. O.; Kotlyarov, V. A.; Chukanov, N. V.; Belakovskiy, D. I. *Miner. Petrology* **2015**, *109*, 143. $K_2[Ni(H_2O)_6]SO_4$
403058	2.060 Å	Blachnik, R.; Wiest, T.; Duelmer, A.; Reuter, H. *Z. Kristallogr.* **1997**, *212*, 20. $(NH_4)_2[Ni(H_2O)_6](PO_4)_2$

ARONEB	2.060 Å	Tandon, S. S.; Dul, M.-C.; L.Lee, J.; Dawe, L.N.; Anwar, M. U.; Thompson, L. K. *Dalton Trans.* **2011**, *40*, 3466. $[Ni(H_2O)_6]_5[NiC_{28}H_{30}N_{16}O_{20}]_5(OH)_2\cdot 12CH_3OH\cdot 32H_2O$
CEJMEJ	2.060 Å	Cingi, M. B.; Lanfredi, A. M. M.; Tiripicchio, A. *Acta Crystallogr., Sect. B* **1984**, *40*, 56. $K_2[Ni(H_2O)_6](C_8H_5O_4)_4\cdot 4H_2O$
FITREF01	2.060 Å	Chen, Y.-G.; He, Z.-K. *Wuhan Dax. Xuebao, Zir. Kex.* **2005**, *51*, 140. $[Ni(H_2O)_6][Ni_2C_{18}H_{28}N_4O_{14}]\cdot 4H_2O$
GIDFUW	2.060 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $[Ni(H_2O)_6]_2[Ni_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot CCl_4\cdot 74.90H_2O$
KOFVOS	2.060 Å	Bai, Z.-S.; Ni, P.-Z.; Zheng, H.-D.; Zhao, S.-Y. *Z. Anorg. Allg. Chem.* **2014**, *640*, 1437. $[Ni(H_2O)_6][Ni3C_{28}H_{12}N_4O_{18}]\cdot 10H_2O$
PUSMOH	2.060 Å	Le Thi Hong, H.; Nguyen Thi Ngoc, V.; Tran Thi, D.; Nguyen Bich, N.; Van Meervelt, L. *Acta Crystallogr., Sect. E* **2015**, *71*, 1105. $[Ni(H_2O)_6](C_{11}H_8NO_8S)_2\cdot 2H_2O$
SETQUD	2.060 Å	Wolodkiewicz, W.; Brzyska, W.; Glowiak, T. *Pol. J. Chem.* **1996**, *70*, 409. $[Ni(H_2O)_6](C_7H_3Cl_2O_2)_2\cdot[NiC_{14}H_{14}Cl_4O_8]\cdot 3H_2O$
QOCPAA	2.060 Å	Kirillova, M. V.; Kirillov, A. M.; da Silva, M. F. C. G.; Kopylovich, M. N.; da Silva, J. J. R. F.; Pombeiro, A. J. L. *Inorg. Chim. Acta* **2008**, *361*, 1728.
SOFTUD	2.060 Å	Huang, L.; Chen, D.-B. *Z. Kristallogr.- New Cryst. Struct.* **2008**, *223*, 163. $[Ni(H_2O)_6](C_{11}H_9N_2O_4)_2\cdot 2H_2O$
WURXUE	2.060 Å	Moneeb, A. M.; Alabdulrahman, A. M.; Bagabas, A. A.; Perkins, C. K.; Apblett, A.W. *Ceramics Int.* **2016**, *42*, 1366. $[Ni(H_2O)_6][MoO_2(C_4H_6O_3)_2]$
YAXBEH	2.060 Å	Oleshkevich, E.; Vinas, C.; Romero, I.; Choquesillo-Lazarte, D.; Haukka, M.; Teixidor, F. *Inorg. Chem.* **2017**, *56*, 5502. $[Ni(H_2O)_6](C_{10}B_{10}H_{12}O_2P)_2$
29009	2.061 Å	Bargouth, M. O.; Will, G. *Int. Centre for Theoretical Physics: Report IC/81/103* **1981**, 1. $[Ni(H_2O)_6]SO_4$
32513	2.061 Å	Leclaire, A.; Borel, M. M. *Acta Crystallogr., Sect. B* **1982**, *38*, 234. $[Ni(H_2O)_6]_2[CdCl_6]$
47856	2.061 Å	Chi, M.; Li, H.; Xin, X.; Qin, L.; Lv, H.; Yang, G.-Y., *Inorg. Chem.* **2022**, *61*, 8467-8476. $KH[NiH_2O)_6][NiMo_6O_{24}(Sb_3O_3)_2]\cdot 5H_2O$
162316	2.061 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 74. $K_2[Ni(H_2O)_6](SO_4)_2$
171140	2.061 Å	Xie, A.-L.; Ma, C.-A.; Wang, L.-B. *Acta Crystallogr., Sect. E* **2006**, *62*, i1. $[Ni(H_2O)_6]_2[V_{10}O_{28}]\cdot 4H_2O$
411336	2.061 Å	Adamczyk, B.; Troyanov, S. I.; Schneider, M.; Kemnitz, E. *Z. Anorg. Allg. Chem.* **2000**, *626*, 2543. $NH_4[Ni(H_2O)_6][AlF_6]$
69588	2.061 Å	Blackburn, A. C.; Gallucci, J. C.; Gerkin, R. E. *Acta Crystallogr., Sect. C* **1991**, *47*, 1786. $[Ni(H_2O)_6](BrO_4)_2$.

EJAMIL	2.061 Å	Ma, C.; Chen, C.; Chen, F.; Zhang, X.; Zhu, H.; Liu, Q.; Liao, D.; Li, L. *Bull. Chem. Soc. Jpn.* **2003**, *76*, 301. $[Ni(H_2O)_6][K_2Ni_2C_{42}H_{26}N_6O_{26}]\cdot 2H_2O$
ESIWAG	2.061 Å	Le Thi Hong, H.; Nguyen Thi Ngoc, V.; Do Thi Van, A.; Van Meervelt, L. *Acta Crystallogr. Sect. E* **2016**, *72*, 1242. $[Ni(H_2O)_6](C_{12}H_{12}BrN_2O_5S)_2\cdot H_2O$
FITREF	2.061 Å	Li; D.-F.; Liao; Z.-R.; Xiong, Y. *Acta Crystallogr., Sect. C* **1999**, *55*, 9900058. $[Ni(H_2O)_6][Ni_2C_{18}H_{28}N_4O_{14}]\cdot 4H_2O$
GIDFOQ	2.061 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $[Ni(H_2O)_6]_2[Ni_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot CBr_4\cdot 74.76H_2O$
IDAGIF	2.061 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Turnbull, M. M.; Mhiri, T.; Bataille, T. *Dalton Trans.* **2011**, *40*, 11613. $[Ni(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
NARKOI	2.061 Å	Yoshida, R.; Ogasahara, S.; Akashi, H.; Shibahara, T. *Inorg. Chim. Acta.* **2012**, *383*, 157. $[Ni(H_2O)_6][Mo_2C_6H_{10}N_2O_6S_4]\cdot 8H_2O$
NOWTOK	2.061 Å	Said, S.; Kolsi, R. B. A.; Naili, H. *J. Organometal. Chem.* **2016**, *809*, 45. $[Ni(H_2O)_6](C_6H_9N_2)_2(SO_4)_2\cdot 2H_2O$
NUHRUE	2.061 Å	Indrani, M.; Ramasubramanian, R.; Fronczek, F. R.; Braga, D.; Vasanthacharya, N. Y.; Kumaresan, S. *J. Chem. Sci. (Bangladore)* **2009**, *121*, 403. $[Ni(H_2O)_6](C_8H_8NO_3S)_2$
RADZUU	2.061 Å	Gao, S.-M.; Xu, Z.-H.; Ye, L.-W.; Su, G.-B.; Zhuang, X.-X. *Jiegou Huaxue* **2015**, *34*, 1682. $[Ni(H_2O)_6][Ni(H_2O)_2(C_6H_{12}N_4)_2](SO_4)_2\cdot 6H_2O$
VAQDIC	2.061 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal. Chem.* **2012**, *700*, 110. $[Ni(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
4308	2.062 Å	Hodgson. P. G.; Whitnall, J.; Kennard, C. H. L.; Moore, F. H. *Cryst. Struct. Commun.* **1975**, *4*, 713. $K_2[Ni(H_2O)_6](SO_4)_2$
29828	2.062 Å	Liu, Y.; Deng, J.-X.; Pan, C.-Y. *J. Cluster Sci.* **2021**, *32*, 469. $[Ni(H_2O)_6](NO_3)_2\cdot [Ni(B_3O_3(OH)_4)]_2(H_2O)_4]\cdot 2H_2O$
62376	2.062 Å	Chattopadhyay, T. K.; Devreux, F.; Peters, K.; Gmelin, E.; Ghosh, B. *J. Phys. C* **1988**, *21*, 1321. $[Ni(H_2O)_6]_2[SiF_6]$
409844	2.062 Å	Wang, X.-W.; Wang, P.; Zheng, Y.-Q. *Kristallogr.-New Cryst. Struct.* **2000**, *215*, 101. $[Ni(H_2O)_6]HPO_4\cdot H_2O$
AMIHOW	2.062 Å	Liu, Y.; Deng, J.-X.; Pan, C.-Y. *J. Cluster Sci.* **2021**, *32*, 469. $[Ni(H_2O)_6](NO_3)_2\cdot [Ni(H_2O)_4(B_3H_4O_7)_2]\cdot 2H_2O$
DOBCOM	2.062 Å	Aghabozorg, H.; Palenik, R. C.; Palenik, G. J. *Inorg. Chem.* **1985**, *24*, 4214. $[Ni(H_2O)_6](C_{30}H_{12}N_6)\cdot 5H_2O$

GAMLAL	2.062 Å	Joliat, E.; Mosberger, M.; Weder, N.; Spingler, B.; Probst, B.; Alberto, R. *Chimia* **2021**, *75*, 180. $[Ni(H_2O)_6]_2[Ni_2C_{44}H_{28}N_8](SO_4)_4 \cdot 5H_2O$
PEVXUM	2.062 Å	Santoso, S. P.; Ismadji, S.; Angkawijaya, A. E.; Soetaredjo, F. E.; Go, A. W.; Ju, Y. H. *J. Mol. Liq.* **2016**, *221*, 617. $[Ni(H_2O)_6](2,6\text{-}(OH)_2C_6H_3COO)_2 \cdot 2H_2O$
RENROS	2.062 Å	Kumaresan, S.; Ramadevi, P.; Walsh, R. D.; McAneny, A.; Lake, C. H. *J. Chem. Sci. Bangladore* **2006**, *118*, 243. $[Ni(H_2O)_6](C_7H_6NO_3S)_2$
UTEMAI	2.062 Å	Shao, Y.; Lin, H.; Su, Y.-Q.; Li, C.-X.; Ling, S.-Q.; Zhu, D.-S.; Liu, Q. *Dongbei Shi-Daxuebao Ziran Kexueban* **2005**, *37*, 61. $[Ni(H_2O)_6](C_6H_5O_4S_2)_2$
VAQFEA	2.062 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T. *J. Organometal Chem.* **2012**, *700*, 110. $[Ni(H_2O)_6](C5H14N2)(SO_4)_2$
WOHBUQ	2.062 Å	Haussuhl, E.; Giester, G.; Tillmanns, E. *Z. Kristallogr.-New Cryst. Struct.* **2000**, *215*, 101. $(C(NH_2)_3)_2[Ni(H_2O)_6][Zr(C_6H_6NO_6)_2] \cdot 6H_2O$
ZZZPAW01	2.062 Å	Morris, J. E.; Squattrito, P. J.; Kirschbaum, K.; Pinkerton, A. A. *J. Chem. Cryst.* **2003**, *33*, 307. . $[Ni(H_2O)_6](C_{10}H_8NO_3S)_2 \cdot 6H_2O$
9127	2.063 Å	Bigoli, F.; Braibanti, A.; Tiripicchio, A.; Tiripicchio Camellini, M. *Acta Crystallogr. Sect. B* **1971**, *27*, 1427. $[Ni(H_2O)_6](NO_3)_2$
20924	2.063 Å	Shchegoleva, T. M.; Iskhakova, L. D.; Ovanisyan, S. M.; Shakhnazaryan, A. A.; Trunov, V. K. *Zh. Neorg. Khim.* **1983**, *28*, 2271. $[Ni(H_2O)_6][SbF_4]_2$
92161	2.063 Å	Ishaque Khan, M.; Tabussum, S.; Zheng, C. *Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry* **2000**, *30*, 1773. $(H_3O)_2[Ni(H_2O)_6][V_{10}O_{28}H_{10}] \cdot 4H_2O$
200304	2.063 Å	Treushnikov, E.′N.; Kuskov, V. I.; Soboleva, L. V.; Belov, N. V. *Kristallografiya* **1978**, *23*, 30. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
261154	2.063 Å	Oudahmane, A.; Mnaouer, N.; El-Ghozzi, M.; Avignant, D. *Acta Crystallogr. Sect. E* **2011**, *67*, i6. $K_2[Ni(H_2O)_6][ZrF_6]$
FIKCUZ	2.063 Å	Chen, M.; Chen, M.-Z.; Zhou, C.-Q.; Lin, W.-E.; Chen, J.-X.; Chen, W.-H.; Jiang, Z.-H. *Inorg. Chim Acta* **2013**, *405*, 461. $[Ni(H_2O)_6](C_{14}H_{10}NO_4)_2 \cdot 4H_2O$
MAZKUX	2.063 Å	Ruzmetov, A.; Ibragimov, A.; Ashurov, J.; Boltaeva, Z.; Ibragimov, B.; Usmanov, S. *Acta Crystallogr., Sect. E* **2022**, *78*, 660. $[Ni(H_2O)_6](p\text{-}OOCC_6H_4OH)_2 \cdot 2H_2O$
SIYZEF	2.063 Å	Bernadinelli, G.; Lucken, E. A. C.; Costines, M. *Z. Kristallogr.* **1991**, *195*, 139. $[Ni(H_2O)_6](C_6H_4ClO_3S)_2$
ZADTAC	2.063 Å	An, H.; Wang, L.; Hu, Y.; Xu, T.; Hou, Y. *Inorg. Chem.* **2016**, *55*, 144. $[Ni(H_2O)_6](C_8H_8NO_2)_4[Co_2Mo_{10}H_4O_{38}] \cdot 5H_2O$
11558	2.064 Å	Balasekaran, S. M.; Lawler, K.; Hagenbach, A.; Abram, A.; Abram, U; Sattelberger, A.; Poineau, F. *Eur. J. Inorg. Chem.* **2019**, 4129. $(NH_4)_4[Ni(H_2O)_6][Re_4F_{18}] \cdot 4H_2O$

26149	2.064 Å	Baggio, S.; Becka, L. N. *Acta Crystallogr., Sect. B* **1969**, *25*, 1150. $[Ni(H_2O)_6]SO_3$
CUPBAQ	2.064 Å	Healy, P. C.; Patrick, J. M.; White, A. H. *Aust. J. Chem.* **1984**, *37*, 1105. $(C_2H_{10}N_2)[Ni(H_2O)_6]\cdot 4H_2O$
HULMEG	2.064 Å	Rodriguez-Martin, Y.; Sanchiz, J.; Ruiz-Perez, C.; Lloret, F.; Julve, M. *Cryst. Eng. Comm.* **2002**, *4*, 631. $[Ni(H_2O)_6][Cu(Br_2(C_3H_4O_5)_2]$
KICJUB	2.064 Å	El-Essawi, M. M.; Masoud, M. S.; Amr, A. M.; Weller, F. *Spectrosc. Lett.* **1990**, *23*, 175. $[Ni(H_2O)_6](C_{13}H_{10}N_3O_4)_2\cdot 6H_2O$
KUGLOW	2.064 Å	Gonzalez Nieves, K.; Pinero Cruz, D. M. *Acta Crystallogr., Sect. E* **2020**, *76*, 314. $[Ni(H_2O)_6][Ni(C_{84}H_{66}N_{14}O_{40}S_{14}]\cdot 18H_2O$
PICKOC	2.064 Å	Taguchi, M.; Igashira-Kamiyama, A.; Kajiwara, T.; Konno, T. *Angew Chem., Int. Ed.* **2007**, *46*, 2422. $[Ni(H_2O)_6][Au_2Ni_2C_{20}H_{36}N_4O_8S_4]\cdot 3.5H_2O$
POGQAG	2.064 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A.*Dalton Trans.* **2019**, *48*, 7006. $[Ni(H_2O)_6]_{0.98}[Mn(H_2O)_6]_{0.02}[NiC_{12}H_{10}N_{14}O_{10}]_{0.69}[MnC_{12}H_{10}N_{14}O_{10}]_{0.31}$
YOSDAM	2.064 Å	Qiu, L.-G.; Gu, L.-N.; Hu, G.; Zhang, L.-D. *J. Solid State Chem.* **2009**, *182*, 502. $[Ni(H_2O)_6][Zn(H_2O)_2(C_{12}H_8N_2)_2](\textit{1,3,5}\text{-}(OOC)_3C_6H_3)_2\cdot 22H_2O$
BEVSON	2.065 Å	Liu, J. *Dyes Pigm.* **2018**, *154*, 92. $[Ni(H_2O)_6](C_{12}H_{14}N_2)(\textit{1,4}\text{-}(OOC)_2C_6H_4)_2\cdot 4H_2O$
GIDFEG	2.065 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $[Ni(H_2O)_6]_2[Ni_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot C_7H_{14}\cdot 67.68H_2O$
UBEPAU	2.065 Å	Chen, K.; Liang, L.-L.; Zhang, Y.-Q.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z. *Inorg. Chem.* **2011**, *50*, 7754. $(H_3O)_2[Ni(H_2O)_6][SmC_{30}H_{36}ClN_{20}O_{13}]_2Cl_6(NO_3)_2\cdot 16H_2O$
CAWMOF	2.066 Å	Yuan, N.; Tian, C.; Sheng, T.; Hu, S.; Wu, X. *Inorg. Chem. Commun.* **2017**, *81*, 33. $[Ni(H_2O)_6][NiC_{84}H_{66}N_{14}O_{40}S_{14}]\cdot 18H_2O$
COZJIK	2.066 Å	Soldanova, J.; Pavelcik, F.; Majer, J.; Garaj, J. *Chem. Zvesti* **1984**, *38*, 321. $K_2[Ni(H_2O)_6][Ni(C_5H_6NO_4)_2]\cdot 4H_2O$
LERMIF	2.066 Å	Rekik, W.; Naili, H.; Bataille, T.; Mhiri. T. *J. Organometal. Chem.* **2006**, *691*, 4725. $[Ni(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$
MAJQEW	2.066 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y.; Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Ni(H_2O)_6][EuC_{30}H_{36}ClN_{20}O_{13}]_2Cl_6\cdot 26H_2O$
WURBUH	2.066 Å	Eshtiagh-Hosseini, H.; Aghabozorg, H.; Mirzaei, M.; Amini, M. M.; Chen, Y.-G.; Shokrollahi, A.; Aghaei, R. *J. Mo. Struct.* **2010**, *973*, 180. $[Ni(H_2O)_6](C_6H_9N_2)_2[Ni(C_7H_3NO_4)_2]\cdot 2H_2O$
16602	2.067 Å	Montgomery, H. *Acta Crystallogr.* **1964**, *17*, 1478. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
43310	2.067 Å	Montgomery, H.; Lingafelter, E. C. *Acta Crystallogr.* **1964**, *17*, 1478. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
414634	2.067 Å	Haag, J. M.; LeBret, G. C.; Cleary, D. A.; Twamley, B. **2005**, *178*, 1308. $[Ni(H_2O)_6]P_2O_6$

UJEDOD	2.067 Å	Wang, H.-S.; Zhang, W.-Q.; Zhang, F.-J.; Zi, J.-F. *Huaxue Yanjiu* **2009**, *20*, 43-3. $[Ni(H_2O)_6][Ni(H_2O)_3((C_{12}H_{10}NO_8)]\cdot 6H_2O$
TUGCIK	2.068 Å	Liu, J.; Lu, Y.; Lu, W. *Dalton Trans.* **2020**, *49*, 4044. $[Ni(H_2O)_6]_2[NiC_{10}H_{10}O_{12}](C_{26}H_{20}N_2O_4)\cdot 4H_2O$
YUJCIS	2.086 Å	Chen, X.-L.; Shen, Y.-J.; Gao, C.; Yang, J.; Sun, X.; Zhang, X.; Yang, Y.-D.; Wei, G.-P.; Xiang, J.-F.; Sessler, J. L.; Gong, H.-Y. *J. Am. Chem. Soc.* **2020**, *142*, 7443. $[Ni(H_2O)_6]_2(C_{38}H_{34}N_{10})(1,4\text{-}(COO)_2\text{-}C_6H_4)_4\cdot 28H_2O$
CEJMEJ01	2.069 Å	Wu, W.; Xie, J.-M.; Xuan, Y.-W. *Z. Anorg. Allg. Chem.* **2009**, *635*, 635. $K_2[Ni(H_2O)_6](C_8H_5O_4)_4\cdot 4H_2O$
TAKTOP	2.069 Å	Koval'chukova, O. V.; Kuz'mina, N. E.; Palkina, K. K.; Strashnova, S. B.; Zaitsev, B. E.; Ryabov, M. A. *Zh. Neorg. Khim.* **2003**, *48*, 244. $[Ni(H_2O)_6](C_5HN_2O_6)_2\cdot 2H_2O$
GIDFIK	2.070 Å	Ronson, T. K.; Giri, C.; Beyeh, N. K.; Minkkinen, A.; Topic, F.; Holstein, J. J.; Rissanen, K.; Nitschke, J. R. *Chem. Eur. J.* **2013**, *19*, 3374. $[Ni(H_2O)_6]_2[Ni_4C_{144}H_{96}N_{24}O_{36}S_{12}]\cdot 0.76CCl_4\cdot 0.24CBr_4\cdot 61.82H_2O$
MAJQIA	2.070 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y.; Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Ni(H_2O)_6][GdC_{30}H_{36}ClN_{20}O_{13}]_2Cl_6\cdot 24H_2O$
IYOHIQ	2.071 Å	Surinwong, A. ; Kuwamura, N. ; Kojima, T. ; Yoshinari, N. ; Rujiwatra, A. ; Konno, T. *Inorg. Chem.* **2021**, *60*, 12555. $[Ni(H_2O)_6]_2[Ni(H_2O)_4][Au_3Co_2C_{30}H_{54}N_6O_{12}S_6]_2$
LIKDIT	2.072 Å	Li, L.-Z.; Wang, L.-H. *Z. Kristallogr.- New Cryst. Struct.* **2007**, *222*, 119. $[Ni(H_2O)_6]_2[Ni(C_9H_7NO_3)_2]\cdot 2H_2O$
280901	2.073 Å	Higami, T.; Hashimoto, M.; Okeya, S. *Acta Crystallogr., Sect. C* **2002**, *58*, 144. $[Ni(H_2O)_6]_2[Na(H_2O)_3]_2[V_{10}O_{28}]\cdot 4H_2O$
411793	2.073 Å	Mialane, P.; Marrot, J.; Mallard, A.; Herve, G. *Inorg. Chim. Acta* **2002**, *328*, 81. $K_8[Ni(H_2O)_6]_{1.5}[W_{19}As_2(H_2O)(K(H_2O)))Ni(H_2O)_4)O_{67}]\cdot 21H_2O$
NELMUO	2.073 Å	Belosevic, S.; Cendic, M.; Meetsma, A.; Matovic, Z. D. *Polyhedron* **2013**, *50*, 473. $[Ni(H_2O)_6][Ni(H_2O)(C_8H_{11}N_2O_7)]_2\cdot 2H_2O$
433307	2.075 Å	Kleeberg, F. M.; Dinnebier, R. E.; Schleid, T. *Inorg. Chim. Acta* **2017**, 147. $[Ni(H_2O)_6]B_{12}Cl_{12}$
COHFAG	2.075 Å	Oliva, G.; Castellano, E. E.; Zukerman-Schpector, J.; Massabni, A. C. *Inorg. Chim. Acta* **1984**, *89*, 9. $K_2[Ni(H_2O)_6](C_6H_5)_3AsO)_4\cdot 4H_2O$
MAJQUM	2.075 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y.; Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Ni(H_2O)_6][PrNaC_{30}H_{36}ClN_{20}O_{13}]_2Cl_8\cdot 18H_2O$
DEZPEF01	2.077 Å	Meier, R.; Platas-Iglesias, C.; Heinemann, F. W.; Linti, G.; Schulte, J.; Srivastava, S. K. *Inorg. Chem.* **2014**, *53*, 6684. $[Ni(H_2O)_6][NiC_{11}H_{14}N_2O_8]\cdot 2H_2O$
IKEMIW	2.077 Å	Zhu, X.; Liao, W. *Polyhedron* **2016**, *111*, 185. $[Ni(H_2O)_6][Ni(C_{12}H_{12}N_2)_3]_2[Ni_2Nd_2C_{96}H_{60}O_{54}S_{16}]\cdot 8H_2O$
411794	2.078 Å	Mialane, P.; Marrot, J.; Mallard, A.; Herve, G. *Inorg. Chim. Acta* **2002**, *328*, 81. $Cs_{5.84}K_{2.16}[Ni(H_2O)_6][As_2W_{19}(H_2O)Ni(H_2O)_2O_{67}]\cdot 17H_2O$

JEYTOX	2.080 Å	Xie, C.; Chang, D.-W.; Mu, S.-C.; Zhou, L.-N.; Chen, W. *Acta Crystallogr., Sect. E* **2007**, *63*, m662. $[Ni(H_2O)_6](NO_3)_2(C_9H_8N_4S_2)_2$
27807	2.081 Å	Grandjean, D.; Weiss, R.; Kern, R. *Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences* **1962**, *255*, 964. $[Ni(H_2O)_6]SO_3$
263943	2.081 Å	Sadikin, Y.; Didelot, E.; Lodziana, Z.; Cerny, R. *Dalton Trans.* **2018**, *47*, 5843. $[Ni(H_2O)_6]B_{12}H_{12}$
QEQPIO	2.081 Å	Malik, A. U Zhou, X.-L.; Kong, S.-N.; Li, L.-L.; Bao, X.-L.; Shu, M.-H. *Dalton Trans.* **2018**, *47*, 1764. $[Ni(H_2O)_6](ClO_4)_2\cdot 2[Ni_6C_{84}H_{84}N_6O_{36}S_{12}]$
IKEMOC	2.082 Å	Zhu, X.; Liao, W. *Polyhedron* **2016**, *111*, 185. $[Ni(H_2O)_6][Ni(C_{12}H_{12}N_2)_3]_2[Ni_2Er_2C_{96}H_{60}O_{54}S_{16}]\cdot 8H_2O$
EQEHEO	2.086 Å	Li-Hui Zhang, Ying-Ying Liu, Jian-Fang Ma, Jin Yang, Li-Guang Zhang, Jun Li, Yan-Wei Li, Y.-W. *Polyhedron* **2011**, *30*, 764. $[Ni(H_2O)_6](C_{22}H_{18}N_2O_4)$
IYOHEM	2.086 Å	Surinwong, A. ; Kuwamura, N. ; Kojima, T. ; Yoshinari, N. ; Rujiwatra, A. ; Konno, T. *Inorg. Chem.* **2021**, *60*, 12555. $[Ni(H_2O)_6]_3[Au_3Co_2C_{30}H_{60}N_6O_{12}S_6]_2$
YUJCIS	2.086 Å	Xu-Lang Chen, Yun-Jia Shen, Chao Gao, Jian Yang, Xin Sun, Xin Zhang, Yu-Dong Yang, Gong-Ping Wei, Jun-Feng Xiang, J.L.Sessler, Han-Yuan Gong, H.-Y. *J. Am. Chem. Soc.* **2020**, *142*, 7443. $[Ni(H_2O)_6](C_{38}H_{34}N_{10})(1,4\text{-}(OOC)_2C_6H_4)_4\cdot 28H_2O$
XEMLOS	2.087 Å	Miminoshvili, E. B.; Miminoshvili, K. E.; Sakvarelidze, T. N. *Zh. Strukt, Khim.* **2012**, *53*, 191. $[Ni(H_2O)_6](C_5H_{12}N)_2(3,5\text{-}(NO_2)_2\text{-}C_6H_3\text{-}COO)_4\cdot 2H_2O$
SIDJUL	2.089 Å	Sun, R.; Li, Y.-Z.; Bai, J.; Pan, Y. *Cryst. Growth Des.* **2007**, *7*, 890. $[Ni(H_2O)_6][Ni_2C_{30}H_{36}N_6O_{24}]\cdot 3H_2O$
MAJRIB	2.090 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y.; Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Ni(H_2O)_6][GdKC_{30}H_{36}Cl_2N_{20}O_{13}]_2Cl_6\cdot 13H_2O$
ZOZFUS	2.093 Å	Liu, Y.; Zhang, Z.; Li, X.-Y.; Yang, G.-Y. *Inorg. Chem. Commun.* **2020**, *113*, 107765. $K_4[Ni(H_2O)_6][Ni_8C_{48}H_{24}N_{36}O_{48}]\cdot 20H_2O$
413186	2.095 Å	Zhang, Q.-Z.; Lu, C.-Z.; Yang, W.-B.; Wu, C.-D.; Yu, Y.-Q.;Yan, Y.; Liu, J.-H.; He, X. *J. Cluster Sci.* **2003**, *14*, 381. $[Ni(H_2O)_6]_3[H_3Mo_{12}O_{40}P]\cdot 30H_2O$
ZASZOK	2.095 Å	Wang, Y.-T.; Tang, G.-M.; Wan, W.-Z.; Wu, Y.; Tian, T.-C.; Wang, J.-H.; He, C.; Long, X.-F.; Wang, J.-J.; Ng, S. W. *CrystEngComm* **2012**, *14*, 3802. $[Ni(H_2O)_6](C_{14}H_{13}O_2)_2\cdot 2H_2O$
84309	2.097 Å	Lorenzo-Luis, P. A.; Martin-Zarza, P.; Gili, P.; Saez-Puche, R.; Jimenez-Jimenez, J.; Rodriguez-Castellon, E.; Ruiz-Perez, C.; Gonzalez-Platas, J.; Solans, X. *Eur. J. Solid State Inorg. Chem.* **1997**, *34*, 1259. $[Ni(H_2O)_6]_3[TeMo_6O_{24}]$
NIEDTA10	2.101 Å	Porai-Koshits, M. A.; Nesterova, Ya. M.; Polynova, T. N.; de Garcia Banus, D. T. *Koord. Khim.* **1975**, *1*, 682. $[Ni(H_2O)_6]\cdot 2[NiC_{10}H_{15}N_2O_9]\cdot 2H_2O$
24140	2.102 Å	Weiss, R.; Grandjean, D.; Wendling, J. P. *Bull. Soc. Chim. Fr.* **1964**, 3152. $[Ni(H_2O)_6]SO_3$

OPARUT	2.103 Å	Chen, L.; Zhao, J.; Ma, P.; Han, Q.; Wang, J.; Niu, J. *Inorg. Chem. Commun.* **2010**, *13*, 50. $[Ni(H_2O)_6]_2[Ni(H_2O)_5][Ni_{18}As_4Na_2W_{34}C_{18}H_{92}N_{12}O_{150}]\cdot 9H_2O$
CETHIT	2.106 Å	Liu, X.-M.; Wang, C.-R.; Liu, B.; Xue, G.-L.; Hu, H.-M.; Wang, J.-W.; Fu, F. *Chin. J. Chem.* **2005**, *23*, 1412. $Na_{10}[Ni(H_2O)_6][Ni_3As_2W_{18}C_{15}H_{15}N_3O_{66}]\cdot 34H_2O$
LATNEC	2.107 Å	Sohmiya, A.; Okuyama, T.; Suzuki, R.; Yamanishi, K.; Sugimoto, K.; Kondo, M. *Chem. Lett.* **2017**, *46*, 485. $[Ni(H_2O)_6][Ni(H_2O)_2(C_{23}H_{14}Cl_2O_6)_2]\cdot 9H_2O$
ZOZFUS	2.107 Å	Liu, Y.; Zhang, Z.; Li, X.-Y.; Yang, G.-Y. *Inorg. Chem. Commun.* **2020**, *113*, 107765. $[Ni(H_2O)_6][Ni_{12}W_{18}C_{20}H_{69}O_{92}P_2]\cdot 2H_2O$
YAGCIT	2.117 Å	Qu, Y.; Liu, Z.-D.; Zhu, H.-L.; Tan, M.-Y. *Acta Crystallogr., Sect. E* **2004**, *60*, m1306. $[Ni(H_2O)_6](4\text{-}NO_2\text{-}C_6H_4COO)_2\cdot 2H_2O$
IXOROD	2.124 Å	Jia, Z.-F.; Yang, J.; Liu, Y.-Y.; Ma, J.-F. *J. Coord. Chem.* **2011**, *64*, 2899. $[Ni(H_2O)_6](C_{30}H_{26}N_2O_6)\cdot 0.5C_2H_5OH\cdot 9H_2O$
ROSSOJ	2.127 Å	Zhu, Z.; Bai, Y.-L.; Zhang, L.; Sun, D.; Fang, J.; Zhu, S. *Chem. Commun.* **2014**, *50*, 14674. $((CH_3)_2NH_2)_6[Ni(H_2O)_6]_3[Ni_3C_{53}H_{36}N_{12}O_{30}]_2\cdot 11H_2O$
VEHWIQ	2.131 Å	Zheng, Y.-Y.; Wen, R.; Kong, X.-J.; Long, L.-S.; Huang, R.-B.; Zheng, L.-S. *Dalton Trans.* **2012**, *41*, 9871. $[Ni(H_2O)_6][Ni_{11}W_{18}C_{20}H_{57}N_{11}O_{87}P_2]\cdot 2(H_2N(CH_2)_2NH_2)\cdot 6H_2O$
QIWHAF	2.132 Å	Berkessel, A.; Hermann, G.; Rauch, O.-T.; Buchner, M.; Jacobi, A.; Huttner, G. *Chem. Ber.* **1996**, *129*, 1421. $[Ni(H_2O)_6][NiC_8H_9N_4O_4S_2]_2\cdot 2CH_3OH\cdot C_2H_5OH\cdot 2H_2O$
POCDOD	2.153 Å	An, S.-W.; Mei, L.; Hu, K.-Q.; Li, F.-Z.; Xia, C.-Q.; Chai, Z.-F.; Shi, W.-Q. *Inorg. Chem.* **2019**, *58*, 6934. $[Ni(H_2O)_6](C_{10}H_9N_2)_2[UC_{42}H_{24}O_{28}S_3]_2$
249617	2.159 Å	Xiaobing, C.; Kechang, L.; Ling, Y.; Yan, C.; Jiqing; X.; Weijie, D.; Haihui, Y.; Zhihui, J.; Jiwen, C. *J. Solid State Chem.* **2008**, *181*, 221. $[Ni(H_2O)_6][H_2As_6V_{15}O_{42}(H_2O)]\cdot 2H_2O$
245385	2.160 Å	Trobajo, C.; Salvado, M. A.; Pertierra, P.; Alfonso, B. F.; Blanco, J. A.; Khainakov, S. A.; Garcia, J. R. *Z. Anorg. Allg. Chem.* **2007**, *633*, 1932. $K[Ni(H_2O)_6]PO_4$
28661	2.163 Å	Ferrari, A.; Colla, C. *Gazz. Chim. Ital.* **1937**, *67*, 294. $[Ni(H_2O)_6](H_2PO_3)_2$
LATWIO	2.182 Å	Yu, K.; Zhou, B.; Yu, Y.; Su, Z.; Wang, C.; Wang, C.; Gao, S.; Chen, Y. *Inorg. Chim. Acta* **2012**, *8*, 384. $[Ni(H_2O)_6](C_3H_5N_2)(C_5H_6N)[Mo_{12}Ni_2Sr_2H_{28}O_{70}O_8)]\cdot 4H_2O$
UCAWEB	2.191 Å	Shi, W.; Dai, Y.; Zhao, B.; Song, H.-B.; Wang, H.-G.; Cheng, P. *Inorg. Chem. Commun.* **2006**, *9*, 192. $[Ni(H_2O)_6][Ni_2(H_2O)_2C_{18}H_{24}N_4O_{12}]\cdot 2H_2O$
Mean	**2.055 Å/386 structures**	

Dimeric hydrates

ICSD/CSD code	d(Ni-O)$_b$ + d(Ni-O)$_t$/d(Ni···Ni)	Reference, compound formula
$[Ni_2(H_2O)_{10}]^{4+}$		
KISBEU	2.046 + 1.924 Å	Zhao, J.-W.; Zheng, S.-T.; Yang, G.-Y. *J. Solid State Chem.* **2007**, *180*, 3317.
	2.694 Å	$(H_3N(CH_2)_2NH_3)_3[Ni_2(H_2O)_{10}][Ni_4P_2W_{18}H_4O_{70}]\cdot H_2N(CH_2)_2NH_2\cdot 8H_2O$
CAKSOY	2.075 + 1.926 Å	Zhao, J.-W.; Chen, L.-J.; Ma, P.-T. *Henan Daxue Xuebao,Ziran Kexueban* **2009**, *39*, 602.
	2.649 Å	$(H_3N(CH_2)_2NH_3)_3[Ni_2(H_2O)_{10}][Ni_4As_2W_{18}H_4O_{70}]\cdot 2H_2N(CH_2)_2NH_2\cdot 8H_2O$
Mean	**1.925 + 2.061 Å/2 structures**	
	2.672 Å	

Table S1aw. Summary of solid state structures containing hydrated palladium(II) and platinum(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Pd/Pt-O bond distance, *d*(Pd/Pt-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Palladium(II)

Four-coordination, square-planar configuration

ICSD/CSD code	*d*(Pd-O)	Reference, compound formula, space group
432329	2.012 Å	Mazej, Z.; Goreshnik, E. *Z. Kristallogr.-Cryst. Mater.* **2017**, *232*, 339. $[Pd(H_2O)_4](SbF_6)\cdot 4H_2O$
425166	2.029 Å	Sokolov, M. N.; Kalinina, I. V.; Peresypkina, E. V.; Moroz, N. K.; Naumov, D. Y.; Fedin, V. P. *Eur. J. Inorg. Chem.* **2013**, 1772. $Na_2KH[Pd(H_2O)_4][H_2W_{12}O_{42}][Pd(H_2O)_3)_2]\cdot 10H_2O$
ZOXSOW	2.046 Å	Fortea-Perez, F. R.; Armentano, D.; Julve, M.; De Munno, G.; Stiriba, S.-E. *J. Coord. Chem.* **2014**, *67*, 4003. $[Pd(H_2O)_4][Pd(C_{10}H_9NO_3)_2]\cdot 2H_2O$
KUZGET	2.080 Å	Fortea-Perez, F. R.; Neve, F.; Armentano, D.; De Munno, G.; Stiriba, S.-E.; Julve, M. *Inorg. Chim. Acta* **2016**, *443*, 267. $[Pd(H_2O)_4]((n\text{-}C_4H_9)_4N)_4[Pd(C_8H_4BrNO_3)_2]_3\cdot 2H_2NCOCH_3$
KUYTOP	2.085 Å	Fortea-Perez, F. R.; Neve, F.; Armentano, D.; De Munno, G.; Stiriba, S.-E.; Julve, M. *Inorg. Chim. Acta* **2016**, *443*, 267. $[Pd(H_2O)_4]((n\text{-}C_4H_9)_4N)_4[Pd(C_8H_4ClNO_3)_2]_3\cdot 2H_2NCOCH_3$
Mean	**2.029 Å/3 structures**	

Platinum(II)

Four-coordination, square-planar configuration

ICSD/CSD code	*d*(P-O)	Reference, compound formula, space group
432329	2.012 Å	Seppelt, K. *Z. Anorg. Allg. Chem.* **2010**, *636*, 2391. $[Pt(H_2O)_4]SbF_6$
DIVYOZ	2.145 Å	Rivero-Crespo, M. A.; Mon, M.; Ferrando-Soria, J.; Lopes, C. W.; Boronat, M.; Leyva-Perez, A.; Corma, A.; Hernandez-Garrido, J. C.; Lopez-Haro, M.; Calvino, J. J.; Ramos-Fernandez, E. V.; Armentano, D.; Pardo, E. *Angew. Chem., Int Ed.* **2018**, *57*, 17094. $Na_6[Pt(H_2O)_4]_2[Pt_2(OH)_2O(NH_3)_4][Cu_3Ni_2C_{39}H_{38}O_{22}]_4\cdot 134H_2O$
Mean	**2.012 Å/1 structure**	

Table S1ax. Summary of solid state structures containing hydrated copper(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Cu-O bond distance, *d*(Cu-O); $d(\text{Cu-O})_{eq}$ and $d(\text{Cu-O})_{ax}$ denote bond distances in the equatorial plane and axial positions in a square pyramidal, bicapped trigonal pyramidal or Jahn-Teller distorted octahedral complexes where the axial Cu-O bond distances in some cases are split then denoted $d(\text{Cu-O})_{ax1}$ and $d(\text{Cu-O})_{ax2}$. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Copper(II)

Four-coordination, square-planar configuration

ICSD/CSD code	*d*(Cu-O)	Reference, compound formula, space group
GEDBIA	1.919 Å	Mak, C. W. T.; Kennard, C. H. L.; Smith, G.; O'Reilly, E. J.; Sagatys, D. S.; Fulwood, J. C. *Polyhedron* **1987**, *6*, 855-861. $[Cu(H_2O)_4)][Cu_2C_{50}H_{55}O_{15}]_2$
PUKMIT	1.930 Å	Patra, A.; Haldar, S.; Kumar, G. V.; Carrella, L.; Ghosh, A. K.; Bera, M. *Inorg. Chim. Acta* **2015**, *436*, 195-204. $[Cu(H_2O)_4]$ $[Cu_2C_{38}H_{34}N_4O_7]_2Cl_2\cdot 5H_2O$
CUHMAL	1.946 Å	Prout, C. K.; Carruthers, J. R.; Rossotti, F. J. C *J. Chem. Soc. A* **1971**, 3342-3349. $[Cu(H_2O)_4](C_4H_3O_4)_2$
170205	2.019 Å	Chippindale, A. L.; Hibble, S. J.; Cowley, A. R. Inorg. Chem. **2004**, 43, 8040-8048. $[Cu(H_2O)_4][Cu_2(CN)I_2]$
TIKPOV	2.031 Å	Li, S.; Feng, Z.; Hu, Y.; Wei, C.; Wu, H.; Huang; J. Inorg. Chem. **2018**, 57, 13289. $[Cu(H_2O)_4][Cu_2(CN)_3]_2$
Mean	**1.932 Å/3 structures**	

Five-coordination, trigonal bipyramidal configuration

ICSD/CSD code	$d(\text{Cu-O})_{eq}+d(\text{Cu-O})_{ax}$	Reference, compound formula
ECAJEY	1.936+2.011 Å	Shivaiah, V.; Das, S. K. *Angew. Chem., Int. Ed.* **2006**, *45*, 245. $[Cu(H_2O)_5][Mo_6O_{19}]\cdot 2C_{12}H_{24}O_6$

Five-coordination, square pyramidal configuration

ICSD/CSD code	$d(\text{Cu-O})_{eq}+d(\text{Cu-O})_{ax}$	Reference, compound formula
ANEKOW	1.880 + 2.356 Å	Dutta, N.; Haldar, S.; Majumder, A.; Vijaykumar, G.; Carrella, L.; Bera, M. *Inorg. Chem. Commun.* **2020**, *121*, 108208. $[Cu(H_2O)_5]ClBr[Cu_4C_{68}H_{66}N_8O_{14}]\cdot 2CH_3OH\cdot 8H_2O$

XATMIQ	1.927 + 2.138 Å	Kaabi, K.; Zeller, M.; Ferretti, V.; Silva, P. S P.; Nasr, C. B. *Inorg. Chim. Acta* **2012**, *388*, 52. $[Cu(H_2O)_5][CuN_4C_{20}H_{28}N_8O_4](ClO_4)_4 \cdot 6H_2O$
MAWGIB	1.954 + 2.246 Å	Yue, C.; Lin, Z.; Chen, L.; Jiang, F.; Hong, M. *J. Mol. Struct.* **2005**, *779*, 16. $[Cu(H_2O)_5][CuC_{16}H_{14}Br_2N_2O_{10}] \cdot CH_3OH$
EZIJAB	1.956 + 2.173 Å	Majumder, A.; Dutta, N.; Das, A.; Carrella, L.; Bera. M. *Polyhedron* **2021**, *208*, 115417. $[Cu(H_2O)_5]Br_2 \cdot 2[Cu_2AsC_{33}H_{35}N_4O_7] \cdot 0.67CH_3OH \cdot 13.83H_2O$
UPODAH	1.974 + 2.178 Å	Ling, I.; Sobolev, A. N.; Raston, C. L. *J. Coord. Chem.* **2021**, *74*, 40. $[Cu(H_2O)_5][Cu_3C_{56}H_{64}O_{44}S_8](NO_3)_2 \cdot 7H_2O$
281341	1.985 + 2.320 Å	Bramsen, F.; Bond, A. D.; McKenzie, C. J. *Acta Crystallogr., Sect. E* **2003**, *59*, i105. $H_3O[Cu(H_2O)_5](ClO_4)_3$
SOZYAH	2.316 Å (mean)	Guillou, O.; Bergerat, P.; Kahn, O.; Bakalbassis, E.; Boubekeur, K.; Batail, P.; Guillot, M. *Inorg. Chem.* **1992**, *31*, 110. $[Cu(H_2O)_5][Cu_3Gd_2C_{23}H_{28}N_6O_{27}] \cdot 15H_2O$
Mean	**1.959 + 2.211 Å/5 structures**	

Six-coordination in Jahn-Teller distorted complexes without center of symmetry or with the center of symmetry not on copper in the $[Cu(H_2O)_6]^{2+}$ complex

ICSD/CSD code	$d(Cu\text{-}O)_{eq}+d(Cu\text{-}O)_{ax1}+d(Cu\text{-}O)_{ax2}$	Reference, compound formula, space group
PIVJIO	1.976 + 2.284 + 2.406 Å	Ma, Y.-S.; Wang, T.-W.; Li, Y.-Z.; Zheng, L.-M. *Inorg. Chim. Acta* **2007**, *360*, 4117. $[Cu(H_2O)_6][Cu_2C_{10}H_8Cl_2N_2O_8P_2] \cdot 2H_2O$; space group: Pc.
WULSAY	1.979 + 2.375 + 2.383 Å	Zhang, W.; Chen, L.-Z.; Xiong, R.-G.; Nakamura, T.; Huang, S. D. *J. Am. Chem. Soc.* **2009**, *131*, 12544. $[Cu(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$; space group: $P2_1$.
IBUHUJ	1.980 + 2.283 + 2.341 Å	Laborda, S.; Clerac, R.; Anson, C. E.; Powell, A. K. *Inorg. Chem.* **2004**, *43*, 5931. $[Cu(H_2O)_6][Cu_2C_{17}H_{21}N_2O_{11}]NO_3 \cdot 2H_2O$; 2.283 + 2.341 Å, space group: P-1.
YAYLUH	1.980 + 2.252 + 2.399 Å	Xiong, K.; Jiang, F.; Wu, M.; Gai, Y.; Chen, Q.; Zhang, S.; Ma, J.; Han, D.; Hong, M. *J. Solid State Chem.* **2012**, *192*, 215. $[Cu(H_2O)_6]_2[Cu_4C_{68}H_{48}N_4O_{42}S_{16}] \cdot 20H_2O$; space group: P-1.
XENJAD	1.982 + 2.297 + 2.352 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Mhiri, T.; Bataille, T. *J. Struct. Chem.* **2012**, *53*, 334. $(C_5H_{14}N_2)[Cu(H_2O)_6](SO_4)_2$; space group; $P2_1$,
XENHUV	1.989 + 2.300 + 2.352 Å	Hajlaoui, F.; Naili, H.; Yahyaoui, S.; Mhiri, T.; Bataille, T. *J. Struct. Chem.* **2012**, *53*, 334. $(C_5H_{14}N_2)[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1$.
ZADTEG	1.998 + 2.296 + 2.303 Å	An, H.; Wang, L.; Hu, Y.; Xu, T.; Hou, Y. *Inorg. Chem.* **2016**, *55*, 144. $[Cu(H_2O)_6][Co_2Mo_{10}H_4O_{38}](4\text{-}C_5H_4CH_2CH_2COOH)_4 \cdot 5H_2O$; space group: P1.

Mean 1.983 + 2.298 + 2.362 Å/7 structures (mean all Cu-O bond distances: 2.099 Å)

Six-coordination in Jahn-Teller distorted complexes with copper in center of symmetry of the $[Cu(H_2O)_6]^{2+}$ complex

ICSD/CSD code	$d(Cu\text{-}O)_{eq}+d(Cu\text{-}O)_{ax}$	Reference, compound formula, space group
412820	1.934 + 2.453 Å	Hennig, C.; Reck, G.; Reich, T.; Rossberg, A.; Kraus, W.; Sieler, J., *Z. Kristallogr.* **2003**, *218*, 37. $[Cu(H_2O)_6][UO_2AsO_4)_2\cdot 6H_2O$; space group: I4/mmm.
418106	1.935 + 2.380 Å	Zhang, C.; Chen, Y.; Shi, D.; Pang, H.-J. *Z. Naturforsch., Teil B* **2008**, *63*, 187. $[Cu(H_2O)_6][Cu(H_2O)_2]_2[Cu(H_2O)_4H_4W_{12}O_{42}]\cdot 12H_2O$; space group: P-1.
CAQWOJ	1.938 + 2.159 Å	Sleymi, S.; Lahbib, K.; Rahmouni, N.; Rzaigui, M.; Besbes-Hentati, S.; Abid, S. *J. Mol. Struct.* **2017**, *1144*, 406. $(H_3N(CH_2)_2NH_3)_2[Cu(H_2O)_6][Cu_2Li_2P_{12}H_{16}O_{44}]$; space group: P-1.
GIVVIS	1.939 + 2.458 Å	Feng, S.; Ma, L.; Feng, G.; Jiao, Y.; Zhu, M. *J. Mol. Struct.* **2014**, *1059*, 27; $[Cu(H_2O)_6][Cu_2C_{16}H_{20}BrN_2O_{12}]_2\cdot 4H_2O$; space group: $P2_1/c$.
RAGXAA	1.943 + 2.515 Å	Martsinko, E. E.; Pesaroglo, A. G.; Minacheva, L. K.; Seifullina, I. I.; ;Sergienko, V. S.; Churakov, A. V. *Russ. J. Inorg. Chem.* **2011**, *56*, 228. $[Cu(H_2O)_6][Cu_2GeC_{10}H_{14}O_{18}]\cdot 4H_2O$; space group: $P2_1/n$.
LOSXID	1.947 + 2.515 Å	Squattrito, P. J.; Lambright-Mutthamsetty, K. J.; Giolando, P. A.; Kirschbaum, K. *Acta Crystallogr., Sect. E* **2019**, *75*, 1801. $[Cu(H_2O)_6](p\text{-}O_3SC_6H_4COOH)_2$; space group P-1.
AYACAE	1.953 + 2.166 Å	Guo, Q.-L.; Zhu, W.-X.; Ma, S.-L.; Dong, S.-J.; Xu, M.-Q. *Polyhedron* **2004**, *23*, 1461. $(C_{12}H_{28}N_2O_4)_2[Cu(H_2O)_6][Cu_2C_{48}H_{30}O_{36}S_{16}]\cdot 12H_2O$; space group: P-1.
65683	1.955 + 2.382 Å	Gallucci, J. C.; Gerkin, R. E., *Acta Crystallogr. Sect. C* **1989**, *45*, 1279. $[Cu(H_2O)_6](ClO_4)_2$; space group: $P2_1/c$.
KAGNEM	1.957 + 2.418 Å	Ma, J.-F.; Yang, J.; Liu, J.-F. *Acta Crystallogr., Sect E* **2003**, *59*, m485. $[Cu(H_2O)_6](C_7H_5O_6S)_2\cdot 2H_2O$; space group: P-1.
WUQQAC	1.957 + 2.398 Å	Lukianova, T. J.; Kinzhybalo, V.; Pietraszko, A. *Acta Crystallogr., Sect E* **2015**, *71*, m191. $[Cu(H_2O)_6](C_5H_7N_2)_2(SO_4)_2\cdot 4H_2O$; space group: P-1.
KAYWAI	1.958 + 2.332 Å	Durif, A.; Averbuch-Pouchot, M. T. *Acta Crystallogr., Sect C* **1989**, *45*, 1884. $(C_2H_{10}N_2)_2[Cu(H_2O)_6]P_6O_{18}$; space group: $P2_1/a$.
NINVOW	1.959 + 2.506 Å	Costantino, F.; Bataille, T.; Audebrand, N.; Le Fur, E.; Sangregorio, C. *Cryst. Growth Des.* **2007**, *7*, 1881. $[Cu(H_2O)_6][Cu_2C_{10}H_{26}N_2O_{14}P_4]\cdot 2H_2O$; space group: $P2_1/n$.
RORRAT	1.959 + 2.135 Å	Thuery, P.; Harrowfield, J. *Cryst. Growth Des.* **2014**, *14*, 4214. $[Cu(H_2O)_6][UC_9H_9O_8]\cdot 2H_2O$; space group: Pnnm.

YEDJUM	1.960 + 2.385 Å	Shamuratov, E. B.; Sharipov, Kh. T.; Batsanov, A. S.; Struchkov, Y. T.; Khudoyarov, A. B.; Mirdzhalalov, F. F., *Koord. Khim.* **1993**, *19*, 155. $(C_8H_{11}N_4O)_2[Cu(H_2O)_6](SO_4)_2{\cdot}2H_2O$; space group: $P2_1/c$.
WULSAY03	1.961 + 2.238 Å	Zhang, W.; Chen, L.-Z.; Xiong, R.-G.; Nakamura, T.; Huang, S. D. *J. Am. Chem. Soc.* **2009**, *131*, 12544. $[Cu(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$; space group: $P2_1/c$.
KEBZEX	1.962 + 2.373 Å	Ghosh, S. K.; El Fallah, M. S.; Ribas, J.; Bharadwaj, P. K. *Inorg. Chim. Acta* **2006**, *359*, 468. $[Cu(H_2O)_6][Cu_2C_{16}H_8N_2O_{14}]$; space group: P-1.
112393	1.962 + 2.424 Å	Mazej, Z.; Goreshnik, E. *Eur. J. Inorg. Chem.* **2021**, 1776. $[Cu(H_2O)_6](SbF_6)_2$; space group: $P2_1/n$
AQOXIO	1.964 + 2.380 Å	Muesmann, T. W. T.; Zitzer, C.; Mietrach, A.; Kluner, T.; Christoffers, J.; Wickleder, M. S. *Dalton Trans.* **2011**, *40*, 3128. $[Cu(H_2O)_6](p\text{-}C_6F_4(SO_3)_2)$; space group: P-1.
8225	1.965 + 2.385 Å	Ginderow, D.; Cesbron, F., *Acta Crystallogr. Sect. B* **1979**, *35*, 2499. $[Cu(H_2O)_6][Al(H_2O)_6](SO_4)_2{\cdot}2H_2O$; space group: P-1.
SAFLAM01	1.965 + 2.321 Å	Kennard, C. H. L.; Smith, G., *Z. Kristallogr.* **1989**, *188*, 63. $[Cu(H_2O)_6][CuC_{16}H_{16}O_{10})$; space group: $P2_1/c$.
JADPEJ	1.966 + 2.382 Å	Averbuch-Pouchot, M. T.; Durif, A., *Acta Crystallogr., Sect C* **1989**, *45*, 46. $(C_2H_{10}N_2)_3[Cu(H_2O)_6](P_4O_{12})_2{\cdot}8H_2O$; space group: $P2_1/n$.
AVUZAT	1.967 + 2.335 Å	Wei, M.-L.; Zhuang, P.-F.; Wang, J.-H.; Wang, X.-X. *J. Mol. Struct.* **2011**, *995*, 51. $(H_3O)[Cu(H_2O)_6][W_{12}PO_{40}]{\cdot}4C_6H_5NO_3{\cdot}4H_2O$; space group: P-1
ZOPFOB	1.967 + 2.389 Å	Kammoun, O.; Naili, H.; Rekik, W.; Bataille, T.; Mhiri, T. CCDC code 1033930, **2014** $(C_7H_7N_2)_2[Cu(H_2O)_6](SO_4)_2{\cdot}4H_2O$; space group: P-1.
2621	1.968 + 2.352 Å	Fischer, J.; Weiss, R., *Acta Crystallogr. Sect. B* **1973**, *29*, 1963. $[Cu(H_2O)_6]Cu_2[ZrF_7]_2{\cdot}10\ H_2O$; ; space group: $P2_1/c$.
55071	1.968 + 2.351 Å	Botova, M.; Nagel, Haeuseler, H. *Z. Anorg. Allg. Chem.* **2004**, *630*, 179. $[Cu(H_2O)_6]H_4I_2O_{10}$; space group: $P2_1/c$.
DODDOP	1.968 + 2.412 Å	Zviedre, I. I.; Bel'skii, V. K.; Shvarts, E.M., *Latv. PSR Zinat. Akad. Vestis, Khim. Ser.* **1985**, 672. $[Cu(H_2O)_6](C_5H_8BO_4)_2{\cdot}4H_2O$; space group: P-1.
FEZWAL	1.968 + 2.404 Å	Aycan, T. CDCC deposition 1566697, **2018**. $[Cu(H_2O)_6][CuC_{12}H_{20}N_4O_6](SO_4)_2{\cdot}2H_2O$; space group: $P2_1$
FEZWAL01	1.968 + 2.406 Å	Aycan, T. CDCC deposition 1889137, **2021**. $[Cu(H_2O)_6][CuC_{12}H_{20}N_4O_6](SO_4)_2{\cdot}2H_2O$; space group: $P2_1/c$.
JAHWOI	1.968 + 2.299 Å	Edis, Z.; Raheja, R.; Bloukh, S. H.; Bhandare, R. R.; Sara, H. A.; Reiss, G. *Polymers* **2021**, *13*, 1005. $[Cu(H_2O)_6](I_3)_2{\cdot}2I_2{\cdot}5C_8H_{16}O_4$; space group: P-1.

NERKUQ	1.968 + 2.376 Å	Bao-Qing; Hao-Ling sun; Song Gao; Guang-Xian Xu, *Inorg. Chem.* **2001**, *40*, 6247. $[Cu(H_2O)_6]Cl_2{\cdot}2(C_{10}H_8N_2O_2){\cdot}2H_2O$; space group: P-1.
17071	1.969 + 2.398 Å	Mereiter, K., *Tschermaks Mineralogische und Petrographische Mitteilungen* **1982**, *30*, 47. $[Cu(H_2O)_6](UO_2)_2(OH)_2(SO_4)_2{\cdot}2H_2O$; space group: P-1.
281320	1.969 + 2.315 Å	Iida, A.; Ozeki, T., *Acta Crystallogr. Sect. C* **2003**, *59*, i41. $[Cu(H_2O)_6]_3[V_{10}O_{28}]{\cdot}17H_2O$; space group: P-1.
SARGAW	1.969 + 2.372 Å	Koferstein, R.; Arnold, M.; Robl, C. *Z. Anorg. Allg. Chem.* **2017**, *643*, 276. $[Cu(H_2O)_6][CuC_2H_4O_6P]_2{\cdot}2H_2O$; space group: P-1.
WULSAY01	1.969 + 2.387 Å	Zhang, W.; Chen, L.-Z.; Xiong, R.-G.; Nakamura, T.; Huang, S. D. *J. Am. Chem. Soc.* **2009**, *131*, 12544. $[Cu(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$; space group: $P2_1/c$.
34760	1.970 + 2.367 Å	Ray, S.; Zalkin, A.; Templeton, D. H., *Acta Crystallogr. Sect. B* **1973**, *29*, 2748. $[Cu(H_2O)_6]SiF_6$; space group: R-3.
CUMALH	1.970 + 2.462 Å	Dimitrova, G. I.; Ablov, A. V.; Kiosse, G. A.; Popovich, G. A.; Malinovski, T. I.; Bourshteyn, I. F., *Dokl. Akad. Nauk SSSR* **1974**, *216*, 1055. $[Cu(H_2O)_6][Cu(C_3H_2O_4)(H_2O)_2]$; space group: P-1
DEVMAT02	1.970 + 2.384 Å	Nkhili, N. L.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *J. Chem. Cryst.* **2011**, *41*, 1680. $(C_6H_{14}N_2)[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/n$.
FINNUM	1.970 + 2.283 Å	Sharma, R. P.;Sharma, R.; Bala, R.; Rychlewska, U.; Warzajtis, B. *J. Mol. Struct.* **2005**, *738*, 291. $[Cu(H_2O)_6](C_{10}H_7SO_3)_2$; space group: $P2_1/n$.
BENSCU	1.971 + 2.262 Å	Couldwell, C.; Prout, K.; Robey, D.; Taylor, R.; Rossotti, F. J. C., *Acta Crystallogr. Sect. B* **1978**, *34*, 1491. $[Cu(H_2O)_6](C_6H_5SO_3)_2$; space group: P-1.
CUMALH01	1.971 + 2.408 Å	Filippova, I. G. *Koord. Khim.* **2000**, *26*, 295. $[Cu(H_2O)_6][Cu(C_3H_2O_4)(H_2O)_2]$; space group: P-1.
LOCBOU	1.972 + 2.421 Å	Navarro, J. A. R.; Freisinger, E.; Lippert, B., *Inorg. Chem.* **2000**, *39*, 2301. $[Pt(C_{14}H_{44}N_{16}O_4][Cu(H_2O)_6](ClO_4)_{10}{\cdot}9H_2O$; space group: $P2_1/c$; space group: $P2_1/n$.
POKBID	1.972 + 2.529 Å	Butsch, K.; Sandleben, A.; Dokoohaki, M. H.; Zolghadr, A. R.; Klein, A. Inorganics 2019, 7, 53. $[Cu(H_2O)_6][Cu_2C_{14}H_6Cl_2N_2O_8]$; space group: P-1.
WIHLAC	1.972 + 2.310 Å	Wikaira, J. L.; Landee, C. P.; Turnbull, M. M. *Acta Crystallogr. Sect. E* **2013**, *69*, m229. $[Cu(H_2O)_6](BF_4)_2{\cdot}3C_4H_4N_2O_2$; space group: P-1.
NULDII	1.974 + 2.360 Å	Yan, Y.-K.; Tan, K.-F.; Kurmoo, M. *Inorg. Chim. Acta* **2009**, *362*, 4017. $[Cu(H_2O)_6][Cu_2C_{16}H_{20}N_4O_{14}]{\cdot}2H_2O$; space group: P-1.
SAFLAM	1.974 + 2.366 Å	Wang Honghui; Zhu Naijue; Fu Heng; Li Roncchang; Wang Kui, *Sci. Sin., Ser. B (Eng. Ed.)* **1988**, *31*, 20. $[Cu(H_2O)_6][CuC_{16}H_{16}O_{10})$; space group: P-1.

CUMALH02	1.975 + 2.406 Å	Rodriguez-Martin, Y.; Sanchiz, J.; Ruiz-Perez, C.; Lloret, F.; Julve, M., *Cryst. Eng. Comm.* **2002**, *4*, 631. $[Cu(H_2O)_6][Cu(C_3H_2O_4)(H_2O)_2]$; space group: P-1.
KONBEX	1.975 + 2.317 Å	Clegg, W.; Harrington, R. W.; Richardson, A. S. CCDC deposition 1922490, **2019**. $[Cu(H_2O)_6][CuC_{14}H_{24}N_8O_6](S_2O_4)_2$; space group: P-1.
2620	1.976 + 2.408 Å	Fischer, J.; Elchinger, R.; Weiss, R., *Acta Crystallogr. Sect. B* **1973**, *29*, 1967; *Acta Crystallogr. Sect. A* **1969**, *25*, S174; *Chem. Commun.* **1967**, 329. $[Cu(H_2O)_6]_2[ZrF_8]$; space group: C2/c.
UGOZAT	1.976 + 2.314 Å	Rekik, W.; Nkhili, N. L.; Naili, H.; Dahaoui, S. *Z. Anorg. Allg. Chem.* **2014**, *640*, 2603. $(C_6H_{14}N_2)[Cu(H_2O)_6][Cu(H_2O)_4(SeO_4)_2]$; space group: $P2_1/n$.
20925	1.977 + 2.410 Å	Shchegoleva, T. M.; Iskhakova, L. D.; Ovanisyan, S. M.; Shakhnazaryan, A. A.; Trunov, V. K., *Zh. Neorg. Khim.* **1983**, *28*, 2271. $[Cu(H_2O)_6][SbF_4]_2$; space group: $P2_1/c$.
DEVMAT01	1.977 + 2.395 Å	Nkhili, N. L.; Rekik, W.; Bataille, T.; Mhiri, T.; *Polyhedron* **2006**, *25*, 3543. $(C_6H_{14}N_2)[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/n$.
WULSAY02	1.978 + 2.380 Å	Zhang, W.; Chen, L.-Z.; Xiong, R.-G.; Nakamura, T.; Huang, S. D. *J. Am. Chem. Soc.* **2009**, *131*, 12544. $[Cu(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$; space group: $P2_1/c$.
DEVMAT	1.979 + 2.380 Å	Nkhili, N. L.; Rekik, W.; Bataille, T.; Mhiri, T.; *Polyhedron* **2006**, *25*, 3543. $(C_6H_{14}N_2)[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
NAYGUR	1.979 + 2.300 Å	Murdock, C. R.; Lu, Z.; Jenkins, D, M, *Dalton Trans.* **2012**, *41*, 7839. $[Cu(H_2O)_6][CuC_8H_{10}N_6O_4S)SO_4 \cdot 3H_2O$; space group: $P2_12_12_1$.
UVOQON	1.979 + 2.355 Å	Hassan, D, B.; Rekik, W.; Roza, A. O.; Mefteh, F. B.; Roisnel, T.; Bataille, T.; Naili, H. *Polyhedron* **2016**, *119*, 238. $(C_4H_{12}N_2)_3[Cu(H_2O)_6](NO_3)_8$; space group: P-1.
CDSRCA10	1.980 + 2.307 Å	Benedetti, E.; di Blasio, B.; Pedone, C.; Scalone, M.; Toniolo, C., *Pept. Str. Bio. Funct. Symp.* **1979**, 141. $[Cu(H_2O)_6](ClO_4)_2 \cdot 2(C_6H_{10}N_2O_2)_2$; space group: $P2_1/c$.
DUWWEX	1.980 + 2.321 Å	Glowiak, T.; Podgorska, I., *Inorg. Chim. Acta* **198621/c**, *125*, 83. $[Cu(H_2O)_6](C_{12}H_{10}PO_4)_2 \cdot 2C_2H_5NO_2$; space group: P-1.
KARHOD	1.980 + 2.270 Å	Smith, G.; Wermuth, U. D. *Acta Crystallogr., Sect. C* **2017**, *73*, 325. $(AsO(OH)_2C_6HH_4NH_3)_2[Cu(H_2O)_6](SO_4)_2 \cdot 2H_2O$; space group: $P2_1/c$.
49501	1.981 + 2.304 Å	Hathaway, B. J.; Hewat, A. W. *J. Solid State Chem.* **1984**, *51*, 364. $(ND_4)_2[Cu(D_2O)_6](SO_4)_2$
HETFIW	1.981 + 2.465 Å	Zhang, Z.-T.; Wang, Q.-Y.; He, Y.; Wang, X.-B.; Xue, D.; Zheng, J.-B. *Chem. J. Chin. Univ., Chon. Ed.* **2005**, *26*, 2247. $[Cu(H_2O)_6](C_{17}H_{13}O_7S)_2 \cdot 8H_2O$; space group: C2/c
2918	1.982 + 2.317 Å	Shields, K. G.; van der Zee, J. J.; Kennard, C. H. L., *Cryst. Struct. Commun.* **1972**, *1*, 371. $Tl_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
EBIKOR	1.982 + 2.416 Å	Shi, L.-X.; Xu, X.; Wu, C.-D. *CrystEngComm* **2011**, *13*, 6027. $[Cu(H_2O)_6][Gd_2C_{18}H_{10}N_2O_{20}] \cdot 4H_2O$; space group: P-1.

VAFKIX	1.982 + 2.301 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, *41*, 6986. $[Cu(H_2O)_6]_3(C_9H_9S_3O_9)_2)\cdot 1.3H_2O$; space group: $P2_1/n$.
78381	1.981 + 2.298 Å	Iversen, B. B.; Larsen, F. K., Reynolds, P.A.; Figgis, B. N. *Acta Chem. Scand.* **1994**, *48*, 800. $(ND_4)_2[Cu(D_2O)_6](SO_4)_2$; space group: $P2_1/a$.
281319	1.984 + 2.390 Å	Iida, A.; Ozeki, T., *Acta Crystallogr. Sect. C* **2003**, *59*, i41. $Na_4[Cu(H_2O)_6][V_{10}O_{28}]\cdot 17H_2O$; space group: P-1.
2926	1.985 + 2.314 Å	Shields, K. G.; Kennard, C. H. L., *Cryst. Struct. Commun.* **1972**, *1*, 189. $Cs_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
15177	1.985 + 2.437 Å	Wood, M. M., *Am. Mineral.* **1970**, *55*, 729. $Fe_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
66707	1.985 + 2.301 Å	Figgis, B. N.; Khor, L.; Kucharski, E. S.; Reynolds, P. A. *Acta Crystallogr., Sect B* **1992**, *48*, 144. $(ND_4)_2[Cu(D_2O)_6](SO_4)_2$; space group: $P2_1/a$.
249345	1.985 + 2.311 Å	Ballirano, P.; Belardi, G.; Bosi, F. *Acta Crystallogr., Sect. E* **2007**, *63*, m165; space group: $P2_1/a$.
250916	1.985 + 2.306 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2013**, *52*, 10481. $Rb_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/a$.
PARBIV	1.985 + 2.154 Å	Lima, I. M. P.; Esteves, C. V.; Delgado, R.; Hermann, P.; Kotek, J.; Sevcikova, R.; Lubal, P. *Eur. J. Inorg. Chem.* **2012**, 2533. $[Cu(H_2O)_6][CuC_{12}H_{30}N_4O_{13}P_4]$; space group: Pcca.
171283	1.986 + 2.329 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021. $K_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
171279	1.987 + 2.313 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021. $K_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/a$.
81463	1.988 + 2.315 Å	Rauw, W.; Ahsbahs, H.; Hitchman, M. A.; Lukin, S.; Reinen, D.; Schultz, A. J.; Simmons, C. J.; Stratemeier, H., *Inorg. Chem.* **1996**, *35*, 1902. $K_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
250988	1.985 + 2.316 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2013**, *52*, 10481. $K_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/a$.
73451	1.986 + 2.300 Å	Figgis, B. N.; Iversen, B. B.; Larsen, F. K.; Reynolds, P. A. *Acta Crystallogr., Sect. B* **1993**, *49*, 794. $(ND_4)_2[Cu(D_2O)_6](SO_4)_2$; space group: $P2_1/a$.
280384	1.988 + 2.277 Å	Figgis, B. N.; Sobolev, A. N.; Simmons, C. J.; Hitchman, M. A.; Stratemeier, H.; Riley, M. J., *Acta Crystallogr. Sect. B* **2000**, *56*, 438. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
281341	1.988 + 2.320 Å	Bramsen, F.; Bond, A. D.; McKenzie, C. J., *Acta Crystallogr. Sect. E* **2003**, *59*, i105. $[Cu(H_2O)_5H_3O]ClO_4$; space group: $P3_22$.
710010	1.988 + 2.295 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2009**, *224*, 360. $Tl_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/a$.

1713	1.989 + 2.334 Å	Nyberg, B., *Acta Crystallogr. Sect. B* **1978**, *34*, 1418. $(NH_4)_2[Cu(H_2O)_6](CuSO_3)_4$; space group: P42/nZ.
280384	1.989 + 2.276 Å	Figgis, B. N.; Sobolev, A. N.; Simmons, C. J.; Hitchman, M. A.; Stratemeier, H.; Riley, M. J., *Acta Crystallogr. Sect. B* **2000**, *56*, 438. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
4306	1.990 + 2.317 Å	Smith, G.; Moore, F. H.; Kennard, C. H. L., *Cryst. Struct. Commun.* **1975**, *4*, 407. $Rb_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
FICRAK	1.990 + 2.359 Å	Wu Guang; Chen Minqin; Wang Boyi; Chen Longchun; Zhang Hualin, *Jiegou Huaxue* **1987**, *6*, 187. $[Cu(H_2O)_6][Cu_2C_{26}H_{24}N_2O_{14}]\cdot 2H_2O$; space group: $P2_1/n$.
FIZJIK	1.990 + 2.213 Å	Mahmoud, A. G.; Fatima M.; Guedes da Silva, C.; Mahmudov, K. T.; Pombeiro, A. J. L. *Dalton Trans.* **2019**, *48*, 1174. $[Cu(H_2O)_6](C_{20}H_{16}N_3O_5S)_2\cdot 2(CH_3)_2NHO$; space group: P-1
4307	1.991 + 2.207 Å	Whitnall, J.; Kennard, C. H. L.; Nimmo, J. K.; Moore, F. H., *Cryst. Struct. Commun.* **1975**, *4*, 709. $K_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/a$.
74060	1.991 + 2.273 Å	Simmons, C. J.; Hitchman, M. A.; Stratemeier, H.; Schultz, A. J., *J. Am. Chem. Soc.* **1993**, *115*, 11304. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
201524	1.991 + 2.278 Å	Alcock, N.; Duggan, M.; Murray, A.; Tyagi, S.; Hathaway, B. J.; Hewat, A. W., *J. Chem. Soc., Dalton Trans.* **1984**, 7. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
BATCUX	1.992 + 2.380 Å	Pinalli, R.; Dalcanale, E.; Misztal, K.; Lucentini, R.; Ugozzoli, F.; Massera, C. CCDC ref. 1539301, **2017**. $[Cu(H_2O)_6](PF_6)_2 2\ C_{68}H_{68}O_{12}P_4\cdot 4CHCl_3\cdot 20H_2O$; space group: P4/n
IVOPEP	1.992 + 2.331 Å	Qin, X.; Chen, W.-J.; Zhang, Y.-Q.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z. *J. Mol. Struct.* **2011**, *996*, 12. $[Cu(H_2O)_6]_2(SO_4)_2\cdot C_{44}H_{48}N_{24}O_{12}\cdot 10H_2O$; space group: P-1.
2924	1.994 + 2.307 Å	Shields, K. G.; van der Zee, J. J.; Kennard, C. H. L., *Cryst. Struct. Commun.* **1972**, *1*, 367. $Rb_2[Cu(H_2O)_6]SO_4)_2$; space group: $P2_1/a$.
74058	1.985 + 2.311 Å	Simmons, C. J.; Hitchman, M. A.; Stratemeier, H.; Schultz, A. J., *J. Am. Chem. Soc.* **1993**, *115*, 11304. $(ND_4)_2[Cu(D_2O)_6](SO_4)_2$; space group: $P2_1/a$.
2619	1.996 + 2.327 Å	Fischer, J.; Weiss, R., *Acta Crystallogr. Sect. B* **1973**, *29*, 1958; *Chem. Commun.* **1968**, 1137. $K_2[Cu(H_2O)_6][ZrF_6]$; space group: $P2_1/c$.
KADFIG	1.997 + 2.406 Å	Imran, M.; Tas, M.; Sadiq-ur-Rehman, G.; Qadeer, G.; Wong W.-Y. *Z. Krist. Cryst. Mater.* **2010**, *225*, 36. $[Cu(H_2O)_6](C_{15}H_{10}NO_4)_2$; space group: P-1.
162317	2.004 + 2.275 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Mineral.* 2009, 94, 74. $K_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
201523	2.004 + 2.250 Å	Alcock, N.; Duggan, M.; Murray, A.; Tyagi, S.; Hathaway, B. J.; Hewat, A. W., *J. Chem. Soc., Dalton Trans.* **1984**, 7. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.

2925	2.006 + 2.279 Å	Robinson, D. J.; Kennard, C. H. L., *Cryst. Struct. Commun.* **1972**, *1*, 185. $K_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
409592	2.006 + 2.264 Å	Fleck, M.; Kolitsch, U., *Z. Kristallogr. - New Crystal Structures* **2002**, *217*, 15. $Rb_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/c$.
51648	2.007 + 2.336 Å	Kockelmann, W.; Schaefer, W.; Kirfel, A.; Klapper, H.; Euler, H. *Mat. Sci. Forum* **2001**, *378*, 274; space group: $P2_1/a$.
AMATUF	2.007 + 2.248 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 138. $(C_5H_7N_2)_2[Cu(H_2O)_6](SO_4)_2$; space group: P-1.
26331	2.011 + 2.238 Å	Monge, A.; Gutierrez-Puebla, E., *Acta Crystallogr. Sect. B* **1981**, *37*, 427. $(NH_4)_2[Cu(H_2O)_6](SeO_4)_2$; space group: $P2_1/c$.
NINVUC	2.018 + 2.485 Å	Costantino, F.; Bataille, T.; Audebrand, N.; Le Fur, E.; Sangregorio, C. *Cryst. Growth Des.* **2007**, *7*, 1881. $[Cu(H_2O)_6][Cu_2C_{12}H_{22}N_2O_{14}P_4]\cdot 2H_2O$; space group: $P2_1/n$.
23187	2.019 + 2.230 Å	Brown, G. M.; Chidambaram, R., *Acta Crystallogr. Sect. B* **1969**, *25*, 676. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
62992	2.020 + 2.216 Å	Maslen, E. N.; Watson, K. J.; Moore, F. H., *Acta Crystallogr. Sect. B* **1988**, *44*, 102. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
QEYNAL	2.022 + 2.099 Å	Said, S.; Mhadhbi, N.; Hajlaoui, F.; Yahyaoui, S.; Norquist, A. J.; Mhiri, T.; Bataille, T.; Naili, H. *Phase Transitions* **2013**, *87*, 71. $(C_5H_{14}N_2)_2[Cu(H_2O)_6](SO_4)_3$; space group: $P2_12_12_1$.
62991	2.023 + 2.226 Å	Maslen, E. N.; Watson, K. J.; Moore, F. H., *Acta Crystallogr. Sect. B* **1988**, *44*, 102. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
14358	2.029 + 2.219 Å	Montgomery, H.; Lingafelter, E. C., *Acta Crystallogr.* **1966**, *20*, 659. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
18177	2.053 + 2.190 Å	Webb, M. W.; Kay, H. F.; Grimes, N. W., *Acta Crystallogr.* **1965**, *18*, 740. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/a$.
FECQEK	2.055 + 2.166 Å	Li, F.; Delgado, R.; Costa, J.; Drew, M. G. B.; Felix, V. *Dalton Trans.* **2005**, 82. $[Cu(H_2O)_6][Cu_2C_{20}H_{38}N_6O_4](SO_4)_3\cdot 3H_2O$; ; space group: $P2_1/c$.
Mean	***1.980 + 2.333 Å/108 structures (2.097 Å)***	
Mean	***1.981 + 2.333 Å/114 structures (2.097 Å)***	

Six-coordination in regular octahedral $[Cu(H_2O)_6]^{2+}$ complexes

ICSD/CSD code $d(Cu\text{-}O)_{eq}+d(Cu\text{-}O)_{ax1}+d(Cu\text{-}O)_{ax2}$ Reference, compound formula, space group

OHAYIG	2.032 Å	Ali, M.: Dutta, D.; Biswas, S.; Marek, J.; Jana, A. D. *CrystEngComm* **2009**, *11*, 2608. $[Cu(H_2O)_6][CuC_{36}H_{24}N_6]_2[Mo_6Te_6O_{24}]\cdot 27H_2O$; space group: P-3c.
GINWEG	2.065 Å	Deng, Y.-F.; Zhang, H.-L.; Hong, Q.-M.; Weng, W.-Z.; Wan, H.-L.; Zhou, Z.-H. *J. Solid State Chem.* **2007**, *180*, 3152. $(NH_4)_2[Cu(H_2O)_6][TiC_{18}H_{18}O_{21}]\cdot 6H_2O$; space group: P-3.
34760	2.074 Å	Ray, S.; Zalkin, A.; Templeton, D. H., *Acta Crystallogr. Sect. B* **1973**, *29*, 2748. $[Cu(H_2O)_6]SiF_6$; space group: R-3.
71532	2.079 Å	Blackburn, A. C.; Gallucci, J. C.; Gerkin, R. E., *Acta Crystallogr. Sect. C* **1991**, *47*, 2019. $[Cu(H_2O)_6](BrO_3)_2$; space group: Pa-3.
200622	2.081 Å	Tat'yanina, I. V.; Chernaya, T. S.; Gorchenkova, E. A.; Simonov, V. I.; Spitsyn, V. I., *Dokl. Akad. Nauk SSSR*, **1979**, *247*, 1162. $H_6[Cu(H_2O)_6][UMo_{12}O_{42}]\cdot 6H_2O$; space group: R-3.
MAJQOG	2.104 Å	Liang, Z.-Y.; Chen, H.-Y.; Shan, C.-Y.; Zhang, Y.-Q.; Tao, Z. *Polyhedron* **2016**, *110*, 125. $[Cu(H_2O)_6][(PrNaC_{30}H_{36}ClN_{20}O_{13}]Cl_8\cdot 19H_2O$; space group: Pnnm.
POJLIK	2.106 Å	Zeng, Y.-F.; Hu, X.; Zhao, J.-P.; Hu, B.-W.; Sanudo, E. C.; Li, F.-C.; Bu,X.-H. *Chem. Eur. J.* **2008**, *14*, 7127. $[Cu(H_2O)_6][Cu_{12}C_{48}H_{30}N_{24}O_{30}]$; space group: P-3.
Mean	***2.077 Å/7 structures***	

Six-coordination in $[Cu(H_2O)_6]^{2+}$ complexes with non-regular octahedral symmetry around copper

ICSD/CSD code	*d*(Cu-O)	Reference, compound formula, space group
59871	1.969, 2.084, 2.202 Å	Li, X.-H.; Xia, F.-Y.; Xiao, H.-P.; Hu, M.-L. *Acta Crystallogr., Sect. E* **2004**, *60*, i32. $[Cu(H_2O)_6](ClO_4)_2\cdot 2H_2O$; space group: $P2_1/c$.
81460	1.932, 2.085, 2.260 Å	Rauw, W.; Ahsbahs, H.; Hitchman, M. A.; Lukin, S.; Reinen, D.; Schultz, A. J.; Simmons, C. J.; Stratemeier, H. *Inorg. Chem.* **1996**, *35*, 1902. $(ND_4)_2[Cu(D_2O)_6](SO_4)_2$; space group: $P2_1/a$.
189267	1.966, 2.086, 2.200 Å	Weil, M. *Acta Crystallogr., Sect. C* **2013**, *69*, 990. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/c$.
189268	1.962, 2.131, 2.177 Å	Weil, M. *Acta Crystallogr., Sect. C* **2013**, *69*, 990. $(NH_4)_{1.176}K_{0.824}(Cu[H_2O)_6](SO_4)_2$; space group: $P2_1/c$.
240926	1.962, 2.130, 2.170 Å	Wu, W.; Xie, J.-M.; Xie, D.-P.; Xuan, Y.-W. *Acta Crystallogr., Sect. E* **2008**, *64*, i7. $Na_2[Cu(H_2O)_6](SO_4)_2$; space group: $P2_1/c$.
CAMSCU	1.967-2.224 Å	Couldwell, C.; Prout, K.; Robey, D.; Taylor, R.; Rossotti, F. J. C., *Acta Crystallogr. Sect. B* **1978**, *34*, 1491. $[Cu(H_2O)_6](C_{10}H_{15}SO_4)_2$; space group: $P2_1$.
EGOGAL	2.041, 2.053, 2.067 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Cu(H_2O)_6]C_{18}H_{14}N_2O_7S_2\cdot(CH_3)_2NHO$; space group: I2/m

AFEXUG	2.057, 2.105, 2.120 Å	Martsinko, E. E.; Minacheva, L. K.; Chebanenko, E. A.; Seifullina, I. I.; Sergienko, V. S.; Churakov, A. V. *Russ. J. Inorg. Chem.* **2013**, *58*, 588. $[Cu(H_2O)_6][Ge(C_6H_5O_7)_2]\cdot 4H_2O$; space group: $P2_1/n$
MOLDAU	2.019, 2.022, 2.076 Å	Mahmudov, K. T.; Kopylovich, M. N.; Fatima M.; Guedes da Silva, C.; Pombeiro, A. J. L. *ChemPlusChem* **2014**, *79*, 1523. $[Cu(H_2O)_6](C_{11}H_{11}N_2O_5S)_2\cdot 4H_2O$; space group: P-1.
PODXIQ	2.017, 2.045, 2.053 Å	Li, Z. L.; Yao, X. J.; Wu, W.; Xuan, Y. W. *Acta Crystallogr., Sect. E* **2008**, *64*, m1024. $[Cu(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4)\cdot 4H_2O$; space group: P-1.
162702	2.017, 2.045, 2.053 Å	Xuan, Y. W.; Wu, W.; Li, S. *Cryst. Res. Technol.* **2009**, *44*, 127. $[Cu(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4)\cdot 4H_2O$; space group: P-1.
ROCFIZ	2.058, 2.116, 2.149 Å	Bi, J.; Kong, L.; Huang, Z.; Liu, J. *Inorg. Chem.* **2008**, *47*, 4564. $[Co_2C_{24}H_{20}N_4O_2]_2[Cu(H_2O)_6](C_9H_3O_6)_2\cdot 21.5H_2O$; ; space group: $P2_1/c$.
SOFRIP	2.023, 2.064, 2.066 Å	Liu, X.-H.; Lu, Q.; Zhang, L.; Shi, L. *Z. Kristallogr.-New Cryst. Struct.* **2008**, *223*, 117. $[Cu(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$; space group: P-1.
WAVVIA	2.081, 2.114, 2.146 Å	Gong, Y.; Qin, J.-B.; Wu, T.; Li, J.-H.; Yang, L.; Cao, R. *Dalton Trans.* **2012**, *41*, 1961. $[Cu(H_2O)_6]$ $[Cu(H_2O)_6][Cu_3C_{80}H_{56}N_8O_{20}]\cdot 3.5H_2O$; space group: $P2_1/n$.
XUXSIT	2.093, 2.104, 2.112 Å	Delgado, S.; Santana, A.; Castillo, O.; Zamora, F, *Dalton Trans.* **2010**, *39*, 2280. $[Cu(H_2O)_6][Cu_3C_{30}H_{30}N_6S_6]_2(SO_4)_4\cdot 4H_2O$; space group: Pbca.
FOFKAN	2*2.104 + 4*2.206 Å	Qiu, L.-G.; Xie, A.-J.; Zhang, L.-D. *Adv. Mater.* **2005**, *17*, 689. $[Cu(H_2O)_6][Mn(H_2O)_2(C_{12}H_7N_2)_2]_2(C_9H_3O_6)_2\cdot 22H_2O$; space group: $P2_1/c$.
MAQDOY	3*2.072 + 3*2.104 Å	Jia, L.-F.; Fu, W.-F.; Yu, M.-M.; Cao, Q.-Y.; Zhang, J.-F.; Yin, Q. *Inorg. Chem. Commun.* **2005**, *8*, 647. $[Cu(H_2O)_6]$; space group: P3c.
171146	2.014-2.084 Å	Zibaseresht, R.; Hartshorn, R. S. *Acta Crystallogr., Sect. E* **2006**, *62*, i19. $[Cu(H_2O)_6](NO_3)_2$; space group: P-1.
IFICUW	2.039-2.070 Å	Zhang, S.-H.; Jiang, Y.-M.;Liu, Z. M. *J. Coord. Chem.* **2008**, *61*, 1927. $[Cu(H_2O)_6][Cu_2C_{20}H_{20}N_2O_{14}S_2]\cdot 6H_2O$; space group: P1.
ASEJOA	2.044-2.124 Å	Oguntade, B. K.; Hulushe, S. T.; Hosten, E. C.; Watkins, G. M. *Z. Krsitllogr.-New Cryst. Struct.* **2021**, *236*, 37. $[Cu(H_2O)_6](C_6H_2(COOH)_2(COO)_2)$; space group: I2/a
PIVJOU	2.055-2.293 Å	Ma, Y.-S.; Wang, T.-W.; Li, Y.-Z.; Zheng, L.-M. *Inorg. Chim. Acta* **2007**, *360*, 4117. $[Cu(H_2O)_6][Cu_2C_{10}H_8Br_2N_2O_8P_2]\cdot 2H_2O$; space group: Pc.
YEDZOX	2.040-2.139 Å	Zhao, Q.-H.; Du, L.; Fang, R.-B. *Acta Crystallogr., Sect. E* **2006**, *62*, m360. $(C_3H_{12}N_2)_2[Cu(H_2O)_6][V_{10}O_{28}]\cdot 7H_2O$; space group: P-1.

21 structures

Table S1ay. Summary of solid state structures containing hydrated silver(I) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Ag-O bond distance, *d*(Ag-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Silver(I)

Two-coordination, linear configuration

ICSD/CSD code	*d*(Ag-O)	Reference, compound formula
RUKZUT	2.112 Å	Wu, H.; Dong, X.-W.; Ma, J.-F.; Liu, H.-Y.; Yang, J.; Bai, H.-Y. *Dalton Trans.* **2009**, 3162. $[Ag(H_2O)_2][K_5C_{12}H_8N_2O_{20}S_4]$
TUFSAR	2.123 Å	Jiang, J.-K., Li, G.-M.; Li, X.-X.; Sun J.-N.; Ge-Shuang, J.; Jin, X. CCDC deposition number 1989320, **2020**. $[Ag(H_2O)_2](C_{10}H_8NO_3S)\cdot H_2O$
DELVAR	2.128 Å	Makhmudova, N. K.; Sharipov, K. T.; Khodashova, T. S.; Porai-Koshits, M. A.; Parpiev, N. A. *Proc. Nat. Acad. Sci. USSR* **1985**, 280, 1360-1362. $[Ag(H_2O)_2][AgMoC_{14}H_{10}N_2O_6]$
YUCMIT	2.132 Å	Wang, G.-H. Li, Z.-G.; Jia, H.-Q.; Hu, N.-H. Xu, J.-W. *Acta Crystallogr., Sect. C* **2009**, *65*, m333. $[Ag(H_2O)_2][AgCuC_{14}H_8N_2O_9)\cdot 3H_2O$
UFAGEO	2.135 Å	Li, Y.-J.; Dong, X.-W.; Wu, H. *Acta Crystallogr., Sect. E* **2007**, *63*, m2230. $[Ag(H_2O)_2](C_{10}H_8NO_3S)\cdot H_2O$
UFAGEO01	2.142 Å	Liu, H.-Y.; Wu, H.; Ma, J.-F.; Song, S.-Y.; Yang, J.; Liu, Y.-Y.; Su, Z.-M. *Inorg. Chem.* **2007**, 46, 7299. $[Ag(H_2O)_2](C_{10}H_8NO_3S)\cdot H_2O$
RUDPOW	2.248 Å	Liang, Z.; Mak, T. C. W. *Inorg. Chem.* **2009**, *48*, 6480. $[Ag(H_2O)_2][Ag_5C_{25}H_{11}F_{24}NO_{20}]$
Mean	**2.129 Å/6 structures**	

Three-coordination, triangular configuration

ICSD/CSD code	*d*(Ag-O)	Reference, compound formula
CUVZOL	2.484 Å	Chen, G.-H.; He, Y.-P.; Wang, F.; Yuan, L.-B.; Xu, H.; Zhang, J. *Cryst. Growth Des.* **2020**, *20*, 6316. $((CH_3)_2NH_2)_3[Ag(H_2O)_3][Ag_4C_{30}H_{70}N_{10}]_3[Ti_4C_{138}H_{72}O_{36}]_2,\cdot 6((CH_3)_2NCHO\cdot 6H_2O$

Table S1az. Summary of solid state structures containing hydrated gold(III) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Au-O bond distance, *d*(Au-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Gold(III)

Four-coordination, square-planar configuration

ICSD/CSD code	*d*(Au-O)	Reference, compound formula
NUJCUT	2.097 Å	Lin, R.-L.; Dong, Y.-P.; Tang, M.; Liu, Z.; Tao, Z.; Liu, J.-X. *Inorg. Chem.* **2020**, *59*, 3850. $[Au(H_2O)_4]_2[AuCl_4]_6{\cdot}3(C_{42}H_{42}N_{28}O_{14}){\cdot}2[AuCl_3(H_2O)]{\cdot}30H_2O$
Mean	**2.097 Å/1 structure**	

Table S1ba. Summary of solid state structures containing hydrated zinc(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Zn-O bond distance, *d*(Zn-O). Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Zinc(II)

Four-coordination, tetrahedral configuration

ICSD/CSD code	*d*(Zn-O)	Reference, compound formula
IBIZOL	2.023 Å	Pan, R.; Yang, B.-B.; Wang, G.-M.; Yang, G.-Y. *Inorg. Chem. Commun.* **2017**, *76*, 26. $[Zn(H_2O)_4][Al_2B_{10}O_{20}]_n$
VAXTEW	2.026 Å	Zhang, L.-P.; Ma, J.-F.; Yang, J.; Pang, Y.-Y.; Ma, J.-C. *Inorg. Chem.* **2010**, *49*, 1535. $[Zn(H_2O)_4](B_6O_{10})_n$
LAJFUB	2.089 Å	Steuber, F. W.; Gough, J. J.; Whelan, E.; Burtnyak, L.; Bradley, A. L.; Schmitt, W. *Inorg. Chem.* **2020**, *59*, 17244. $[Zn(H_2O)_4][Cu_2ZnC_{56}H_{43}N_8O_{16}]_2$

No structure with a reasonable Zn-O bond distance for four-coordination

Five-coordination, trigonal bipyramidal configuration

ICSD/CSD code	*d*(Zn-O)	Reference, compound formula
FURWUL	2.000 Å	Leong, W. L.; Vittal, J. J. *Inorg. Chim. Acta* **2009**, *362*, 2189. $[Zn(H_2O)_5][Zn_2C_{30}H_{28}N_2O_{16}]$
ASACON	2.006 Å	Zhang, L.-P.; Ma, J.-F.; Yang, J.; Pang, Y.-Y.; Ma, J.-C. *Inorg. Chem.* **2010**, *49*, 1535. $[Zn(H_2O)_5][Zn_4C_{20}H_4O_{18}]\cdot 2H_2O$
YUPKAW	2.028 Å	Fiolka, C.; Striebinger, R.; Walter, T.; Walbaum, C.; Pantenburg, I. *Z. Anorg. Allg. Chem.* **2009**, *635*, 855. $[Zn(H_2O)_5](I3)2\cdot 2C_{12}H_{24}O_6$
DEHFUR01	2.032 Å	Malinska, M.; Gorna, M.; Merski, M. CCDC deposition number 1964322, **2020**. $[Zn(H_2O)_5][Zn_2C_{18}H_{24}O_{12}P_2]\cdot 7H_2O$
DEHFUR	2.047 Å	Podlahova, J.; Kratochvil, B.; Podlaha, J.; Hasek, J. *J. Chem. Soc., Dalton Trans.* **1985**, 2393. $[Zn(H_2O)_5][Zn_2C_{18}H_{24}O_{12}P_2]\cdot 7H_2O$
Mean	**2.017 Å/4 structrures**	

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Zn-O)	Reference, compound formula
YOGQUG	2.039 Å	Li, J.-T.; Cao, D.-K.; Liu, B.; Li, Y.-Z.; Zheng, L.-M. *Cryst. Growth Des.* **2008**, *8*, 2950. $[Zn(H_2O)_6][Zn_8C_{52}H_{32}N_2O_{30}P_6]$
YEVLER	2.045 Å	Zhao; M.; Wang; Z.-B.; Li; Y.-Z.; Chen, H.-L. *Inorg. Chem. Commun.* **2007**, *10*, 101. $[Zn(H_2O)_6]Cl_2\cdot 3(C_{36}H_{36}N_{24}O_{12})\cdot 3(C_{18}H_{26}N_4)\cdot 14H_2O$
POFDAQ	2.045 A	Yao, X. J.; Xuan, Y. W.; Wu, W. *Acta Crystallogr., Sect. E* **2008**, *64*, m1132. $[Zn(H_2O)_6]Cl_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
CITDAK02	2.046 Å	Baruah, J. B. CCDC deposition number 749999, **2016.** $[Zn(H_2O)_6](p\text{-}OOC\text{-}C_5H_5NO)_2$
ORIMUY	2.053 Å	Wei, M.-L.; Zhuang, P.-F.; Miao, Q.-X.; Wang, Y. *J. Solid State Chem.* **2011**, *184*, 1472. $[Zn(H_2O)_6][HMo_{12}O_{40}P](4\text{-}HOOC\text{-}C_5H_5NO)_2\cdot 4H_2O$
64614	2.060 Å	Duhlev, R.; Brown, I. D.; Faggiani, R. *Acta Crystallogr., Sect. C* **1988**, *44*, 1696. $[Zn(H_2O)_6][Zn_2Br_6]$
KAXLIF	2.060 Å	Wang; X.-B.; Zhang; Z.-T.; Wang, Q.-Y. *Struct. Chem.* **2005**, *16*, 461. $[Zn(H_2O)_6](C_{16}H_{11}O_7S)_2\cdot 10H_2O$
DIWPUX	2.063 Å	Zhang, X.-D.; Zhao, Y.; Chen, K.; Guo, J.-H.; Wang, P.; Wu, H.; Sun, W. Y. *Sens. Actuators B* **2019** *282*, 844. $(NH_4)_2[Zn(H_2O)_6][Mg_4C_{84}H_{60}O_{32}]\cdot 6C_{36}H_{36}N_{24}O_{12}\cdot 66H_2O$
YASHIK	2.065 Å	Zhang; X.-L.; Lu,; Y.-J.; Li; J.-Z.; Ng, S. W. *Acta Crystallogr., Sect. E* **2005**, *61*, m1063. $[Zn(H_2O)_6](C_6H_4NO_3)_2$
TITNIU	2.066 Å	Tai, X.-S.; Yin, J.; Hao, M.-Y. *Acta Crystallogr., Sect. E* **2008**, *64*, m273. $[Zn(H_2O)_6](C_{13}H_{10}NO_4S)_2$
BENBIG	2.067 Å	Nguyen-Trung; C.; Bryan, J. C.; Palmer, D.A. *Struct. Chem.* **2004**, *15*, 89. $[Zn(H_2O)_6](CF_3SO_3)_2$
KERNAX	2.067 Å	Li, B.; Ye; L.; Hou; G.-F.; Yang; G.-D.; Wu, L.-X. *Acta Crystallogr., Sect. E* **2006**, *62*, m2932. $[Zn(H_2O)_6][ZnC_{12}H_8Cl_4N_2O_4](C_{16}H_{11}O_7S)_2\cdot 2H_2O$
YASHIK02	2.067 Å	Segla, P.; Moncol, J. CCDC deposition number 2009719, **2020**. $[Zn(H_2O)_6](C_6H_4NO_3)_2$
QUXPUV	2.068 Å	Yang, G.-F.; Zhao, Y.-H. *Acta Crystallogr., Sect. E* **2010**, *66*, m804. $[Zn(H_2O)_6](2,4,5\text{-}(HOOC)_3C_6H_2\text{-}COO)_2\cdot 2C_{11}H_6N_2O\cdot 2H_2O$
PEGMET	2.068 Å	Auerbach, U.; Stockheim, C.; Weyhermuller, T.; Wieghardt, K.; Nuber, B. *Angew. Chem., Int. Ed.* **1993**, *32*, 714. $[Zn(H_2O)_6](C_{24}H_{20}B)_2\cdot[FeC_{39}H_{54}N_3O_3]_2\cdot 4CH_3COCH_3$
YASHIK01	2.068 Å	Song; Y.-S.; Yan; B.; Chen, Z.-X. *Inorg. Chem. Commun.* **2005**, *8*, 1165. $[Zn(H_2O)_6](C_6H_4NO_3)_2$
161155	2.069 Å	Polovinko, I. I.; Rykhlyuk, S. V.; Davydov, V. M. *Ukrains'kii Fiz. Zh.* **2007**, *52*, 671. $K_2[Zn(H_2O)_6](SO_4)_2$
418436	2.069 Å	Tiritiris, I.; Schleid, T. *Z. Anorg. Allg. Chem.* **2008**, *634*, 317. $[Zn(H_2O)_6]B_{12}H_{12}\cdot 6H_2O$
ZNAQBS02	2.069 Å	Assoumatine, T.; Stoeckli-Evans, H. CCDC deposition number 1980074, **2020**. $[Zn(H_2O)_6](C_6H_5SO_3)_2$
AQAFIK	2.070 Å	Isbjakowa, A. S.; Chernyshev, V. V.; Tafeenko, V. A.; Shiryaev, A. A.; Kudryavtsev, I. K.; Aslanov, L. A. *Struct. Chem.* **2021**, *32*, 719. $[Zn(H_2O)_6](C_6H_2N_7O_3)_2]\cdot 2H_2O$

DISJIY	2.070 Å	Zviedre, I. I.; Bel'skii, V.K.; Mardanenko *Latv. PSR Zinat. Akad. Vestis, Khim.Ser.* **1985**, 387. $[Zn(H_2O)_6](C_{14}H_8BO_6)_2 \cdot 4H_2O$
411337	2.071 Å	Adamczyk, B.; Troyanov, S. I.; Schneider, M.; Kemnitz, E. *Z. Anorg. Allg. Chem.* **2000**, *626*, 2543. $NH_4[Zn(H_2O)_6][AlF_5(H_2O)]$
FIHVUQ	2.071 Å	Basdouri, Z.; Trojette, B.; Falvello, L. R.; Graia, M.; Tomas, M. *J. Mol. Struct.* **2019**, *1176*, 165. $[Zn(H_2O)_6][ZnCl_3(NC_6H_{12}N_3)]_2 \cdot 0.5H_2O$
EGOGEP	2.072 Å	Black, D. T.; Kennedy, A. R.; Lobato, K. M. *Acta Crystallogr., Sect. C* **2019**, *75*, 633. $[Zn(H_2O)_6](C_{18}H_{14}N_2O_7S_2) \cdot (CH_3)_2NCHO$
EGUPAZ	2.072 Å	Tang, S.-F.; Li, L.-J.; Lv, X.-X.; Wang, C.; Zhao, X.-B. *CrystEngComm* **2014**, *16*, 7043. $[Zn(H_2O)_6]$(*2,5*-$(CH_3)_2$-*1*-$(PO_2(OH)$-*4*-$(PO(OH)_2)$-$C_6H_2)_2 \cdot 2H_2O$
VONDEJ	2.072 Å	Gagnon, K. J.; Teat, S. J.; Beal, Z. J.; Embry, A. M.; Strayer, M. E.; Clearfield, A. *Cryst. Growth Des.* **2014**, *14*, 3612. $[Zn(H_2O)_6][Zn_4C_{12}H_{26}O_{18}P_6] \cdot 2H_2O$
KETXAI	2.073 Å	Su; D.; Guo; C.-Y.; Willett, R. D.; Scott, B.; Kirchmeier, R. L.; Shreeve, J. M. *J. Am. Chem. Soc.* **1990**, *112*, 3152. $[Zn(H_2O)_6](C_2H_2F_2O_6P_2) \cdot H_2O$
411337	2.074 Å	Adamczyk, B.; Troyanov, S.I.; Schneider, M.; Kemnitz, E. *Z. Anorg. Allg. Chem.* **2000**, *626*, 2543. $[Zn(H_2O)_6][ZnF_5(H_2O)]$
CITDAK	2.074 Å	Knuuttila, P. *Polyhedron* **1984**, *3*, 303. $[Zn(H_2O)_6]$(p-COO-$C_5H_5NO)_2$
ROKSUG01	2.074 Å	Shankar, R.; Singh, R.; Mendiratta, S.; Jassal, A. K.; Kociok-Kohn, G.; Molloy, K. C. *Eur. J. Inorg. Chem.* **2017**, 2081. $[Zn(H_2O)_6](C_2H_5SO_3)_2$
ZIDNUY	2.074 Å	Belova, E. V.; Krasnov, V. S.; Ilyukhin, A. B.; Uspenskaya, I. A. *Thermochim. Acta* **2018**, *668*, 46. $[Zn(H_2O)_6](CH_3SO_3)_2 \cdot 6H_2O$
BENBIG01	2.075 Å	Johnston, D. H.; Tinapple, E. L. CCDC deposition number 1878807, **2018**. $[Zn(H_2O)_6](CF_3SO_3)_2$
CITDAK01	2.075 Å	Marandi, F.; Hashemi, L.; Morsali, A.; Krautscheid, H. *Ultrason. Sonochem.* **2016**, *33*, 86. $[Zn(H_2O)_6]$(p-COO-$C_5H_5NO)_2$
ETUMEM	2.075 Å	Liu, S.-Y.; Tian, L. *Acta Crystallogr., Sect. E* **2011**, *67*, m950. $[Zn(H_2O)_6][ZnC_{26}H_{18}N_{12}O_{14}S_2] \cdot 3H_2O$
GIYDEY	2.075 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.;; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Zn(H_2O)_6]SO_4 \cdot 2N(C_8H_{10}N_3O)_3$
IDOLAR	2.075 Å	Igoa, F.; Martinez, S.; Zanoni, K. P. S.; Castiglioni, J.; Suescun, L.; Gonzalez-Platas, J.; de Camargo, A. S. S.; Kremer, C.; Torres, J. *CrystEngComm* **2018**, *20*, 4942. $[Zn(H_2O)_6][HoZn(C_4H_4O_5)_3]_2 \cdot 2H_2O$
JINCUF	2.076 Å	Dinoi, C.; Sozen, P.; Taban, G.; Demir, D.; Demirhan, F.; Prikhodchenko, P.; Gun, J.; Lev, O.; Daran, J.-C.; Poli, R. *Eur. J. Inorg. Chem.* **2007**, 4306. $[Zn(H_2O)_6][W_3(C_5H_5)_3(C_{15}H_{30}O_6)]_2(CF_3COO)_4 \cdot CF_3COOH \cdot 4H_2O$

760212	2.077 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinšek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Zn(H_2O)_6]B_{12}F_{12}$
GIYDEY01	2.077 Å	Wu, B.; Liang, J.; Yang, J.; Jia, C.; Yang, X.-J.; Zhang, H.; Tang, N.; Janiak, C. *Chem. Commun* **2008**, 1762. $[Zn(H_2O)_6]SO_4{\cdot}2N(C_8H_{10}N_3O)_3$
IDOLIZ	2.077 Å	Igoa, F.; Martinez, S.; Zanoni, K. P. S.; Castiglioni, J.; Suescun, L.; Gonzalez-Platas, J.; de Camargo, A. S. S.; Kremer, C.; Torres, J. *CrystEngComm* **2018**, *20*, 4942. $[Zn(H_2O)_6][DyZn(C_4H_4O_5)_3]_2{\cdot}3H_2O$
JEJTIC	2.077 Å	Zun-Ting Zhang; Qiu-Ya Wang *Heterocycles* **2005**, *65*, 1947. $[Zn(H_2O)_6](C_{19}H_{17}O_7S)_2{\cdot}8H_2O$
OROFOS	2.077 Å	Brady, M.; Piombo, S. D.; Hu, C.; Buccella, D. *Dalton Trans.* **2016**, *45*, 12458. $[Zn(H_2O)_6][Zn_2C_{24}H_{20}N_2O_{14}]{\cdot}C_4H_8O_2{\cdot}6H_2O$
VAFKAP	2.077 Å	Dalrymple, S. A.; Parvez, M.; Shimizu, G. K. H. *Inorg. Chem.* **2002**, *41*, 6986. $[Zn(H_2O)_6]_3(C_9H_9O_9S_3)_2$
VONDOT	2.077 Å	Gagnon, K. J.; Teat, S. J.; Beal, Z. J.; Embry, A. M.; Strayer, M. E.; Clearfield, A. *Cryst. Growth Des.* **2014**, *14*, 3612. $[Zn(H_2O)_6][Zn_4C_{18}H_{38}O_{18}P_6]{\cdot}CH_3COOH{\cdot}2H_2O$
VUNFAN	2.077 Å	Ding, R.; Wei, T.; Wang, Q.-Y.; Wang, T.; Zhang, Z.-T. *Z. Anorg. Allg.Chem.* **2015**, *641*, 1130. $[Zn(H_2O)_6](C_{16}H_{11}O_7S)_2{\cdot}2H_2O$
YAPWET	2.077 Å	Fujiwara, Y.; Dixon, J. A.; Rodriguez, R. A.; Baxter, R. D.; Dixon, D. D.; Collins, M. R.; Blackmond, D. G.; Baran, P. S. *J. Am. Chem. Soc.* **2012**, *134*, 1494. $[Zn(H_2O)_6][Zn_2(O_2SCF_2H)_6]$
YIRWOO	2.077 Å	Lacroix, M. R.; Bukovsky, E. V.; Lozinsek, M.; Folsom, T. C.; Newell, B. S.; Liu, Y.; Peryshkov, D. V.; Strauss, S. H. *Inorg. Chem.* **2018**, *57*, 14983. $[Zn(H_2O)_6]B_{12}H_{12}$
ZNATOS01	2.077 Å	Fewings, K. R.; Junk, P. J.; Georganopoulou, D.; Prince, P. D.; Steed, J. W. *Polyhedron* **2001,** *20*, 643. $[Zn(H_2O)_6](p\text{-}CH_3C_6H_4SO_3)_2$
1836	2.078 Å	Black, W. H.; Griffith, E. A. H.; Robertson, B. E. *Acta Crystallogr., Sect. B* **1975**, *31*, 615. $[Zn(H_2O)_6]S_2O_6$
34757	2.078 Å	Ray, S. Zalkin, A.; Templeton, D. H. *Acta Crystallogr., Sect. B* **1973**, *29*, 2741. $[Zn(H_2O)_6]SiF_6$
FETLOG	2.078 Å	Lu; J. J.; Shi, J. M. *Acta Crystallogr., Sect. E* **2005**, *61*, m327. $[Zn(H_2O)_6](ClO_4)_2{\cdot}2C_6H_8N_2O_2$
HEKHIO	2.078 Å	Steed, J. W; McCool, B. J.; Junk, P. C. *J. Chem. Soc., Dalton Trans.* **1998**, 3417. $[Zn(H_2O)_6](ClO_4)_2{\cdot}C_{12}H_{24}O_6$
SUDGUW	2.078 Å	Amanchi, S. R.; Das, S. K. *Front. Chem.* **2018**, *6*, 469. $[Zn(H_2O)_6](4\text{-}NH_2\text{-}C_5H_5N)_{10}[V_{10}O_{28}]_2{\cdot}10H_2O$
WIHPAF	2.078 Å	Schepke, M.; Edelmann, F. T.; Blaurock, S. *Acta Crystallogr., Sect. E* **2007**, *63*, m2071. $[Zn(H_2O)_6](C_{10}H_{15}O_{14}S)_2$
262616	2.079 Å	Donakowski, M. D.; Gautier, R.; Jeongho, Y.; Moore, D. T.; Nino, J. C.; Shiv Halasyamani, P.; Poeppelmeier, K. R. *J. Am. Chem. Soc.* **2012**, *134*, 7679. $[Zn(H_2O)_6][VOF_4(H_2O)]$
DIKRIZ01	2.079 Å	Wu, B.-D.; Zhang, T.-L.; Li, Y.-L.; Wang, S.-W.; Zhou, Z.-N.; Zhang, J.-G.; Yang, L. *Z. Anorg. Allg.Chem.* **2013**, *639*, 2209. $[Zn(H_2O)_6](2,4,6\text{-}(NO_2)_3C_6H_2\text{-}O)_2{\cdot}3H_2O$

GUBLAR01	2.079 Å	Kruszynski, R.; Sieranski, T.; Swiatkowski, M.; Zielak, M.; Wojciechowski, J.; Dzierzawsk, M.; Lewinski, B. *J. Coord. Chem.* **2014**, *67*, 1332. $[Zn(H_2O)_6](NO_3)_2{\cdot}2C_6H_{12}N_4{\cdot}4H_2O$
IDOLOF	2.079 Å	Igoa, F.; Martinez, S.; Zanoni, K. P. S.; Castiglioni, J.; Suescun, L.; Gonzalez-Platas, J.; de Camargo, A. S. S.; Kremer, C.; Torres, J. *CrystEngComm* **2018**, *20*, 4942. $[Zn(H_2O)_6][YZn(C_4H_4O_5)_3]_2{\cdot}2H_2O$
IDOMAS	2.079 Å	Igoa, F.; Martinez, S.; Zanoni, K. P. S.; Castiglioni, J.; Suescun, L.; Gonzalez-Platas, J.; de Camargo, A. S. S.; Kremer, C.; Torres, J. *CrystEngComm* **2018**, *20*, 4942. $[Zn(H_2O)_6][YbZn(C_4H_4O_5)_3]_2{\cdot}2H_2O$
UDAFAI	2.079 Å	Basa, P. N.; Bhowmick, A.; Schulz, M. M.; Sykes, A. G. *J. Org. Chem.* **2011**, *76*, 7866. $[Zn(H_2O)_6](NO_3)_2{\cdot}2C_{26}H_{28}N_2O_8{\cdot}2CH_3OH$
VOJXUQ	2.079 Å	Song, J. H.; Kim, D. W.; Kang, D. W.; Lee, W. R.; Hong, C. S. *Chem. Commun.* **2019**, *55*, 9713. $[Zn(H_2O)_6](\textit{3}\text{-}HOOC\text{-}\textit{4}\text{-}OH\text{-}C_6H_3\text{-}SO_3)_2{\cdot}2H_2O$
YIVTAZ	2.079 Å	Wang, Y.-C.; Zhang, Z.-T.; Chang, Y. *Struct. Chem.* **2007**, *18*, 951. $[Zn(H_2O)_6](C_{16}H_{11}O_9S)_2{\cdot}4H_2O$
194893	2.080 Å	Wilcox, R. J.; Losey, B. P.; Folmer, J. C.W.; Martin, J. D.; Zeller, M.; Sommer, R. *Inorg. Chem.* **2015**, *54*, 1109. $[Zn(H_2O)_6][ZnCl_4]$
417920	2.080 Å	Graia, M.; Ksiksi, R.; Driss, A. *J. Chem. Crystallogr.* **2008**, *38*, 855. $[Zn(H_2O)_6][Zn_2V_{10}O_{28}(H_2O)_{10}]{\cdot}6H_2O$
AXEJEV	2.080 Å	Zhao, G. Liu, J. *RSC Adv.* **2021**, 11, 24500. $[Zn(H_2O)_6](\textit{p}\text{-}C_6H_4(COO)_2){\cdot}C_{14}H_{12}N_2O_4{\cdot}3H_2O$
MELQIE	2.080 Å	Zhang; Z.-T.; Wang, Q.-Y. *J. Chem. Cryst.* **2005**, *35*, 989. $[Zn(H_2O)_6](C_{17}H_{13}O_7S)_2{\cdot}8H_2O$
NAYQUA	2.080 Å	Martsinko, E. E.; Seifullina, I. I.; Sergienko, V. S.; Churakov, A. V. *Zh. Neorg. Khim.* **2005**, *50*, 953. $[Zn(H_2O)_6][ZnC_6H_{22}Ge_3O_{28}P_6]{\cdot}9H_2O$
TOKCAY	2.080 Å	Chagas, L. H.; Janczak, J.; Gomes, F. S.; Fernandes, N. G.; de Oliveira, L. F. C.; Diniz, R. *J. Mol. Struct.* **2008**, *892*, 305. $[Zn(H_2O)_6](\textit{m}\text{-}HOOC\text{-}C_6H_4\text{-}SO_3)_2$
UGURET	2.080 Å	Sun; Y.-Q.; Zhang; J.; Yang, G.-Y.; *Acta Crystallogr., Sect. E* **2002**, *58*, m548. $[Zn(H_2O)_6]C_{10}H_4O_8$
VONDIN	2.080 Å	Gagnon, K. J.; Teat, S. J.; Beal, Z. J.; Embry, A. M.; Strayer, M. E.; Clearfield, A. *Cryst. Growth Des.* **2014**, *14*, 3612. $[Zn(H_2O)_6][Zn_4C_{15}H_{32}O_{18}P_6]CH_3COOH{\cdot}2H_2O$
86093	2.081 Å	Gilardi, R. D.; Butcher, R. J. *J. Chem. Cryst.* **1998**, *28*, 105. $[Zn(H_2O)_6](N(NO_2)_2)_2{\cdot}2H_2O$
143827	2.081 Å	Colliard, I.; Nyman, M. *Angew. Chem,. Int. Ed.* **2021**, *60*, 7308. $[Zn(H_2O)6]_{0.5}[Ce_{4.5}Ce_{70}(OH)_{36}O_6(SO_4)_{67.5}(H_2O)64.75]{\cdot}285.75(H_2O)$
BIPLIX	2.081 Å	Kumar, G.; Gupta, R. *Inorg. Chem.* **2013**, *52*, 10773. $[Zn(H_2O)_6][Co_2Zn_5C_{84}H_{54}N_{12}O_{30}]{\cdot}13.5H_2O$
FARFOV	2.081 Å	Lamshoft, M.; Storp, J.; Ivanova, B.; Spiteller, M. *Polyhedron* **2011**, *30*, 2564. $[Zn(H_2O)_6](C_7H_5O_6S)_2{\cdot}H_2O$
FOXLOU	2.081 Å	Lian, Z.; Zhao, N.; Zhang, J.; Gu, Y.; Li, X.; Tang, B. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*, 399. $[Zn(H_2O)_6][Zn(H_2O)_2(C_{12}H_8N_2)_2]_2(\textit{1,3,5}\text{-}(OOC)_3C_6H_3)_2{\cdot}19.5H_2O$
FUGBAL01	2.081 Å	Gao, S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2009**, *65*, m1633. $[Zn(H_2O)_6](\textit{4}\text{-}HOC_6H_4SO_3)_2{\cdot}2H_2O$

GINWIK	2.081 Å	Deng, Y.-F.; Zhang, H.-L.; Hong, Q.-M.; Weng, W.-Z.; Wan, H.-L.; Zhou, Z.-H. *J. Solid State Chem.* **2007**, *180*, 3152. $(NH_4)_2[Zn(H_2O)_6][Ti(C_6H_6O_7)_3]_2\cdot 6H_2O$
POGPIN	2.081 Å	Mohan, M.; Rajak, S.; Tremblay, A. A.; Maris, T.; Duong, A. *Dalton Trans.* **2019**, *48*, 7006. $[Zn(H_2O)_6][Zn(H_2O)_4(C_6HN_7O_4)_2]$
POKYUM	2.081 Å	Swiatkowski, M.; Kruszynski, R. *Appl. Organometal. Chem.* **2019**, *33*, e4812. $[Zn(H_2O)_6](HCOO)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
62375	2.082 Å	Chattopadhyay, T. K.; Devreux, F.; Peters, K.; Peters, E. M.; Gmelin, E.; Ghosh, B. *J. Phys. C: Solid State Phys.* **1988**, *21*, 1321. $[Zn(H_2O)_6][TiF_6]$
242129	2.082 Å	Klepov, V. V.; Serezhkina, L. B.; Serezhkin, V. N.; Alekseev, E. V. *J. Solid State Chem.* **2016**, *244*, 100. $Na[Zn(H_2O)_6][UO_2(CH_3COO)_3]_3$
DAWVIH	2.082 Å	Rychlewska, U.;Guresic, D. M.Warzajtis, B.; Radanovic, D. D.; Djuran, M. I. *Polyhedron* **2005**, *24*, 2009. $[Zn(H_2O)_6][ZnC_{11}H_{14}N_2O_8]\cdot 2H_2O$
FUGBAL	2.082 Å	Zhu, Z.-B.; Gao, S.; Ng, S. W. *Acta Crystallogr., Sect. E* **2009**, *65*, m1345. $[Zn(H_2O)_6](4\text{-}HOC_6H_4SO_3)_2\cdot 2H_2O$
GUBLAR	2.082 Å	Singh, G.; Baranwal, B. P.; Kapoor, I. P. S.; Kumar, D.; Singh, C. P.; Frohlich, R. *J. Therm. Anal. Calorimetry* **2008**, *91*, 971. $[Zn(H_2O)_6](NO_3)_2\cdot 2C_6H_{12}N_4\cdot 4H_2O$
IJOQAB	2.082 Å	Oreskova, G.; Chrappova, J.; Puskelova, J.; Simunek, J.; Schwendt, P.; Noga, J.; Gyepes, R. *Struct. Chem.* **2016**, *27*, 605. $[Zn(H_2O)_6][V_2C_4H_4O_{12}]\cdot 2H_2O$
KAGNIQ	2.082 Å	Ma; J.-F.; Yang; J.; Liu, J.-F. *Acta Crystallogr., Sect. E* **2003**, *59*, m487. $[Zn(H_2O)_6](C_7H_5O_6S)_2\cdot 8H_2O$
QIXKIS	2.082 Å	Natarajan, S.; Vijitha, K. V.; Dhas, S. A. M. B.; Suresh, J.; Lakshman, P. L. N. . *Acta Crystallogr., Sect. E* **2008**, *64*, m581. $[Zn(H_2O)_6](2,4,6\text{-}(NO_2)_3C_6H_2\text{-}O)_2\cdot 3H_2O$
413095	2.083 Å	Chen, W.; Li, N.; Xiang, S. H. *J. Solid State Chem.* **2004**, *177*, 3229. $[Zn(H_2O)_6]Zn_3(HPO_3)_4$
ASUDUN	2.083 Å	Gao; S.; Zhang; Z.-Y.; Huo; L.-H.; Zhao; H.; Zhao, J.-G. *Acta Crystallogr., Sect. E* **2004**, *60*, m444. $[Zn(H_2O)_6](C_7H_6NO_3)_2\cdot 2H_2O$
GUHMII	2.083 Å	Liu, J.; Lu, Y.; Li, J.; Lu, W. *Dyes Pigm.* **2020**, *177*, 108266. $[Zn(H_2O)_6][ZnC_{26}H_{28}N_4O_6][ZnC_{10}H_4O_8]_2\cdot 2H_2O$
LASJIB	2.083 Å	Rui, W.; Yuchen, Y.; Xin, D.; Zhaohui, Z. *Yingyong Huaxue* **2016**, *33*, 70. $[Zn(H_2O)_6][ZnC_8H_{11}N_2O_6]_2\cdot 2H_2O$
MARFAQ	2.083 Å	Nkhili, N. L.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Arab. J. Chem.* **2017**, *10*, S2509. $(C_6H_{14}N_2)[Zn(H_2O)_6](SeO_4)_2$
RUSYIO	2.083 Å	Romero, M. J.; Pedrido, R.; Gonzalez-Noya, A. M.; Martinez-Calvo, M.; Zaragoza, G.; Bermejo, M. R. **2010**, *46*, 5115. $[Zn(H_2O)_6][Zn_3C_{75}H_{64}N_9O_{10}S_3]_2\cdot 3CH_3CN\cdot H_2O$

242285	2.084 Å	Klepov, V. V.; Peresypkina, E. V.; Serezhkina, L. B.; Karasev, M. O.; Virovets, A. V.; Serezhkin, V. N. *Polyhedron* **2013**, *61*, 137. $[Zn(H_2O)_6][UO_2(CH_3COO)_3]_2$
DIRZEM	2.084 Å	Liu, C.; Wang, C.; Sun, Z.-M. *Inorg. Chem.* **2018**, *57*, 15370. $[Zn(H_2O)_6][U_2C_{54}H_{34}O_{16}Si_2]\cdot 5H_2O$
WABJUG01	2.084 Å	Wawrzycka, A. J.; Rogala, P.; Czerwonka, G.; Hodorowicz, M.; Stadnicka, K. *J. Mol. Struct.* **2016**, *1105*, 357. $[Zn(H_2O)_6][Zn(C_7H_4NO_4)_3]_2$
419504	2.085 Å	Aleksandrova, M.; Haeuseler, H.; Jacquet, R.; Wagener. M. *Z. Naturforsch., Teil B* **2008**, *63*, 1367. $[Zn(H_2O)_6]H_4I_2O_{10}$
421598	2.085 Å	Zimmermann, L. W.; Schleid, T. *Z. Kristallogr.-New Cryst. Struct.* **2013**, *228*, 558. $[Zn(H_2O)_6]B_{10}H_{10}\cdot 2H_2O$
422816	2.085 Å	Udomvech, A.; Kongrat, P.; Pakawatchai, C.; Phetmung, H. *Inorg. Chem. Commun.* **2012**, *17*, 132. $(NH_4)_2[Zn(H_2O)_6][V10O_{28}]\cdot 4H_2O$
AQUREK	2.085 Å	Huang, L.-F.; Ji, C.-C.; Lu, Z.-Z.; Yao, X.-Q.; Hu, J.-S.; Zheng, H.-G. *Dalton Trans.* **2011**, *40*, 3138. $[Zn(H_2O)_6][Zn_3C_{18}H_{16}O_{18}]\cdot 3H_2O$
KAGNIQ01	2.085 Å	Song, J. H. Kim, D. W.; Kang, D. W.; Lee, W. R.; Hong, C. S. *Chem Commun.* **2019**, *55*, 9713. $[Zn(H_2O)_6](C_7H_5O_6S)_2\cdot 8H_2O$
PIWKOX	2.085 Å	Zimmermann, L. W.; Schleid, T. *Z. Krist. Cryst. Mater.* **2013**, *228*, 558. $[Zn(H_2O)_6]B_{10}H_{10}\cdot 2H_2O$
TUFGIL	2.085 Å	Demadis, K. D.; Barouda, E.; Zhao, H.; Raptis, R. G. *Polyhedron* **2009**, *28*, 3361. $[Zn(H_2O)_6]((HO_3PCH_2)_2NH(CH_2)_4NH(CH_2PO_3H)_2)$
XIGNAD	2.085 Å	Ichikawa, M.; Toyoguchi, F.; Akashi, H. *Front. Pharma.* **2003**, *29*, 7. $Na_2[Zn(H_2O)_6](C_{24}H_{12}O_{16}S_8)\cdot 12H_2O$
YONYIL	2.085 Å	Zhao, H.; Zhou, S.-Y.; Feng, C.; Wei, N.-X.; Wang, G.-G. *Inorg. Chim. Acta* **2014**, *421*, 169. $[Zn(H_2O)_6][Zn(C_{10}H_8N_3O_2)_3]_2\cdot 4H_2O$
DIKRIZ	2.086 Å	Honda, K.; Yamawaki, H.; Fujihisa, H.; Matsunaga, T.; Matsukawa, M. *Acta Crystallogr., Sect. C* **2007**, *63*, m423. $[Zn(H_2O)_6](2,4,6\text{-}(NO_2)_3C_6H_2\text{-}O)_2\cdot 3H_2O$
GEDFEA	2.086 Å	Mak, T. C. W.; Huang, S.-H. *Polyhedron* **1987**, *6*, 1111. $[Zn(H_2O)_6][ZnC_6H_{12}Cl_3N_4]_2\cdot 6H_2O$
HEMGAH	2.086 Å	Doxsee, K. M.; Hagadorn, J. R.; Weakley, T. J. R. *Inorg.Chem.* **1994**, *33*, 2600. $[Zn(H_2O)_6][ZnCl_3(H_2O)]_2\cdot 2(C_{12}H_{24}O_6)\cdot CH_3COCH_3$
IDOKUK	2.086 Å	Igoa, F.; Martinez, S.; Zanoni, K. P. S.; Castiglioni, J.; Suescun, L.; Gonzalez-Platas, J.; de Camargo, A. S. S.; Kremer, C.; Torres, J. *CrystEngComm* **2018**, *20*, 4942. $[Zn(H_2O)_6][ErZn(C_4H_4O_5)_3]_2\cdot 1.5H_2O$
NAPCOZ	2.086 Å	Shankar, R.; Singh, R.; Mendiratta, S.; Jassal, A. K.; Kociok-Kohn, G.; Molloy, K. C. *Eur. J. Inorg. Chem.* **2017**, 2081. $[Zn(H_2O)_6](C_3H_7SO_3)_2$
RAPMUR	2.086 Å	San; W.-G.; Feng; H.; Li; L.; Jin; Z.-M.; Hu, M.-L. *Acta Crystallogr., Sect. E* **2005**, *61*, m1363. $(NH(C_2H_5)_3)_2[Zn(H_2O)_6](C_{10}H_6O_6S_2)_2$

UMANOR	2.086 Å	Dalrymple, S. A.; Shimizu, G. K. H. *Supramol. Chem.* **2003**, *15*, 591. $[Zn(H_2O)_6]_3C_{12}H_{12}O_{18}S_6 \cdot 3C_4H_8O_2$
XILFIJ	2.086 Å	Chen, S.-C.; Zhang, Z.-H.; Huang, K.-L.; Luo, H.-K.; He, M.-Y.; Du, M.; Chen, Q. *CrystEngComm* **2013**, *15*, 9613. $[Zn(H_2O)_6](p\text{-}C_6Cl_4(COO)_2) \cdot 4H_2O$
9450	2.087 Å	Voit, E. I.; Didenko, N. A.; Gerasimenko, A. V.; Slobodyuk, A. B. *J. Fluorine Chem.* **2020**, *232*, 109475. $[Zn(H_2O)_6][Zr_2F_{10}]$
237726	2.087 Å	Hennings, E.; Schmidt, H., Voigt, W. *Acta Crystallogr., Sect. E* **2014**, *70*, 515. $[Zn(H_2O)_6][ZnCl_4] \cdot 3H_2O$
BOGRIA	2.087 Å	Gui, J.; Zhou, Q.; Pan, C.-M.; Yabe, Y.; Burns, A. C.; Collins, M. R.; Ornelas, M. A.; Ishihara, Y.; Baran, P. S. *J. Am. Chem. Soc.* **2014**, *136*, 4853. $[Zn(H_2O)_6](O_2SCH_2SO_2C_6H_5)_2$
KASNUO	2.087 Å	Jin, Z.-M.; Li; L.; Hu; M.-L.; Su; H.; Tong, C.-X. *Acta Crystallogr., Sect. E* **2005**, *61*, m1849. $[Zn(H_2O)_6][ZnC_8H_{10}Cl_3N_4O_2]_2 \cdot 8H_2O$
MAVDAQ	2.087 Å	Wang, L.-Y.; Fan, R.-Q.; Chen, H.; Sun, C.-F.; Yang, Y.-L. *Guangpux. Yu Guang. Fenxi* **2011**, *31*, 3298. $[Zn(H_2O)_6](C_{16}H_8O_8)$
MAVDAQ01	2.087 Å	Henling, L. M.; Marsh, R. E. *Acta Crystallogr., Sect. E* **2014**, *70*, 834. $[Zn(H_2O)_6](C_{16}H_8O_8)$
PICDIQ	2.087 Å	Klepov, V. V.; Peresypkina, E. V.; Serezhkina, L. B.; Karasev, M. O.; Virovets, A. V.; Serezhkin, V. N. *Polyhedron* **2013**, *61*, 137. $[Zn(H_2O)_6][UO_2(OOCCH_3)_3]_2$
RAXCID	2.087 Å	Yu; Q.; Zhu; L.-G.; Bian; H.-D.; Deng; J.-H.; Yang; X.-E.; Guo; G.-Q.; Liang, H. *Jiegou Huaxue* **2005**, *24*, 1271. $[Zn(H_2O)_6](ClO_4)_2 \cdot 4C_7H_8N_4O_2$
SIWPEU	2.087 Å	Singh, G.; Baranwal, B. P.; Kapoor, I. P. S.; Kumar, D.; Frohlich, R. *J. Phys. Chem. A* **2007**, *111*, 12972. $[Zn(H_2O)_6](ClO_4)_2 \cdot 2C_6H_{12}N_4] \cdot 2H_2O$
YOSCOZ	2.087 Å	Qiu, L.-G.; Gu, L.-N.; Hu, G.; Zhang, L.-D. *J. Solid State Chem.* **2009**, *182*, 502. $[Zn(H_2O)_6][Zn(H_2O)_2(C_{12}H_8N_2)_2](1,3,5\text{-}(OOC)_3C_6H_3)_2 \cdot 22H_2O$
166589	2.088 Å	Kokunov, Y. V.; Gorbunova, Y. E.; Petrov, V. N.; Gustyakova, M. P.; Buslaev, Y.A. *Dokl. Akad. Nauk SSSR* **1989**, *307*, 1126-1130. $[Zn(H_2O)_6](SnO_3]_2$
AXODAU	2.088 Å	Oelkers, B.; Schaffner, D.; Sun, Y. *Chem. Sel.* **2016**, *1*, 4440. $[Zn(H_2O)_6][Zn(H_2O)_4(C(SO_3)_3)$
DUVNUF	2.088 Å	Klepov, V. V.; Serezhkina, L. B.; Pushkin, D. V.; Alekseev, E. V.; Grigor'ev, M. S.; Sergeeva, O. A.; Shimin, N. A.; Serezhkin, V. N. *Eur. J. Inorg. Chem.* **2016**, 118. $[Zn(H_2O)_6][UO_2(OOCC(CH_2)(CH_3))_3]_2 \cdot 8H_2O_6$
FAMKEL	2.088 Å	Tabatabaee, M.; Tahriri, M.; Tahriri, M.; Ozawa, Y.; Neumuller, B.; Fujioka, H.; Toriumi, K. *Polyhedron* **2012**, *33*, 336. $[Zn(H_2O)_6](C_2H_5N_4)_2[Zn(C_7H_3NO_4)_2]_2 \cdot H_2O$
FUGWUU	2.088 Å	Huo; L.-H.; Gao; S.; Xu; S.; Zhao, H. *Acta Crystallogr., Sect. E* **2005**, *61*, m449. $[Zn(H_2O)_6]C_{10}H_6O_6S_2$
GAYTIM	2.088 Å	Yerra, S.; Das, S. K. *J. Mol. Struct.* **2017**, *1146*, 23. $[Zn(H_2O)_6][Na_2(H_2O)_{12}V_{10}O_{28}] \cdot 4H_2O$
GIXJIH	2.088 Å	Rohe, M.; Merz, K. *Chem. Commun.* **2008**, 862. $(NH_4)_4[Zn(H_2O)_6][Ti_4C_{24}H_{18}O_{36}] \cdot 6H_2O$

OBUPEJ	2.088 Å	Felder, J.; Yeon, J.; Smith, M.; zur Loye, H.-C. *Inorg. Chem. Front.* **2017**, *4*, 368. $[Zn(H_2O)_6][UF_5]_2 \cdot 2H_2O$
UGURET02	2.088 Å	Clegg, W.; Harrington, R. W. CCDC deposition number 2182352, **2022**. $[Zn(H_2O)_6](C_{10}H_4O_8)$
237725	2.089 Å	Hennings, E.; Schmidt, H., Voigt, W. *Acta Crystallogr., Sect. E* **2014**, *70*, 515. $[Zn(H_2O)_6][ZnCl_4]$
710007	2.089 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*,, 355-359. $Tl_2[Zn(H_2O)_6](SO_4)_2$
710013	2.089 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*, 360-364. $Tl_2[Zn(H_2O)_6](SeO_4)_2$
GOMKAV	2.089 Å	Wang, Q.-Y. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*, 71. $[Zn(H_2O)_6](C_{18}H_{15}O_7S)_2 \cdot 4H_2O$
LEZCEA	2.089 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M. *Dalton Trans.* **2012**, *41*, 10390. $[Zn(H_2O)_6](C_6H_6N_5O_2)_2 \cdot C_{10}H_8N_2$
QODBUH	2.089 Å	Wu, M.; Yuan, D.; Jiang, F.; Chen, B.; Gao, Q.; Wei, W.; Hong, M. *Supramol. Chem.* **2008**, *20*, 289. $[Zn(H_2O)_6](C_{12}H_{14}N_2)_3[Zn_2C_{48}H_{28}O_{36}S_{16}] \cdot 14H_2O$
QUKVAO	2.089 Å	Sattler, A.; Budde, M. R.; Schnick, W. *Z. Anorg. Allg. Chem.* **2009**, *635*, 1933. $(NH_4)_2[Zn(H_2O)_6](C_6HN_7O_3)_2 \cdot 2H_2O$
RAYRAM	2.089 Å	Tepavitcharova, S.; Rabadjieva, D.; Havlicek, D.; Nemec, I.; Vojtisek, P.; Plocek, J.; Koleva, Z. *J. Mol. Struct.* **2012**, *1018*, 113. $[Zn(H_2O)_6](SO_4)_2 \cdot 2[Zn(H_2O)_4(OOCCH_2NH_3)_2] \cdot 2H_2O$
VURPOP	2.089 Å	Naili, H.; BenHassan, D.; Rekik, W. CCDC deposition number 1433262, **2015**. $[Zn(H_2O)_6](C_4H_{12}N_2)_2(NO_3)_6$
63662	2.090 Å	Stadnicka, K.; Glazer, A. M.; Koralewki, M. *Acta Crystallogr., Sect. B* **1988**, *44*, 356. $[Zn(H_2O)_6]SeO_4$
HEFPAN	2.090 Å	Belaj, F.; Furpa, K. M.; Mosch-Zanetti, N. C. **2022**, CCDC deposition no. 2178714. $[Zn(H_2O)_6][ZnC_{24}H_{33}N_6O_9S_3]_2 \cdot 2C_8H_{14}O_4 \cdot 2H_2O$
JUVSEY	2.090 Å	Bezrukavnikova, I. M.; Polynova, T. N.; Kovaleva, I. B.; Mitrofanova, N. D.; Porai-Koshits, M. A. *Koord. Khim.* **1992**, *18*, 150. $[Zn(H_2O)_6][NiC_{10}H_{12}N_2O_8]_2 \cdot 8H_2O$
QUGLEM	2.090 Å	Kerber, W. D.; Sean Hartnett, D.; Wang, A.; Mafrice, C. H.; Siegler, M. A. *Inorg. Chim. Acta* **2020**, *506*, 119547. $[Zn(H_2O)_6][Zn_2(H_2O)_3(C_{16}H_{14}FN_2O_{10}] \cdot 2H_2O$.
RAYRAM03	2.090 Å	Fortes, A. D.; Howard, C. M.; Wood, I. G.; Gutmann, M. J. *J. Mol. Struct.* **2012**, *1018*, 113. $[Zn(H_2O)_6](SO_4)_2 \cdot 2[Zn(H_2O)_4(OOCCH_2NH_3)_2] \cdot 2H_2O$
UGAFEP	2.090 Å	Kammoun, O.; Rekik, W.; Bataille, T.; Mahmudov, K. T.; Kopylovich, M. N.; Naili, H. *J. Organometal. Chem.* **2013**, *741*, 136. $[Zn(H_2O)_6](C_4H_7N_2)_2(SO_4)_2 \cdot 2H_2O$
YAVHOS	2.090 Å	Kumberger, O.; Riede, J.; Schmidbaur, H. *Z. Naturforsch., Teil B* **1993**, *48*, 961. $[Zn(H_2O)_6](C_5H_3N_2O_4)_2 \cdot 2H_2O$.

ZOLVED	2.090 Å	Kruszynski, R.; Sieranski, T.; Swiatkowski, M.; Zielak, M.; Wojciechowski, J.; Dzierzawsk, M.; Lewinski, B. *J. Coord. Chem.* **2014**, *67*, 1332. $[Zn(H_2O)_6][Zn(H_2O)_4(C_6H_{12}N_2)_2](SO_4)_2{\cdot}6H_2O$
AHOWOK	2.091 Å	Bera, M.; Musie, G. T.; Powell, D. R. *Inorg. Chem.* **2009**, *48*, 4625. $[Zn(H_2O)_6][Zn(H_2O)_2C_{23}H_{25}N_4O_7]_2{\cdot}12H_2O$.
CIVCIV	2.091 Å	Shi, J.; Wang, Y.-C.; Wang, Q.-Y.; Zhang, Z.-T. *Inorg. Chim. Acta* **2014**, *409*, 259. $[Zn(H_2O)_6](C_{17}H_{12}BrO_9S)_2{\cdot}2H_2O$
COCYAV	2.091 Å	Zhang, S.-G.; Feng, Y.-L.; Wen, Y.-H. *Wuji Huaxue Xuebao* **2008**, *24*, 581. $[Zn(H_2O)_6](C_9H_7N_4O_3S)_2$
EBIKIL	2.091 Å	Shi, L.-X.; Xu, X.; Wu, C.-D. *CrystEngComm* **2011**, *13*, 6027. $[Zn(H_2O)_6][Gd_2C_{18}H_{10}N_2O_{20}]{\cdot}4H_2O$
KUNJOT	2.091 Å	Knope, K. E.; Cahill, C. L. *Eur. J. Inorg. Chem.* **2010**, 1177. $[Zn(H_2O)_6][(UO_2)_4C_8H_{14}O_{22}P_4]{\cdot}5H_2O$
ONOTAN	2.091 Å	Wagner, C.; Merzweiler, K. *Z. Anorg. Allg. Chem.* **2010**, *636*, 557. $[Zn(H_2O)_6](p\text{-}HOOCC_6H_4SO_3)_2$
RAYRAM01	2.091 Å	Oguey, S.; Jacquier, Y.; Neels, A.; Stoeckli-Evans, H. CCDC depositions number 936400, **2013**. $[Zn(H_2O)_6](SO_4)_2{\cdot}2[Zn(H_2O)_4(OOCCH_2NH_3)_2]{\cdot}2H_2O$
ZNATOS	2.091 Å	Hargreaves, A. *Acta Crystallogr.* **1957,** *10*, 191. $[Zn(H_2O)_6](p\text{-}CH_3C_6H_4SO_3)_2$
65012	2.092 Å	Maslen, E.N.; Watson, K.J.; Ridout, S.C.; Moore, F. H. *Acta Crystallogr., Sect. C* **1988**, *44*, 1510. $(NH_4)_2[Zn(H_2O)_6](SO_4)_2$
409496	2.092 Å	Euler, H.; Barbier, B.; Klumpp, S.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2000**, *215*, 473. $Rb_2[Zn(H_2O)_6](SO_4)_2$
409750	2.092 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2003**, *218*, 405. $Cs_2[Zn(H_2O)_6](SeO_4)_2$
AFECUK	2.092 Å	Genther, D. J.; Squattrito, P. J.; Kirschbaum, K.; Pinkerton, A. A. *Acta Crystallogr., Sect. E* **2007**, *63*, m2262. $[Zn(H_2O)_6](C_{10}H_8NS_6S_2)_2{\cdot}4H_2O$
DURKAD	2.092 Å	Tian, D.-M.; Shi, C.-Y.; Hao, C.-J. *Acta Crystallogr., Sect. E* **2010**, *66*, m968. $[Zn(H_2O)_6](C_{16}H_{12}O_6){\cdot}H_2O$
EKOYUA	2.092 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Pietraszko, A. *Acta Crystallogr., Sect. C* **2016**, *72*, 432. $[Zn(H_2O)_6](2\text{-}H_2NC_5H_5N)_2(SO_4)_2$
HACYZN	2.092 Å	Gupta, M. P.; Agrawal, J. L. *Crystal. Struct. Commun.* **1977**, *6*, 103. $[Zn(H_2O)_6](HOOCCOO)_2{\cdot}2H_2O$
JOBMUJ	2.092 Å	Curtiss, A. B. S.; Bera, M.; Musie, G. T.; Powell, D. R. *Dalton Trans.* **2008**, 2717. $[Zn(H_2O)_6][Zn(H_2O)_2(C_{23}H_{23}N_2O_9)]_2{\cdot}12H_2O$
RAYRAM02	2.092 Å	Balamurugan, M. S.; Subramanian, P.; Rao, P. S. CCDC deposition number 806684, **2011**. $[Zn(H_2O)_6](SO_4)_2{\cdot}2[Zn(H_2O)_4(OOCCH_2NH_3)_2]{\cdot}2H_2O$
RUZMOQ	2.092 Å	Deng, H.-Q.; Jiang, Q.-Y.; Xu, J.-R.; Hu, Y.-M. *Adv. Mater. Res.* **2012**, *554/556*, 536. $[Zn(H_2O)_6][BiC_{10}H_{12}N_2O_8]_2{\cdot}2H_2O$

SAMSOE	2.092 Å	Dutta, R.; Akhuli, B.; Ghosh, P. *Dalton Trans.* **2015**, *44*, 15075. $[Zn(H_2O)_6][Zn_3C_{108}H_{132}N_{48}O_{30}](SO_4)_4 \cdot 18H_2O$
UMANIF	2.092 Å	Dalrymple, S. A.; Shimizu, G. K. H. *Supramol. Chem.* **2003**, *15*, 591. $[Zn(H_2O)_6]_3C_{12}H_{12}O_{18}S_6 \cdot 3CH_3COCH_3$
VIKDID	2.092 Å	Wen, Y.-H.; Ng, S. W. *Acta Crystallogr., Sect. E* **2007**, *63*, m2378. $[Zn(H_2O)_6][ZnC_{11}H_{13}O_{11}]_2(SO_4)_2$
83335	2.093 Å	Mostafa, G.; Ray, S.; Mukhopadhyay, A. *Z. Kristallogr.* **1996**, *211*, 373. $[Zn(H_2O)_6][TiF_6]$
90098	2.093 Å	Simmons, C. J.; Hitchman, M. A.; Stratemeier, H. *Inorg. Chem.* **2000**, *39*, 6124. $(NH_4)_2[Zn(H_2O)_6](SO_4)_2$
41339	2.093 Å	Araya, M. A.; Cotton, F. A.; Daniels, M. N.; Falvello, L. R.; Murillo, C. A. *Inorg. Chem.* **1993**, *32*, 4853-4860. $(NH_4)_2[Zn(H_2O)_6](SO_4)_2$
DIYJAZ	2.093 Å	Hou, Y.; An, H.; Chang, S.; Zhang, J. *Cat. Sci. Tech.* **2019**, *9*, 2445. $Rb_2[Zn(H_2O)_6][As_2Mo_{12}ZnC_{16}H_{42}N_4O_{57}] \cdot 14H_2O$
MEYLEH	2.093 Å	Junk, P. C.; Smith, M. K.; Steed, J. W. *Polyhedron* **2001**, *20*, 2979. $[Zn(H_2O)_6][ZnC_{16}H_{32}O_8](ClO_4)_2)_6 \cdot 2(C_8H_{16}O_4) \cdot 8H_2O$
NAKJUG	2.093 Å	Carlson, Z. A.; Harrod, B. L.; Widener, D.; Howard, W. A.; Pang, K. *J. Chem. Cryst.* **2010**, *40*, 863. $[Zn(H_2O)_6][ZnC_{16}H_{32}O_8] \cdot 4H_2O$
REBTEZ	2.093 Å	Paluchowska, B.; Maurin, J. K.; Leciejewicz, J. *J. Coord. Chem.* **2001**, *52*, 253. $[Zn(H_2O)_6][Na_2Zn_8C_{90}H_{56}O_{56}]$
409649	2.094 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr.-New Cryst. Struct.* **2002**, *217*, 471. $(NH_4)_2[Zn(H_2O)_6](SeO_4)_2$
409742	2.094 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2003**, *218*, 409. $Cs_2[Zn(H_2O)_6](SO_4)_2$
411335	2.094 Å	Adamczyk, B.; Troyanov, S. I.; Schneider, M.; Kemnitz, E. *Z. Anorg. Allg. Chem.* **2000**, *626*, 2543. $NH_4[Zn(H_2O)_6][AlF_6]$
427974	2.094 Å	Yerra, S.; Das, S. K. *J. Mol. Struct.* **2017**, *1146*, 23. $[Zn(H_2O)_6][Na_2(H_2O)_6(H_2O)_4Zn(H_2O)_2][V_{10}O_{28}] \cdot 4H_2O$
HITFUN	2.094 Å	Shen, L.; Li, W.-X.; Xia, Q.-J.; Yang, J.; Liu, Y.; Ji, C.; Wu, C.-Y.; Zhai, Y.-S.; Yang, G.-W.; Li, Q.-Y. *J. Chem. Cryst.* **2013**, *43*, 585. $[Zn(H_2O)_6][ZnC_{13}H_{10}ClN_2O_5]_2 \cdot 4H_2O$
IPEVEG	2.094 Å	Said, S.; Naili, H.; Bataille, T.; Herrera, R. P. *CrystEngComm* **2016**, *18*, 5365. $[Zn(H_2O)_6](2\text{-}NH_2\text{-}6\text{-}CH_3C_5H_4N)_2(SO_4)_2 \cdot 2H_2O$
KAMPEU	2.094 Å	Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T *Acta Crystallogr., Sect. E* **2005**, *61*, m629. $(C_4H_{12}N_2)[Zn(H_2O)_6](SO_4)_2$
OYUYAJ	2.094 Å	Boiko, V. N.; Filatov, A. A.; Yagupolskii, Y. L.; Tyrra, W.; Naumann, D.; Pantenburg, I.; Fischer, H. T. M.; Schulz, F. *J. Fluorine Chem.* **2011**, *132*, 1219. $[Zn(H_2O)_6](2,4,6\text{-}(SO_2F)_3C_6H_2O)_2 \cdot 5.5H_2O$

YEYYEJ	2.094 Å	Jin, K. P.; Jiang, H. J.; Wang, Y.; Zhang, D. P.; Mei, J.; Cui, S. H. *J. Cluster Sci.* **2018**, *29*, 785. $[Zn(H_2O)_6](H_3N(CH_2)_4NH_3)_2[V_{10}O_{28}]\cdot 6H_2O$
250995	2.095 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2013**, *52*, 10481. $Rb_2[Zn(H_2O)_6](SeO_4)_2$
409985	2.095 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*, 171. $K_2[Zn(H_2O)_6](SO_4)_2$
AMAVIV	2.095 Å	Bednarchuk, T. J.; Kinzhybalo, V.; Bednarchuk, O.; Pietraszko, A. *J. Mol. Struct.* **2016**, *1120*, 138. $[Zn(H_2O)_6](4\text{-}H_2N\text{-}C_5H_5N)_2(SO_4)_2$
BEMQES	2.095 Å	Priyadharshini, A.; Kalainathan, S. *J. Mater. Sci: Mater. Electron* **2017**, *28*, 5089. $[Zn(H_2O)_6](C_6H_6N_3)_2(SO_4)_2\cdot 4H_2O$
FIYLIL	2.095 Å	Bazhina, E. S.; Gogoleva, N. V.; Aleksandrov, G. G.; Kiskin, M. A.; Efimov, N. N.; Bogomyakov, A. S.; Ugolkova, E. A.; Minin, V. V.; Sidorov, A. A. ;Eremenko, I. L. *Chem. Sel.* **2018**, *3*, 13765. $[Zn(H_2O)_6][Cu(H_2O)C_{12}H_{12}O_8)_2]$
KIZTIY	2.095 Å	Qi, C.-M.; Li, Q.; Liang, S.-W.; Wang, M.; Xiong, L.-Q. *Z. Anorg. Allg. Chem.* **2014**, *640*, 159. $[Zn(H_2O)_6](C_{12}H_{11}N_2O_4)_2\cdot 6H_2O$
ONEHEV	2.095 Å	Tian, L.; Niu, Z.; Yang, N.; Zou, J.-F. *Inorg. Chim. Acta* **2011**, *370*, 230. $[Zn(H_2O)_6][Zn_2C_{30}H_{26}N_{12}O_{14}]\cdot 2H_2O$
SIDJIZ	2.095 Å	Sun, R.; Li, Y.-Z.; Bai, J.; Pan, Y. *Cryst. Growth Des.* **2007**, *7*, 890. $[Zn(H_2O)_6][Zn_2C_{30}H_{36}N_6O_{24}]\cdot 3H_2O$
WABJUG	2.095 Å	Gharagozlou, M.; Langer, V.; Nemati, A. *Acta Crystallogr., Sect. E* **2010**, *66*, m1606. $[Zn(H_2O)_6][Zn(C_7H_4NO_4)_3]_2$
ZADTIK	2.095 Å	An, H.; Wang, L.; Hu, Y.; Xu, T.; Hou, Y. *Inorg. Chem.* **2016**, *55*, 144. $[Zn(H_2O)_6](4\text{-}HOOCCHCH\text{-}C_5H_5N)_4\cdot[H_4Co_2Mo_{10}O_{38}]\cdot 5H_2O$
11439	2.096 Å	Ayer, G. B.; Klepov, V. V.; Smith, M. D.; zur Loye, H.-C. *Inorg. Chem.* **2019**, *58*, 13049. $Cs_2[Zn(H_2O)_6][Hf_2F_{12}]$
15367	2.096 Å	Ferrari, A.; Braibanti, A.; Lanfredi, A. M. M.; Tiripicchio, A. *Acta Crystallogr.* **1967**, *22*, 240. $[Zn(H_2O)_6](NO_3)_2$
29827	2.096 Å	Liu, Y.; Deng, J.-X.; Pan, C.-Y. *J. Cluster Sci.* **2021**, *32*, 469. $[Zn(H_2O)_6](NO_3)_2\cdot [Zn(B_3O_3(OH)_4)]_2(H_2O)_4]\cdot 2H_2O$
77309	2.096 Å	Mostafa, G.; Ray, S.; Mukhopadhyay, A. *Z. Kristallogr.* **1996**, *211*, 373. $[Zn(H_2O)_6][TiF_6]$
162318	2.096 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Mineral.* **2009**, *94*, 74. $K_2[Zn(H_2O)_6](SO_4)_2$
409722	2.096 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2003**, *218*, 265. $Rb_2[Zn(H_2O)_6](SeO_4)_2$
AMIHIQ	2.096 Å	Liu, Y.; Deng, J.-X.; Pan, C.-Y. *J. Cluster Sci.* **2021**, *32*, 469. $[Zn(H_2O)_6](NO_3)_2\cdot[Zn(H_2O)_4(B_3H_4O_7)_2]\cdot 2H_2O$

DIWLUS	2.096 Å	Li, G.-F.; Feng, X.; Peng, P. R.; Sun, Y.-L. *Z. Kristallogr.-New Cryst. Struct.* **2014**, *229*, 37. . $[Zn(H_2O)_6](C_7H_6NO_3)_2$
KUNJIN	2.096 Å	Knope, K. E.; Cahill, C. L. *Eur. J. Inorg. Chem.* **2010**, 1177. $[Zn(H_2O)_6][(UO_2)_2C_4H_4O_{12}P_2]\cdot 4H_2O$
RENREI	2.096 Å	Kumaresan, S.; Ramadevi, P.; Walsh, R. D.; McAneny, A.; Lake, C. H. *J. Chem. Sci.* **2006**, *118*, 243. $[Zn(H_2O)_6](C_7H_6NO_3S)_2$
SAVLOR	2.096 Å	Xu, L.; Liu, B.; Zheng, F.-K.; Guo, G.-C.; Huang, J.-S. *J. Solid State Chem.* **2005**, *178*, 3396. $[Zn(H_2O)_6][Zn_2C_{18}H_{10}O_{14}]$
4309	2.097 Å	Whitnall, J.; Kennard, C. H. L.; Nimmo, J. K.; Moore, F. H. *Cryst. Struct. Commun.* **1975**, *4*, 717. $K_2[Zn(H_2O)_6](SO_4)_2$
250994	2.097 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2013**, *52*, 10481. $K_2[Zn(H_2O)_6](SeO_4)_2$
710001	2.097 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*, 351. $K_2[Zn(H_2O)_6](SeO_4)_2$
CUYZUS	2.097 Å	Melegari, M.: Massera, C.; Ugozzoli, F.; Dalcanale, E. *CrystEngComm* **2010**, *12*, 2057. $[Zn(H_2O)_6][ZnCl_4]\cdot 2C_{36}H_{36}O_{12}P_4\cdot 5CF_3CH_2OH\cdot 5H_2O$
DAYHOC	2.097 Å	Naili, H. *J. Coord. Chem.* **2012**, *65*, 1178. $[Zn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
DIFDUR	2.097 Å	Arranz-Mascaros, P.; Godino, M. L.; Lopez, R.; Cuesta, R.; Valenzuela-Calahorro, C.; Martin-Ramos, D. *Acta Crystallogr., Sect. C* **1999**, *55*, 2049. $[Zn(H_2O)_6](C_7H_8N_5O_4)_2\cdot 2H_2O$
MAAPEZ	2.097 Å	Rujiwatra, A.; Limtrakul, J. *Acta Crystallogr., Sect. E* **2005**, *61*, m1403. $H_3NCH_2CH_2NH_3[Zn(H_2O)_6](SO_4)_2$
XISGAK	2.097 Å	Cariati, E.; Forni, A.; Lucenti, E.; Marinotto, D.; Previtali, A.; Righetto, S.; Botta, C.; Bold, V.; Kravtsov, V.; Fonar, M. S. *Chem. Asian J.* **2019**, *14*, 853. $[Zn(H_2O)_6](BF_4)_2\cdot 2C_9H_6N_6$
CAXYUV	2.098 Å	Cariati, F.; Erre, L.; Micera, G.; Panzanelli, A.; Ciani, G.; Sironi, A. *Inorg. Chim. Acta* **1983**, *80*, 57. $[Zn(H_2O)_6](C_6H_4(OH)_2(COO))_2\cdot 2H_2O$
DARMAO	2.098 Å	Wu, Y.; Jiang, H.; Jiao, S.; Li, D.; Gao, Z.; Niu, B.; Wu, D.; Chen, S.; Cai, H.-L.; Wu, X. *Adv. Opt. Mater*, **2021**, 2101905. $(C_5H_{14}N_2)_2[Zn(H_2O)_6](SO_4)_3$
DAYHIW	2.098 Å	Naili, H. *J. Coord. Chem.* **2012**, *65*, 1178. $[Zn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
OHINUR	2.098 Å	Aycan, Tugba, A. CCDC deposition number 1888931, **2020**. $[Zn(H_2O)_6][Zn(H_2O)_4)(C_6H_6N_2O](SO_4)_2\cdot 2H_2O$
RUXPAE	2.098 Å	Li, C.-P.; Long, W.-W.; Lei, Z.; Guo, L.; Xie, M.-J.; Lu, J.; Zhu, X.-D. *Chem. Commun.* **2020**, *56*, 12403. $[Zn(H_2O)_6][Zn_6C_{52}H_{40}N_2O_{32}]$
XETWAV	2.098 Å	Thakuria, H.; Borah, B. M.; Das, G. *Eur. J. Inorg. Chem.* **2007**, 524. $[Zn(H_2O)_6][Zn_2C_{12}H_{12}N_2O_{12}]\cdot 3H_2O$

39734	2.099 Å	Bukvetskii, B. V.; Gerasimenko, A. V.; Davidovich, R. L.; Kaidalova, T. A.; Teplukhina, L. V. *Koord. Khim.* **1993**, *19*, 526. $K_2[Zn(H_2O)_6][ZrF_6]$
DAXDEN	2.099 Å	Hou, Y.; Rodriguez, M. A.; Nyman, M. *Cryst. Growth Des.* **2012**, *12*, 1422. $[Zn(H_2O)_6][Fe_4C_{26}H_{34}N_4O_{24}]\cdot 4.5H_2O$
DAYHIW01	2.099 Å	Wu, Y.; Jiang, H.; Jiao, S.; Li, D.; Gao, Z.; Niu, B.; Wu, D.; Chen, S.; Cai, H.-L.; Wu, X. *Adv. Opt. Mater.* **2021**, 2101905. $[Zn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
DAYHUI	2.099 Å	Naili, H. *J. Coord. Chem.* **2012**, *65*, 1178. $[Zn(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
NUHSAL	2.099 Å	Indrani, M.; Ramasubramanian, R.; Fronczek, F. R.; Braga, D.; Vasanthacharya, N. Y..; Kumaresan, S. *J. Chem. Sci. Bangladore* **2009**, *121*, 413. $[Zn(H_2O)_6](2\text{-}OOC(CH_2)_2SC_5H_4NO)_2$
SACVIE	2.099 Å	Wang, M.; Sun, W.; Pang, H.; Ma, H.; Yu, J.; Zhang, Z.; Niu, Y.; Yin, M. *J. Solid State Chem.* **2016**, *235*, 175. $[Zn(H_2O)_6][V_{10}Zn_2C_{16}H_{36}N_{12}O_{34}]\cdot 4H_2O$
TUKHEO	2.099 Å	Dey, D.; Pal, S.; Yadav, H. R.; Sengupta, P. S.; Choudhury, A. R.; Kole, N.; Biswas, B. *RSC Adv.* **2015**, *5*, 42681. $[Zn(H_2O)_6]HSO_4)_2\cdot 2H_2O$
UGAFOZ	2.099 Å	Kammoun, O.; Rekik, W.; Bataille, T.; Mahmudov, K. T.; Kopylovich, M. N.; Naili, H. *J. Organometal. Chem.* **2013**, *741*, 136. $[Zn(H_2O)_6](C_7H_7N_2)_2(SO_4)_2\cdot 4H_2O$
94861	2.100 Å	Hitchman, M. A.; Yablokov, Y. V.; Petrashen, V. E.; Augustyniak-Jublokov, M. A.; Stratemeier, H.; Riley, M. J.; Lukaszewicz, K.; Tomaszewski, P. E.; Pietraszko, A. *Inorg. Chem.* **2002**, *41*, 229. $Cs_2[Zn(H_2O)_6]ZrF_6]_2$
DEYTOS	2.100 Å	Chen, Z.; An, H.; Zhang, H.; Hu, Y. *CrystEngComm* **2013**, *15*, 4711. $[Zn(H_2O)_6][Mo_8C_{12}H_{30}N_4O_{30}]\cdot 4H_2O$
DOFYUT	2.100 Å	Gao, Y.-Q.; Gu, W.; Sun, X.-P.; Liu, X.; Liao, D.-Z. *Z. Anorg. Allg. Chem.* **2008**, *634*, 1961. $[Zn(H_2O)_6]_2[V_2C_{10}H_{12}N_2O_{16}P_2]\cdot 2H_2O$
EQIXUX	2.100 Å	Yang; B.-P.; Mao; J.-G.; Sun; Y.-Q.; Zhao, H.-H.; Clearfield, A. *Eur. J. Inorg. Chem.* **2003**, 4211. $[Zn(H_2O)_6]_2[Zn_7C_{36}H_{54}N_6O_{30}P_6]\cdot 16H_2O$
POCMUR	2.100 Å	Zviedre, I.; Belyakov, S.; Zarina, I. *Z. Kristallogr.-New Cryst. Struct.* **2009**, *224*, 627. $[Zn(H_2O)_6](BC_{12}H_{12}O_{14})_2\cdot 2H_2O$
XESFUW	2.100 Å	Arnold, P. J.; Davies, S. C.; Dilworth, J. R.;Durrant, M. C.;Griffiths, D. V.;Hughes, D. L.; Richards, R. L.; Sharpe, P. C. *J. Cherm. Soc., Dalton Trans.* **2001**, 736. $[Zn(H_2O)_6][ZnC_{16}H_{20}N_4O_3]_2(SO_4)_3\cdot 3H_2O$
ARAXEV	2.101 Å	Yang; Y.-Y.; Szeto; L.; Wong, W.-T. *Appl. Organomet. Chem.* **2003**, *17*, 958. $[Zn(H_2O)_6][ZnC_{17}H_8O_{10}]\cdot 4H_2O.$
OCETOG	2.101 Å	Xu; L.; Liu; B.; Guo; G.; Huang, J.-S. *Inorg. Chem. Commun.* **2006**, *9*, 220. $[Zn(H_2O)_6][Zn_5C_{36}H_{22}Na_2O_{30}]\cdot 6H_2O$
EXEHEV	2.101 Å	Croitor, L.; Coropceanu, E. B.; Siminel, A. V.; Kravtsov, V. C.; Fonari, M. S. *Cryst. Growth Des.* **2011**, *11*, 3536. $[Zn(H_2O)_6][Zn(H_2O)_3(SO_4)(C_{10}H_6N_2O_3)]\cdot[Zn(H_2O)_3(SO_4)(C_{10}H_8N_2O_3)]$

EXEHEV01	2.101 Å	Zhu, K.; Gao, Y.; Li, G. *Synth. React. Inorg., Met.-Org., Nano-Met. Chem.* **2011**, *41*, 785. $[Zn(H_2O)_6][Zn(H_2O)_3(SO_4)(C_{10}H_6N_2O_3)]\cdot[Zn(H_2O)_3(SO_4)(C_{10}H_8N_2O_3)]$
EXEHEV02	2.102 Å	Xu, X.-T.; Bai, F.-Y.; Zou, W.; Xing, Y.-H. *J. Inorg. Organomet. Polym. Mater.* **2014**, *24*, 450. $[Zn(H_2O)_6][Zn(H_2O)_3(SO_4)(C_{10}H_6N_2O_3)]\cdot[Zn(H_2O)_3(SO_4)(C_{10}H_8N_2O_3)]$
IVOPOZ	2.102 Å	Qin, X.; Chen, W.-J.; Zhang, Y.-Q.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z. *J. Mol. Struct.* **2011**, *996*, 12. $[Zn(H_2O)_6]_2(SO_4)_2\cdot C_{44}H_{48}N_{24}O_{12}\cdot 10H_2O$
UWILEU	2.102 Å	Fonari, M. S; Kravtsov, V. C.; Bold, V.; Lucenti, E.; Cariati, E.; Marinotto, D.; Forni, A. *Cryst. Growth Des.* **2021**, *21*, 4184. $[Zn(H_2O)_6](NO_3)_2\cdot 2C_9H_6N_6$
ALEDEA	2.104 Å	Lei; C.; Mao; J.-G.; Sun; Y.-Q.; Zeng H.-Y.; Clearfield, A. *Inorg. Chem. 42*, **2003**, 6157. $[Zn(H_2O)_6]_2[Zn_7C_{24}H_{42}N_6O_{30}P_6]\cdot 22H_2O$
GIWPOT	2.104 Å	Xu, B.; Cai, Y.; Li, L.; Zhang, Z.; Li, C. *J. Mol. Struct.* **2014**, *1059*, 320. $[Zn(H_2O)_6][PbC_9H_3O_6]_2$
KENYIP	2.104 Å	Sun, C.; Hu, J.; Deng, C. *Inorg. Chem. Commun.* **2022**, *144*, 109938. $[Zn(H_2O)_6][ZnC_{17}H_{15}N_2O_{12}]_2\cdot 4H_2O$
LADMOV	2.104 Å	Coropceanu, E. B.; Croitor, L.; Siminel, A. V.; Chumakov, Y.; Fonari, M.S. *Polyhedron* **2016**, *109*, 107. $[Zn(H_2O)_6][Zn_2C_{20}H_{24}F_8N_4O_4][Zn_3C_{30}H_{24}F_8N_6]SiF_6\cdot 2H_2O$
REDRUO	2.104 Å	He; J.; Yin; Y.-G.; Huang; X.-C.; Li, D. *Inorg. Chem. Commun.* **2006**, *9*, 205. $[Zn(H_2O)_6][Zn_2C_{27}H_{27}N_4O_7S]_2\cdot 0.75CH_3OH\cdot 3H_2O$
HULMOQ	2.104 Å	Rodriguez-Martin, Y.; Sanchiz, J.; Ruiz-Perez, C.; Lloret, F.; Julve, M. *CrystEngComm* **2002**, *4*, 631. $[Zn(H_2O)_6][Cu(C_3H_2O_4)_2(H_2O)_2]$
TUGCOQ	2.105 Å	Liu, J.; Lu, Y.; Lu, W. *Dalton Trans.* **2020**, *49*, 4044. $[Zn(H_2O)_6][ZnC_{10}H_{10}O_{12}]\cdot C_{26}H_{20}N_2O_4\cdot 4H_2O$
250492	2.106 Å	Liu; B.; Jia; Y.-Y.; Yang; H.-Q.; Yang; J.-H.; Xue, G.-L. *Dalton Trans.* **2013**, *42*, 16742. $K[Zn(H_2O)_6][Zn(H_2O)_2Ru_2(CO_3)_4Cl_2]\cdot 4H_2O$
XOKKEQ	2.106 Å	Larionov, S. V.; Rakhmanova, M. I.; Glinskaya, L. A.; Naumov, D. Y.; Vinogradov, A. S.; Karpov, V. M.; Platonov, V. E.; Fadeeva, V. P. *Zh. Obshch. Khim.* **2019**, *89*, 261. $[Zn(H_2O)_6][Zn(H_2O)_4(C_{14}F_8O_4)_2]\cdot 2H_2O$
16591	2.107 Å	Montgomery, H.; Lingafelter, E. C. *Acta Crystallogr.* **1964**, *17*, 1295. $(NH_4)_2[Zn(H_2O)_6](SO_4)_2$
41708	2.107 Å	Spiess, M.; Gruehn, R. *Z. Anorg. Allg. Chem.* **1979**, *456*, 222. $[Zn(H_2O)_6]SO_4$
SILCOI	2.107 Å	Chi-Duran, I.; Enriquez, J.; Vega, A.; Herrera, F.; Pratap Singh, D. *Acta Crystallogr., Sect. E* **2018,** *74*, 1231. $[Zn(H_2O)_6](NO_3)_2\cdot 2C_6H_5N_5$
TIQWEY	2.107 Å	Wang, X.; Feng, J.; Zhao, Y.-D.; Zhang, X.-F.; Yan, T.; Wang, Q.; Du, L.; Zhao, Q.-H. *Inorg. Chem. Commun.* **2018**, *98*, 80. $[Zn(H_2O)_6](NO_3)_2\cdot(1,2,4,5\text{-}(CH_2\text{-}NC_5H_4\text{-}4\text{-}COO)_4\text{-}C_6H_2)_4\cdot H_2O$
ZNAQBS	2.107 Å	Broomhead, J. M.; Nicol, A. D. I. *Acta Crystallogr.* **1948,** *1*, 88. $[Zn(H_2O)_6](C_6H_5SO_3)_2$
15981	2.108 Å	Yue, S. H.; Beevers, C. A. *Z. Kristallogr.* **1936**, *95*, 426. $[Zn(H_2O)_6](BrO_3)_2$
MUTLEU	2.111 Å	Rousseau, G.; Zhang, S.; Oms, O.; Dolbecq, A.; Marrot, J.; Liu, R.; Shang, X.; Zhang, G.; Keita, B.; Mialane. P. *Chem. Eur. J.* **2015**, *21*, 12153. $K_3Na_7[Zn(H_2O)_6][Zn_2Co_7W_{18}C_{20}H_{48}N_4P_6]\cdot 32H_2O$

EMIVON	2.112 Å	Li, P.-X.; Wang, M.-S.; Guo, G.-C. *Cryst. Growth Des.* **2016**, *16*, 3709. $[Zn(H_2O)_6](1,4\text{-}(OOC)_2C_6H_4)_2\cdot 2(C_{12}H_{10}N_2O_2)_2\cdot 2H_2O$
WITQEY	2.112 Å	Miao, S. B.; Xu, C. Y.; Ji, B. M. *Zh. Strukt. Khim.* **2018**, *59*, 1456. $[Zn(H_2O)_6][ZnC_{19}H_{15}N_6O_8)_2\cdot 2H_2O$
28	2.115 Å	Zloczysti, S.; Hartl, H.; Frydrych, R. *Acta Crystallogr., Sect. B* **1976,** *32*, 7538. $[Zn(H_2O)_6][Pb(IO_3)_6]$
HAHKUX	2.118 Å	Worl, S.; Hellwinkel, D.; Pritzkow, H.; Hofmann, M; Kramer, R *Dalton Trans.* **2004**, 2750. $[Zn(H_2O)_6][ZnC_{21}H_{14}NO_7]_2\cdot 2H_2O$
141393	2.122 Å	Colliard, I.; Morrison, G.; zur Loye, H.-C.; Nyman, M. *J. Am. Chem. Soc.* **2020**, *142*, 9039. $(Zn(H_2O)_6)_{3.5}[Zn_{2.5}U_{70}(OH)_{36}O_{64}](SO_4)_{64}(H_2O)_{54.5}\cdot 145H_2O$
280218	2.125 Å	Bennett, M. V.; Shores, M. P.; Beauvais, L. G.; Long, J. R. *J. Am. Chem. Soc.* **2000**, *122*, 6664. $[Zn(H_2O)_6]Zn_3[Re_6S_8(CN)_6]_2\cdot 18H_2O$
143823	2.128 Å	Colliard, I.; Nyman, M. *Angew. Chem, Int. Ed.* **2021**, *60*, 7308. $[Zn(H_2O)_6]Ce_{2.5}[Ce_{70}(OH)_{36}O_{64}(SO_4)_{64}(H_2O)_{58.5}]255.5\cdot H_2O$
84605	2.129 Å	Ghosh, S.; Mukherjee, M.; Seal, A.; Ray, S. *Acta Crystallogr., Sect. B* **1997,** *53*, 639. $[Zn(H_2O)_6](ClO_4)_2$
710062	2.135 Å	Liu, H. *Z. Kristallogr.-New Cryst. Struct.* **2011,** *226*, 441. $(NH_4)_2[Zn(H_2O)_6][MoW_{12}O_{40}]_2\cdot 4NH_3\cdot 36H_2O$
LATNOM	2.143 Å	Sohmiya, A.; Okuyama, T.; Suzuki, R.; Yamanishi, K.; Sugimoto, K.; Kondo, M. *Chem. Lett.* **2017**, *46*, 485. $[Zn(H_2O)_6][Zn(H_2O)_2(C_{23}H_{14}Cl_4O_{12}]\cdot 9H_2O$
WURWIR	2.152 Å	Li, S. H.; Fu, W. J. *Asian J. Chem.* **2014**, *26*, 3665. $[Zn(H_2O)_6](C_9H_4NO_8)_2\cdot 4H_2O$
415706	2.158 Å	Meyer, G.; Nolte, M.; Berners, R. *Z. Anorg. Allg. Chem.* **2006**, *632*, 2184. $[Zn(H_2O)_6][(Hg_2)_3(OH)_2](NO_3)_6$
IGOZEL	2.183 Å	Wang, Y.; Wang, X.-G.; Yuan, B.; Shao, C.-Y.; Chen, Y.-Y.; Zhou, B.-B.; Li, M.-S.; An, X.-M.; Cheng, P.; Zhao, X.-J. *Inorg. Chem.* **2015**, *54*, 4456. $[Zn(H_2O)_6][CdYbC_{12}H_{12}O_{15}]_2\cdot 1.5H_2O$
Mean	**2.088 Å/266 structures**	

Table S1bb. Summary of solid state structures containing hydrated cadmium(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Cd-O bond distance, *d*(Cd-O); *d*(Cd-O)$_b$ denotes bridging ligands and *d*(Cd-O)$_t$ terminal ligands. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Cadmium(II)

Four-coordination, distorted tetrahedral configuration

ICSD/CSD code	*d*(Cd-O)	Reference, compound formula
ODIXIK	2.351 Å	Zhang, M.; Chen, Y.-P.; Zhou, H.-C. *CrystEngComm* **2013**, *15*, 9544. $[Cd(H_2O)_4][Cd_3Si_2C_{56}H_{32}O_{16}]$

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Cd-O)	Reference, compound formula
ZETFUZ	2.199 Å	Ka-Luo, T.; Xiang-Lin, J.; Shao-Juan, J.; You-Qi, T. *Chinese J. Struct. Chem.* **1995**, *14*, 399. $[Cd(H_2O)_6][CdC_{72}H_{60}Cl_4S_{13}]$ Cheng-Peng Li, Qian Yu, Jing Chen, Miao Du Wang, X.-G.; Yuan, B.; Shao, C.-Y.; Chen, Y.-Y.; Zhou, B.-B.; Li, M.-S.; An, X.-M.; Cheng, P.; Zhao, X.-J. *Inorg. Chem.* **2015**, *54*, 4456. $[Cd(H_2O)_6][CdYbC_{12}H_{12}O_{15}]_2{\cdot}3H_2O$
XEVGUC	2.228 Å	Ma, J.-X.; Huang, X.-F.; Song, X.-Q.; Liu, W.-S. *Chem. Eur. J.* **2013**, *19*, 3590. $[Cd(H_2O)_6][CdGd(C_4H_4O_5)_3]_2{\cdot}H_2O$
QUPPOH	2.231 Å	Cheng-Peng Li, Qian Yu, Jing Chen, Miao Du, M. *Cryst. Growth Des.* **2010**, *10*, 2650. $[Cd(H_2O)_6][Cd_2C_{40}H_{34}N_8O_{22}S_3]_2{\cdot}10H_2O$
DOJWUW	2.232 Å	Yang, B.; Xiao, X.; Zhang, Y.-Q.; Zhu, Q.-J.; Xue, S.-F.; Tao, Z.; Wei, G. *RSC Adv.* **2014**, *4*, 44359. $[Cd(H_2O)_6](C_{13}H_{21}N_2)_2[CdCl_4]_2{\cdot}2C_{40}H_{44}N_{24}O_{12}{\cdot}2H_2O$
KOMJON	2.234 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Cd(H_2O)_6][CdEr(C_4H_4O_5)_3]_2{\cdot}12H_2O$
WEJDAT	2.236 Å	Tang X.-Y.; Yu, H.; Gao, B.-B.; Lang, J.-P. *Dalton Trans.* **2017**, *46*, 14724. $[Cd(H_2O)_6][Cd_6Hg_2C_{108}H_{100}Cl_6N_{16}O_{24}S_4]{\cdot}10(CH_3)_2NCHO{\cdot}12H_2O$
KOLVAK	2.241 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Cd(H_2O)_6][CdLu(C_4H_4O_5)_3]_2{\cdot}12H_2O$
TUWPOR	2.243 Å	Singh, W. M.; Baruah, J. B. *Polyhedron* **2010**, *29*, 1543. $[Cd(H_2O)_6][Cd3C_{56}H_{48}O_{28})]{\cdot}7H_2O$
KOLTUC	2.247 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Cd(H_2O)_6][CdTm(C_4H_4O_5)_3]_2{\cdot}12H_2O$
KOMJED	2.250 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Cd(H_2O)_6][CdDy(C_4H_4O_5)_3]_2{\cdot}6H_2O$
ZADTOQ	2.252 Å	An, H.; Wang, L.; Hu, Y.; Xu, T.; Hou, Y. *Inorg. Chem.* **2016**, *55*, 144. $[Cd(H_2O)_6](SO_4)_4[H_4Co_2Mo_{10}O_{38}]{\cdot}5H_2O$

TUXLEE	2.254 Å	Barszcz, B.; Hodorowicz, M.; Jablonska-Wawrzycka, A.; Masternak, J.; Nitek, W.; Stadnicka, K. *Polyhedron* **2010**, *29*, 1191. $[Cd(H_2O)_6](C_8H_8NO_2)_4[CdC_{21}H_{12}N_3O_{12}]_2$
GIYCUN	2.257 Å	Custelcean, R.; Remy, P.; Bonnesen, P. V.; Jiang, D.-E.;.; Moyer, B. A. *Angew. Chem., Int. Ed.* **2008**, *47*, 1866. $[Cd(H_2O)_6]SO_4{\cdot}2(C_{24}H_{30}N_{10}O_3)$
KOMJIH	2.257 Å	Huang, X.-F.; Ma, J.-X.; Liu, W.-S. *Inorg. Chem.* **2014**, *53*, 5922. $[Cd(H_2O)_6][CdHo(C_4H_4O_5)_3]_2{\cdot}12H_2O$
OJIKOH	2.257 Å	Jin-Sen Zhou; Ji-Wen Cai; Ng, S. W., *Acta Crystallogr., Sect. E* **2003**, *59*, o1185.
XEVGOW	2.257 Å	Ma, J.-X.; Huang, X.-F.; Song, X.-Q.; Liu, W.-S. *Chem. Eur. J.* **2013**, *19*, 3590. $[Cd(H_2O)_6][CdTb(C_4H_4O_5)_3]_2{\cdot}H_2O$
XUBLAI01	2.257 Å	Kumar, S.; Sharma, R. P.; Venugopalan, P.; Aree, T. *Polyhedron* **2018**, *139*, 178. $[Cd(H_2O)_6](C_6H_2N_3O_7)_2{\cdot}2H_2O$
XUBLAI	2.258 Å	Natarajan, S.; Moovendaran, K.; Dhas, S. A. M. B.; Suresh, J.; Lakshman, P. L.N. *Acta Crystallogr., Sect. E* **2009**, *65*, m620. $[Cd(H_2O)_6](C_6H_2N_3O_7)_2{\cdot}2H_2O$
WANLOO	2.259 Å	Rajbanshi, A.; Custelcean, R. *Supramol. Chem.* **2012**, *24*, 65. $[Cd(H_2O)_6]CrO_4{\cdot}2(C_{24}H_{30}N_{10}O_3)$
YOSYUB	2.259 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M.; Rodriguez-Dieguez, A. *Inorg. Chim. Acta* **2009**, *362*, 1553. $[Cd(H_2O)_6](C_5H_4N_5O_2)_2$
UWILAQ	2.260 Å	Fonari, M. S; Kravtsov, V. C.; Bold, V.; Lucenti, E.; Cariati, E.; Marinotto, D.; Forni, A. *Cryst. Growth Des.* **2021**, *21*, 4184. $[Cd(H_2O)_6][Cd(C_9H_6N_6)_6]_2(ClO_4)_6{\cdot}7H_2O$
XIBXAH	2.260 Å	Moers, O.; Blaschette, A.; Jones, P. G. *Z. Allg. Anorg. Chem.* **2001**, *627*, 1611. $[Cd(H_2O)_6](C_{14}H_{10}NO_8S_2)_2{\cdot}2H_2O$
KIPYOZ	2.261 Å	Galstyan, A.; Miguel, P. J. S.; Weise, K.; Lippert, B. *Dalton Trans.* **2013**, *42*, 16151. $[Cd(H_2O)_6][Cd_2Pt_3C_{30}H_{56}N_{18}O_7](SO_4)_6{\cdot}15H_2O$
WANLUU	2.261 Å	Rajbanshi, A.; Custelcean, R. *Supramol. Chem.* **2012**, *24*, 65. $[Cd(H_2O)_6]SeO_4{\cdot}2(C_{24}H_{30}N_{10}O_3)$
IROSEO	2.263 Å	Deka, H.; Sarma, R.; Kumari, S.; Khare, A.; Baruah, J. B. *J. Solid State Chem.* **2011**, *184*, 1726. $[Cd(H_2O)_6](C_{14}H_{10}O_6){\cdot}2H_2O$
FIKQIA	2.267 Å	Liu, Q.-Y.; Xu, L. *CrystEngComm* **2005**, *7*, 87. $[Cd(H_2O)_6][Cd_2C_{42}H_{46}N_2O_{20}S_2){\cdot}10H_2O$
RUNHIU	2.269 Å	Colaneri, M. J.; Teat, S. J.; Vitali, J. *J. Phys. Chem. A* 2020, *124*, 2242. $[Cd(H_2O)_6]_{0.96}[Cu(H_2O)_6]_{0.04}(C_4H_8N_3O)_2(SO_4)_2{\cdot}2H_2O$
HAJGIK	2.270 Å	Mei, C. Z.; Zhang, P.; Shan, W. W. *Z. Kristallogr. – New Cryst. Struct.* **2011**, *226*, 383. $[Cd(H_2O)_6](C_{16}H_9O_8)_2{\cdot}4H_2O$
IDUBOZ	2.270 Å	Liu, W.-L.; Zhang, Y.-Y.; Lu, Y.; Hu, X.-Y. *Acta Crystallogr., Sect. E* **2006**, *62*, m1582. $[Cd(H_2O)_6][CuC_{11}H_{12}N_2O_4]_2{\cdot}12H_2O$
LEZCAW	2.270 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M. *Dalton Trans.* **2012**, *41*, 10390. $[Cd(H_2O)_6](C_6H_6N_5O_2)_2{\cdot}C_{10}H_8N_2$

MAVHEX	2.270 Å	Zhao, B.-T.; Hu, P.-Z.; Wang, J.-G.; Ma, L- F.; Wang, L.-Y.; Ng, S. W. *Acta Crystallogr., Sect. E* **2005**, *61*, m1957. $[Cd(H_2O)_6]_2(C_{24}H_{12}O_{16}S_8)\cdot H_2O$
VOHVUK	2.270 Å	Lian-Cai Du, L.-C. *Acta Crystallogr., Sect. E* **2008**, *64*, m1625. $[Cd(H_2O)_6](C_{14}H_{10}N_2O_6S_2)\cdot 2H_2O$
BISCOX	2.272 Å	Li, Z.-J.; Yao, J.; Tao, Q.; Jiang, L.; Lu, T.-B. *Inorg. Chem.* **2013**, *52*, 11694. $[Cd(H_2O)_6](C_{10}H_{14}O_4S)_2$
HIPZAI	2.274 Å	Zhang, S.-G.; Feng, Y.-L.; Su, H. *Acta Crystallogr., Sect. E* **2008**, *64*, m1625. $[Cd(H_2O)_6](C_9H_7N_4O_3S)_2$
CIVBOA	2.275 Å	Shi, J.; Wang, Y.-C.; Wang, Q.-Y.; Zhang, Z.-T. *Inorg. Chim. Acta* **2014**, *409*, 259. $[Cd(H_2O)_6](C_{17}H_{12}BrO_9S)_2\cdot 2H_2O$
NAYXUH	2.275 Å	Zhou, H.-B.; Li, M.-T.; Shi, S.-M. *Acta Crystallogr., Sect. E* **2005**, *61*, m2749. $[Cd(H_2O)_6][CdC_{12}H_{32}N_8O_4](C_{10}H_8NO_3S)_4\cdot 6H_2O$
432328	2.276 Å	Mazej, Z.; Goreshnik, E. *Z. Kristallogr. – Crystalline Mater.* **2017**, *232*, 339. $[Cd(H_2O)_6][SnF_3]_2$
VISKOZ	2.276 Å	Jlassi, R.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Zh. Strukt. Khim.* **2013**, *54*, 1092. $[Cd(H_2O)_6](C_5H_{14}N_2)(SO_4)_2$
62039	2.277 Å	Johansson, G.; Sandström, M. *Acta Chem. Scand., Ser. A* **1987**, *41*, 113. $[Cd(H_2O)_6](ClO_4)_2$
14379	2.277 Å	Montgomery, H.; Lingafelter, E. C. *Acta Crystallogr.* **1966**, *20*, 728. $(NH_4)_2[Cd(H_2O)_6](SO_4)_2$
CAWCIO	2.277 Å	Kennedy, A. R.; Stewart, H.; Eremin, K.; Stenger, J. *Chem. Eur. J.* **2012**, *18*, 3064. $[Cd(H_2O)_6](C_{20}H_{13}N_2O_4S)_2\cdot 4H_2O$
PUWCEP	2.277 Å	Kim, J.; Chen, B.; Reineke, T. M.; Li, H.; Eddaoudi, M.; Moler, D. B.; O'Keefee, M.; Yaghi, O. M. *J. Am. Chem. Soc.* **2001**, *123*, 8239. $[Cd(H_2O)_6][CdC_{14}H_{12}O_8]\cdot 5H_2O$
415119	2.278 Å	Tiritiris, I.; Schleid, T. *Z. Anorg. Allg. Chem.* **2005**, *631*, 1593. $[Cd(H_2O)_6]B_{12}H_{12}$
YOSZAI	2.278 Å	Maldonado, C. R.; Quiros, M.; Salas, J. M.; Rodriguez-Dieguez, A. *Inorg. Chim. Acta* **2009**, *362*, 1553. $[Cd(H_2O)_6](C_6H_6N_5O_2)_2$
QEUHAH	2.279 Å	Song, J.; Hu, R.; Kang, B.; Lei, Y.; Li, F.; Yu, K. *J. Thermal Anal.* **1999**, ***55***, 797. $[Cd(H_2O)_6][Cd(C_2HN_4O_3)_4]\cdot 4H_2O$
14379	2.279 Å	Montgomery, H.; Lingafelter, E. C. *Acta Crystallogr.* **1966**, *20*, 728.
PAYKUX01	2.279 Å	Rekik, W.; Naili, H.; Bataille, T. *J. Coord. Chem.* **2015**, *68*, 142. $[Cd(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$
WIZQIG	2.279 Å	Tai, X.-S.; Xu, J.; Feng, Y.-M.; Liang, Z.-P. *Acta Crystallogr., Sect. E* **2008**, *64*, m694. $[Cd(H_2O)_6](C_{13}H_{10}NO_4S)_2\cdot 2H_2O$
166590	2.280 Å	Kokunov, Y. V.; Gorbunova, Y. E.; Petrov, V. N.; Gustyakova, M. P.; Buslaev, Y. A. *Dokl. Akad. Nauk SSSR* **1989**, *307*, 1126. $[Cd(H_2O)_6][SnF_3]_2$
GIMPID	2.281 Å	Kovalchukova, O. V.; Stash, A. I.; Nguen, D. D.; Strashnova, S. B.; Belsky, V. K. *Koord. Khim.* **2013**, *39*, 136. $[Cd(H_2O)_6](C_5HN_2O_6)_2\cdot 2H_2O$
PAYKUX	2.282 Å	Wang, B.-Q.; Yan, H.-B.; Fang, C.-J.; Zhang, Z. *Acta Crystallogr., Sect. E* **2012**, *68*, m759. $[Cd(H_2O)_6](C_6H_{14}N_2)(SO_4)_2$

SEDSOM	2.282 Å	Tahli, A.; Koc, U.; Elshaarawy, R. F. M.; Kautz, A. C.; Janiak, C. *Crystals* **2016**, *6*, 23. $[Cd(H_2O)_6][CdC_{11}H_{11}N_4O_8]_2{\cdot}2H_2O$
22686	2.284 Å	Feng, L.-N.; Tian, Y.-C.; Li, J.-Y.; Yang, J.-H.; Liu, B. *Dalton Trans.* **2020**, *49*, 17152. $Cs_3[Cd(H_2O)_6[(Cd(H_2O)_3)_2Ru_2(CO_3)_4)_3]{\cdot}10H_2O$
WEHGIC	2.284 Å	Rekik, W.; Naili, H.; Bataille, T. *J. Coord. Chem.* **2015**, *68*, 142. $[Cd(H_2O)_6](C_4H_{12}N_2)(SO_4)_2$
RISLIP	2.286 Å	Zhang, G.; Ye, L.; Zhang, Y.; Liu, W. *Acta Crystallogr., Sect. E* **2008**, *64*, m94. $[Cd(H_2O)_6][CuC_{15}H_{17}N_2O_4]_2{\cdot}2H_2O$
XISCIO	2.286 Å	Cariati, E.; Forni, A.; Lucenti, E.; Marinotto, D.; Previtali, A.; Righetto, S.; Botta, C.; Bold, V.; Kravtsov, V.; Fonari, M. S. *Chem. Asian J.* **2019**, *14*, 853. $[Cd(H_2O)_6](BF_4)_2{\cdot}2C_9H_6N_6$
XISCEK	2.287 Å	Cariati, E.; Forni, A.; Lucenti, E.; Marinotto, D.; Previtali, A.; Righetto, S.; Botta, C.; Bold, V.; Kravtsov, V.; Fonari, M. S. *Chem. Asian J.* **2019**, *14*, 853. $[Cd(H_2O)_6](ClO_4)_2{\cdot}2C_9H_6N_6$
SELBAP	2.288 Å	Wu, Q.; Wang, H.-Y.; Dong, Y.-L.; Hu, J.-S.; Liu, D.-J.; Wu, C.; Xu, Y.; Ying, A.; Fang, M.; Liu, H.-K. *Chin. J. Struct. Chem.* **2017**, *33*, 1889. $[Cd(H_2O)_6][Cd_3C_{36}H_{50}N_{18}O_{10}S_4]_2{\cdot}2CH_3OH$
AGOPIV	2.309 Å	Fan, J.; Sui, B. ; Okamura, T. ; Sun, W.-X. ; Tang, W.-Y. ; Ueyama, N. *J. Chem. Soc., Dalton Trans.* **2002**, 3868. $[Cd(H_2O)_6][Cd_3C_{46}H_{64}N_{12}O_{20}S_4]_2{\cdot}2H_2O$
GAVTON	2.312 Å	Fu, A.-Y.; Wang, D.-Q.; Sun, Y.-L. *Acta Crystallogr., Sect. E* **2005**, *61*, m2353. $[Cd(H_2O)_6](C_{15}H_{15}O_2$
Mean	**2.266 Å/57 structures**	

Dimeric hydrate complex

Six-coordination, octahedral configuration

ICSD/CSD code	d(Cd-O)$_b$ + d(Cd-O)$_t$	Reference, compound formula
UYUKEF	2.384 + 2.219 Å	Pandey, R.; Yadav, M.; Kumar, P.; Li, P.-Z.; Singh, S. K.; Xu, Q.; Pandey, D. S. *Inorg. Chim. Acta*
	3.650 Å	**2011**, *376*, 195. $[Cd_2(H_2O)_{10}][CdC_{18}H_{12}Cl_2N_2O_8]$
Mean	**2.274 Å/ 1 structure**	

Table S1bc. Summary of solid state structures containing hydrated mercury(I) and mercury(II) ions. The ICSD/CDS code refers to the code in the Inorganic Crystal Structure Database (ICSD, number) and Cambridge Structure Database (CSD, letters), respectively, and the mean Hg-O bond distance, *d*(Hg-O); *d*(Hg-Hg) denotes the Hg-Hg bond distancein the dimeric mercury(I) ion. Data in purple text are not included in the mean distance as they are uncertain or differ significantly from the mean value.

Mercury(I)

Two-coordination, linear configuration

ICSD/CSD code	*d*(Hg-O) + *d*(Hg-Hg)	Reference, compound formula
412799	2.109 + 2.504 Å	Weil, M. *Z. Anorg. Allg. Chem.* **2004**, *630*, 1048. $[Hg_2(OH_2)_2](H_4TeO_6)(H_6TeO_6)$
1958	2.127 + 2.510 Å	Grdenic, D.; Sikirica, M.; Vickovic, I. *Acta Crystallogr., Sect. B* **1975**, *31*, 2174. $[Hg_2(OH_2)_2](NO_3)_2$
27442	2.140 + 2.500 Å	Johansson, G. *Acta Chem. Scand.* **1966**, *20*, 553. $[Hg_2(OH_2)_2](ClO_4)_2 \cdot 4H_2O$
26668	2.141 + (2.549) Å	Grdenic, D. *J. Chem. Soc.* **1956**, 1312. $[Hg_2(OH_2)_2](NO_3)_2$
32505	2.144 + 2.500 Å	Fourquet, J. L.; Plet, F.; de Pape, R. *Acta Crystallogr., Sect. B* **1981**, *37*, 2136. $[Hg_2(OH_2)_2](AlF_5)_2$
412433	2.148 + 2.492 Å	Berkei, M.; Schuermann, M.; Bernhardt, E.; Willner, H. *Z. Naturforsch., Teil B* **2002**, *57*, 615. $[Hg_2(OH_2)_2](SbF_6)_2 \cdot 4HF$
23125	2.198 + 2.496 Å	Dorm, E. *Acta Chem. Scand.* **1971**, *25*, 1655. $[Hg_2(OH_2)_2](SiF_6)_2$
Mean	**2.135 + 2.501 Å/6 structures**	

Mercury(II)

Six-coordination, octahedral configuration

ICSD/CSD code	*d*(Hg-O)	Reference, compound formula
1640	2.342 Å	Johansson, G.; Sandström, M. *Acta Chem Scand., Ser. A* **1978**, *32*, 109. $[Hg(H_2O)_6](ClO_4)_2$
Mean	**2.342 Å/1 structure**	

Table S2. Summary of reported crystal structures containing oxoanions ions not binding to a metal ion, except alkali metal ions. For the perchlorate ion, a limited selection has been made due to the large number of reported structures. References in purple denote structures with M–O bond distances outside 2% of the mean value, and they are not included in the calculated mean values. The data have been collected from the Inorganic Crystal Structure Database (ICSD) and the Cambridge Structure Database (CSD).

Chlorite ion, ClO_2^-

ICSD/CSD code	*d(Cl-O)*	*Reference*
1954	1.561 Å	Tarimci, C.; Schempp, E. *Acta Crystallogr., Sect. B* **1975**, *31*, 2146-2149. $NaClO_2 \cdot 3H_2O$
26511	1.562 Å	Gillespie, R. B.; Sparks, R. A.; Trueblood, K. N. *Acta Crystallogr.* **1959**, *12*, 867-872. NH_4ClO_2
22	1.564 Å	Tarimci, C.; Rosenstein, R. D.; Schempp, E. *Acta Crystallogr., Sect. B* **1976**, *32*, 610-612. $NaClO_2$
59935	1.565 Å	Smolentsev, A. I.; Naumov, D. Y. *Acta Crystallogr., Sect. E* **2005**, *61*, i17-i19. $KClO_2$
1858	1.566 Å	Tazzoli, V.; Riganti, V.; Giuseppetti, G.; Coda, A. *Acta Crystallogr., Sect. B* **1975**, *31*, 1032-1037. $NaClO_2 \cdot 3H_2O$
171021	1.570 Å	Smolentsev, A. I.; Naumov, D. Y. *Acta Crystallogr., Sect. E* **2005**, *61*, i249-i250. $Sr(ClO_2)$
170034	1.575 Å	Smolentsev, A. I.; Naumov, D. Y. *Acta Crystallogr., Sect. E* **2005**, *61*, i49-i50. $Ba(ClO_2) \cdot 3.5H_2O$
59921	1.576 Å	Smolentsev, A. I.; Naumov, D. Y. *Acta Crystallogr., Sect. E* **2005**, *61*, i38-i40. NH_4ClO_2
59936	1.578 Å	Smolentsev, A. I.; Naumov, D. Y. *Acta Crystallogr., Sect. E* **2005**, *61*, i17-i19. $LiClO_2$
162802	1.578 Å	Smolentsev, A. I.; Naumov, D.Y. *Zh. Strukt. Khim.* (Issue-No. from 1981) **2008**, *49*, 725-728. $RbClO_2$
69587	1.580 Å	Marsh, R. E. *Acta Crystallogr., Sect. C* **1991**, *47*, 1775-1775. $[Mg(H_2O)_6](ClO_2)_2$
68485	1.582 Å	Okuda, M.; Ishihara, M.; Yamanaka, M.; Ohba, S.; Saito, Y. *Acta Crystallogr., Sect. C* **1990**, *46*, 1755-1759. $[Mg(H_2O)_6](ClO_2)_2$
162803	1.582 Å	Smolentsev, A. I.; Naumov, D.Y. *Zh. Strukt. Khim.* (Issue-No. from 1981) **2008**, *49*, 725-728. $CsClO_2$
171020	1.585 Å	Smolentsev, A. I.; Naumov, D. Y. *Acta Crystallogr., Sect. E* **2005**, *61*, i246-i248. $Ca(ClO_2)$
Mean	**1.573 Å/14 structures**	

Chlorate ion, ClO_3^-

ICSD/CSD	*d(Cl-O)*	*Reference*
XOJDOS	1.431 Å	Wurzenberger, M. H. H.; Gruhne, M. S.; Lommel, M.; Szimhardt, N.; Klapotke, T. M.; Stierstorfer, J. *Chem. – Asian J.* **2019**, *14*, 2018. $[Cu(NC_3H_6N_3)_6](ClO_3)_2$
76434	1.433 Å	Smith, P.; Martinez-Carrera, S. *Anal. Real Sociedad Esp. Fis.Quim., Serie A* **1951**, *47*, 89. $TlBrO_3$
CAYSAX	1.437 Å	Xu-Dong Chen, X.-D.; Mak, T. C. W. *Chem. Commun.* **2005**, 3529. $[Ag_2C_{22}H_{16}N_4O_2](ClO_3)_2$
36260	1.439 Å	Gomis, V.; Garcia Blanco, S. Anal. Real Sociedad Espanola Fis. Quim., Ser. A: **1951**, *47*, 95. $RbClO_3$
LANFEP	1.441 Å	Freund, R.; Kraft, M.; Volkmer, D. *Eur. J. Inorg. Chem.* **2022**, 202100853. M.H.H.Wurzenberger, M.S.Gruhne, M.Lommel, N.Szimhardt, T.M.Klapotke, J.Stierstorfer
MIZCIL	1.443 Å	Jiang, W.; Huang, W.; Xu,M.; Leng, X.; Lu, L.; Shen, Q. *Chem. - Eur. J.* **2023**, *29*, e202300991. $(C_{48}H_{48}N_6)(ClO_3)_2$
THURTL	1.451 Å	Mitchell, J..; Boeyens, J. C. A. *Acta Crystallogr., Sect. C* **1998**, *54*, 927. $[TlC_4H_{16}N_8S_4]_n(ClO_3)_n$
AYUXOH	1.455 Å	Chun-Xia Ren; Bao-Hui Ye; Feng He; Lin Cheng; Xiao-Ming Chen *CrystEngComm* **2000**, *6*, 200. $[Ag(C_{12}H_{14}N_4)_2](ClO_3)_2$
LOWLAM	1.455 Å	Sinnwell, M. A.; Baltrusaitis, J.; MacGillivray, L. R. *Cryst. Growth Des.* **2015**, *15*, 538. $[(Ag(NC_5H_4CHCHC_5F_5)_2)_2](ClO_3)_2$
EJOJEV	1.456 Å	Hull, K. L.; Schipper, D. E.; Oliver, A. G. *RSC Adv.* **2020**, *10*, 44973. $N(n\text{-}C_4H_9)_4ClO_3$
MAPARC	1.456 Å	Hlavata, D. *Acta Crystallogr., Sect. B* **1971**, *27*, 1483. $(C_{16}H_{21}N_3)ClO_3$
HUJVOX	1.457 Å	Gentile, P. S.; Ocampo, A. P. *Inorg. Chim. Acta* **1978**, *29*, 83. $Ca_2(C_4H_7NO_2)_4(ClO_3)_2{\cdot}H_2O$
EJOJOF	1.458 Å	Hull, K. L.; Schipper, D. E.; Oliver, A. G. *RSC Adv.* **2020**, *10*, 44973. $((C_6H_5)_3PNP(C_6H_5)_3)N(n\text{-}C_4H_9)_4ClO_3$
FOZGEI	1.461 Å	Ilovic, I.; Uzarevic, K. *CrystEngComm* **2015**, *17*, 3153. $(C_{20}H_{26}N_3O_6)ClO_3{\cdot}1.5CH_3OH$
QUPJIV	1.461 Å	Georgiev, I. G.; Bucar, D.-K.; MacGillivray, L. R. *Chem. Commun.* **2010**, *46*, 4956. $[Ag(NC_5H_4CHCH_2)_2]ClO_3$
IJETAV	1.462 Å	Reichel, M.; .Wurzenberger, M. H. H.; Lommel, M.; Kofen, M.; Krumm, B.; Stierstorfer, J.; Karaghiosoff, K. *Z. Anorg. Allg. Chem.* **2020**, *647*, 341. $[Cu(NC_2H_3FN_3)_6](ClO_3)_2$
WONGUB	1.463 Å	Xiaopeng Hu; Jiwen Cai; Xiaoleng Feng; Liangnian Ji *J. Chem. Cryst.* **2000**, *30*, 27. $[Co(H_2N(C_2H_4N)_3H_2)(NO_2)_2]ClO_3$
DIPHER	1.464 Å	Yoshida, M.; Shimada, T.; Ishida, T.; Kogane, T. *Polyhedron* **2013**, *66*, 75. $[CuC_{10}H_{10}N_6O_2]_n(ClO_3)_{2n}$
NUMYID	1.467 Å	Todorov, T.; Petrova, R.; Kossev, K.; Macicek, J.; Angelova, O. *Acta Crystallogr., Sect. B* **1970**, *26*, 1121. $[Mg(OC(NH_2)_2)_6](ClO_3)_2$

59383	1.467 Å	Todorov, T.; Petrova, R.; Kossev, K.; Macicek, J.; Angelova, O. *Acta Crystallogr., Sect. C* **1998**, *54*, 927-929. $[Mg(OC(NH_2)_2)_6](ClO_3)_2$
NEWRAJ	1.468 Å	Sharma, R..: Sharma, R. P.; Balaa, R.; Kariuki, B. M. *J. Mol. Struct.* **2007**, *826*, 177. $[Co(H_2NC_2H_4NH_2)(NO_2)_2]ClO_3$
KIBYIH	1.468 Å	Rosch, M.; Gruhne, M. S.; Lommel, M.; Endra, S. M. J.; Stierstorfer, J. *Inorg. Chem.* **2023**, *62*, 1488. $[Cu(NC_4H_6N_3)_6](ClO_3)_2$
SIBFUH	1.469 Å	Wurzenberger, M. H. H.; Szimhardt, N.; Stierstorfer, J. *J. Am. Chem. Soc.* **2018**, *140*, 3206. $[CuC_{15}H_{24}N_{24}](ClO_3)_2$
SODCUM	1.469 Å	Song, F.; Al-Ameed, K.; Schilling, M.; Fox, T.; Luber, S.; Patzke, G. R. *J. Am. Chem. Soc.* **2019**, *141*, 8846. $[Co_4C_{50}H_{45}N_8O_{14}]ClO_3 \cdot 11H_2O$
KIGSIG	1.470 Å	Jelen, J.; Tavčar, G. *Org. Lett.* **2023**, *25*, 3649. $(C_{27}H_{36}ClN_2)ClO_3$
ZAWKIT	1.470 Å	Koskinen, L.; Jaaskelainen, S.; Oresmaa, L.; Haukka, M. *CrystEngComm* **2012**, *14*, 3509. $[Ag_2C_{24}H_{32}N_{12}](ClO_3)_2 \cdot CH_3OH$
414606	1.472 Å	Sharma, R. P.; Bala, R.; Sharma, R.; Ferretti, V. *Inorg. Chim. Acta* **2005**, *358*, 3457-3464 $[Co(NH_3)_6]Br_2(ClO_3)$
VEQZEX	1.473 Å	Sharma, R. P.; Sharma, R.; Bala, R.; Venugopalan, P. *J. Mol. Struct.* **2006**, *789*, 133. $[Co(H_2NC_2H_4NH_2)Cl_2]ClO_3$
KOLMEG	1.473 Å	Song, F.; Al-Ameed, K.; Schilling, M.; Fox, T.; Luber, S.; Patzke, G. R. *J. Am. Chem. Soc.* **2019**, *141*, 8846. $[Ni_4C_{50}H_{45}N_8O_{14}]ClO_3 \cdot 11H_2O$
JAXGAR	1.474 Å	Petrosyan, A. M.; Karapetyan, H. A.; Sukiasyan, R. P.; Aghajanyan, A. E.; Morgunov, V. G.; Kravchenko, E. A.; Bush, A. A. *J. Mol. Struct.* **2005**, *752*, 144. $(C_6H_{15}N_4O_2)ClO_3$
1724	1.476 Å	Bats, J. W. *Acta Crystallogr., Sect. B* **1978**, *34*, 1679-1681. $KClO_3$
414607	1.476 Å	Sharma, R. P.; Bala, R.; Sharma, R.; Ferretti, V. *Inorg. Chim. Acta* **2005**, *358*, 3457-3464 $[Co(NH_3)_6]Cl_2(ClO_3)$
16714	1.477 Å	Ramachandran, G. N.; Chandrasekaran, K. S. *Acta Crystallogr.* **1957**, *10*, 671-675. $NaClO_3$
26684	1.477 Å	Zachariasen, W. H. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1929**, *71*, 517-529. $NaClO_3$
40285	1.477 Å	Lutz, H. D.; Buchmeier, W.; Jung, M.; Kellersohn, T. *Z. Kristallogr.* **1989**, *189*, 131-139. $Ba(ClO_3)_2$
HIQTIN	1.477 Å	Salmasi, R.; Salimi, A.; Gholizadeh, M.; Rahmani, M.; Garrison, J. C. *J. Mol. Struct.* **2019**, *1179*, 549. $((C_6H_5)_3P(CH_2)_2P(C_6H_5)_3)(ClO_3)_2$
10283	1.478 Å	Brunton, G. *Mater. Res. Bull.* **1973**, *8*, 791-794. $RbClO_3$
26409	1.478 Å	Danielsen, J.; Hazell, A.; Larsen, F. K. *Acta Crystallogr., Sect. B* **1981**, *37*, 913-915. $KClO_3$
61157	1.478 Å	Lutz, H. D.; Buchmeier, W.; Alici, E.; Eckers, W. *Z. Anorg. Allg. Chem.* **1985**, *529*, 46-56. $Sr(ClO_3)_2$

CUZKIT	1.478 Å	Ofori, A.; Suvanto, S.; Jaaskelainen, S.; Koskinen, L.; Koshevoy, I. O.; Hirva, P. *Cryst. Growth Des.* **2016**, *16*, 255. $[Ag(NC_5H_7N_2O)_2]ClO_3$
SIBFIV	1.479 Å	Wurzenberger, M. H. H.; Szimhardt, N.; Stierstorfer, J. *J. Am. Chem. Soc.* **2018**, *140*, 3206. $[Cu(H_2O)_2(C_5H_8N_8O)_2](ClO_3)_2$
SIDNEB	1.479 Å	Szimhardt, N.; Wurzenberger, M. H. H.; Zeisel, L.; Gruhne, M. S.; Lommel, M.; Stierstorfer, J. *J. Mater Chem. A* **2018**, *6*, 16257. $[Cu(NCH_3N_4)_6](ClO_3)_2$
80338	1.480 Å	Sowa, H. *J. Solid State Chem.* **1995**, *118*, 378-382. $NaClO_3$
80340	1.480 Å	Sowa, H. *J. Solid State Chem.* **1995**, *118*, 378-382. $NaClO_3$
IJESUO	1.480 Å	Reichel, M.; .Wurzenberger, M. H. H.; Lommel, M.; Kofen, M.; Krumm, B.; Stierstorfer, J.; Karaghiosoff, K. *Z. Anorg. Allg. Chem.* **2020**, *647*, 341. $[Cu(NC_2H_6FN_2)_3]ClO_3$
IVICIC	1.480 Å	Braun, V.; Wurzenberger, M. H. H.; Weippert, V.; Stierstorfer, J. *New. J. Chem.* **2021**, *45*, 11042. $[Cu(NC_4H_6N_3)_6](ClO_3)_2$
IVOMEM	1.480 Å	Sharma, R. P.; Singh, A.; Venugopalan, P.; Harrison, W. T. A. *J. Mol. Struct.* **2011**, *996*, 82. $[Co(N_2C_{12}H_8)_2CO_3]ClO_3$
KICMES	1.480 Å	Rosch, M.; Gruhne, M. S.; Lommel, M.; Endra, S. M. J.; Stierstorfer, J. *Inorg. Chem.* **2023**, *62*, 1488. $[Cu(NC_3H_4N_3)_6](ClO_3)_2$
EYEWOX	1.481 Å	Gruhne, M. S.; Lenz, T.; Rosch, M.; Lommel, M.; Wurzenberger, T.M. H. H.; Klapotke, T. M.; Stierstorfer, J. *Dalton Trans.* **2021**, *50*, 10811. $[Cu(NC_3H_5N_4O_3)_5](ClO_3)_2$
80339	1.482 Å	Sowa, H. *J. Solid State Chem.* **1995**, *118*, 378-382. $NaClO_3$
DIHVUP	1.482 Å	Kofen, M.; Lommel, M.; Wurzenberger, M. H. H.; Klapotke, T. M.; Stierstorfer, J. *Chem. – Eur. J.* **2022**, *28*, 202200492. $[Cu(NC_2H_3N_6)_6](ClO_3)_2$
QESXUL	1.482 Å	Kofen, M.; Braun, V.; Endra, S. M. J.; Klapotke, T. M.; Stierstorfer, J. *Inorg. Chem.* **2022**, *61*, 17212. $[Cu(NC_2H_3N_4O_3)_6](ClO_3)_2$
31120	1.483 Å	Aravindakshan, C. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1958**, *111*, 35-45. $KClO_3$
FEQBUC	1.484 Å	Kofen, M.; Klapotke, T. M.; Stierstorfer, J. *Chem. Eng. J.* **2023**, *452*, 139375. $[Cu(NC_2H_3N_4)_6](ClO_3)_2{\cdot}0.5H_2O$
1301	1.485 Å	Abrahams, S. C.; Bernstein, J. L. *Acta Crystallogr., Sect. B* **1977**, *33*, 3601-3604. $NaClO_3$
63712	1.485 Å	Blackburn, A. C.; Gallucci, J. C.; Gerkin, R. E. *Acta Crystallogr., Sect. B* **1991**, *47*, 474-479. $[Cu(H_2O)_4](ClO_3)_2$
80341	1.485 Å	Sowa, H. *J. Solid State Chem.* **1995**, *118*, 378-382. $NaClO_3$
30452	1.486 Å	Sikka, S. K.; Momin, S. N.; Rajagopal, H.; Chidambaram, R. *J. Chem. Phys.* **1968**, *48*, 1883-1890. $Ba(ClO_3)_2{\cdot}H_2O$
67106	1.487 Å	Gallucci, J. C.; Gerkin, R. E. *Acta Crystallogr., Sect. C* **1990**, *46*, 350-354. $[Ni(H_2O)_6](ClO_3)_2$

26408	1.488 Å	Danielsen, J.; Hazell, A.; Larsen, F. K. *Acta Crystallogr., Sect. B* **1981**, *37*, 913-915. $KClO_3$
CISMUQ	1.488 Å	Kohutekova, S.; Matulkova, I.; Zabransky, M.; Martin, J. L.; Cisarova, I.; Gyepes, R.; Nemec, P.; Gryl, M.; Seidler, T.; Nemec, I. *J. Solid State Chem.* **2023**, *327*, 124288. $(CH_8N_5)ClO_3$
1117	1.490 Å	Bruke-Laing, M. E.; Trueblood, K. N. *Acta Crystallogr., Sect. B* **1977**, *33*, 2698-2699. $NaClO_3$
23935	1.490 Å	Gillespie, R. B.; Gantzel, P. K.; Trueblood, K. N. *Acta Crystallogr.* **1962**, *15*, 1271-1272. NH_4ClO_3
63713	1.490 Å	Blackburn, A. C.; Gallucci, J. C.; Gerkin, R. E. *Acta Crystallogr., Sect. B* **1991**, *47*, 474-479. $[Cu(H_2O)_4](ClO_3)_2$
80337	1.490 Å	Sowa, H. *J. Solid State Chem.* **1995**, *118*, 378-382. $NaClO_3$
31121	1.491 Å	Aravindakshan, C. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1959**, *111*, 241-248. $NaClO_3$
139053	1.509 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev Mater.* **2021**, *5*, 105003. $CsClO_3$
Mean	**1.474 Å/62 structures**	

Perchlorate ion, ClO_4^-

ICSD/CSD code	*d(Cl-O)*	*Reference*
280494	1.423 Å	Figgis, B.; Sobolev, A.; Reynolds, P. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $[Cs[Ru(NH_3)_6]Cl_2(ClO_4)_2$
9894	1.424 Å	Conant, J. W.; Roof Jr., R. B. *Acta Crystallogr., Sect. B* **1970**, *26*, 1928. $N_2H_5ClO_4$
173	1.425 Å	Berglund, B.; Tellgren, R.; Thomas, J.O. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $NaClO_4 \cdot H_2O$
280487	1.428 Å	Figgis, B.; Sobolev, A.; Reynolds, P. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $[Cs[Co(NH_3)_6]Cl_2(ClO_4)_2$
23931	1.429 Å	Smith, H. G.; Levy, H. A. *Acta Crystallogr.* **1962**, *15*, 1201. NH_4ClO_4
425697	1.429 Å	Hennings, E.; Heinz, J.; Schmidt, H.; Voigt, W. *Z. Anorg. Allg. Chem.* **2013**, *639*, 922. $NaClO_4 \cdot 2H_2O$
63363	1.430 Å	Granzin, J. *Z. Kristallogr.* **1988**, *184*, 157. $RbClO_4$
24329	1.431 Å	Liminga, R. *Acta Chem. Scand.* **1967**, *21*, 1217. NH_4ClO_4
63364	1.433 Å	Granzin, J. *Z. Kristallogr.* **1988**, *184*, 157. $CsClO_4$
172567	1.433 Å	Zhang, G.-L.; Li, Y.-T.; Wu, Z. Y.; Song, Y.-L. *Acta Crystallogr., Sect. E* **2006**, *62*, i150. NH_4ClO_4
280496	1.433 Å	Figgis, B.; Sobolev, A.; Reynolds, P. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $Cs[Cr(NH_3)_6]Cl_2(ClO_4)_2$
280492	1.433 Å	Figgis, B.; Sobolev, A.; Reynolds, P. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $[Cs[Co(NH_3)_6]Cl_2(ClO_4)_2$
30564	1.434 Å	Lundgren, J. O. *Acta Crystallogr., Sect. B* **1979**, *35*, 1027. NH_4ClO_4
97716	1.434 Å	Zhang J.; Zhang Ti; Yang L. *Huozhayao Xuebao* **2002**, *25*, 33. NH_4ClO_4
425696	1.434 Å	Hennings, E.; Heinz, J.; Schmidt, H.; Voigt, W. *Z. Anorg. Allg. Chem.* **2013**, *639*, 922. $NaClO_4 \cdot 2H_2O$
633	1.435 Å	Choi, C. S.; Prask, H. J. *Acta Crystallogr., Sect. B* **1976**, *32*, 2919. NH_4ClO_4
200405	1.435 Å	Wartchow, R.; Berthold, H. J. *Z. Kristallogr.* 1**980**, *147*, 307. $NaClO_4$
280489	1.435 Å	Figgis, B.; Sobolev, A.; Reynolds, P. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $K[Ru(NH_3)_6]Cl_2(ClO_4)_2$
280491	1.435 Å	Figgis, B.; Sobolev, A.; Reynolds, P. *Acta Crystallogr., Sect. B* **1998**, *54*, 613. $Cs[Ru(NH_3)_6]Cl_2(ClO_4)_2$
2080	1.435 Å	Prince, E.; Dickens, B.; Rush, J. J. *Acta Crystallogr., Sect. B* **1974**, *30*, 1167. NH_3OHClO_4
1137	1.436 Å	Johansson, G. B.; Lindqvist, O. *Acta Crystallogr., Sect. B* **1977**, *33*, 2918. $KClO_4$
22504	1.439 Å	Pugachev, V. M.; Erenburg, B. G.; Khisamov, A. A. *Zh. Strukt. Khim.* **1985,** *26*, 162. $KCs(ClO_4)_2$
13311	1.439 Å	Lundgren, J. O. *Acta Crystallogr., Sect. B* **1980**, *36*, 1774. $KClO_4$
87617	1.440 Å	Reynolds, P. A.; Figgis, B. N.; Sobolev, A. N. *Aust. J. Chem.* **1999**, *52*, 219. $K[Ru(NH_3)_6]Cl_2(ClO_4)_2$
1946	1.442 Å	Peyronel, G.; Pignedoli, A. *Acta Crystallogr., Sect. B* **1975**, *31*, 2052. NH_4ClO_4
8042	1.445 Å	Lundgren, J. O.; Liminga, R. *Acta Crystallogr., Sect. B* **1979**, *35*, 1023. NH_4ClO_4
749	1.443 Å	Fugel, M.; Malaspina, L. A.; Pal, R.; T., Sajesh P.; Shi, M. W.; Spackman, M. A.; Sugimoto, K. Grabowsky, S. *Chem. Eur. J.* **2019**, *25*, 6523. $KClO_4$
35111	1.443 Å	Bats, J. W.; Fuess, H. *Acta Crystallogr., Sect. B* **1982**, *38*, 2116. $KClO_4$
87617	1.444 Å	Reynolds, P. A.; Figgis, B. N.; Sobolev, A. N. *Aust. J. Chem.* **1999**, *52*, 219. $K[Cr(NH_3)_6]Cl_2(ClO_4)_2$

170089	1.446 Å	Marabello, D.; Bianchi, R.; Gervasio, G.; Cargnoni, F. *Acta Crystallogr., Sect. A* **2004**, *60*, 494. $KClO_4$
Mean	**1.435 Å/30 structures**	
AXUFAA	1.414 Å	Harrowfield, J. M.; Ogden, M. I.; Skelton, B. W.; White, A. H. *Inorg. Chim. Acta* **2004**, *357*, 2404. $[Th(OS(CH_3)_2)_9](ClO_4)_4$
BIPMIW	1.426 Å	Persson, I. *Acta Chem. Scand., Ser. A* **1982**, *36*, 7. $[Zn(OS(CH_3)_2)_6](ClO_4)_2$
BIPMIW	1.391 Å	Chan, E. J.; Cox, B. G.; Harrowfield, J. M.; Ogden, M. I.; Skelton, B. W.; White, A. H. *Inorg. Chim. Acta* **2004**, *357*, 2365. $[Zn(OS(CH_3)_2)_6](ClO_4)_2$
CDDMSO	1.372 Å	Sandström, M. *Acta Chem. Scand., Ser. A* **1978**, *32*, 519. $[Cd(OS(CH_3)_2)_6](ClO_4)_2$
CDDMSO02	1.377 Å	Lyubeznova, T. Y.; Ponomarev, V. I. *Kristallografiya* **1989**, *34*, 862. $[Cd(OS(CH_3)_2)_6](ClO_4)_2$
EROQAD	1.428 Å	Harrowfield, J. M.; Richmond, W. R.; Skelton, B. W.; White, A. H. *Eur. J. Inorg. Chem.* **2004**, 227. $[Mg(OS(CH_3)_2)_6](ClO_4)_2$
EROQAD01	1.368 Å	Ullström, A.-S.; Warminska, D.; Persson, I. *J. Coord. Chem.* **2005**, 611. $[Mg(OS(CH_3)_2)_6](ClO_4)_2$
EROQEH	1.437 Å	Harrowfield, J. M.; Richmond, W. R.; Skelton, B. W.; White, A. H. *Eur. J. Inorg. Chem.* **2004**, 227. $[Ba(OS(CH_3)_2)_{10}(ClO_4)_2](ClO_4)_2$
EROQIL	1.402 Å	Harrowfield, J. M.; Richmond, W. R.; Skelton, B. W.; White, A. H. *Eur. J. Inorg. Chem.* **2004**, 227. $[Sr_2(OS(CH_3)_2)_{11}][Sr_2(OS(CH_3)_2)_{12}][Sr(OS(CH_3)_2)_6](ClO_4)_{14}$
FALVEU		

Bromate ion, BrO_3^-

ICSD/CSD code	*d(Br-O)*	*Reference*
AYUXIB	1.629 Å	Chun-Xia Ren, Bao-Hui Ye, Feng He, Lin Cheng, Xiao-Ming Chen *CrystEngComm* **2004**, *6*, 200. $[Ag_2C_{24}H_{28}N_8]BrO_3)_2$
EJOJIZ	1.630 Å	Hull, K. L.; Schipper, D. E.; Oliver, A. G. *RSC Adv.* **2020**, *10*, 44973. $(N(C_6H_5)_2)BrO_3$
LEKDAJ	1.631 Å	Cui, Y.; Zhang, X.; Dong, Y.; Li, W. *Z. Kristallogr. – New Cryst. Struct.* **2017**, *232*, 599. $[Ag_2C_{12}H_{16}N_{12}](BrO_3)_2{\cdot}2H_2O$
BASLEM	1.634 Å	Paduan-Filho, A.; Sinn, E.; Chirico, R. D.; Carlin, R. L. *Inorg. Chem.* **1981**, *20*, 2688. $[Ni(ONC_5H_5)_6](BrO_3)_2$
DEYYAK	1.641 Å	Wurzenberger, M. H. H.; Szimhardt, N.; Stierstorfer, J. *Inorg. Chem.* **2018**, *57*, 7940. $[Cu_2C_{12}H_{24}N_{24}]_n(BrO_3)_4{\cdot}H_2O$
JAXFOE	1.641 Å	Petrosyan, A. M; Karapetyan, H. A.; Sukiasyan, R. P.; Aghajanyan, A. E.; Morgunov, V. G.; Kravchenko, E. A.; Bush, A. A. *J. Mol. Struct.* **2005**, *752*, 144. $(C_6H_{15}N_4O_2)BrO_3$
UKEHEX	1.641 Å	Cingolani, A.; Effendy; Hanna, J. V.; Pellei, M.; Pettinari, C.; Santini, C.; Skelton, B. W.; White, A. H. *Inorg. Chem.* **2003**, *42*, 4938. $[Ag(As(C_6H_5)_3)_4]BrO_3{\cdot}CH_3OH$
VEQSAT	1.641 Å	Sharma, R. P.; Sharma, R.; Bala, R.; Venugopalan, P. *J. Mol. Struct.* **2006**, *789*, 133. $[Co(H_2N(CH_2)_2NH_2)_2]Cl_2](BrO_3)_2$
DEYXUD	1.643 Å	Wurzenberger, M. H. H.; Szimhardt, N.; Stierstorfer, J. *Inorg. Chem.* **2018**, *57*, 7940. $[Cu_2C_{10}H_{20}N_{16}O_2]_n(BrO_3)_2$
EJOJAR	1.644 Å	Hull, K. L.; Schipper, D. E.; Oliver, A. G. *RSC Adv.* **2020**, *10*, 44973. $(n\text{-}C_4H_9)_4N)BrO_3{\cdot}H_2O$
VITFOX	1.646 Å	Calabrese, M.; Pizzi, A.; Beccaria, R.; Frontera, A.; Resnati, G. *ChemPhysChem* **2023**, 202300298. $(3\text{-}C_5H_5NO_2)BrO_3$
1302	1.648 Å	Abrahams, S. C.; Bernstein, J. L. *Acta Crystallogr., Sect. B* **1977**, *33*, 3601. $NaBrO_3$
47173	1.648 Å	Templeton, D. H.; Templeton, L. K. *Acta Crystallogr., Sect. A* **1985**, *41*, 133. $KBrO_3$
DEYYIS	1.649 Å	Wurzenberger, M. H. H.; Szimhardt, N.; Stierstorfer, J. *Inorg. Chem.* **2018**, *57*, 7940. $[Cu((NH_2)_2(CH_2)_2)_2(H_2O)_2](BrO_3)_2$
74767	1.651 Å	Szafranski, M.; Ståhl, K. *Z. Kristallogr.* **1994**, *209*, 491. $KBrO_3$
33760	1.652 Å	Kellersohn, T.; Lutz, H. D. *Z. Kristallogr.* **1990**, *193*, 71. $Sr(BrO_3)_2{\cdot}H_2O$
47174	1.653 Å	Templeton, D. H.; Templeton, L. K. *Acta Crystallogr., Sect. A* **1985**, *41*, 133. $NaBrO_3$
74768	1.653 Å	Szafranski, M.; Ståhl, K. *Z. Kristallogr.* **1994**, *209*, 491. $RbBrO_3$
113779	1.653 Å	Topić, F.; Marrett, J. M.; Borchers, T. H.; Titi, H. M.; Barrett, C. J.; Friščić, T. *Angew. Chem, Int. Ed.* **2021**, *60*, 24400. $Na_3Br(BrO_3)_2{\cdot}2H_2O$

74769	1.654 Å	Szafranski, M.; Ståhl, K. *Z. Kristallogr.* **1994**, *209*, 491. $CsBrO_3$
66035	1.655 Å	Lutz, H. D.; Alici, E.; Kellersohn, T.; Kuske, P. *Z. Naturforsch., Sect. B* **1990**, *45*, 587. $Ba(BrO_3)_2$
61158	1.655 Å	Lutz, H. D.; Buchmeier, W.; Alici, E.; Eckers, W. *Z. Anorg. Allg. Chem.* **1985**, *529*, 46. $Sr(BrO_3)_2$
60906	1.657 Å	Lutz, H. D.; Alici, E.; Buchmeier, W. *Z. Anorg. Allg. Chem.* **1986**, *535*, 31. $Ba(BrO_3)_2·H_2O$
59180	1.662 Å	Lutz, H. D.; Alici, E.; Buchmeier, W. *Z. Anorg. Allg. Chem.* **1986**, *535*, 31. $Sr(BrO_3)_2·H_2O$
76966	1.670 Å	Rivoir, L.; Abad, M. *Anal. Real Sociedad Esp. Fis.Quim., Serie A* **1948**, *44*, 5-15. $TlBrO_3$
33663	1.682 Å	Goldschmidt, V. M.; Barth, T.; Lunde, G. V. V. *Papers – Norweg. Acad. Sci. Lett., Sect 1* **1928**, 1-165. $KBrO_3$
UKEHAT	1.690 Å	Cingolani, A.; Effendy; Hanna, J. V.; Pellei, M.; Pettinari, C.; Santini, C.; Skelton, B. W.; White, A. H. *Inorg. Chem.* **2003**, *42*, 4938. $[Ag(As(C_6H_5)_3)_4]BrO_3·CH_3OH$
Mean	**1.650 Å/27 structures**	

Perbromate ion, BrO_4^-

ICSD code	*d(Br-O)*	*Reference*
DEBSUY	1.580 Å	Beno, M. A.; Blackman, G. S.; Leung, P. C. W.; Carlson, K. D.; Copps, P. T.; Williams, J. M. *Mol. Cryst. Liq. Cryst.* **1985**, *119*, 409. $(C_{10}H_8S_8)_2(C_{10}H_8S_8)(BrO_4)_2$
CIYFOF	1.581 Å	Williams, J. M.; Beno, B. A.; Wang, H.-H.; Reed, P. E.; Azevedo, L. J.; Schirber, J. E. *Inorg. Chem.* **1984**, *23*, 1790. $(C_{10}H_8S_8)(C_{10}H_8S_8)BrO_4$
BUYRAO10	1.611 Å	Beno, M. A.; Blackman, G. S.; Leung, P. C. W.; Carlson, K. D.; Copps, P. T.; Williams, J. M. *Mol. Cryst. Liq. Cryst.* **1985**, *119*, 409. $(C_{10}H_8S_8)(C_{10}H_8S_8)BrO_4·0.5C_2H_3Cl_3$
CIYFOF01	1.614 Å	Williams, J. M.; Beno, B. A.; Wang, H.-H.; Reed, P. E.; Azevedo, L. J.; Schirber, J. E. *Inorg. Chem.* **1984**, *23*, 1790. $(C_{10}H_8S_8)(C_{10}H_8S_8)BrO_4$
RIDLAV	1.637 Å	Schindler, K.; Horner, J.; Demirci, G.; Cortat, Y.; Crochet, A.; Steiner, O. M.; Zobi, F. *Inorganics* **2023**, *11*, 139. $[Re(N_2C_{10}H_8)_2(CO)_2]BrO_4$
Mean	**1.605 Å/5 structures**	

Iodate ion, IO_3^-

ICSD/CSD code	*d(I-O)*	*Reference*
IWECAR	1.768 Å	Casadevall, C.; Martin-Diaconescu, V.; Browne, W. R.; Fernandez, S.; Franco, F.; Cabello, N.; Benet-Buchholz, J.; Lassalle-Kaiser, B.; Lloret-Fillol, J. *Nature Chem.* **2021**, *13*, 800. $[Ru(O_2)C_{19}H_{27}N_5]_2(PF_6)_3IO_3$
LOFKOG	1.785 Å	Terzyan, S. S.; Petrosyan, A. M. *Kristallografiya* **1999**, *44*, 846. $N(CH_3)_4IO_4{\cdot}2H_2O$
20198	1.787 Å	Kalinin, V. P.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1978**, *239*, 590. KIO_3
97995	1.790 Å	Kasatani, H.; Aoyagi, S.; Kuroiwa, Y.; Yagi, K.; Katayama, R.; Terauchi, H. *Nucl. Instr. Methods Phys. Res. B* **2003**, *199*, 49. KIO_3
86285	1.792 Å	Chen, Y.; Zhang, P.-L.; Yan, Q.-W.; Cheng, Y.-F.; Cheng, Z.-X. *Wu Li Hsueh Pao* **1986**, *35*, 1102. $K_2(IO_3)Cl{\cdot}HIO_3$
201816	1.792 Å	Crettez, J. M.; Coquet, E.; Pannetier, J.; Bouillot, J.; Durand-Le Floch, M. *J. Solid State Chem.* **1985**, *56*, 133. $LiIO_3$
EVAMIY	1.793 Å	Gholizadeh, M.; Maleki, B.; Pourayoubi, M.; Kia, M.; Notash, B. *Acta Crystallogr., Sect. E* **2011**, *67*, o1614. $(C_5H_5N(CH_2)_2NC_5H_5)(IO_3)_2$
VITFAJ	1.793 Å	Calabrese, M.; Pizzi, A.; Beccaria, R.; Frontera, A.; Resnati, G. *ChemPhysChem* **2023**, 202300298. $(C_{12}H_{14}N_2)(IO_3)_2{\cdot}2H_2O$
XUYGEF	1.793 Å	da Cunha, T. T.; Oliveira, W. X. C.; Pinheiro, C. B.; Pedroso, E. F.; Nunes, W. C.; Pereira, C. L. M. *Cryst. Growth Des.* **2016**, *16*, 900. $C_{12}H_{16}N_4(IO_3)_2{\cdot}4H_2O$
2642	1.794 Å	Schulz, H. *Acta Crystallogr., Sect B* **1973**, *29*, 2285. $LiIO_3$
23772	1.794 Å	Chan, L. Y. Y.; Einstein, F. W. B. *Can. J. Chem.* **1971**, *49*, 468. $KIO_3{\cdot}HIO_3$
BAHKUT	1.794 Å	He, C.; Hooper, J. P.; Shreeve, J. M. *Inorg. Chem.* **2016**, *55*, 12844. $C_5H_7I_2N_2(IO_3)(HIO_3){\cdot}H_2O$
9508	1.796 Å	Emiraliev, A.; Kocharov, A. G.; Yamzin, I. I.; Lyubimtsev, V. A. *Kristallografiya* **1973**, *18*, 1177. $LiIO_3$
70861	1.798 Å	Li, Q.; Liu, H.; Yu, H.; Hu, Z.; Wang, J.; Wu, Y.; Wu, H. *Inorg. Chem.* **2023**, *62*, 3896. $KIO_3{\cdot}MoO_3$
DOBCUV	1.799 Å	Marshall, W. G.; Jones, R. H.; Knight, K. S.; Pulham, C. R.; Smith, R. I. *Acta Crystallogr., Sect. C* **2019**, *75*, 152. ND_4IO_3
VITFIR	1.799 Å	Calabrese, M.; Pizzi, A.; Beccaria, R.; Frontera, A.; Resnati, G. *ChemPhysChem* **2023**, 202300298. $(H_3N(CH_2)_6NH_3)(IO_3)_2{\cdot}2H_2O$
35474	1.800 Å	Coquet, E.; Crettez, J. M.; Pannetier, J.; Bouillot, J.; Damien, J. C. *Acta Crystallogr., Sect. B* **1983**, *39*, 408. $LiIO_3$
35646	1.801 Å	Averbuch-Pouchot, M. T. *J. Solid State Chem.* **1983**, *49*, 368. $NH_4IO_3{\cdot}Te(OH)_6{\cdot}H_2O$

156001	1.801 Å	Chen Xue An; Zhang Li; Chang Xi Nan; Xue Hai Ping; Zang Hegui; Xiao Wei Qiang; Song Xuemei; Yan Hui *J. Alloys Compd.* **2007**, *428*, 54. $KIO_3 \cdot MoO_3$
156006	1.801 Å	Chen, X.; Zhang L.; Chang X. N.; Xue H. P.; Zang H.; Xiao W. Q.; Song X.; Yan H. *J. Alloys Compd.* **2007**, *428*, 54. $LiIO_3 \cdot MoO_3$
200669	1.801 Å	Kalinin, V.R.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1978**, *241*, 583. $RbLi_2(IO_3)_3$
200793	1.801 Å	Soldatov, E. A.; Ilyukhin, V. V.; Kuz'min, E. A.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1980**, *252*, 108. $NH_4(IO_3) \cdot 2HIO_3$
BAHKON	1.801 Å	He, C.; Hooper, J. P.; Shreeve, J. M. *Inorg. Chem.* **2016**, *55*, 12844. $C_9H_{10}I_4N_4(IO_3)_2 \cdot 3H_2O$
VITFEN	1.801 Å	Calabrese, M.; Pizzi, A.; Beccaria, R.; Frontera, A.; Resnati, G. *ChemPhysChem* **2023**, 202300298. $(H_3N(CH_2)_4NH_3)(IO_3)_2 \cdot 2H_2O$
59317	1.802 Å	Peter, S.; Suchanek, E.; Roisnel, T.; Lutz, H.D. *Acta Crystallogr., Sect. C* **1998**, *54*, 1064. $Ca(IO_3)_2 \cdot H_{1.82}D_{0.18}O$
BAWBAF03	1.802 Å	Chen, S. CCDC deposit number 2117179, **2022**. $(H_3N(CH_2)_2NH_3)IO_3$
40361	1.803 Å	Svensson, C.; Albertsson, J.; Liminga, R.; Kvick, Å.; Abrahams, S. C. *J. Chem. Phys.* **1983**, *78*, 7343. $LiIO_3$
60907	1.803 Å	Lutz, H. D.; Alici, E.; Buchmeier, W. *Z. Anorg. Allgem. Chem.* **1986**, *535*, 31. $Ba(IO_3) \cdot H_2O$
20858	1.804 Å	Sorokina, N. I.; Murodyan, L. A.; Loshmanov, A. A.; Fykin, L. E.; Rider, E. E.; Dobrzhanskii, G. F.; Simonov, V. I. *Kristallografiya* **1984**, *29*, 220. $NH_4(IO_3) \cdot 2HIO_3$
23695	1.804 Å	Keve, E. T.; Abrahams, S. C.; Bernstein, J. L. *J. Chem. Phys.* **1971**, *54*, 2556. NH_4IO_3
BAWBAF	1.804 Å	Abdallah, M. A. B.; Kamoun, S.; Bacchi, A.; Stefano, C. CCDC deposit number 1554555, **2017**. $(H_3N(CH_2)_2NH_3)IO_3$
116865	1.805 Å	Huang, J.; Guo, F.; Guo, Z.; Chen, J.; Dai, B.; Yu, F. *Inorg. Chem.* **2022**, *61*, 11803. NH_4IO_3
200239	1.805 Å	Sorokina, N. I.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1977**, *236*, 1361. $(C(NH_2)_3)IO_3$
414608	1.805 Å	Sharma, R. P.; Bala, R.; Sharma, R.; Ferretti, V. *Inorg. Chim. Acta* **2005**, *358*, 3457. $[Co(NH_3)_6]Cl_2(IO_3) \cdot H_2O$
420353	1.805 Å	Gautier Luneau, I.; Suffren, Y.; Jamet, H.; Pilme, J. *Z. Anorg. Allgem. Chem.* **2010**, *636*, 1368. $Cs_2(IO_3) \cdot I_3O_8$
GUPIOD	1.805 Å	Sorokina, N. I.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1977**, *236*, 1361. $C(NH_2)_3IO_3$
DOBCUV01	1.805 Å	Huang, J.; Guo, F.; Guo, Z.; Chen, J.; Dai, B.; Yu., F *Inorg. Chem.* **2022**, *61*, 11803. ND_4IO_3
1391	1.806 Å	Ghose, S.; Wan, C. *Acta Crystallogr., Sect. B* **1978**, *34*, 84. $Ca(IO_3)_2$
35645	1.806 Å	Averbuch-Pouchot, M. T. *J. Solid State Chem.* **1983**, *49*, 368. $KIO_3 \cdot Te(OH)_6$
35647	1.806 Å	Averbuch-Pouchot, M. T. *J. Solid State Chem.* **1983**, *49*, 368. $(KIO_3)_2 \cdot Te(OH)_6$
36635	1.806 Å	Alici, E.; Schmidt, T.; Lutz, H. *Z. Anorg. Allgem. Chem.* **1992**, *608*, 135. $Ca(IO_3)_2 \cdot 2H_2O$

131739	1.806 Å	Shi, T.; Zhang, F.; Li, Y.; Gao, L.; Yang, Z.; Pan, S. *Inorg. Chem.* **2020**, *59*, 3034. $Na_3(IO_3)(MoO_4)$
13700	1.807 Å	Fan, H.; Peng, G.; Lin, C.; Chen, K.; Yang, S.; Ye, N. *Inorg. Chem.* **2020**, *59*, 7376. $Ba(IO_3)F$
14045	1.807 Å	Kalinin, V. P.; Karataeva, I. M.; Vinogradov, E. E.; Vavilin, V. I.; Plyukhin, V. V.; Pakhomov, V. I. *Koord. Khim.* **1978**, *4*, 444. $RbLi_2(IO_3)_3$
61176	1.807 Å	Lucas, B. W. *Acta Crystallogr., Sect. C* **1985**, *41*, 1388. KIO_3
62499	1.807 Å	Sorokina, N. I.; Loshmanov, A. A.; Fykin, L. E.; Rider, E. E. *Kristallografiya* **1985**, *30*, 895. $KIO_3{\cdot}HIO_3$
80025	1.807 Å	Cheng, Y.-F.; Yang, Z.; Cheng, Z.-X.; Guo, L.-P. *Jiegon Huaxue* **1995**, *14*, 11. $LiIO_3$
80026	1.807 Å	Cheng, Y.-F.; Yang, Z.; Cheng, Z.-X.; Guo, L.-P. *Jiegon Huaxue* **1995**, *14*, 11. $LiIO_3$
132694	1.807 Å	Gai, M.; Tong, T.; Wang, Y.; Yang, Z.; Pan, S. Chem. Mater. 2020, 32, 5723. $Sr_2(IO_3)_4$
405832	1.807 Å	Suchanek, E.; Peter, S.; Lutz, H. D. *J. Mol. Struct.* **1997**, *416*, 249. $[Ca(H_2O)_6](IO_3)_2$
ICAYEQ	1.807 Å	Petrosyan, A. M.; Burbelo, V. M.; Tamazyan, R. A.; Karapetyan, H. A.; Sukiasyan, R. P. *Z. Naturforsch., Teil B* **2000**, *55*, 119. $(H_3NCH_3CHCOOH)IO_3{\cdot}H_2O$
2825	1.808 Å	Alcock, N. W. *Acta Crystallogr., Sect B* **1972**, *28*, 2783. $RbIO_3$
20168	1.808 Å	Sorokina, N. I.; Ilyukhin, V. V.; Pakhomov, V. I.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1979**, *249*, 613. $NaIO_3$
47138	1.808 Å	Podlahova, J.; Loub, J.; Pechar, F.; Petricek, V. *Acta Crystallogr., Sect. C* **1984**, *40*, 1999. $KIO_3{\cdot}Te(OH)_6$
131558	1.808 Å	Jo, H.; Kim, H. G.; Byun, H. R.; Jang, J. I.; Ok, K. M. *J. Solid State Chem.* **2020**, *282*, 121120. $KLi_2(IO_3)_3$
200804	1.808 Å	Soldatov, E. A.; Ilyukhin, V. V.; Kuz'min, E. A.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1980**, *252*, 615. $Rb(IO_3){\cdot}2HIO_3$
202679	1.808 Å	Svensson, C.; Ståhl, K. *J. Solid State Chem.* **1988**, *77*, 112. $NaIO_3$
ICAYAM	1.808 Å	Petrosyan, A. M.; Burbelo, V. M.; Tamazyan, R. A.; Karapetyan, H. A.; Sukiasyan, R. P. *Z. Naturforsch., Teil B* **2000**, *55*, 119. $(H_3N(CH_2)_2COOH)IO_3{\cdot}H_2O$
14344	1.809 Å	de Boer, J. L.; van Bolhuis, F.; Olthof-Hazekamp, R.; Vos, A. *Acta Crystallogr.* **1966**, *21*, 841. $LiIO_3$
420354	1.809 Å	Gautier Luneau, I.; Suffren, Y.; Jamet, H.; Pilme, J. *Z. Anorg. Allgem. Chem.* **2010**, *636*, 1368. $Rb_2(IO_3)(I_3O_8){\cdot}2HIO_3{\cdot}H_2O$
10306	1.810 Å	Kemper, G.; Vos, A.; Rietveld, H. M. *Can. J. Chem.* **1972**, *50*, 1134. $KIO_3{\cdot}HIO_3$
23276	1.810 Å	Petricek, V.; Maly, K.; Kratochvil, B.; Podlahova, J.; Loub, J. *Acta Crystallogr., Sect. B* **1980**, *36*, 2130. $Ba(IO_3)_2$
QEYYUR	1.810 Å	Abdallah, M. A. B. *J. Mol. Struct.* **2018**, *76*, 1171. $(H_3N(CH_2)_2NH_2(CH_2)_2NH_3)(IO_3)_3{\cdot}2H_2O$
48721	1.811 Å	Ma, W.; Huang, J.; Dai, B.; Yu, F. *New. J. Chem.* **2022**, *46*, 12482. $Ba(IO_3)_2{\cdot}HI_2O_6$

200717	1.811 Å	Kalinin, V. R.; Ilyukhin, V. V.; Pakhomov, V. I.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1978**, *239*, 318. $KIO_3 \cdot HIO_3$
RINQOY	1.811 Å	Chen, Q.-Q.; Hu, C.-L.; Zhang, M.-Z.; Li, B.-X.; Mao, J.-G. *Inorg. Chem.* **2023**, *62*, 12613. $(C_4H_5N_2O)IO_3 \cdot HIO_3$
20209	1.812 Å	Kalinin, V.R.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1978**, *239*, 1340. $K_2(IO_3)(NO_3) \cdot 2HIO_3$
202145	1.812 Å	Bordet, P.; Boucherle, J. X.; Santoro, A.; Marezio, M. *Solid State Ionics* **1986**, *21*, 243. $NH_4(IO_3) \cdot 2HIO_3$
238104	1.812 Å	Xu, X.; Yang, B.-P.; Huang, C.; Mao, J.-G. *Inorg. Chem.* **2014**, *53*, 1756. $[Rb(IO_3)(HIO_3)_2$
423584	1.812 Å	Belokoneva, E. L.; Stefanovich, S. Y.; Dimitrova, O. V. *J. Solid State Chem.* **2012**, *195*, 79. KIO_3
GUCCUD	1.812 Å	Boldog, I.; Daran, J.-C.; Chernega, A. N.; Rusanov, E. B.; Krautscheid, H.; Domasevitch, K. V. *Cryst. Growth Des.* **2009**, *9*, 2895. $(C_6H_8N_4)_3(IO_3)_6(HIO_3)_2 \cdot 2H_2O$
61009	1.813 Å	Wang, C.-G. *Hua Hsueh Hsueh Pao* **1985**, *43*, 271. $CsIO_3$
YUMPII	1.813 Å	Abdallah, M. A. B.; Bacchi, A.; Parisini, A.; Canossa, S.; Bergamonti, L.; Balestri, D.; Kamoun, S. *J. Mol. Struct.* **2020**, *1215*, 128254.
202144	1.814 Å	Bordet, P.; Boucherle, J. X.; Santoro, A.; Marezio, M. *Solid State Ionics* **1986**, *21*, 243. $NH_4(IO_3) \cdot 2HIO_3$
280857	1.814 Å	Sykora, R.E.; Ok, K. M.; Halasyamani, P. S.; Albrecht Schmitt, T. E. *J. Am. Chem. Soc.* **2002**, *124*, 1951. $KIO_3 \cdot MoO_3$
280859	1.814 Å	Sykora, R.E.; Ok, K. M.; Halasyamani, P. S.; Albrecht Schmitt, T. E. *J. Am. Chem. Soc.* **2002**, *124*, 1951. $CsIO_3 \cdot MoO_3$
410914	1.814 Å	Engelen, B.; Gavrilko, T.; Panthoefer, M.; Puchkovskaya, G.; Sekirin, I. *J. Mol. Struct.* **2000**, *523*, 163. $KIO_3 \cdot HIO_3$
416527	1.814 Å	Gerken, M.; Hazendonk, P.; Iuga, A.; Mack, J. P.; Mercier, H. P. A.; Schrobilgen, G. J. D. *J. Fluor. Chem.* **2006**, *127*, 1328. $(CH_3)_4N(IO_3)$
HIRMOK	1.814 Å	Petrosyan, A. M.; Sukiasyan, R. P.; Terzyan, S. S.; Burbelo, V. M. *Acta Crystallogr., Sect. B* **1999**, *55*, 221. $(C_6H_{16}NO_2)(HI_2O_6)IO_3$
REWRUH	1.814 Å	Gerken, M.; Hazendonk, P.; Iuga, A.; Mack, J. P.; Mercier, H. P.A.; Schrobilgen, G. J. *J. Fluorine Chem.* **2006**, *127*, 1328. $N(CH_3)_4IO_4$
49187	1.815 Å	Hou, Y.; Li, H.; Wu, H.; Yu, H.; Hu, Z.; Wang, J.; Wu, Y. *Dalton Trans.* **2022**, *51*, 14036. $Ba_2(WO_3F(IO_3))(WO_3F_2)$
DIRWEK	1.815 Å	Zhang, L.; Zhang, X.; Liang, F.; Hu, Z.; Wu, Y. *Inorg. Chem.* **2023**, *62*, 14518. $(C_5H_6N_3O_2)IO_3$
42347	1.816 Å	Chen, J.; Hu, C.-L.; Li, Y.-L.; Chen, Q.-Q.; Li, B.-X.; Mao, J.-G. *J. Alloys Compd.* **2022**, *894*, 162547. $NaIO_3 \cdot MoO_3$

42348	1.816 Å	Chen, J.; Hu, C.-L.; Li, Y.-L.; Chen, Q.-Q.; Li, B.-X.; Mao, J.-G. *J. Alloys Compd.* **2022**, *894*, 162547. $KIO_3 \cdot MoO_3$
14377	1.817 Å	Rosenzweig, A.; Morosin, B. *Acta Crystallogr.* **1966**, *21*, 758. $LiIO_3$
15564	1.818 Å	MacGillavry, C. H.; Panthaleon van Eck, C. L. *Rec. Trav. Chim. Pays-Bas Belg.* **1943**, *62*, 729. $NaIO_3$
166893	1.818 Å	Yang, B.; Hu, C.; Xu, X.; Sun, C. F.; Zhang, J. H.; Mao, J. G. *Chem. Mater.* **2010**, *22*, 1545. $Na(VO_2)(IO_3)_2 \cdot H_2O$
423864	1.819 Å	Bayarjargal, L.; Wiehl, L.; Friedrich, A.; Winkler, B.; Juarez-Arellano, E. A.; Morgenroth, W.; Haussuehl, E. *J. Physics: Condensed Matter* **2012**, *24*, 325401-11. KIO_3
280858	1.820 Å	Sykora, R.E.; Ok, K. M.; Halasyamani, P. S.; Albrecht Schmitt, T. E. *J. Am. Chem. Soc.* **2002**, *124*, 1951. $RbIO_3 \cdot MoO_3$
OVULAT	1.820 Å	Saidi, K.; Kamoun, S.; Ayedi, H. F. *J. Chem. Cryst.* **2011**, *41*, 1258. $(H_3N(CH_2)_2NH_3)(IO_3)_2 \cdot 4HIO_3$
OVULAT01	1.821 Å	Chen, S. CCDC deposition number 2117178, **2022**. $(H_3N(CH_2)_2NH_3)(IO_3)_2 \cdot 4HIO_3$
ICAYIU	1.823 Å	Petrosyan, A. M.; Burbelo, V. M.; Tamazyan, R. A.; Karapetyan, H. A.; Sukiasyan, R. P. *Z. Naturforsch., Teil B* **2000**, *55*, 119. $(H_3N(CH_2)_4CH(NH_3)COOH)(IO_3)_2 \cdot 4HIO_3$
133563	1.823 Å	Chen, J.; Hu, C.-L.; Zhang, X.-H.; Li, B.-X.; Yang, B.-P.; Mao, J.-G. *Angew. Chem., Int. Ed.* **2020**, *59*, 5381. $CsVO_2F(IO_3)$
VIQKAK	1.823 Å	Peng, G. CCDC deposition number 1878308, **2018**. $Li_4Sr_5(H_4B_{12}O_{26})(IO_3)_2$
140980	1.824 Å	An, Y.; Zhong, Y.; Sun, T.; Wang, H.; Hu, Z.; Liu, H.; Liu, S.; Kong, Y.; Xu, J. *Dalton Trans.* **2019**, *48*, 13074. $Sr(IO_3)_2 \cdot HIO_3$
127048	1.825 Å	Kampf, A. R.; Harlow, G. E.; Ma, C. *Miner. Magaz.* **2023**, *87*, 171. $Pb_7(IO_3)(OH)_4Cl_9$
130347	1.825 Å	Li, Y.; Han, G.; Yu, H.; Li, H.; Yang, Z.; Pan, S. *Chem. Mater.* **2019**, *31*, 2992. $NH_4IO_3 \cdot MoO_3$
238105	1.825 Å	Xu, X.; Yang, B.-P.; Huang, C.; Mao, J.-G. *Inorg. Chem.* **2014**, *53*, 1756. $[Rb_3(IO_3)_3(I_2O_5)(HIO_3)_4 \cdot H_2O$
BAWBAF01	1.828 Å	Abdallah, M. A. B.; Bacchi, A.; Parisini, A.; Canossa, S.; Mazzeo, P. P.; Bergamonti, L.; Kamoun, S. *Struct. Chem.* **2019**, *30*, 1911. $(H_3N(CH_2)_2NH_3)IO_3$
140979	1.831 Å	An, Y.; Zhong, Y.; Sun, T.; Wang, H.; Hu, Z.; Liu, H.; Liu, S.; Kong, Y.; Xu, J. *Dalton Trans.* **2019**, *48*, 13074. $Ca(IO_3)_2 \cdot HIO_3$
247719	1.832 Å	Bayarjargal, L.; Wiehl, L.; Friedrich, A.; Winkler, B.; Juarez-Arellano, E. A.; Morgenroth, W.; Haussuehl, E. *J. Physics: Condensed Matter* **2012**, *24*, 325401-11. KIO_3
Mean	**1.808 Å/100 structures**	

Metaperiodate ion, IO_4^-

ICSD/CSD code	*d(I-O)*	*Reference*
BUAMPI	1.672 Å	Carpy, A.; Goursolle, M.; Leger, J. M..; Nivaud, E. *KC. R. Acad. Sci., Ser.C (Chim)* **1977**, *285*, 311. $N(C_4H_9)_4IO_4$
ROQLIS	1.668 Å	Belaj, F.; Trnoska, A.; Nachbaur, E. *Z. Kristallogr.* **1997**, *212*, 355. $[NaO_6C_{18}H_{36}N_2])IO_4$
VAVTAO	1.693 Å	Campos-Fernandez, C. S.; Schottel, B. L.; Chifotides, H. T.; Bera, J. K.;Bacsa, J.; Koomen, J. M.; Russell, D. H.; Dunbar, K. R. *J. Am. Chem. Soc.* **2005**, *127*, 12909. $[Ni_4C_{56}H_{52}N_{28}O_{48}]ClO_4(IO_4)_7\cdot 3CH_3CN$
UYEMOB	1.725 Å	Rezaeifard, A.; Jafarpour, M.; Kavousi, H.; Alipour, M.; Stoeckli-Evans, H. *Polyhedron* **2011**, *30*, 2303. $N((n\text{-}C_4H_9)_3CH_2C_6H_5)IO_4$
NEGVAZ	1.728 Å	Liu, Y.; Chen, Y.; Xu, M.-J.; Zhu, C.-L.; Liu, Z.-Q. *J. Mol. Struct.* **2017**, *1148*, 429. $(C_6H_7N_2O_2)IO_4\cdot C_{12}H_{24}O_6$
EVIHIC	1.731 Å	Liu, Z.-Q.; Liu, Y.; Chen, Y.; Zhao, W.-Q.; Fang, W.-N. *Chin. Chem. Lett.* **2016**, *28*, 297. $(C_6H_7N_2O_2)IO_4\cdot C_{12}H_{24}O_6\cdot 0.5CH_3OH$
HOHMOG01	1.735 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2001**, *13*, 11053. $(C_5H_6N)IO_4$
HOHMOG02	1.737 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2001**, *13*, 11053. $(C_5H_6N)IO_4$
ZZZUYA02	1.738 Å	Wagner, R. I.; Bau, R.; Gnann, R. Z.; Jones, P. F.; Christe, K. O. *Inorg. Chem.* **1997**, *36*, 2564. $N(CH_3)_4IO_4$
HOHMOG04	1.745 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2003**, *15*, 5663. $(C_5H_6N)IO_4$
YASKIP	1.745 Å	You, Y.-M.; Tang, Y.-Y.; Li, P.-F.; Zhang, H.-Y.; Zhang, W.-Y.; Zhang, Y.; Ye, H.-Y.; Nakamura, T.; Xiong, R.-G. *Nature Commun.* **2017**, *8*, 14934. $(C_4H_{14}N)IO_4$
83375	1.747 Å	de Waal, D.; Zabel, M.; Range, K. J. *Naturforschung, Teil B* **1996**, *51*, 441-443. $CsIO_4$
89509	1.748 Å	Hoppe, R.; Fischer, D.; Schneider, J. *Z. Anorg. Allgem. Chem.* **1999**, *625*, 1135-1142. $CsIO_4$
HOHMOG03	1.750 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2001**, *13*, 11053. $(C_5H_6N)IO_4$
IKAMUD	1.750 Å	Jin-Gang Hu, J.-G. *Acta Crystallogr., Sect. E* **2011**, *67*, o472. $(C_3H_{10}NO)IO_4\cdot C_{12}H_{24}O_6$
UYOBEQ	1.750 Å	Sharma, R. P.; Singh, A.; Brandao, P.; Felix, V.; Venugopalan, P. *Inorg. Chim. Acta* **2011**, *376*, 64. $[Co(N_2C_{12}H_8)_2(C_6H_5N_4)]\ (IO_4)_2\cdot 0.5H_2O$

HOHMOG07	1.751 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2003**, *15*, 5663. $(C_5H_6N)IO_4$
BEKNIS	1.751 Å	Calabrese, M.; Pizzi, A.; Daolio, A.; Frontera, A.; Resnati, G. *Chem. Commun.* **2022**, *58*, 9274. $(C_6H_5N_2)IO_4$
HOHMOG06	1.752 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2003**, *15*, 5663. $(C_5H_6N)IO_4$
HOHMOG	1.752 Å	Dutkiewicz, G.; Pajak, Z. *Z. Naturforsch., Teil B* **1998**, *53*, 1323. $(C_5H_6N)IO_4$
UNUREB	1.752 Å	Gholizadeh, M.; Zonoz, F. M.; Pourayoubi, M.; Ebrahimpour, M.; Salehabadi, M. *Acta Crystallogr., Sect. E* **2011**, *67*, o863. $((C_6H_5)_3P(CH_2)_2P(C_6H_5)_3)IO_4$
IHEGUZ	1.753 Å	Salchner, R.; Laus, G.; Haslinger, S.; Kahlenberg, V.; Wurst, K.; Braun, D. E.; Vergeiner, S.; Kopacka, H.; Schottenberger, H.; Puckowski, A.; Markiewicz, M.; Stolte, S.; Nerdinger, S. *Hetereocycles* **2015**, *90*, 1018. $(C_6H_{14}NO_2)IO_4$
BEKNOY	1.755 Å	Calabrese, M.; Pizzi, A.; Daolio, A.; Frontera, A.; Resnati, G. *Chem. Commun.* **2022**, *58*, 9274. $(C_5H_5N_2O_2)IO_4$
BEKPAM	1.756 Å	Calabrese, M.; Pizzi, A.; Daolio, A.; Frontera, A.; Resnati, G. *Chem. Commun.* **2022**, *58*, 9274. $(C_5H_5FN)IO_4$
83365	1.759 Å	de Waal, D.; Range, K. J. *Z. Naturforschung, Teil B* **1996**, *51*, 1365-1367. $RbIO_4$
JOWRIY	1.759 Å	Ding, X.-H.; Wang, S.; Li, Y.-H.; Huang, W. *J. Mol. Struct.* **2015**, *1079*, 266. $(C_9H_{13}N_2)IO_4$
UZUQUC	1.760 Å	Abate, A.; Marti-Rujas, J.; Metrangolo, P.; Pilati, T.; Resnati, G.; Terraneo, G. *Cryst. Growth Des.* **2011**, *11*, 4220. $(N(n\text{-}C_4H_9)_4)IO_4 \cdot 1.5C_6F_4I_2$
BEKNUE	1.760 Å	Calabrese, M.; Pizzi, A.; Daolio, A.; Frontera, A.; Resnati, G. *Chem. Commun.* **2022**, *58*, 9274. $(C_6H_6NO_2)IO_4$
TEJBET01	1.760 Å	Yu, Z.-H.; Liu, D.-X.; Ling, Y.-Y.; Chen, X.-X.; Shang, Y.; Chen, S.-L.; Ye, Z.-M.; Zhang, W.-X.; Chen, X.-M. *Sci. China Mater.* **2023**, *66*, 1641. $K(C_6H_{14}N_2)(IO_4)_3$
83377	1.761 Å	de Waal, D.; Range, K. J. *Naturforschung, Teil B* **1996**, *51*, 444-446. KIO_4
400552	1.761 Å	Kraft, T.; Jansen, M. *Z. Anorg. Allgem. Chem.* **1995**, *621*, 484-487. $LiIO_4$
KEJTAX	1.761 Å	Sharninghausen, L. S.; Sinha, S. B.; Shopov, D. Y.; Mercado, B. Q.; Balcells, D.; Brudvig, G. W.; Crabtree, R. H. *Angew. Chem., Int. Ed.* **2017**, *56*, 13047. $[IrC_{32}H_{32}N_4O_4]IO_4 \cdot CCl_4$
83376	1.762 Å	de Waal, D.; Range, K. J. *Naturforschung, Teil B* **1996**, *51*, 444-446. KIO_4
MOHFAR	1.762 Å	Sharma, R. P.; Singh, A.; Brandao, P.; Felix, V.; Venugopalan, P. *J. Mol. Struct.* **2008**, *888*, 291. $[Co(N_2C_{12}H_8)_3](IO_4)_3 \cdot 2H_2O$
OZEFOP	1.762 Å	Gholizadeh, M.; Hojati, S. F.; Pourayoubi, M.; Maleki, B.; Kia, M.; Notash, B. *X-ray. Str. Anal. Online* **2011**, *27*, 47. $(C_{12}H_{14}N_2)(IO_4)_2$

IHEHAG	1.763 Å	Salchner, R.; Laus, G.; Haslinger, S.; Kahlenberg, V.; Wurst, K.; Braun, D. E.; Vergeiner, S.; Kopacka, H.; Schottenberger, H.; Puckowski, A.; Markiewicz, M.; Stolte, S.; Nerdinger, S. *Hetereocycles* **2015**, *90*, 1018. $(C_7H_{16}NO_2)IO_4$
YIVYUB	1.764 Å	Yu, Z.-H.; Liu, D.-X.; Ling, Y.-Y.; Chen, X.-X.; Shang, Y.; Chen, S.-L.; Ye, Z.-M.; Zhang, W.-X.; Chen, X.-M. *Sci. China Mater.* **2023**, *66*, 1641. $Rb(C_6H_{14}N_2)(IO_4)_3$
89510	1.765 Å	Hoppe, R.; Fischer, D.; Schneider, J. *Z. Anorg. Allgem. Chem.* **1999**, *625*, 1135-1142. $RbIO_4$
ECAFEW	1.765 Å	Kaabel, A.; Adamson, J.; Topic, F.; Kiesila, A.; Kalenius, E.; Oeren, M.; Reimund, M.; Prigorchenko, E.; Lookene, A.; Reich, H. J.; Rissanen, K.; Aav, R. *Chem. Sci.* **2017**, *8*, 2184. $(P(C_4H_9)_4)IO_4{\cdot}C_{64}H_{96}N_{16}O_8{\cdot}2CH_3OH$
ROSDOV	1.765 Å	Vijayakanth, T.; Ram, F.; Praveenkumar, B.; Shanmuganathan, K.; Boomishankar, R. *Chem. Mater.* **2019**, *31*, 5964. $(P(C_6H_5)_2(NHC_3H_7)_2)IO_4$
ROSFIR	1.765 Å	Vijayakanth, T.; Ram, F.; Praveenkumar, B.; Shanmuganathan, K.; Boomishankar, R. *Chem. Mater.* **2019**, *31*, 5964. $(P(NHC_3H_7)_4)IO_4$
TEJBIX01	1.765 Å	Yu, Z.-H.; Liu, D.-X.; Ling, Y.-Y.; Chen, X.-X.; Shang, Y.; Chen, S.-L.; Ye, Z.-M.; Zhang, W.-X.; Chen, X.-M. *Sci. China Mater.* **2023**, *66*, 1641. $NH_4(C_6H_{14}N_2)(IO_4)_3$
83365	1.766 Å	de Waal, D.; Range, K. J. *Z. Naturforschung, Teil B* **1996**, *51*, 1365-1367. $RbIO_4$
YOFBAA	1.767 Å	Feng, Y.; Zhang, J.; Cao, W.; Zhang, J.; Shreeve, J. M. *Nature Commun.* **2023**, *14*, 7765. $NH_4(C_6H_{14}N_2)_2[Na(OIO_3)_6]$
WEMSUD	1.767 Å	Sharma, R. P.; Sharma, R.; Bala, R.; Burrows, A. D.; Mahon, M. F.; Cassar, K. *J. Mol. Struct.* **2006**, *794*, 173. $[Co(H_2N(CH_2)_2NH_2)_2Cl_2]IO_4$
JOJYOY	1.767 Å	Zhang,Y.; Ye, H.-Y.; Cai, H.-L.; Fu, D.-W.; Ye, Q.; Zhang, W.; Zhou, Q.; Wang, J.; Yuan, G.-L.; Xiong, R.-G. *Adv. Mater.* **2014**, *26*, 4515. $(C_3D_5N_2)IO_4$
IVOMAI	1.768 Å	Sharma, R. P.; Singh, A.; Venugopalan, P.; Harrison, W. T. A. *J. Mol. Struct.* **2011**, *996*, 82. $[Co(C_{12}H_8N_2)_2CO_3]IO_4$
JOJZAL	1.768 Å	Zhang,Y.; Ye, H.-Y.; Cai, H.-L.; Fu, D.-W.; Ye, Q.; Zhang, W.; Zhou, Q.; Wang, J.; Yuan, G.-L.; Xiong, R.-G. *Adv. Mater.* **2014**, *26*, 4515. $(C_3H_5N_2)IO_4$
14287	1.769 Å	Kalman, A.; Cruickshank, D. W. J. *Acta Crystallogr., Sect. B* **1970**, *26*, 1782-1785. $NaIO_4$
TEJBET	1.769 Å	Chen. S. CCDC deposition number 2169907, **2022**. $K(C_6H_{14}N_2)(IO_4)_3$
ROSFAJ	1.770 Å	Vijayakanth, T.; Ram, F.; Praveenkumar, B.; Shanmuganathan, K.; Boomishankar, R. *Chem. Mater.* **2019**, *31*, 5964. $(P(C_6H_5)(NHC_3H_7)_3)IO_4$
HOHMOG05	1.772 Å	Maluszynska, H.; Czarnecki, P.; Lewicki, S.; Wasicki, J.; Gdaniec, M. *J. Phys.: Condens. Matter* **2003**, *15*, 5663. $(C_5H_6N)IO_4$

LANNEU	1.772 Å	Sharma, R. P.; Sharma, R.; Bala, R.; Bond, A. D. *Acta Crystallogr., Sect. E* **2005**, *61*, m997. $[Co(H_2N(CH_2)_2NH_2)_2(NO_2)_2]IO_4$
280083	1.773 Å	Levason, W.; Webster, M. *Acta Crystallogr., Sect. C* **1999**, *55*, 1-1. NH_4IO_4
TEJBIX	1.774 Å	Chen. S. CCDC deposition number 2169908, **2022**. $NH_4(C_6H_{14}N_2)(IO_4)_3$
Mean	**1.757 Å/52 structures**	

Sulfite ion, SO_3^{2-}

ICSD/CSD code	*d(S-O)*	*Reference*
HOXGUX	1.495 Å	Custelcean, R.; Remy, P. Cryst. Growth Des. **2009**, *9*, 1985. $[Li_2C_{48}H_{64}N_{20}O_8]SO_3$
HIVVUF	1.499 Å	Khoma, R. E.; Gelmboldt, V. O.; Baumer, V. N.; Shishkin, O. V.; Koroeva, L. V. *Russ. J. Inorg. Chem.* **2013**, *58*, 950. $(CH_7N_4)_2SO_3{\cdot}H_2O$
4432	1.505 Å	Larsson, L. O.; Kierkegaard, P. *Acta Chem. Scand.* **1969**, *23*, 2253. Na_2SO_3
1626	1.508 Å	Oddon, Y.; Pepe, G.; Tranquard, A. J. *Chem. Res. S* **1977**, 138. $NaTl_3(SO_3)_2$
60762	1.515 Å	Andersen, L.; Strömberg, D. *Acta Chem. Scand., Ser. A* **1986**, *40*, 479. K_2SO_3
NEDHOW01	1.522 Å	Khoma, R. E.; Gelmboldt, V. O.; Ennan, A. A.; Baumer, V. N.; Puzan, A. N., Koksharova, T. V.; Mazepa, A. V. *Russ. J. Inorg. Chem.* **2017**, *62*, 736. $(C_4H_{12}N_4)SO_3{\cdot}H_2O$
TARBUL	1.522 Å	Murphy, L. J.; McPherson, A. M.; Robertson, K. N.; Clyburne, J. A. C. *Chem. Commun.* **2012**, *48*, 1127. $(H_3N(CH_2)_2NH(CH_2)_2NH_3)SO_3{\cdot}H_2O$
23824	1.524 Å	Battelle, L. F.; Trueblood, K. N. Acta Crystallogr. **1965**, *19*, 531. $(NH_4)_2SO_3{\cdot}H_2O$
YOPVEG	1.524 Å	Khoma, R. E.; Gelmboldt, V. O.; Shishkin, O. V.; Baumer, V. N.; Puzan, A. N.; Ennan,A. A.; Rakipov, I. M. *Russ. J. Inorg. Chem.* **2014**, *59*, 716. $(H_3N(CH_2)_2NH_2(CH_2)_2OH)SO_3{\cdot}H_2O$
131990	1.526 Å	Weil, M.; Mereiter, K. *Acta Crystallogr., Sect. C* **2020**, *76*, 427. $Na_2SO_3{\cdot}7H_2O$
200780	1.526 Å	Archer, C.; Durand, J.; Cot, L.; Galigne, J. L. *Can. J. Chem.* **1979**, *57*, 899. $LiCsSO_3{\cdot}2H_2O$
48112	1.528 Å	Anderson, L.; Lindqvist, O. *Acta Crystallogr., Sect. B* **1984**, 40, 584. $[Mg(H_2O)_6]SO_3$
NEDHIQ	1.528 Å	Zhao, W.; Zhao, Q.; Zhang, Z.; Liu, J.; Chen, R.; Chen, Y.; Chen, J. *Fuel* **2017**, *209*, 69. $(H_3N(CH_2)_2NH_3)_2SO_3$
26149	1.532 Å	Baggio, S.; Becka, L. N. *Acta Crystallogr., Sect. B* **1969**, *25*, 1150. $[Ni(H_2O)_6]SO_3$
NEDHOW	1.532 Å	Zhao, W.; Zhao, Q.; Zhang, Z.; Liu, J.; Chen, R.; Chen, Y.; Chen, J. *Fuel* **2017**, *209*, 69. $(C_4H_{12}N_4)SO_3{\cdot}H_2O$
240683	1.533 Å	Nguyen, D.-T.; Bu, X. *Inorg. Chem.* **2006**, *45*, 10410. $Na(Zn(OH))_3(SO_3)_2$
62636	1.533 Å	Bats, J. W.; Fuess, H.; Elerman, Y. *Acta Crystallogr., Sect. B* **1986**, *42*, 552. $[Mg(H_2O)_6]SO_3$
2524	1.536 Å	Flack, H. D. *Acta Crystallogr., Sect. B* **1973**, *29*, 656. $[Mg(H_2O)_6]SO_3$
62637	1.536 Å	Bats, J. W.; Fuess, H.; Elerman, Y. *Acta Crystallogr., Sect. B* **1986**, *42*, 552. $[Mg(H_2O)_6]SO_3$
62638	1.536 Å	Bats, J. W.; Fuess, H.; Elerman, Y. *Acta Crystallogr., Sect. B* **1986**, *42*, 552. $[Mg(H_2O)_6]SO_3$
TARBOF	1.540 Å	Murphy, L. J.; McPherson, A. M.; Robertson, K. N.; Clyburne, J. A. C. *Chem. Commun.* **2012**, *48*, 1127. $(H_3N(CH_2)_2NH_2(CH_2)_2NH_3)SO_3Cl$
2166	1.555 Å	Oddon, Y.; Pepe, G.; Vignalou, J. R.; Tranquard, A. *J. Chem. Soc., Syn.* **1978**, 250. Tl_2SO_3
Mean	**1.524 Å/22 structures**	

Sulfate ion, SO_4^{2-}

ICSD/CSD code	*d(S-O)*	*Reference*
145512	1.450 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4 \cdot 0.75H_2O$
20851	1.456 Å	Sandomirskii, P. A.; Meshalkin, S. S.; Rozhdestvenskaya, I. V. *Kristallogrfiya* **1983**, *28*, 67. $KLiSO_4$
63181	1.458 Å	Asahi, T.; Hasebe, K. *J. Phys. Soc. Jpn.* **1988**, *57*, 4184. $LiCsSO_4$
30747	1.459 Å	Armstrong, R. S.; Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1983**, 1973. $Cs[Rh(H_2O)_6](SO_4)_2 \cdot 6H_2O$
36470	1.459 Å	Schulz, H.; Zucker, U.; Frech, R. E. *Acta Crystallogr., Sect. B* **1985**, *41*, 21. $KLiSO_4$
136218	1.460 Å	Yan, Y.; Chen, Y.; Jiang, B.; Jing, Q.; Zhang, J. *New. J. Chem.* **2021**, *45*, 19883. $Li_5Cs(SO_4)_3$
48136	1.461 Å	Bhakay-Tamhane, S. N.; Sequeira, A.; Chidambaram, R. *Acta Crystallogr., Sect. C* **1984**, *40*, 1648. $KLiSO_4$
166170	1.461 Å	Kurihama, T.; Suzuki, Y.; Teng Y.-J.; Shimizu, F.; Yamaguchi, T. *Ferroelectrics* **2009**, *381*, 201. $(NH_4)_3Li(SO_4)_2$
201212	1.461 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Mn(H_2O)_6](SO_4)_2 \cdot 6H_2O$
201214	1.461 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Co(H_2O)_6](SO_4)_2 \cdot 6H_2O$
30748	1.462 Å	Armstrong, R. S.; Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1983**, 1973. $Cs[Ir(H_2O)_6](SO_4)_2 \cdot 6H_2O$
33251	1.462 Å	Gu, X.-Y. *Wuli Xuebao* **1983**, *32*, 1196. $KLiSO_4$
26196	1.463 Å	Dollase, W. A. *Acta Crystallogr., Sect. B* **1969**, *25*, 2298. $LiNH_4SO_4$
34313	1.464 Å	Ikuji, K.; Teng, Y. J.; Kurihama, T. *Ferroelectrics* **2017**, *513*, 78. $(NH_4)_3Na(SO_4)_2$
145528	1.464 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4$
26337	1.465 Å	Tanisaki, S.; Mashiyama, H.; Hasebe, K.; Shiroishi, Y.; Sawada, S. *Acta Crystallogr., Sect. B* **1980**, *36*, 3084. $LiRbSO_4$
29930	1.465 Å	Lee, S.; Xu, H.; Xu, H.; Neuefeind, J. *Minerals* **2021**, *11*, 272. $CaSO_4 \cdot 2H_2O$
73989	1.465 Å	Mashiyama, H.; Kasano, H. *J. Phys. Soc. Jpn.* **1993**, *62*, 155. $LiNH_4SO_4$
84118	1.465 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz Perez, C.; Martinez-Sarrion, M. L.; Mestres, L.; Bocanegra, E. H. *J. Phys.; Cond. Matter* **1997**, *9*, 2657. $(NH_4)_2SO_4$
266702	1.465 Å	Malec, L. M.; Gryl, M.; Stadnicka, K. M. *Inorg. Chem.* **2018**, *57*, 4340. $(NH_4)_2SO_4$
34257	1.465 Å	Schlemper, E. O.; Hamilton, W. C. *J. Chem. Phys.* **1966**, *44*, 4498. $(NH_4)_2SO_4$

62981	1.466 Å	Zhang, P.-L.; Yan, Q. W.; Boucherle, J. X. *Acta Crystallogr., Sect. C* **1988**, *44*, 592. $KLiSO_4$
200524	1.466 Å	Kruglik, A. I.; Misjul', S. V.; Simonov, M. A. *Kristallografiya* **1979**, *24*, 582. $LiRbSO_4$
81085	1.467 Å	Niwata, A.; Itoh, K. *J. Phys. Soc. Jpn.* **1995**, *64*, 4184. $LiCsSO_4$
136245	1.468 Å	Comodi, P.; Fastelli, M.; Criniti, G.; Glazyrin, K.; Zucchini, A. *Crystals* **2021**, *11*, 976. $(NH_4)_2SO_4$
200905	1.468 Å	Hasebe, K. *J. Phys Soc. Jpn.* **1981**, *50*, 1266. $(NH_4)_2SO_4$
2827	1.469 Å	McGinnety, J. A. *Acta Crystallogr., Sect. B* **1972**, *28*, 3084. K_2SO_4
113690	1.469 Å	Yang, Y-C.; Liu, X.; Lu, J.; Wu, L.-M.; Chen, L. *Angew. Chem., Int. Ed.* **2021**, *60*, 21216; *JACS Au* **2022**, *2*, 2059. $[Ag(NH_3)_2]_2SO_4$
200624	1.469 Å	Kruglik, A. I.; Simonov, M. A.; Zhelezin, E. P.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1979**, *247*, 1384. $LiCsSO_4$
201211	1.469 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Cr(H_2O)_6](SO_4)_2{\cdot}6H_2O$
280551	1.469 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M. *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $K[Cr(H_2O)_6](SO_4)_2{\cdot}6H_2O$
419316	1.469 Å	Lu Y.; Feng Y. *Chin. J. Chem.* **2009**, *25*, 447. $Na[Co(H_2O)_6](SO_4)_2$
429064	1.469 Å	Avdontceva, M. S.; Zolotarev, A. A.; Krivovichev, S. V. *J. Solid State Chem.* **2015**, *231*, 42. Na_3SO_4F
4309	1.470 Å	Hodgson. P. G.; Whitnall, J.; Kennard, C. H. L.; Moore, F. H. *Cryst. Struct. Commun.* **1975**, *4*, 713. $K_2[Zn(H_2O)_6](SO_4)_2$
14364	1.470 Å	Morosin, B.; Smith, D. L. *Acta Crystallogr.* **1967**, *22*, 906. $LiNaSO_4$
59891	1.470 Å	Rempfer, N.; Lerner, H. W.; Bolte, M. *Acta Crystallogr., Sect. E* **2004**, *60*, i80. $NH_4[Cr(H_2O)_6](SO_4)_2{\cdot}6H_2O$
95407	1.470 Å	Mata, J.; Solans, X.; Calvet, M. T.; Molera, J.; Font-Bardia, M. *J. Phys.: Cond. Matter* **2002**, *14*, 5211. $LiNaSO_4$
19808	1.471 Å	Eckhardt, T.; Wagner, C.; Imming, P.; Seidel, R. W. *IUCr Data* **2020**, *5*, 201275. $NaNH_4SO_4{\cdot}2H_2O$
77896	1.471 Å	Arzt, S.; Glazer, A. M. *Acta Crystallogr., Sect. B* **1994**, *50*, 425. $NH_4NaSO_4{\cdot}2H_2O$
133603	1.471 Å	Svensson, F. G. *Acta Crystallogr., Sect. E* **2021**, *77*, 58. $[Al(H_2O)_6]SO_4Cl{\cdot}H_2O$
145510	1.471 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4{\cdot}0.83H_2O$
194492	1.471 Å	Komornicka, D.; Wolcyrz, M.; Pietraszko, A. *Cryst. Growth Des.* **2014**, *14*, 5784. $LiNH_4SO_4$
245146	1.471 Å	Chabchoub, N.; Darriet, J.; Khemakhem, H. *J. Solid State Chem.* **2006**, *179*, 2164.$CsKSO_4{\cdot}Te(OH)_6$
254107	1.471 Å	Karppinen, M. *Acta Crystallogr., Sect. B* **2015**, *71*, 334. $LiNaSO_4$
409740	1.471 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2009**, *224*, 171. $K_2[Fe(H_2O)_6]$

9373	1.472 Å	Zubkova, N. V.; Pekov, I. V.; Ksenofontov, D. A.; Yapaskurt, V. O.; Pushcharovsky, D. Y.; Sidorov, E. G. *Dokl. Earth Sci.* **2018**, *479*, 339. K_2SO_4
9519	1.472 Å	Pabst, A.; Sharp, W. N. *Am. Miner.* **1973**, *58*, 116. Na_3SO_4F
23187	1.472 Å	Brown, G. M.; Chidambaram, R. *Acta Crystallogr., Sect. B* **1969**, *25*, 676. $[NH_4)_2[Cu(H_2O)_6](SO_4)_2$
31145	1.472 Å	Fanfani, L.; Giuseppetti, G.; Tadini, C.; Zanazzi, P. F. *Miner. Magazine* **1980**, *43*, 753. Na_3SO_4F
51640	1.472 Å	Kockelmann, W.; Schaefer, W.; Kirfel, A.; Klapper, H.; Euler, H. *Mater. Sci. Forum* **2001**, *378*, 274. $K_2[Co(D_2O)_6](SO_4)_2$
54472	1.472 Å	Dammak, M.; Khemakhem, H.; Mhiri, T.; Kolsi, A.W.; Daoud, A. *J. Alloys Compd.* **1998**, *280*, 107. $Rb_2SO_4{\cdot}Te(OH)_6$
59856	1.472 Å	Li, X.-H.; Li, Z.-G. *Acta Crystallogr., Sect. E* **2004**, *60*, i114. $[NH_4)_2[Co(H_2O)_6](SO_4)_2$
66115	1.472 Å	Shiozaki, Y.; Onodera, A.; Yoshida, M.; Takahashi, I. *Ferroelecgtrics* **1989**, *96*, 73. Cs_2SO_4
81506	1.472 Å	Rasmussen, S. E.; Jørgensen, J. E.; Lundtoft, B. *J. Appl. Crystallogr.* **1996**, *29*, 42. Na_2SO_4
136757	1.472 Å	Ikeda, R.; Kyono, A. *J. Solid State Chem.* **2021**, *304*, 122574. $Na_2SO_4{\cdot}10H_2O$
145524	1.472 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4{\cdot}0.2H_2O$
409738	1.472 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Mn(H_2O)_6]$
POKROA	1.472 Å	Jing, L.; Deplazes, E.; Clegg, J. K. Wu, X. *Nature Chem.* **2024**, *16*, 335. $((n\text{-}C_4H_9)_4N)_2SO_4{\cdot}C_{36}H_{66}N_{14}O_6{\cdot}2H_2O$
4308	1.473 Å	Hodgson. P. G.; Whitnall, J.; Kennard, C. H. L.; Moore, F. H. *Cryst. Struct. Commun.* **1975**, *4*, 713. $K_2[Ni(H_2O)_6](SO_4)_2$
25713	1.473 Å	Margulis, T. N.; Templeton, D. H. *Z. Kristallogr.* **1972**, *117*, 344. $(NH_4)_2[Mg(H_2O)_6](SO_4)_2$
50582	1.473 Å	Kirfel, A.; Klapper, H.; Schaefer, W.; Schwabenlaender, F. *Z. Kristallogr.* **1998**, *213*, 456. $K_2[Co(H_2O)_6](SO_4)_2$
62991	1.473 Å	Maslen, E. N.; Watson, K. J.; Moore, F. H. *Acta Crystallogr., Sect. B* **1988**, *44*, 102. $(NH_4)_2[Mg(H_2O)_6](SO_4)_2$
63024	1.473 Å	Maslen, E. N.; Watson, K. J.; Moore, F. H. *Acta Crystallogr., Sect. B* **1988**, *44*, 102. $(NH_4)_2[Mg(H_2O)_6](SO_4)_2$
78419	1.473 Å	Hasebe, K.; Asahi, T. *Ferroelecterics* **1994**, *159*, 61. NH_4LiSO_4
100458	1.473 Å	Mehrotra, B. N. *Z. Kristallogr.* **1981**, *155*, 159. Na_2SO_4
165965	1.473 Å	Brand, H. E. A.; Fortes, A. D.; Wood, I. G.; Knight, K. S.; Vocadlo, L. *Phys. Chem. Miner.* **2009**, *36*, 29. $Na_2SO_4{\cdot}10D_2O$
186839	1.473 Å	Kotera, T.; Yoshioka, D.; Mikuriya, M. *X-Ray Struct. Anal. Online* **2012**, *28*, 45. $K_3Na(SO_4)_2$

201217	1.473 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[In(H_2O)_6](SO_4)_2{\cdot}6H_2O$
409739	1.473 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Fe(H_2O)_6](SO_4)_2$
409742	1.473 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Zn(H_2O)_6](SO_4)_2$
409984	1.473 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. . *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Co(H_2O)_6]$
409985	1.473 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. . *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Zn(H_2O)_6]$
2105	1.474 Å	Nord, A. G. *Acta Crystallogr., Sect. B* **1974**, *30*, 1640. Rb_2SO_4
14310	1.474 Å	Corazza, E.; Sabelli, C.; Giuseppetti, G. *Acta Crystallogr.* **1967**, *22*, 683. $NaNH_4SO_4{\cdot}2H_2O$
30505	1.474 Å	Levy, A. H.; Lisensky, G. C. *Acta Crystallogr., Sect. B* **1978**, *34*, 3502. $Na_2SO_4{\cdot}10H_2O$
66554	1.474 Å	Tanaka, K.; Naruse, H.; Morikawa, H.; Marumo, F. *Acta Crystallogr., Sect. B* **1991**, *47*, 581. Na_2SO_4
63026	1.474 Å	Maslen, E. N.; Ridout, S. C.; Watson, K. J.; Moore, F. H. *Acta Crystallogr., Sect. C* **1988**, *44*, 412. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
90098	1.474 Å	Simmons, C. J.; Hitchman, M. A.; Stratemeier, H. *Inorg. Chem.* **2000**, *39*, 6124. $(NH_4)_2[Zn(H_2O)_6](SO_4)_2$
135097	1.474 Å	Srinivasan, B. R.; Deshpande, M. S. *Optics & Laser Technol.* **2021**, *137*, 106864. $[Mg(H_2O)_6]SO_4$
136755	1.474 Å	Ikeda, R.; Kyono, A. *J. Solid State Chem.* **2021**, *304*, 122574. $Na_2SO_4{\cdot}10H_2O$
143782	1.474 Å	Mutschke, A.; Bernard, G. M.; Bertmer, M.; Karttunen, A. J.; Ritter, C.; Michaelis, V. K.; Kunkel, N. *Angew. Chem., Int. Ed.* **2021**, *60*, 5683. Na_3SO_4D
145521	1.474 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4{\cdot}0.535H_2O$
162313	1.474 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 47. $K_2[Mg(H_2O)_6](SO_4)_2$
171288	1.474 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021. $K_2[Cu(H_2O)_6](SO_4)_2$
201213	1.474 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Fe(H_2O)_6](SO_4)_2{\cdot}6H_2O$
203160	1.474 Å	Weber, H. J.; Schulz, M.; Schmitz, S.; Granzin, J.; Siegert, H. *J. Phys.: Cond. Matter* **1989**, *1*, 8543. Cs_2SO_4
280547	1.474 Å	Nyburg, S. C.; Steed, J.; Aleksovska, S.; Petrusevski, V. M. *Acta Crystallogr., Sect. B* **2000**, *56*, 204. $K[Al(H_2O)_6](SO_4)_2{\cdot}6H_2O$
409737	1.474 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Mg(H_2O)_6]$
409741	1.474 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. – New Struct.* **2003**, *218*, 409. $Cs_2[Ni(H_2O)_6]$
4306	1.475 Å	Smith, G.; Moore, F. H.; Kennard, C. H. L. *Cryst. Struct. Commun.* **1975**, *4*, 407. $Rb_2[Cu(H_2O)_6](SO_4)_2$

34258	1.475 Å	Schlemper, E. O.; Hamilton, W. C. *J. Chem. Phys.* **1966**, *44*, 4498. $(NH_4)_2SO_4$
63077	1.475 Å	Eysel, W.; Hoefer, H. H.; Keester, K. L.; Hahn, T. *Acta Crystallogr., Sect. B* **1985**, *41*, 5. Na_2SO_4
65012	1.475 Å	Maslen, E. N.; Ridout, S. C.; Watson, K. J.; Moore, F. H. *Acta Crystallogr., Sect. C* **1988**, *44*, 1510. $(NH_4)_2[Zn(H_2O)_6](SO_4)_2$
79777	1.475 Å	Ojima, K.; Nishihata, Y.; Sawada, A. *Acta Crystallogr., Sect. B* **1995**, *51*, 287. K_2SO_4
135795	1.475 Å	Schmidt, H.; Paschke, I.; Voigt, W. *Acta Crystallogr., Sect. E* **2021**, *77*, 924. $LiNa_3(SO_4)_2{\cdot}6H_2O$
143783	1.475 Å	Mutschke, A.; Bernard, G. M.; Bertmer, M.; Karttunen, A. J.; Ritter, C.; Michaelis, V. K.; Kunkel, N. *Angew. Chem., Int. Ed.* **2021**, *60*, 5683. Na_3SO_4H
162318	1.475 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 47. $K_2[Zn(H_2O)_6](SO_4)_2$
188767	1.475 Å	Mereiter, K. *Acta Crystallogr., Sect. E* **2013**, *69*, i63. $Na[Al(H_2O)_6](SO_4)_2$
201215	1.475 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[Al(H_2O)_6](SO_4)_2{\cdot}6H_2O$
203159	1.475 Å	Weber, H. J.; Schulz, M.; Schmitz, S.; Granzin, J.; Siegert, H. *J. Phys.: Cond. Matter* **1989**, *1*, 8543. Rb_2SO_4
249871	1.475 Å	Oswald, I. D. H.; Hamilton, A.; Hall, C.; Marshall, W. G.; Prior, T. J.; Pulham, C. R. *J. Am. Chem. Soc.* **2008**, *130*, 17795. $Na_2SO_4{\cdot}7H_2O$
2895	1.476 Å	Nord, A. G. *Acta Chem. Scand., Ser. A* **1973**, *27*, 814. Na_2SO_4
2925	1.476 Å	Robinson, D. J.; Kennard, C. H. L. *Cryst. Struct. Commun.* **1972**, *1*, 185. $K_2[Cu(H_2O)_6](SO_4)_2$
60824	1.476 Å	Heeg, M. J.; Hurd, A. *Acta Crystallogr., Sect. C* **1987**, *43*, 161. $Li_2NaK(SO_4)_2$
73623	1.476 Å	Frech, R.E.; Mattioda, A.; Huang, E. *J. Mol. Struct.* **1993**, *295*, 121. $(NH_4)_2(N_2H_6)(SO_4)_2$
138008	1.476 Å	Vasilchenko, D.; Tkachenko, P.; Tkachev, S.; Popovetskiy, P.; Komarov, V.; Asanova, T.; Asanov, I.; Filatov, E.; Maximovskiy, E.; Gerasimov, E.; Zhurenok, A.; Kozlova, E. *Inorg. Chem.* **2022**, *61*, 9667. $[Pt(OH)_2(H_2O)_4]SO_4$
162314	1.476 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 47. $K_2[Fe(H_2O)_6](SO_4)_2$
162315	1.476 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 47. $K_2[Co(H_2O)_6](SO_4)_2$
172401	1.476 Å	Rudneva, E. B.; Manomenova, V. L.; Malakhova, L. F.; Voloshin, A. E.; Smirnova, T. N. *Kristallografiya* **2006**, *51*, 372. $Cs_2[Ni(H_2O)_6](SO_4)_2$
249782	1.476 Å	Oswald, I. D. H.; Hamilton, A.; Hall, C.; Marshall, W. G.; Prior, T. J.; Pulham, C. R. *J. Am. Chem. Soc.* **2008**, *130*, 17795. $Na_2SO_4{\cdot}8H_2O$
27654	1.477 Å	Mehrotra, B. N.; Hahn, T.; Eysel, W.; Roepke, H.; Illguth, A. *Neues Jahrbuch Miner., Monatshefte* **1978**, 408. Na_2SO_4
108844	1.477 Å	Figgis, B. N.; Kucharski, E. S.; Reynolds, P. A. *Acta Crystallogr., Sect. B* **1990**, *46*, 161. $(NH_4)_2[Cr(H_2O)_6](SO_4)_2$

136895	1.477 Å	Urushihara, D.; Asaka, T.; Harada, M.; Kondo, S.; Nakayama, M.; Ogino, M.; Owaki, E.; Fukuda, K., *J. Solid State Chem.* **2022**, *306*, 122730. Na_2SO_4
162316	1.477 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 47. $K_2[Ni(H_2O)_6](SO_4)_2$
162317	1.477 Å	Bosi, F.; Belardi, G.; Ballirano, P. *Am. Miner.* **2009**, *94*, 47. $K_2[Cu(H_2O)_6](SO_4)_2$
28056	1.479 Å	Hawthorne, F. C.; Ferguson, R. B. *Can. Miner*. **1975**, *13*, 181. Na_2SO_4
138008	1.478 Å	Vasilchenko, D.; Tkachenko, P.; Tkachev, S.; Popovetskiy, P.; Komarov, V.; Asanova, T.; Asanov, I.; Filatov, E.; Maximovskiy, E.; Gerasimov, E.; Zhurenok, A.; Kozlova, E. *Inorg. Chem.* **2022**, *61*, 9667. $[Pt(OH)_2(H_2O)_4]SO_4$
143046	1.478 Å	Makarova, I.; Selezneva, E.; Canadillas-Delgado, L.; Mossou, E.; Vasiliev, A.; Komornikov, V.; Devishvili, A. *Acta Crystallogr., Sect. B* **2021**, *77*, 266.
145523	1.478 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4{\cdot}0.29H_2O$
31531	1.479 Å	Beaugnon, F.; Quiligotti, S.; Chevreux, Sy.; Wallez, G. *Solid State Sci.* **2020**, *108*, 106399. $CaSO_4$
74060	1.479 Å	Simmons, C. J.; Hitchman, M. A.; Stratemeier, H.; Schultz, A. J. *J. Am. Chem. Soc.* **1993**, *115*, 11304. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$
96931	1.479 Å	Tregenna-Piggott, P. L. W.; Andres, H. P.; McIntyre, G. J.; Best, S. P.; Wilson, C. C.; Cowan, J. A. *Inorg. Chem.* **2003**, *42*, 1350. $Cs[V(D_2O)_6](SO_4)_2{\cdot}6H_2O$
27751	1.480 Å	Kruglik, A. I.; Simonov, M. A.; Aleksandrov, K. S. *Kristallografiya* **1978**, *23*, 494. $LiNH_4SO_4$
67702	1.480 Å	Graneli, B.; Fischer, P.; Roos, J.; Brinkmann, D.; Hewat, A. W. *Phys. B: Cond. Matter* **1992**, *180*, 612. $LiNaSO_4$
96933	1.480 Å	Tregenna-Piggott, P. L. W.; Andres, H. P.; McIntyre, G. J.; Best, S. P.; Wilson, C. C.; Cowan, J. A. *Inorg. Chem.* **2003**, *42*, 1350. $Cs[Ti(D_2O)_6](SO_4)_2{\cdot}6H_2O$
145509	1.481 Å	Kyono, A.; Ikeda, R.; Takagi, S.; Nishiyasu, W. *J. Miner. Petrolog. Sci.* **2022**, *117*, 220811. $CaSO_4{\cdot}2H_2O$
74552	1.481 Å	Tahirov, T. H.; Lu, T.-H.; Huang, C.-C.; Chung, C.-S. J. *Acta Crystallogr., Sect. C* **1994**, *50*, 668. $(NH_4)_2[Ni(H_2O)_6](SO_4)_2$
78195	1.481 Å	Yang, Y-C.; Liu, X.; Zhu, C.-F.; Zhu, L.; Wu, L.-M.; Chen, L. *Angew. Chem., Int. Ed.* **2023**, *62*, e202301404. $[Ag(NH_3)_2]_2SO_4$
96931	1.481 Å	Tregenna-Piggott, P. L. W.; Andres, H. P.; McIntyre, G. J.; Best, S. P.; Wilson, C. C.; Cowan, J. A. *Inorg. Chem.* **2003**, *42*, 1350. $Cs[Mn(D_2O)_6](SO_4)_2{\cdot}6H_2O$
96937	1.481 Å	Tregenna-Piggott, P. L. W.; Andres, H. P.; McIntyre, G. J.; Best, S. P.; Wilson, C. C.; Cowan, J. A. *Inorg. Chem.* **2003**, *42*, 1350. $Cs[Ga(D_2O)_6](SO_4)_2{\cdot}6H_2O$
201210	1.481 Å	Beattie, J. K.; Best, S. P.; Skelton, B. W.; White, A. H. *J. Chem. Soc., Dalton Trans.* **1981**, 2105. $Cs[V(H_2O)_6](SO_4)_2{\cdot}6H_2O$

280384	1.481 Å	Figgis, B. N.; Sobolev, A. N.; Simmons, C. J.; Hitchman, M. A.; Stratemeier, H.; Riley, M. J. *Acta Crystallogr., Sect. B* **2000**, *56*, 438. $(NH_4)_2[Cu(H_2O)_6](SO_4)_2$
81463	1.483 Å	Rauw, W.; Ahsbahs, H.; Hitchman, M. A.; Lukin, S.; Reinen, D.; Schultz, A. J.; Simmons, C. J.; Stratemeier, H. *Inorg. Chem.* **1996**, *35*, 1902. $K_2[Cu(H_2O)_6](SO_4)_2$
139224	1.483 Å	Gatta, G. D.; Guastella, G.; Guastoni, A.; Gagliard, V.; Cañadillas-Delgado, L.; Fernandez-Diaz, M. T. *Am. Miner.* **2023**, *108*, 354. $(NH_4)_2[Mg_{0.963}Mn_{0.037}(H_2O)_6](SO_4)_2$
138469	1.486 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $CsLiSO_4$
138651	1.487 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $RbLiSO_4$
138912	1.487 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $RbLiSO_4$
411348	1.488 Å	Prescott, H. A.; Troyanov, S. I.; Kemnitz, E. *J. Solid State Chem.* **2001**, *156*, 415. $Na_2SO_4 \cdot 10H_2O$
15187	1.489 Å	Robinson, P. D.; Fang, J. H. *Am. Miner.* **1969**, *54*, 19. $Na[Al(H_2O)_6](SO_4)_2$
438	1.494 Å	Nord, A. G. *Acta Chem. Scand., Ser. A* **1976**, *30*, 198. Cs_2SO_4
Mean	**1.473 Å/138 structures**	

Thiosulfate ion, $S_2O_3^{2-}$

ICSD/CSD code	*d(S-O)+d(S-S)*	*Reference*
KOLXOY	1.446 + 1.969 Å	Freire, E.; Baggio, S.; Mombru, A.; Baggio, R. *Acta Crystallogr., Sect. C* **2000**, *56*, 541. $[Ni(C_{10}H_8N_2)_3](S_2O_3)\cdot 7H_2O$
4436	1.456 + 1.996 Å	Csordas, L. *Acta Chim. Acad. Sci. Hung.* **1969**, *62*, 371. $K_2S_2O_3\cdot 0.33H_2O$
9054	1.456 + 1.941 Å	Padmanabhan, V. M.; Yadava, V. S.; Navarro, Q. O.; Garcia, A.; Karsono, L.; Suh, I.-H.; Chien, L. S. *Acta Crystallogr., Sect. B* **1971**, *27*, 253. $Na_2S_2O_3\cdot 5H_2O$.
MOPSIV	1.456 + 1.979 Å	Dabrowska, A.; Chojnacki, J. *Z. Krist. Cryst. Mater.* **2014**, *229*, 555. $(H_3N\text{-}C_6H_{11})_2S_2O_3$
MOPSOB	1.456 + 1.997 Å	Dabrowska, A.; Chojnacki, J. *Z. Krist. Cryst. Mater.* **2014**, *229*, 555. $(H_3N(CH_2)_6NH_3)(NH_4)_2(S_2O_3)_2$
2428	1.458 + 2.016 Å	Elerman, Y.; Uraz, A. A.; Armagan, N. *Acta Crystallogr., Sect. B* **1978**, *34*, 3330. $[Ni(H_2O)_6]S_2O_3$
LICCIK	1.460 + 1.982 Å	de Vivar, M. E. D.; Baggio, S.; Garland, M. T.; Baggio, R. *Acta Crystallogr., Sect. C* **2007**, *63*, m153. $[Ni(C_{10}H_8N_2)(H_2O)_4]_n(S_2O_3)_n\cdot 7H_2O$
ROKHII	1.460 + 1.982 Å	Baggio, S.; Pardo, M. I.; Baggio, R.; Garland, M. T. *Acta Crystallogr., Sect. C* **1997**, *53*, 1570. $[Zn(C_{10}H_8N_2)(H_2O)_4]_n(S_2O_3)_n\cdot 7H_2O$
EVAVUT	1.461 + 1.997 Å	Yang, Y.-X.; Ng, S. W. *Acta Crystallogr., Sect. E* **2011**, *67*, o1664. $((CH_3)_4N)_2S_2O_3\cdot 4H_2O$
GINDUC	1.461 + 2.008 Å	Leyten, W.; Rettig, S. J.; Trotter, J. *Acta Crystallogr., Sect. C* **1988**, *44*, 1749. $(C_2H_5)_4N)_2(S_2O_3)\cdot 2H_2O$
425887	1.463 + 2.012 Å	Lehner, A. J.; Schindler, L. V.; Roehr, C. *Z. Naturforsch., Sect. B* **2013**, *68*, 323. $K_6(S_2O_3)_3\cdot H_2O$
24841	1.465 + 2.011 Å	Elerman, Y.; Fuess, H.; Joswig, W. *Acta Crystallogr., Sect. B* **1982**, *38*, 1799. $[Mg(H_2O)_6]S_2O_3$
425886	1.465 + 2.002 Å	Lehner, A. J.; Schindler, L. V.; Roehr, C. *Z. Naturforsch., Sect. B* **2013**, *68*, 323. $K_2S_2O_3$
432518	1.465 + 1.993 Å	Funk, C.; Schleid, T. *Z. Kristallogr., Suppl. Issue* **2017**, *37*, 108. $Cs_2S_2O_3$
PUMTUM	1.465 + 1.987 Å	Tong Jiang; Lough, A.; Ozin, G. A.; Bedard, R. L. *J. Mater. Chem.* **1998,** *8*, 733. $(C_{10}H_{18}N)_2S_2O_3$
2226	1.466 + 2.025 Å	Lisensky, G. C.; Levy, H. A. *Acta Crystallogr., Sect. B* **1978**, *34*, 1975. $Na_2S_2O_3\cdot 5H_2O$
24842	1.466 + 2.047 Å	Elerman, Y.; Fuess, H.; Joswig, W. *Acta Crystallogr., Sect. B* **1982**, *38*, 1799. $[Mg(H_2O)_6]S_2O_3$
34705	1.466 + 2.012 Å	Baggio, S.; Amzel, L.M.; Becka, L.N. *Acta Crystallogr., Sect. B* **1969**, *25*, 2650. $[Mg(H_2O)_6]S_2O_3$
37093	1.466 + 2.001 Å	von Benda, H.; von Benda, K. *Z. Naturforsch., Teil B* **1979**, *34*, 957. $Na_2S_2O_3$
279595	1.466 + 2.016 Å	Prasad, S. M.; Rani, A. *Acta Crystallogr., Sect. E* **2001**, *57*, 67. $Na_2S_2O_3\cdot 5H_2O$
15476	1.467 + 2.018 Å	Sandor, E.; Csordas, L. *Acta Crystallogr.* **1961**, *14*, 237. $Na_2S_2O_3$
59268	1.467 + 1.982 Å	Sobolev, A. N.; Figgis, B. N. *Acta Crystallogr., Sect. C* **1997**, *53*, 661. $[Co(NH_3)_6](S_2O_3)Cl\cdot H_2O$
936	1.468 + 2.016 Å	Uraz, A. A.; Armagan, N. *Acta Crystallogr., Sect. B* **1977**, *33*, 1396. $Na_2S_2O_3\cdot 5H_2O$
59815	1.468 + 2.008 Å	Held, P.; Bohaty, L. *Acta Crystallogr., Sect. C* **2004**, *60*, i97. $CaS_2O_3\cdot 6H_2O$
425888	1.468 + 2.030 Å	Lehner, A. J.; Schindler, L. V.; Roehr, C. *Z. Naturforsch., Sect. B* **2013**, *68*, 323. $Rb_2S_2O_3\cdot H_2O$
MOPSER	1.468 + 2.017 Å	Dabrowska, A.; Chojnacki, J. *Z. Krist. Cryst. Mater.* **2014**, *229*, 555. $(H_3N\text{-}t\text{-}C_4H_9)_2S_2O_3\cdot H_2O$

100282	1.469 + 1.965 Å	Aka, Y.; Armagan, N.; Aydin Uraz, A. *Z. Kristallogr.* **1980**, *151*, 61. $BaS_2O_3 \cdot H_2O$
417161	1.469 + 1.977 Å	Sharma, R.P.; Bala, R.; Pretto, L.; Ferretti, V.; Du Yu; Hong, Y. J. *J. Mol. Struct.* **2007**, *842*, 6. $[Co(NH_3)_6]BrS_2O_3 \cdot H_2O$
XIGSIR	1.469 + 1.983 Å	Srinivasan, B. R.; Khandolkar, S. S.; Jyai, R. N.; Ravikumar, K.; Sridhar, B.; Natarajan, S. *Spectrochim. Acta, Ser. A* **2013**, *102*, 235. $(H_3N(CH_2)_2NH_3)S_2O_3$
35664	1.470 + 2.019 Å	Elerman, Y.; Bats, J. W.; Fuess, H. *Acta Crystallogr., Sect. B* **1983**, *39*, 515. $[Mg(H_2O)_6]S_2O_3$
430930	1.470 + 2.028 Å	Winkler, V.; Schlosser, M.; Pfitzner, A. *Z. Naturforsch., Sect. B* **2016**, *71*, 579. $Cs_2S_2O_3 \cdot H_2O$
8126	1.471 + 1.979 Å	Teng, S. T.; Fuess, H.; Bats, J. W. *Acta Crystallogr., Sect. B* **1979**, *35*, 1682. $(NH_4)_2S_2O_3$
16035	1.471 + 2.012 Å	Baggio, S.; Amzel, L.; Becka, L. N. *Acta Crystallogr., Sect. B* **1969**, *25*, 1650. $[Mg(H_2O)_6]S_2O_3$
37094	1.472 + 1.999 Å	von Benda, H.; von Benda, K. *Z. Naturforsch., Teil B* **1979**, *34*, 957. $Na_2S_2O_3$
52210	1.472 + 2.022 Å	Klein, W. *Acta Crystallogr., Sect. E* **2023**, *79*, 44. $Na_2S_2O_3 \cdot 5H_2O$
72924	1.472 + 1.996 Å	Hesse, W.; Leutner, B.; Boehn, K. H.; Walker, N. P. C. *Acta Crystallogr., Sect. C* **1993**, *49*, 363. $Na_2S_2O_3 \cdot 0.667H_2O$ *Acta Crystallogr., Sect. C* **1993**, *49*, 363. $Na_2S_2O_3 \cdot 0.667H_2O$
UCIDAP	1.472 + 2.013 Å	Liu, Y.; Liu, X.; Xiong, Z.; Liu, B.; Xu, J.; Li, L.; Zhao, S.; Lin, Z.; Hong, M.; Luo, J. *Inorg. Chem.* **2021**, *60*, 14544. $(C(NH_2)_3)_2S_2O_3$
GANVEY	1.473 + 2.006 Å	Seidlhofer, B.; Nather, C.; Bensch, W. *Acta Crystallogr., Sect. E* **2012**, *68*, m167. $[NiC_8H_{26}N_6]S_2O_3 \cdot 3H_2O$
684	1.474 + 2.004 Å	Klein, W. *Acta Crystallogr., Sect. E* **2020**, *76*, 197. $SrS_2O_3 \cdot H_2O$
LERKOK	1.474 + 1.990 Å	Okuniewski, A.; Chojnacki, J.; Baranowska, K.; Becker, B. *Acta Crystallogr., Sect. C* **2013**, *69*, 195. $(H_2N(i\text{-}C_3H_7)_2S_2O_3$
59816	1.475 + 1.995 Å	Held, P.; Bohaty, L. *Acta Crystallogr., Sect. C* **2004**, *60*, i97. $SrS_2O_3 \cdot 5H_2O$
60026	1.475 + 2.005 Å	Teng, S. T.; Fuess, H.; Bats, J.W. *Acta Crystallogr., Sect. C* **1984**, *40*, 1785. $Na_2S_2O_3$
DMSOST	1.475 + 2.001 Å	Jansen, M.; Wiench, D. M. *Cryst. Struct. Commun.* **1978**, *7*, 423. $Na_2S_2O_3 \cdot (CH_3)_2SO$
PADBEC	1.475 + 2.004 Å	Nelson, J.; Nieuwenhuyzen, M.; Pal, I.; Town, R. M. *Dalton Trans.* **2004**, 2003. $(C_{30}H_{54}N_8O_3)(S_2O_3)(ClO_4)_4 \cdot 8H_2O$
LERKUQ	1.475 + 1.994 Å	Okuniewski, A.; Chojnacki, J.; Baranowska, K.; Becker, B. *Acta Crystallogr., Sect. C* **2013**, *69*, 195. $(H_2N(t\text{-}C_4H_9)_2S_2O_3$
MEGXON	1.475 + 1.952 Å	Basu, A.; Das, G. *Dalton Trans.* **2012**, *41*, 10792. $((C_2H_5)_4N)_2S_2O_3 \cdot 2N(C_9H_{10}ClN_2S)_3$
RAZQIV	1.475 + 2.010 Å	Brozdowska, A.; Chojnacki, J. *Acta Crystallogr., Sect. B* **2017**, *73*, 507. $(H_3N(CH_2)_5NH_3)S_2O_3 \cdot H_2O$
35665	1.476 + 2.018 Å	Elerman, Y.; Bats, J. W.; Fuess, H. *Acta Crystallogr., Sect. B* **1983**, *39*, 515. $[Mg(H_2O)_6]S_2O_3$
52206	1.476 + 2.006 Å	Klein, W. *Acta Crystallogr., Sect. E* **2023**, *79*, 44. $Na_2S_2O_3 \cdot 2H_2O$
60022	1.476 + 2.006 Å	Teng, S. T.; Fuess, H.; Bats, J.W. *Acta Crystallogr., Sect. C* **1984**, *40*, 1785. $Na_2S_2O_3$

AROWUA	1.476 + 1.984 Å	Srinivasan, B. R.; Naik, A. R.; Dhuri, S. N.; Nather, C.; Bensch, W. *J. Chem. Sci. (Bangalore)* **2011**, *123*, 55. $(C_4H_{12}N_2)S_2O_3 \cdot H_2O$
QIXPIW	1.476 + 1.994 Å	Maubert, B. M.; Nelson, J.; McKee, V.; Town, R. T.; Pal, I. *J. Chem. Soc., Dalton Trans.* **2001**, 1395. $(C_{36}H_{60}N_8O_3)(S_2O_3)(ClO_4)_4 \cdot 11H_2O$
140	1.477 + 1.979 Å	Manojlovic Muir, L.M. *Acta Crystallogr., Sect. B* **1975**, *31*, 135. $BaS_2O_3 \cdot H_2O$
NAGTUN	1.478 + 2.005 Å	Seck, G. A.; Sene, A.; Diop, L.; Maris, T. *Acta Crystallogr., Sect. E* **2016**, *72*, 273. $(C_6H_{13}N_2)_2S_2O_3 \cdot 2H_2O$
IZAVAG	1.480 + 1.989 Å	Diaz de Vivar, M. E.; Baggio, S.; Ibanez, A.; Baggio, R. *Acta Crystallogr., Sect. E* **2023**, *79*, 44. $[ZnC_8H_{24}N_2(H_2O)_2S_2O_3$
RAZQOB	1.481 + 1.991 Å	Brozdowska, A.; Chojnacki, J. *Acta Crystallogr., Sect. B* **2017**, *73*, 507. $(H_3N(CH_2)_6NH_3)S_2O_3 \cdot H_2O$
23881	1.482 + 2.020 Å	Nardelli, M.; Fava, G.; Giraldi, G. *Acta Crystallogr.* **1962**, *15*, 227. $[Mg(H_2O)_6]S_2O_3$
RAZQAN	1.482 + 2.009 Å	Brozdowska, A.; Chojnacki, J. *Acta Crystallogr., Sect. B* **2017**, *73*, 507. $(H_3N(CH_2)_3NH_3)S_2O_3 \cdot H_2O$
RAZPOA	1.484 + 1.992 Å	Brozdowska, A.; Chojnacki, J. *Acta Crystallogr., Sect. B* **2017**, *73*, 507. $(C_3H_{12}N_2)S_2O_3 \cdot H_2O$
UQUYAI	1.486 + 1.986 Å	Guchhait, T.; Mani, G.; Schulzke, C. *Dalton Trams.* **2016**, *45*, 11781. $(C_{32}H_{48}N_6)S_2O_3$
RAZQAN	1.487 + 2.002 Å	Brozdowska, A.; Chojnacki, J. *Acta Crystallogr., Sect. B* **2017**, *73*, 507. $(H_3N(CH_2)_4NH_3)S_2O_3 \cdot H_2O$
Total mean	**1.470 + 2.000 Å/60 structures**	

Selenite ion, SeO_3^{2-}

ICSD/CSD code	*d(Se-O)*	*Reference*
VEXCAD	1.676 Å	Wiechoczek, M.; Jones, P. G. *Z. Naturforsch., Teil B* **2006**, *61*, 1401. $(C_4H_{12}N)_2(SeO_3)$
183813	1.648 Å	Pushkin, D. V.; Peresypkina, E. V.; Serezhkina, L. B.; Savchenkov, A. V.; Virovets, A. V.; Serezhkin, V.N. *Zh. Neorg. Khim.* **2012**, *57*, 216-221; *Russ. J. Inorg. Chem.* **2012**, *57*, 175-180. $(C(NH_2)_3)_2[(UO_2)_2(C_2O_4)(SeO_3)_2]$
MAQGIY	1.678 Å	Al Isawi, W. A.; Zeller, M.; Mezei, G. *Cryst. Growth Des.* **2022**, *22*, 1398. $(C_{22}H_{24}N)(N(n\text{-}C_4H_9)SeO_3\cdot[Cu_{28}C_{84}H_{112}N_{56}O_{28}]\cdot 1.327C_6H_4Cl_2$
IKUWIX	1.685 Å	Ayadi, R.; Lhoste, J.; Rak, I. L.; Mhiri, T.; Boujelbene, M. *J. Saudi Chem. Soc.* **2017**, *21*, 869. $(H_3N(CH_2)_3NH_3)_2SeO_3SeO_4\cdot 4H_2O$
TUYMOP	1.686 Å	Havlicek, D.; Chudoba, V.; Nemec, I.; Cisarova, I.; Micka, Z. *J. Mol. Struct.* **2002**, *606*, 101. $(C_4H_{12}N_2)(SeO_3)\cdot H_2O$
KOBFEO	1.686 Å	Jmal, A.; Oueslati, A.; Hamdi, B.; Jarraya, K. *Solid State Sci.* **2017**, *64*, 99. $(C_6H_5CH_2NH_3)_2SeO_3\cdot H_2O$
TUYMOP	1.686 Å	Havlicek, D.; Chudoba, V.; Nemec, I.; Cisarova, I.; Micka, Z. *J. Mol. Struct.* **2002**, *606*, 101. $(C_4H_{12}N_2)SeO_3\cdot H_2O$
137592	1.687 Å	Albrecht, R.; Doert, T.; Ruck, M. *Acta Crystallogr., Sect. E* **2022**, *78*, 615. K_2SeO_3
YASHAC	1.687 Å	Todd, M. J.; Harrison, W. T. A. *Acta Crystallogr., Sect. E* **2005**, *61*, o1538. $(C_3H_{12}N_2)(SeO_3)\cdot H_2O$
BAYBUZ	1.689 Å	Chudoba, V.; Micka, Z.; Havlicek, D.; Cisarova, I.; Nemec, I.; Robinson, W. T. *J. Solid State Chem.* **2003**, *170*, 390. $(C_4H_{14}N_2)(SeO_3)\cdot H_2O$
420179	1.691 Å	Burns, W. L.; Ibers, J. A. *J. Solid State Chem.* **2009**, *182*, 1457-1461. $Cs(UO_2)(SeO_3)(HSeO_3)\cdot 3H_2O$
BAYCEK	1.692 Å	Chudoba, V.; Micka, Z.; Havlicek, D.; Cisarova, I.; Nemec, I.; Robinson, W. T. *J. Solid State Chem.* **2003**, *170*, 390. $(C_3H_{12}N_2)(SeO_3)\cdot 2H_2O$
184743	1.698 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao *Dalton Trans.* **2012**, *41*, 5687-5695. $Rb_4(Mo_5O_{15})(SeO_3)_2\cdot 2H_2O$
280981	1.698 Å	Wickleder, M. S. *Acta Crystallogr., Sect. E* **2002**, *58*, 103-104. Na_2SeO_3
VEXCEH	1.698 Å	Wiechoczek, M.; Jones, P. G. *Z. Naturforsch., Teil B* **2006**, *61*, 1401. $(C_4H_{12}N)_2(SeO_3)\cdot 1.5H_2O$
184742	1.700 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao *Dalton Trans.* **2012**, *41*, 5687-5695. $K_4(Mo_5O_{15})(SeO_3)_2\cdot 2H_2O$
BAYCIO	1.700 Å	Chudoba, V.; Micka, Z.; Havlicek, D.; Cisarova, I.; Nemec, I.; Robinson, W. T. *J. Solid State Chem.* **2003**, *170*, 390. $(C_2H_{10}N_2)(SeO_3)$
184744	1.701 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao *Dalton Trans.* **2012**, *41*, 5687-5695. $Rb_4(Mo_5O_{15})(SeO_3)_2\cdot 2H_2O$

3344	1.707 Å	Liang, M.-L.; Ma, Y.-X.; Hu, C.-L.; Kong, F.; Mao, J.-G. *Dalton Trans.* **2018**, *47*, 1513. $Ba(VO_2F)SeO_3$
3343	1.711 Å	Liang, M.-L.; Ma, Y.-X.; Hu, C.-L.; Kong, F.; Mao, J.-G. *Dalton Trans.* **2018**, *47*, 1513. $Sr(VO_2F)SeO_3$
184745	1.715 Å	Kong Fang; Hu Chunli; Xu Xiang; Zhou Tianhua; Mao Jianggao *Dalton Trans.* **2012**, *41*, 5687-5695. $HRb_3(Mo_5O_{15})(SeO_3)_2 \cdot 2H_2O$
Mean	**1.691 Å/21 structures**	

Selenate ion, SeO_4^{2-}

ICSD/CSD code	*d(Se-O)*	*Reference*
73411	1.600 Å	Fabry, J.; Breczewski, T. *Acta Crystallogr., Sect. C* **1993**, *49*, 1724. Tl_2SeO_4
STOSEH10	1.603 Å	Neidle, S. ; Rogers, D. ; Hursthouse, M. B. *Proc. R. Soc. London, Ser. A* **1978**, *359*, 365. $(C_{21}H_{43}N_8O_{12})_2(SeO_4)_3 \cdot 8H_2O$
419775	1.617 Å	Grzechnik, A.; Breczewski, T.; Friese, K. *J. Solid State Chem.* **2008**, *181*, 2914-2917. Tl_2SeO_4
99382	1.618 Å	Friese, K.; Goeta, A. E.; Leech, M. A.; Howard, J. A. K.; Madariaga, G.; Perez-Mato, J. M.; Breczewski, T. *J. Solid State Chem.* **2004**, *177*, 1127-1136. Tl_2SeO_4
KERRIK02	1.618 Å	Kessentini, Y.; Ben Ahmed, A.; Al-Juaid, S. S.; Elaoud, Z. *J. Solid State Chem.* **2022**, *313*, 123286. $(C_{12}H_{18}N)_2SeO_4 \cdot H_2O$
21047	1.620 Å	Kruglik, A. I.; Simonov, V. I.; Yuzvak, V. I. *Kristallografiya* **1973**, *18N*, 287-292. $(NH_4)NaSeO_4 \cdot 2H_2O$
157371	1.620 Å	Dammak, M.; Litaiem, H.; Gravereau, P.; Mhiri, T.; Kolsi, A. W. *J. Alloys Compd.* **2007**, *442*, 316-319. $Rb_2SeO_4 \cdot Te(OH)_6$
419338	1.621 Å	Ghedia, S.; Dinnebier, R.; Jansen, M. *Solid State Sci.* **2009**, *11*, 72-76. Rb_2SeO_4
KERRIK	1.621 Å	Kessentini, Y.; Ahmed, A. B.; Elaoud, Z.; Aljuaid, S. S.; Mhiri, T. *Spectrochim. Acta, Sect. A* **2012**, *98*, 222. $(C_{12}H_{18}N)_2SeO_4 \cdot H_2O$
14298	1.622 Å	Kalman, A.; Stephens, J. S.; Cruickshank, D. W. J. *Acta Crystallogr., Sect. B* **1970**, *26*, 1451-1454. K_2SeO_4
107620	1.622 Å	Malchus, M.; Jansen, M. *Z. Naturforsch., Teil B* **1998**, *53*, 704-710. $(N(CH_3)_4)_2SeO_4$
200539	1.622 Å	Nozik, Y. Z.; Fykin, L. E.; Duderov, V. Y.; Muradyan, L. A.; Rostuntseva, A. I. *Kristallografiya* **1978**, *23N*, 617-619. $Na(NH_4)SeO_4 \cdot 2H_2O$
MAKLUH	1.622 Å	Ayi, A. A.; Uwah, I. E.; Iniama, G. E. *Ultra Sci. Phys. Sci.* **2007**, *19*, 473. $(H_3N(CH_2)_2(NH_2(CH_2)_2)_2NH_3)(SeO_4)_2 \cdot 4H_2O$
73464	1.624 Å	Fabry, J.; Breczewski, T.; Petricek, V. *Acta Crystallogr., Sect. B* **1993**, *49*, 826-832. $K_3Na(SeO_4)_2$
81688	1.624 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. *Ferroelectrics* **1996**, *177*, 191-199. K_2SeO_4
99383	1.625 Å	Friese, K.; Goeta, A. E.; Leech, M. A.; Howard, J. A. K.; Madariaga, G.; Perez-Mato, J. M.; Breczewski, T. *J. Solid State Chem.* **2004**, *177*, 1127-1136. Tl_2SeO_4
81689	1.626 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. *Ferroelectrics* **1996**, *177*, 191-199. K_2SeO_4
81690	1.626 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. *Ferroelectrics* **1996**, *177*, 191-199. K_2SeO_4

DUKLUS	1.626 Å	Thomas, S. P.; Veccham, S. P. K. P.; Farrugia, L. J.; Guru Row, T. N. *Cryst. Growth Des.* **2015**, *15*, 2110. $(C_9H_{11}N_4O_2S_2)_2SeO_4$
LORYAT	1.626 Å	Janczak, J.; J.Perpetuo, G. *Acta Crystallogr., Sect. C* **2009**, *65*, o121. $(H_3NC_6H_4OH)_2SeO_4{\cdot}2H_2O$
WOKSOG	1.626 Å	Ben Hassen, C.; Boujelbene, M.; Bahri, M.; Zouari, N.; Mhiri, T. *J. Mol. Struct.* **2014**, *1074*, 602. $(C_7H_{10}N)_2SeO_4$
54168	1.627 Å	Fukami, T.; Chen, R.-H. *Acta Phys. Pol., Ser. A* **1998**, *94*, 795-801. $K_3Na(SeO_4)_2$
WULSAY01	1.627 Å	Zhang, W.; Chen, L.-Z.; Xiong, R.-G.; Nakamura, T.; Huang, S. D. *J. Am. Chem. Soc.* **2009**, *131*, 12544. $[Cu(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
158790	1.628 Å	Krivovichev, S. V. *Ukrain. Dokl. Kristallogr.* **2006**, *135*, 106-113. $[Al(H_2O)_6]_2(SeO_4)_3(NO_3){\cdot}4H_2O$
250316	1.628 Å	Krivovichev, S. V. *Zapiski Vserossijskogo Mineralogicheskogo Obshchestva* **2006**, *135*, 106-113. $[Al(H_2O)_6]_2(SeO_4)_3{\cdot}4H_2O$
419776	1.628 Å	Grzechnik, A.; Breczewski, T.; Friese, K. *J. Solid State Chem.* **2008**, *181*, 2914-2917. Tl_2SeO_4
JUFKIUS	1.628 Å	Mottillo, C.; Friscic, T. *Chem. Commun.* **2015**, *51*, 8924. $(C_{13}H_{11}N_2)_2SeO_4$
JEMYIM	1.629 Å	Naili, N.; Francois, M.; Norquist, A. J.; Rekik,W. *Solid State Sci.* **2017**, *74*, 44. $[Mn(H_2O)_6]C_6H_{14}N_2(SeO_4)_2$
81691	1.630 Å	Gonzalez-Silgo, C.; Solans, X.; Ruiz-Perez, C.; Martinez-Sarrion, M. L.; Mestres, L. *Ferroelectrics* **1996**, *177*, 191-199. K_2SeO_4
94517	1.630 Å	Troyanov, S. I.; Kosterina, E. V.; Kemnitz, E. *Zh. Neorg. Khim.* **2001**, *46*, 1496-1502. $Cs_4(SeO_4)(HSeO_4)_2{\cdot}HF$
160681	1.630 Å	Smirnov, L. S.; Melnyk, G.; Zink, N.; Wozniak, K.; Dominiak, P.; Pawlukojc, A.; Loose, A.; Shuvalov, L. A. *Poverkhnostnye Fizika, Khimiya, Mekhanika* **2007**, 73-79. $(NH_4)_2(SeO_4)_2$
281276	1.630 Å	Johnston, M. G.; Harrison, W. T. A. *Acta Crystallogr., Sect. E* **2003**, *59*, i25-i27. $Li_2SeO_4{\cdot}H_2O$
710013	1.630 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 360-364. $Tl_2[Zn(H_2O)_6](SeO_4)_2$
HILPAT	1.630 Å	Malchus, M.; Jansen, M. *Naturforsch., Sect B* **1998**, *53*, 704. $((CH_3)_4N)_2SeO_4$
RUXWIQ	1.630 Å	Nemec, I.; Gyepes, R.; Micka, Z.; Trojanek, F. *Mat. Res. Soc. Symp. Proc.* **2002**, *725*, 213. $(C_5H_{12}NO_2)_2SeO_4{\cdot}2H_2O$M.K.Marchewka, J.Janczak, S.Debrus, J.Baran, H.Ratajczak
60928	1.631 Å	Takahashi, I.; Onodera, A.; Shiozaki, Y. *Acta Crystallogr., Sect. C* **1987**, *43*, 179-182. Rb_2SeO_4
73463	1.631 Å	Fabry, J.; Breczewski, T.; Petricek, V. *Acta Crystallogr., Sect. B* **1993**, *49*, 826-832. $K_3Na(SeO_4)_2$
150083	1.631 Å	Wildner, M.; Stoilova, D.; Georgiev, M.; Karadjova, V. *J. Mol. Struct.* **2004**, *707*, 123-130. $[Be(H_2O)_4]SeO_4$
710012	1.631 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 360-364. $Tl_2[Ni(H_2O)_6](SeO_4)_2$

PRACSE10	1.631 Å	Morosin, B.; Howatson, J. *Acta Crystallogr., Sect. B* **1970**, *26*, 2062. $[Cu(H_2N(CH_2)NH_2)_2]SeO_4 \cdot H_2O$
27656	1.632 Å	Mehrotra, B. N.; Hahn, T.; Eysel, W.; Roepke, H.; Illguth, A. *Neues Jahrbuch fuer Mineralogie. Monatshefte* **1978**, 408-421. Na_2SeO_4
61183	1.632 Å	Kruglik, A. I. *Dokl. Akad. Nauk SSSR* **1976**, *229*, 853-855. $Na(NH_4)(SeO_4) \cdot 2H_2O$
158480	1.632 Å	Krivovichev, S. V. *Ukrain. Dokl. Kristallogr.* **2006**, *135*, 80-87. $[Mg(H_2O)_4]_2(SeO_4)_2 \cdot H_2O$
200912	1.632 Å	Mukhtarova, N. N.; Rastsvetaeva, R. K.; Ilyukhin, V. V.; Belov, N. V. *Kristallografiya* **1979**, *24N*, 1184-1192. $Na[In(H_2O)_6](SeO_4)_2$
250370	1.632 Å	Krivovichev, S. V. *Zapiski Vserossijskogo Mineralogicheskogo Obshchestva* **2006**, 80-87. $[Mg(H_2O)_4]_2(SeO_4)_2 \cdot H_2O$
710008	1.632 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 360-364. $Tl_2[Mg(H_2O)_6](SeO_4)_2$
RANYEK	1.632 Å	Havlicek, D.; Plocek, J.; Nemec, I.; Gyepes, R.; Micka, Z. *J. Solid State Chem.* **2000**, *150*, 305. $(C_6H_{16}N_2)SeO_4 \cdot 2H_2O$
WUYXIX	1.632 Å	Marchewka, M. K.; Janczak, J.; Debrus, S.; Baran, J.; Ratajczak, H. *Solid State Sci.* **2003**, *5*, 643. $(C_3H_7N_6)_4(SeO_4)_2 \cdot 3H_2O$
OWOROI	1.632 Å	Liao, J.-H.; Chang, H.-W.; You, H.-C.; Fang, C.-S.; Liu, C. W. *Inorg. Chem.* **2011**, *50*, 2070. $[Ag_{32}C_{96}H_{240}O_{48}P_{24}S_{48}](SeO_4)_2(PF_6)_4$
82757	1.633 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. *Coll. Czech. Chem. Commun.* **1996**, *61*, 1295-1306. $Rb_2[Mg(H_2O)_6](SeO_4)_2$
174115	1.633 Å	Sawae, S.; Nakashima, T.; Shigematsu, H.; Kasano, H.; Mashiyama, H. *J. Phys. Soc. Jpn.* **2005**, *74*, 2748-2753. $(K_{0.52}Rb_{0.48})_2SeO_4$
240671	1.633 Å	Ling, J.; Albrecht-Schmitt, T. E. *Inorg. Chem.* **2007**, *46*, 346-347. $K_2SeO_4 \cdot 2HIO_3$
710009	1.633 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 360-364. $Tl_2[Co(H_2O)_6](SeO_4)_2$
JUFLAZ	1.641 Å	Mottillo, C.; Friscic, T. *Chem. Commun.* **2015**, *51*, 8924. $(C_{13}H_{11}N_2)_2SeO_4 \cdot 2CH_3OH$
RANYAG	1.633 Å	Havlicek, D.; Plocek, J.; Nemec, I.; Gyepes, R.; Micka, Z. *J. Solid State Chem.* **2000**, *150*, 305. $(C_4H_{12}N_2)SeO_4 \cdot H_2O$
82756	1.634 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. *Coll. Czech. Chem. Commun.* **1996**, *61*, 1295-1306. $K_2[Mg(H_2O)_6](SeO_4)_2$
152720	1.634 Å	Litaiem, H.; Dammak, M.; Mhiri, T.; Cousson, A. *J. Alloys Compd.* **2005**, *396*, 34-39. $(NH_4)_2SeO_4 \cdot Te(OH)_6$
158479	1.634 Å	Krivovichev, S. V. *Ukrain. Dokl. Kristallogr.* **2006**, *135*, 96-101. $[Al(H_2O)_6](SeO_4)(NO_3) \cdot H_2O$

250369	1.634 Å	Krivovichev, S. V. *Zapiski Vserossijskogo Mineralogicheskogo Obshchestva* **2006**, 96-101. $[Al(H_2O)_6]_2(SeO_4)(NO_3)\cdot H_2O$
710010	1.634 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 360-364. $Tl_2[Cu(H_2O)_6](SeO_4)_2$
710011	1.634 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Crystal Struct.* **2009**, *224*, 360-364. $Tl_2[Mn(H_2O)_6](SeO_4)_2$
ISOMOT	1.634 Å	Matulkova, I.; Cihelka, J.; Fejfarova, K.; Dusek, M.; Pojarova, M.; Vanek, P.; Kroupa, J.; Sala, M.; Krupkova, R.; Nemec, I, *CrystEngComm* **2011**, *13*, 4131. $(C_6H_5NH_3)_2SeO_4\cdot 2H_2O$
51079	1.635 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Stiewe, A.; Kemnitz, E. J. *Solid State Chem.* **1998**, *141*, 317-322. $Cs_4(SeO_4)(HSeO_4)2\cdot H_3PO_4$
67234	1.635 Å	Pietraszko, A.; Lukaszewicz, K.; Augustyniak, M. A. *Acta Crystallogr., Sect. C* **1992**, *48*, 2069-2071. Li_2SeO_4
71786	1.635 Å	Baran, J.; Lis, T.; Marchewka, M.; Ratajczak, H. *J. Mol. Struct.* **1991**, *250*, 13-45. $Na_4(SeO_4)(SeO_3)\cdot H_2O$
82758	1.635 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. *Coll. Czech. Chem. Commun.* **1996**, *61*, 1295-1306. $Cs_2[Mg(H_2O)_6](SeO_4)_2$
82759	1.635 Å	Micka, Z.; Prokopova, L.; Cisarova, I.; Havlicek, D. *Coll. Czech. Chem. Commun.* **1996**, *61*, 1295-1306. $(NH_4)_2[Mg(H_2O)_6](SeO_4)_2$
250994	1.635 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2013**, *52*, 10481. $K_2[Cu(H_2O)_6](SeO_4)_2$
409719	1.635 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 265-268. $Rb_2[Mg(H_2O)_6](SeO_4)_2$
409750	1.635 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 405-408. $Rb_2[Zn(H_2O)_6](SeO_4)_2$
411002	1.635 Å	Troyanov, S. I.; Morozov, I. V.; Rybakov, V. B.; Kemnitz, E. *Kristallografiya* **2000**, *45*, 441-447. $Rb_2SeO_4\cdot H_3PO_4$
ISOMUZ	1.635 Å	Matulkova, I.; Cihelka, J.; Fejfarova, K.; Dusek, M.; Pojarova, M.; Vanek, P.; Kroupa, J.; Sala, M.; Krupkova, R.; Nemec, I, *CrystEngComm* **2011**, *13*, 4131. $(C_6H_5NH_3)_2SeO_4$
JUFKOM	1.635 Å	Mottillo, C.; Friscic, T. *Chem. Commun.* **2015**, *51*, 8924. $(C_8H_9N_2)_2SeO_4\cdot CH_3OH\cdot 0.5H_2O$
ROPMIU	1.635 Å	Ben Hassen, C.; Boujelbene, M.; Mhiri, T. *J. Mol. Struct.* **2015**, *1079*, 147. $(C_5H_6N_5)_2SeO_4\cdot 2H_2O$
66526	1.636 Å	Zuniga, F. J.; Breczewski, T.; Arnaiz, A. *Acta Crystallogr., Sect. C* **1991**, *47*, 638-640. Cs_2SeO
193627	1.636 Å	Pristacz, H.; Talla, D.; Preuschl, F.; Giester, G.; Wildner, M. *Neues Jahrbuch fuer Mineralogie, Abhandlungen* **2014**, *191*, 215. $Ca(SeO_4)_2$

409722	1.636 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 265-268. $Rb_2[Zn(H_2O)_6](SeO_4)_2$
409747	1.636 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 405-408. $Rb_2[Mn(H_2O)_6](SeO_4)_2$
409748	1.636 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 405-408. $Rb_2[Co(H_2O)_6](SeO_4)_2$
MARFEU	1.636 Å	Nkhili, N. L.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Arab J. Chem.* **2017**, *10*, S2509. $[Ni(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
IKUWIX	1.636 Å	Ayadi, R.; Lhoste, J.; Rak, I. L..; Mhiri, T.; Boujelbene, M. *J. Saudi Chem. Soc.* **2017**, *21*, 869. $(H_3N(CH_2)_3NH_3)_2(SeO_3)(SeO_4)\cdot 4H_2O$
RAFWII	1.636 Å	Messoudi, N.; Messoudi, N.; Elleuch, S.; Jarraya, K. *Zh. Strukt. Khim.* **2021**, *62*, 1293. $(C_3H_8N_6)SeO_4$
TISWOL	1.636 Å	Panicker, L. *J. Mol. Struct.* **2024**, *1296*, 136764. $(p\text{-}H_3NC_6H_4COOH)_2SeO_4\cdot 3H_2O$
TISWUR	1.636 Å	Panicker, L. *J. Mol. Struct.* **2024**, *1296*, 136764. $(p\text{-}H_3NC_6H_4COOH)_2SeO_4$
171281	1.637 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021-1031. $K_2[Cu(H_2O)_6](SeO_4)_2$
171282	1.637 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021-1031. $K_2[Cu(H_2O)_6](SeO_4)_2$
246302	1.637 Å	Pertlik, F.; Fuith, A. H. *Acta Crystallogr., Sect. C* **1989**, *45*, 158-159. Li_2SeO_4
409591	1.637 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr. - New Cryst. Struct.* **2002**, *217*, 15-16. $Rb_2[Ni(H_2O)_6](SeO_4)_2$
409591	1.637 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr. - New Cryst. Struct.* **2002**, *217*, 15-16. $Rb_2[Cu(H_2O)_6](SeO_4)_2$
409669	1.637 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 9-10. $[Mn(H_2O)_4]SeO_4\cdot H_2O$
409720	1.637 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 265-268. $Rb_2[Co(H_2O)_6](SeO_4)_2$
409749	1.637 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 405-408. $Rb_2[Ni(H_2O)_6](SeO_4)_2$
FAKVEU	1.637 Å	Kammoun, O.; Loulou, N.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *J. Chem. Cryst.* **2012**, *42*, 103. $[Co(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
HIZVIZ	1.637 Å	Einkauf, J. D.; Williams, N. J.; Seipp, C. A.; Custelcean, R. *JACS Au* **2023**, *3*, 879. $(C_9H_{15}N_8)SeO_4\cdot 4H_2O$
NENHOF	1.637 Å	Daszkiewicz, M. *Struct. Chem.* **2012**, *23*, 307. $(C_4H_6N_3)_2SeO_4\cdot H_2O$
QIXPES	1.637 Å	Maubert, B. M.; Nelson, J.; McKee, V.; Town, R. M.; Pal, I. *J.Chem.Soc., Dalton Trans.* **2001**, 1395. $(C_{36}H_{60}N_8)SeO_4(ClO_4)_4\cdot H_2O$

QOFSAI	1.637 Å	Diallo, W.; Diop, L.; Diop, C. A. K.; Plasseraud, L.; Cattey, H. *Z. Naturforsch., Sect. B* **2017**, *72*, 425. $(N(i\text{-}C_3H_7)_2)_2SeO_4$
89440	1.638 Å	Pietraszko, A.; Bronowska, W. *Solid State Commun.* **1999**, *111*, 205-209. $Rb_2Li_4(SeO_4)_3\cdot 2H_2O$
150084	1.638 Å	Wildner, M.; Stoilova, D.; Georgiev, M.; Karadjova, V. *J. Mol. Struct.* **2004**, *707*, 123-130. $[Be(H_2O)_4]SeO_4$
150706	1.638 Å	Fukami, T.; Chen Rueyhong *J. Phys. Soc. Jpn.* **2003**, *72*, 3299-3300. Na_2SeO_4
171280	1.638 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021-1031. $K_2[Cu(H_2O)_6](SeO_4)_2$
242241	1.638 Å	Kamburov, S.; Schmidt, H.; Voigt, W.; Balarew, C. *Acta Crystallogr., Sect. B* **2014**, *70*, 714. $Na_2SeO_4\cdot 10H_2O$
409648	1.638 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr. - New Cryst. Struct.* **2002**, *217*, 471-473. $(NH_4)_2[Co(H_2O)_6](SeO_4)_2$
409721	1.638 Å	Euler, H.; Meents, A.; Barbier, B.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 265-268. $Rb_2[Mn(H_2O)_6](SeO_4)_2$
409746	1.638 Å	Euler, H.; Barbier, B.; Meents, A.; Kirfel, A. *Z. Kristallogr. - New Cryst. Struct.* **2003**, *218*, 405-408. $Rb_2[Mg(H_2O)_6](SeO_4)_2$
419776	1.638 Å	Grzechnik, A.; Breczewski, T.; Friese, K. *J. Solid State Chem.* **2008**, *181*, 2914-2917. Tl_2SeO_4
47736	1.638 Å	Reuter, H.; Kamaha, S. *Acta Crystallogr., Sect. E* **2022**, *78*, 809. $Ba_3[Sn(OH)_6](SeO_4)_2\cdot 3H_2O$
70988	1.638 Å	Yan, Q.; Dong, X.; Huang, L.; Zhou, Y.; Lin, Z.; Zou, G. *Inorg. Chem.* **2023**, *62*, 4752. $Na_3Li(SeO_4)_2\cdot 3H_2O$
COSSAH	1.638 Å	Messoudi, N.; Messoudi, N.; Litaiem, H.; Jarraya, K. *J. Mol. Struct.* **2019**, *1198*, 126854. $(C_5H_5NNH_3)_2SeO_4\cdot H_2O$
PIPLAE	1.638 Å	Boursas, F.; Berrah, F.; Kanagathara, N.; Anbalagan, G.; Bouacida, S. *J. Mol. Struct.* **2019**, *1180*, 532. $(C_3H_5N_4O_2)_2SeO_4\cdot 2H_2O$
QITYUO	1.638 Å	Sansam, B. C. R.; Anderson, K. M.; Steed, J. W. *Cryst. Growth Des.* **2007**, *7*, 2649. $(C_{12}H_{11}N_4)_2SeO_4\cdot 6H_2O$
ZIWSAC	1.638 Å	Maalej, W. CCDC deposition number 1887612, **2018**. $[Ni(H_2O)_4(C_{12}H_{12}N_2)]SeO_4$
154512	1.639 Å	Dammak, M.; Mhiri, T.; Cousson, A. *J. Alloys Compd.* **2006**, *407*, 176-181. $K_2SeO_4\cdot Te(OH)_6$
194195	1.639 Å	Weil, M.; Bonneau, B. *Acta Crystallogr., Sect. E* **2014**, *70*, 54. $Na_2SeO_4\cdot 10H_2O$
200156	1.639 Å	Mukhtarova, N. N.; Rastsvetaeva, R. K.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1977**, *235*, 575-577. $Na[In(H_2O)_6](SeO_4)_2$
201893	1.639 Å	Yamada, N.; Ono, Y.; Ikeda, T. *J. Phys. Soc. Jpn.* **1984**, *53*, 2565-2574. K_2SeO_4
280788	1.639 Å	Kolitsch, U. *Acta Crystallogr., Sect. E* **2002**, *58*, 3-5. $[Mg(H_2O)_6]SeO_4$

409649	1.639 Å	Fleck, M.; Kolitsch, U. *Z. Kristallogr. - New Cryst. Struct.* **2002**, *217*, 471-473. $(NH_4)_2[Zn(H_2O)_6](SeO_4)_2$
BIWZUG	1.639 Å	Baaziz, S.; Poyraz, E. B.; Benali-Cherif, R.; Falek, W.; Hannachi, B.; Dege, N.; Bendeif, E.; Benali-Cherif, N. *J. Struct. Chem.* **2023**, *64*, 1350. $(C_5H_6N_6O)_2SeO_4{\cdot}2.5H_2O$
FUQYAT	1.639 Å	Matulkova, I.; Mathauserova, J.; Cisarova, I.; Nemec, I.; Fabry, J. *J. Mol. Struct.* **2016**, *1103*, 82. $(C_4H_7N_4)_2SeO_4{\cdot}2H_2O$
KARFIU	1.639 Å	Daszkiewicz, M.; Marchewka, M. K. *Vibr. Spectroscopy* **2011**, *57*, 326. $(C_5H_9N_2)SeO_4$
TOJYEY	1.639 Å	Weil, M.; Bonneau, B. *Acta Crystallogr., Sect. E* **2014**, *70*, 54. $[Na_2(H_2O)_8]SeO_4{\cdot}2H_2O$
201740	1.640 Å	Mascherpa-Corral, D.; Ducourant, M. B.; Fourcade, R.; Mascherpa, G.; Alberola, S. *J. Solid State Chem.* **1986**, *63*, 52-61. $K_2SeO_4{\cdot}2SbF_3{\cdot}H_2O$
244208	1.640 Å	Martin, A. T.; Nichols, S. M.; Li, S.; Tan, M.; Kahr, B. *J. Appl. Crystallogr.* **2017**, *50*, 1117. $(C_2H_{10}N)SeO_4$
GAXJAS	1.640 Å	Matulkova, I.; Cihelka, J.; Pojarova, M.; Fejfarova, K.; Dusek, M.; Vanek, P.; Kroupa, J.; Krupkova, R.; Fabry, J.; Nemec, I. *CrystEngComm* **2012**, *14*, 4625. $(C_2H_6N_5)_2SeO_4{\cdot}2H_2O$
HIWRIS	1.640 Å	Bhavani, R.; Kanagathara, N.; Marchewka, M. K.; Janczak, J.; Senthilkumar, K.; Azam, M. *Results Chem.* **2023**, *7*, 101239. $(2\text{-}NC_5H_4OH)_2SeO_4$
HIZTET	1.640 Å	Einkauf, J. D.; Williams, N. J.; Seipp, C. A.; Custelcean, R. *JACS Au* **2023**, *3*, 879. $(C_6H_{16}N_8)SeO_4{\cdot}2H_2O$
HIZTOD	1.640 Å	Einkauf, J. D.; Williams, N. J.; Seipp, C. A.; Custelcean, R. *JACS Au* **2023**, *3*, 879. $(C_{10}H_{16}N_8)SeO_4{\cdot}2H_2O$
XECZUD	1.640 Å	Martin, A. T.; Nichols, S. M.; Li, S.; Tan, M.; Kahr, B. *J. Appl. Crystallogr.* **2017**, *50*, 1117. $(H_3N(CH_2)NH_3)SeO_4$
60929	1.641 Å	Takahashi, I.; Onodera, A.; Shiozaki, Y. *Acta Crystallogr., Sect. C* **1987**, *43*, 179-182. Rb_2SeO_4
171279	1.641 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021-1031. $K_2[Cu(H_2O)_6](SeO_4)_2$
194194	1.641 Å	Weil, M.; Bonneau, B. *Acta Crystallogr., Sect. E* **2014**, *70*, 54. $Na_2SeO_4{\cdot}1.5H_2O$
248730	1.641 Å	Fortes, A. D.; Gutmann, M. J. A *Acta Crystallogr., Sect. E* **2014**, *70*, 134. $[Mg(H_2O)_6]SeO_4{\cdot}H_2O$
280783	1.641 Å	Kolitsch, U. *Acta Crystallogr., Sect. E* **2001**, *57*, 104-105. $[Cu(H_2O)_4]SeO_4{\cdot}H_2O$
JUFKIG	1.641 Å	Mottillo, C.; Friscic, T. *Chem. Commun.* **2015**, *51*, 8924. $(C_7H_7N_2)_2SeO_4$
MARFAQ	1.641 Å	Nkhili, N. L.; Rekik, W.; Naili, H.; Mhiri, T.; Bataille, T. *Arab J. Chem.* **2017**, *10*, S2509. $[Zn(H_2O)_6](C_6H_{14}N_2)(SeO_4)_2$
YOHJAI	1.641 Å	Fortes, A. D.; Gutmann, M. J. *Acta Crystallogr., Sect. E* **2014**, *70*, 134. $[Mg(H_2O)_6]SeO_4{\cdot}0H_2O$

163455	1.642 Å	Amri, M.; Zouari, N.; Mhiri, T.; Gravereau, P. *J. Alloys Compd.* **2009**, *477*, 68-75. $Cs_4(SeO_4)(HSeO_4)_2)\cdot H_3AsO_4$
201882	1.642 Å	Yamada, N.; Ikeda, T. *J. Phys. Soc. Jpn.* **1984**, *53*, 2555-2564. K_2SeO_4
250995	1.642 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2013**, *52*, 10481. $Rb_2[Cu(H_2O)_6](SeO_4)_2$
DEHQIR	1.642 Å	Jun-Jieh Wang; Tessier, C.; Holm, R. H. *Inorg. Chem.* **2006**, *45*, 2979. $(C_8H_{20}N)_2SeO_4\cdot CH_3CN$
GAWNAX	1.642 Å	Divekar, S. K.; Nagabhusan Achary, S.; Ajgaonkar, V. R. *Solid State Sci.* **2021**, *1222*, 106768. $[Co(H_2O)_6]((CH_3)_4)N)_2(SeO_4)_2\cdot 4H_2O$
HIZSUI	1.642 Å	Einkauf, J. D.; Williams, N. J.; Seipp, C. A.; Custelcean, R. *JACS Au* **2023**, *3*, 879. $(C_5H_{14}N_8)SeO_4\cdot 3H_2O$
LOPNAH	1.642 Å	Nkhili, N. L.; Rekik, W.; Naili, H. *Monatsh. Chem.* **2014**, *145*, 931. $[Ni(H_2O)_6](C_4H_{12}N_2)(SeO_4)_2$
HIZSES	1.643 Å	Einkauf, J. D.; Williams, N. J.; Seipp, C. A.; Custelcean, R. *JACS Au* **2023**, *3*, 879. $(C_4H_{12}N_8)SeO_4\cdot 3H_2O$
838	1.644 Å	Carter, R.; Koerntgen, C.; Margulis, T. N. *Acta Crystallogr., Sect. B* **1977**, *33*, 592-593. $(NH_4)_2SeO_4$
77995	1.644 Å	Yang, Y.-C.; Liu, X.; Zhu, C.-F.; Zhu, L.; Wu, L.-M.; Chen, L. *Angew. Chem., Int. Ed.* **2023**, *62*, e202301404. $[Ag(NH_3)_2]_2SeO_4$
154671	1.644 Å	Dammak, M.; Litaiem, H.; Mhiri, T. *J. Alloys Compd.* **2006**, *416*, 228-235. $Na_2SeO_4\cdot Te(OH)_6\cdot 0.5H_2O$
171283	1.644 Å	Simmons, C. J.; Stratemeier, H.; Hitchman, M. A.; Riley, M. J. *Inorg. Chem.* **2006**, *45*, 1021-1031. $K_2[Cu(H_2O)_6](SeO_4)_2$
254952	1.644 Å	Fortes, A. D. *Powder Diffraction* **2015**, *30*, 149. $[Mg(H_2O)_6]SeO_4\cdot 3H_2O$
70987	1.645 Å	Yan, Q.; Dong, X.; Huang, L.; Zhou, Y.; Lin, Z.; Zou, G. *Inorg. Chem.* **2023**, *62*, 4752. $CsLi_3(SeO_4)_2\cdot H_2O$
DGLYSE	1.645 Å	Olejnik, S.; Lukaszewicz, K.; Lis, T. *Acta Crystallogr., Sect. B* **1975**, *31*, 1785. $(C_2H_6NO_2)_2SeO_4$
202659	1.646 Å	Mascherpa-Corral, D.; Ducourant, M. B.; Alberola, S. *J. Solid State Chem.* **1988**, *76*, 276-283. $K_2SeO_4\cdot 2SbF_3\cdot 0.5H_2O$
LATUMS	1.648 Å	Kono, Y.; Takeuchi, S.; Yonehara, H.; Marumo, F.; Saito, Y. *Acta Crystallogr., Sect. B* **1971**, *27*, 2341. $(C_{10}H_{12}NO)SeO_4$
XIVZUZ	1.648 Å	Matulkova, I.; Cihelka, J.; Pojarova, M.; Fejfarova, K.; Dusek, M.; Cisarova, I.; Vanek, P.; Kroupa, J.; Nemec, P.; Tesarova, N.; Nemec, I,. *CrystEngComm* **2014**, *16*, 1763.
15816	1.649 Å	Naray-Szabo, I.; Argay, G. *Acta Chim. Acad. Sci. Hung.* **1963**, *39*, 85-92. Na_2SeO_4
TOBPAD	1.650 Å	Soukrata, S.; Belhouchet, M.; Mhiri, T. *Phosphorus, Sulfur, Silicon, Relat. Elem.* **2014**, *189*, 422. $(C_{12}H_{13}N_2O)_2SeO_4\cdot H_2O$

242240	1.651 Å	Kamburov, S.; Schmidt, H.; Voigt, W.; Balarew, C. *Acta Crystallogr., Sect. B* **2014**, *70*, 714. $Na_2SeO_4 \cdot 7.5H_2O$
99384	1.653 Å	Friese, K.; Goeta, A. E.; Leech, M. A.; Howard, J. A. K.; Madariaga, G.; Perez-Mato, J. M.; Breczewski, T. *J. Solid State Chem.* **2004**, *177*, 1127-1136. Tl_2SeO_4
16042	1.654 Å	Kalman, A.; Cruickshank, D. W. J. *Acta Crystallogr., Sect. B* **1970**, *26*, 436-436. Na_2SeO_4
138650	1.667 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $LiRbSeO_4$
138676	1.668 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $LiCsSeO_4$
138677	1.669 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $LiRbSeO_4$
138653	1.669 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $LiNaSeO_4$
138659	1.670 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $K_2Sr(SeO_4)_2$
160682	1.671 Å	Smirnov, L. S.; Melnyk, G.; Zink, N.; Wozniak, K.; Dominiak, P.; Pawlukojc, A.; Loose, A.; Shuvalov, L. A. *Poverkhnostnye Fizika, Khimiya, Mekhanika* **2007**, 73-79. $(NH_4)_2(SeO_4)_2$
Mean	**1.635 Å/158 structures**	

Phosphate, PO_4^{3-}

ICSD/CSD code	*d(P-O)*	*Reference*
TEGZIO01	1.47 Å	Banerjee, S.; Pal,A. K.; Pal, R. S.; Saha, S.; Banerjee, N.; Banerjee, A.; De, M. *Indian J. Phys., Ser. A* **2004**, *78*, 635. $H_3O(C_4H_7N_4)_2PO_4$
BADXIP	1.484 Å	Venediktov, A. B.; Tyutyunnik, A. P.; Gromilov , S. A. *Zh. Strukt. Khim.* **2010**, *51*, 1239. $[Pt(NH_3)_5Cl]PO_4{\cdot}2H_2O$
ZIVSOQ	1.488 Å	Zhang, W.; Zhao, J.; Yang, D.; Li, B.; Feng, Y.; Wang, Y.; Zheng, X.; Yang, X.-J.; Wu, B. *Inorg. Chem. Front.* **2023**, *10*, 6384. $K_4((n\text{-}C_4H_9)_4)_7{\cdot}((CH_3)_3NC_3H_7NO)(PO_4)_4{\cdot}4C_{63}H_{48}N_{18}O_{12}{\cdot}4C_{12}H_{24}O_6{\cdot}4H_2O$
97206	1.507 Å	Harrison, R. J.; Putnis, A.; Kockelmann, W. *Chem. Phys. Phys. Chem.* **2002**, *4*, 3252. Na_3PO_4
INOBIZ	1.510 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $((n\text{-}C_3H_7)_4N)_6(PO_4)_2{\cdot}3(C_{36}H_{32}N_{10}O_8){\cdot}6H_2O$
XUXKAE	1.510 Å	Custelcean, R.; Bonnesen, P. V.; Duncan, N. C.; Zhang, X.; Watson, L. A.; Van Berkel, G.; Parson, W. B.; Hay, B. P. *J. Am. Chem. Soc.* **2012**, *134*, 8525. $[Ni_4C_{138}H_{120}N_{36}O_{66}]PO_4(NO_3)_3{\cdot}19H_2O$
WOGNAI	1.512 Å	Ling, C.-S.; Yan, L. *Acta Crystallogr., Sect. E* **2008**, *64*, m1399. $[Ni(NC_{14}H_{10}N_2)_3](PO_4)_2SO_4$
UFEMAX	1.514 Å	Li, B.; Wei, T.; Zhao, X.; Wang, Y.; Xu, L.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2023**, *62*, e202301300. $((C_2H_5)_4N)_{18}(PO_4)_6{\cdot}6C_{60}H_{48}N_{15}O_{13}P{\cdot}2C_{20}H_{42}O_{11}CN{\cdot}(C_2H_5)_2O$
AGOPIZ	1.523 Å	Zhao, W. CCDC deposition number 2242798, **2023**. $((n\text{-}C_4H_9)_4N)_6(PO_4)_2{\cdot}3C_{42}H_{38}N_{10}O_4{\cdot}6CH_3CN$
XAXJOX	1.525 Å	Zhang, Z.; Guo, J.; Fu, J.; Zheng, L.; Zhu, D.; Xu, Y.; Song, Y. *J. Cluster Sci.* **2012**, *23*, 177. $(H_3N(CH_2)_2NH_2(CH_2)_2NH_3)_4PO_4[PV_{18}O_{46}]{\cdot}H_2O$
158801	1.528 Å	Voronin, V. I.; Ponosov, Y. S.; Berger, I. F.; Proskurnina, N. V.; Zubkov, V. G.; Tyutyunnik, A. P.; Bushmeleva, S. N.; Balagurov, A. M.; Sheptyakov, D. V.; Burmakin, E. I.; Shekhtman, G. S..; Vovkotrub, E. G. *Neorg. Miner.* **2006**, *42*, 1001. K_3PO_4
INOBAR	1.529 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $((n\text{-}C_4H_9)_4N)_6(PO_4)_2{\cdot}3(C_{36}H_{32}N_{10}O_8)$
33718	1.530 Å	Lissel, E.; Jansen, M.; Jansen, E.; Will, G. *Z. Kristallogr.* **1990**, *192*, 233. Na_3PO_4
AFILIL	1.530 Å	Duan, W.-J.; Cui, X.-B.; Xu, Y.; Xu, J.-Q.; Yu, H.-H.; Yi, Z.-H.; Cui, J.-W.; Wang, T.-G. *J. Solid State Chem.* **2007**, *180*, 1875. $(H_3N(CH_2)_2NH(CH_2)_2NH_3)_4(PO_4)_2[H_{10}V_{18}O_{42}]{\cdot}2H_2O$
137692	1.531 Å	Hazrah, K. S.; Antao, S. M. *Minerals* **2022**, *12*, 527. $Ca_5(PO_4)_3F$
PANYAI	1.531 Å	Holmes, J. L.; Russell, S, M.; Abrahams, B. F.; Hudson, T. A.; White K. F. *Chemistry Open* **2020**, *2*, 577. $[Rb_6K_2C_{84}H_{96}O_{36}]Rb(OC(NH_2)_2)_6](PO_4)_3$
AFOTAR	1.532 Å	Chen, S.-P.; Li, M.; Xiao, Y.; Yuan, Y.-X.; Pan, L.-L.; Yuan, L.-J. *CrystEngComm* **2008**, *10*, 1227. $[Ni(NC_3H_5N)_6]PO_4{\cdot}C3H5N_2{\cdot}H_2O$

MEQZEQ	1.532 Å	Bai, X.; Jia, C.; Zhao, Y.; Yang, D.; Wang, S.-C.; Li, A.; Chan, Y.-T.; Wang, Y.-Y.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2018**, *57*, 1851. $((CH_3)_4N)_{12}(PO_4)_4{\cdot}6(C_{34}H_{28}N_{10}O_8){\cdot}3.6O(C_2H_5)_2{\cdot}H_2O$
UFELOK	1.532 Å	Li, B.; Wei, T.; Zhao, X.; Wang, Y.; Xu, L.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2023**, *62*, e202301300. $((C_2H_5)_4N)_{18}(PO_4)_6{\cdot}6C_{60}H_{48}N_{15}O_{13}P{\cdot}19.5CH_3CN{\cdot}(C_2H_5)_2O$
XUBPAO	1.533 Å	Fu, J.; Zheng, B.; Zhang, H.; Zhao, Y.; Zhang, D.; Zhang, W.; Yang, X.-J.; Wu, B. *Chem. Commun.* **2020**, *56*, 2475. $((n\text{-}C_3H_7)_4N)_3PO_4{\cdot}C_{66}H_{63}N_{13}O_6$
XECTUY	1.533 Å	Wang, Y.; Li, B.; Zhu, J.; Zhang, W.; Zheng, B.; Zhao,W.; Tang, J.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2022**, *61*, e2020201789. $((CH_3)_4N))_6[K_2C_{64}H_{80}N_{12}O_{20})_3(PO_4)_4{\cdot}3(C_{40}H_{32}N_{12}O_8){\cdot}(C_{12}H_{24}O_6){\cdot}6(CH_3)_2CO$
97205	1.534 Å	Harrison, R. J.; Putnis, A.; Kockelmann, W. *Chem. Phys. Phys. Chem.* **2002**, *4*, 3252. Na_3PO_4
IZOWAW	1.534 Å	Nohra, B.; Moll, H. E.; Albelo, L. M. R.; Mialane, P.; Marrot, J.; Mellot-Draznieks, C.; O'Keeffe, M.; Biboum, R. N.; Lemaire, J.; Keita, B.; Nadjo, L.; Dolbecq, A. *J. Am. Chem. Soc.* **2011**, *133*, 13363. $(n\text{-}C_4H_9)_4N)_9[Mo_{36}Zn_{12}C_{36}H_{24}O_{132}](PO_4)_3{\cdot}18H_2O$
VULYOS	1.534 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CHClF_2$
VULZOT	1.534 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CH_3Cl_3$
WUJJAP	1.534 Å	Li, B.; Zheng, B.; Zhang, W.; Zhang, D.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2020**, *142*, 6304. $((CH_3)_4N)_9(C_6H_{16}NO)_3(PO_4)_4{\cdot}6(C_{34}H_{28}N_{10}O_8)$
INIZUD	1.535 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{12}H_{24}O_6]((C_2H_5)_3NH)_5(PO_4)_2{\cdot}6H_2O{\cdot}3(C_{36}H_{32}N_{10}O_8)$
INOBOF	1.535 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{12}H_{24}O_6]3((CH_3)_2C_2H_5NH)_3(PO_4)_2{\cdot}6H_2O{\cdot}3(C_{36}H_{32}N_{10}O_8)$
LIJBAJ	1.535 Å	Li, R.; Zhao, Y.; Li, S.; Yang, P.; Huang, X.; Yang, X.-J.; Wu, B. *Inorg. Chem.* **2013**, *52*, 5851. $((n\text{-}C_4H_9)_4N)_3PO_4{\cdot}C_{20}H_{16}N_6O_4S_2$
KEBKAH	1.535 Å	Li, H.; Kou, L.; Liang, L.; Li, B.; Zhao, W.; Yang, X.-J.; Wu, B. *Chem. Sci.* **2022**, *13*, 4915. $((CH_3)_4N)_6(PO_4)_2{\cdot}4(C_{38}H_{38}N_8O_4){\cdot}6((CH_3)_2CO){\cdot}2CH_3CN{\cdot}H_2O$
ANUWEO	1.535 Å	Wang, S.; Huang, Z.; Li, A.; Zhao, Y.; Zuo, W.; Li, Y.; Miao, H.; Ma, J.; Sun, W.; Wang, X.; Cao, L.; Wu, B.; Jia, C. *Angew. Chem., Int. Ed.* **2021**, *60*, 9573. $((C_2H_5)_4N)_{12}(PO_4)_4{\cdot}3(C_{48}H_{46}N_{10}O_{14}){\cdot}3(C_{48}H_{46}N_{10}O_{14}){\cdot}3CH_3CN$

TOCQOV	1.535 Å	Sun, Z.-Y.; Chen, S.-Q.; Liang, L.; Zhao, W.; Yang, X.-Y.; Wu, B. *Chem. Commun.* **2023**, *59*, 12923. $((CH_3)_4N)_3PO_4 \cdot C_{48}H_{48}N_{16}O_{12} \cdot 2CH_3CN$
64059	1.536 Å	Avdontceva, M. S.; Krzhizhanovskaya, M. G.; Krivovichev, S. V.; Zolotarev, A. A.; Yakovenchuk, V. N. *J. Solid State Chem.* **2023**, *31*, 123779. Na_2CaPO_4F
112808	1.536 Å	Yuan, F.; Hu, L.; Bai, Z.; Liu, L.; Huang, Y.; Zhang, Li.; Wei, D.; Lin, Z. *Inorg. Chem.* **2021**, *60*, 8103. $K[Mg(H_2O)_6]PO_4$
BELJUA	1.536 Å	Jia, C.; Zuo, W.; Yang, D.; Chen, Y.; Cao, L.; Custelcean, R.; Hostas, J.; Hobza, P.; Glaser, R.; Wang, Y.-Y.; Yang, X.-J.; Wu, B. *Nature Commun.* **2017**, *8*, 938. $((CH_3)_4N)_6(PO_4)_2 \cdot 3(C_{41}H_{34}N_{10}O_8) \cdot CH_3CN \cdot 2H_2O$
INOCAS	1.536 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $((CH_3)_4N)_6(PO_4)_2 \cdot 3(C_{36}H_{32}N_{10}O_8)$
LINKOK	1.536 Å	Jana, D.; Mani, G.; Schulzke, C. *Inorg. Chem.* **2013**, *52*, 6427. $(C_{39}H_{54}N_{11})PO_4$
RIHVIQ	1.536 Å	Marques, I.; Costa, P. M. R.; Miranda, M. Q.; Busschaert, N.; Howe, E. N. W.; Clarke, H. J.; Haynes, C. J. E.; Kirby, I. L.; Rodilla, A. M.; Perez-Tomas, R.; Gale, P. A.; Felix, V. *Phys. Chem. Chem. Phys.* **2018**, *20*, 20796. $((n\text{-}C_4H_9)_4N)_3PO_4 \cdot 3(C_{26}H_{18}N_4O_4) \cdot (CH_3)_2SO)$
VULYUY	1.536 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4 \cdot 4(C_{66}H_{51}N_{15}O_{12}) \cdot 12(C_{12}H_{24}O_6) \cdot CH_3F_3 \cdot CH_3CN$
WOLPUJ	1.536 Å	Caltagirone, C.; Hiscock, J. R.; Hursthouse, M. B.; Light, M. E.; Gale, P. A. *Chem. Eur. J.* **2008**, *14*, 10236. $((n\text{-}C_4H_9)_4N)_3PO_4 \cdot 3(C17H14N4O) \cdot 1.5(CH_3)_2SO)$
XUBPIW	1.536 Å	Fu, J.; Zheng, B.; Zhang, H.; Zhao, Y.; Zhang, D.; Zhang, W.; Yang, X.-J.; Wu, B. *Chem. Commun.* **2020**, *56*, 2475. $((C_2H_5)_4N)_3PO_4 \cdot C_{63}H_{57}N_{13}O_6$
125157	1.537 Å	Rucks, M. J.; Finkelstein, G. J.; Zhang, D.; Dera, P. K.; Duffy, T. S. *Am. Miner.* **2023**, *108*, 731. $Ca_5(PO_4)_3F$
NEYHAD	1.537 Å	Zhang, W.; Yang, D.; Zhao, J.; Hou, L.; Sessler, J. L.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2018**, *140*, 5248. $((C_2H_5)_4N)_3PO_4 \cdot (C_{63}H_{48}N_{18}O_{12}) \cdot 0.5CH_3CN \cdot 2H_2O$
NEYHEH	1.537 Å	Zhang, W.; Yang, D.; Zhao, J.; Hou, L.; Sessler, J. L.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2018**, *140*, 5248. $K((C_2H_5)_4N)_2PO_4 \cdot (C_{63}H_{48}N_{18}O_{12})$
OMIJAX	1.537 Å	Ji, L.; Yang, Z.; Zhao, Y.; Sun, M.; Cao, L.; Yang,X.-J.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2016**, *52*, 7310. $(n\text{-}C_4H_9)_4N(C_6H_{11}N_2)_2PO_4 \cdot 2(C_{39}H_{46}N_6O_{10}) \cdot (O(C_2H_5)_2 \cdot 2(CH_3)_2CO$
VULZUZ	1.537 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4 \cdot 4(C_{66}H_{51}N_{15}O_{12}) \cdot 12(C_{12}H_{24}O_6) \cdot CH_3CCl_2CH_3 \cdot 2CH_3CN$

YEXXIL	1.537 Å	Zuo, W.; Huang, Z.; Zhao, Y.; Xu, W.; Liu, Z.; Yang, X.-J.; Jia, C.; Wu, B. *Chem. Commun.* **2020**, *54*, 7378. $((n\text{-}C_4H_9)_4N)_5(C_6H_{16}NO)(PO_4)_2\cdot 3(C_{41}H_{34}N_{10}O_8)\cdot 2(O(C_2H_5)_2$
XEDJOJ	1.537 Å	Wang, Y.; Li, B.; Zhu, J.; Zhang, W.; Zheng, B.; Zhao,W.; Tang, J.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2022**, *61*, e202201789. $[KC_{12}H_{24}O_6]_{12}(PO_4)_4\cdot(C_{40}H_{32}N_{12}O_8)$
AVEQOJ	1.538 Å	Zhou, Y.; Cao, L.; Lin, C.; Luo, M.; Yan, T.; Ye, N.; Cheng , W. *J. Mater. Chem. C* **2016**, *4*, 9219. $(CsMg(H_2O)_{6n}(PO_4)_n$
DUVLEM	1.538 Å	Jia, C.; Wu, B.; Li, S.; Yang, Z.; Zhao, Q.; Liang, J.; Li, Q.-S.; Yang, X.-J. *Chem. Commun.* **2010**, *46*, 5376. $((n\text{-}C_4H_9)_4N)_3PO_4\cdot 2(C_{27}H_{22}N_8O_7)\cdot 2(CH_3)_2SO$
INIZEN	1.538 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{120}H_{164}N_{20}O_{42}][KC_{48}H_{56}N_{10}O_{14}][KC_{12}H_{28}O_8](PO_4)_2$
IXIBUB	1.538 Å	Wen, X.; Lin, C.; Luo, M.; Fan, H.; Chen, K.; Y, N. *Sci. China Mater.* **2021**, *64*, 2008. $(C(NH_2)_3)_3PO_4\cdot 2H_2O$
NEZNUD	1.538 Å	Dey, S. K.; Das, G. *Dalton Trans.* **2012**, *41*, 8960. $((C_2H5)_4N)_3PO_4\cdot 2N((C_9H_{10}N3O_2S)_3)$
SOJKIO	1.538 Å	Fan, X.; Zhang, D.; Jiang, S.; Wang, H.; Lin, L.-T.; Zheng, B.; Xu, W.-H.; Zhao, X.; Hay, B. P.; Chan, Y.-T.; Yang, X.-J.; Li, X.; Wu, B. *Chem. Sci.* **2019**, *10*, 6278. $((C_2H_5)_4N)_3PO_4\cdot(C_{50}H_{44}N_{14}O_{10})\cdot 3(CH_3)_2CO$
37021	1.539 Å	Averbuch-Pouchot, M. T.; Durif, A. *J. Solid State Chem.* **1983**, *46*, 193-196. $Na_3PO_4\cdot 0.5H_2O$
39763	1.539 Å	Rastsvetaeva, R. K.; Khomyakov, A. P. *Kristallografiya* **1994**, *39*, 43. $LiNa_5(PO_4)_2$
GOXPAN	1.539 Å	Li, B.; Zheng, B.; Zhang, W.; Zhang, D.; Yang, X.-J.; Wu, B. *Cryst. Growth Des.* **2019**, *19*, 6527. $((CH_3)_4N)_3PO_4\cdot 2(C_{38}H_{38}N_8O_4)\cdot 4(CH_3)_2CO\cdot 8.5H_2O$
KIJHUJ	1.539 Å	Gillen, D. M.; Hawes, C. S.; Gunnlaugsson, T. *J. Org. Chem.* **2018**, *83*, 10398. $3((n\text{-}C_4H_9)N)_3PO_4\cdot 3(C_{22}H_{22}N_4O_4)\cdot 0.5CHCl_3$
LUDZER	1.539 Å	Mezei, G. *Chem. Commun.* **2015**, *51*, 10341. $[Cu_{30}C_{93}H_{128}N_{60}O_{30}]((n\text{-}C_4H_9)N)PO_4\cdot 8CH_3OH$
NEYGUW	1.539 Å	Zhang, W.; Yang, D.; Zhao, J.; Hou, L.; Sessler, J. L.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2018**, *140*, 5248. $((n\text{-}C_4H_9)_4N)_{12}(PO_4)_4\cdot 4(C_{63}H_{48}N_{18}O_{12})\cdot 2.5CH_3CN\cdot 6H_2O$
SOJFEF	1.539 Å	Fan, X.; Zhang, D.; Jiang, S.; Wang, H.; Lin, L.-T.; Zheng, B.; Xu, W.-H.; Zhao, X.; Hay, B. P.; Chan, Y.-T.; Yang, X.-J.; Li, X.; Wu, B. *Chem. Sci.* **2019**, *10*, 6278. $((n\text{-}C_4H_9)_4N)(CH_3)_4N)(PO_4)_2\cdot(C_{50}H_{44}N_{14}O_{10})\cdot 2(CH_3)_2CO$
SOJKEK	1.539 Å	Fan, X.; Zhang, D.; Jiang, S.; Wang, H.; Lin, L.-T.; Zheng, B.; Xu, W.-H.; Zhao, X.; Hay, B. P.; Chan, Y.-T.; Yang, X.-J.; Li, X.; Wu, B. *Chem. Sci.* **2019**, *10*, 6278. $((CH_3)_4N)_3PO_4\cdot(C_{50}H_{44}N_{14}O_{10})\cdot 0.5CH_3CN$
20208	1.540 Å	Bondareva, O. S.; Simonov, M. A.; Belov, N. V. *Dokl. Akad Nauk SSSR. Chem.* **1978**, *240*, 75. Li_3PO_4

79427	1.540 Å	Wang, B.; Chakoumakos, B. C.; Sales, B. C.; Kwak, B. S.; Bates, J. B. *J. Solid State Chem.* **1995**, *115*, 313. Li_3PO_4
GAYJAU	1.540 Å	Witty, M.; Dingra, N. N.; Abboud, K. A.; Felts, A. C.; Theppawut; Ayudhya, I. N. *Anal. Lett.* **2017**, *50*, 2549.
INOBEV	1.540 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{12}H_{24}O_6]_7(C_2H_5)_2(CH_3)_2N)_5(PO_4)_4{\cdot}6(C_{36}H_{32}N_{10}O_8){\cdot}6CH_3CN{\cdot}2H_2O$
MAJFEM	1.540 Å	Li, B.; Zhang, W.; Lu, S.; Zheng, B.; Zhang, D.; Li, A.; Li, X.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2020**, *142*, 21160. $(C_2H_5)_4N)_6(PO_4)_2{\cdot}3(C_{40}H_{32}N_{10}O_8){\cdot}xH_2O$
OBEGAE	1.540 Å	Liu, C.-M.; Zhang, D.-Q.; Xu, C.-Y.; Zhu, D.- B. *Solid State Sci.* **2004**, *6*, 689. $[Co_4Mo_8V_8C_{100}H_{76}N_{16}O_{44})PO_4{\cdot}7H_2O$
VUMLOG	1.540 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $(CH_3)_4N)_3(PO_4)_2{\cdot}(C_{66}H_{51}N_{15}O_{12}){\cdot}0.5(C_{12}H_{24}O_6){\cdot}0.5(C_2H_5)_2O{\cdot}5.25H_2O$
WUJJET	1.540 Å	Li, B.; Zheng, B.; Zhang, W.; Zhang, D.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2020**, *142*, 6304. $((CH_3)_4N)_9(C_6H_{16}NO)_3(PO_4)_4{\cdot}6(C_{34}H_{28}N_{10}O_8)$
ZIDNAB	1.540 Å	Averbuch-Pouchot, M.-T.; Durif, A. *C. R. Seances Acad. Sci., Ser. II* **1993**, *317*, 1179. $(CH_6N_3)_4(PO_4)Cl{\cdot}2H_2O$
39628	1.541 Å	Malinovskii, Y. A.; Genkina, E. A. *Kristallografiya* **1992**, *37*, 1429. $LiNa_5(PO_4)_2$
GELCAE	1.541 Å	Sun, Z.-G.; Zhu, Y.-Y. CCDC deposition number 708771, **2017**. $[Ni(H_2O)_4(N_2C_6H_6N_2)]PO_4{\cdot}3H_2O$
UFELUQ	1.541 Å	Li, B.; Wei, T.; Zhao, X.; Wang, Y.; Xu, L.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2023**, *62*, e202301300. $((C_2H_5)_4N)_{18}(PO_4)_6{\cdot}6C_{60}H_{48}N_{15}O_{13}P{\cdot}2C_7H_{14}N_6$
EXIZIX	1.542 Å	Wu, C.; Jiang, X.; Wang, Z.; Sha, H.; Lin, Z.; Huang, Z.; Long, X.; Humphrey, M. G.; Zhang, C. *Angew. Chem., Int. Ed.* **2021**, *60*, 14806. $(C(NH_2)_3)_3PO_4{\cdot}1.5H_2O$
INOBUL	1.542 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{12}H_{24}O_6][KC_{12}H_{26}O_8]_4((C_2H_5)_2(CH_3)_2N)(PO_4)_2{\cdot}3(C_{36}H_{32}N_{10}O_8)_3{\cdot}2O(C_2H_5)_2$
LIHZUZ	1.542 Å	Li, R.; Zhao, Y.; Li, S.; Yang, P.; Huang, X.; Yang, X.-J.; Wu, B. *Inorg. Chem.* **2013**, *52*, 5851. $((CH_3)_4N)_3PO_4{\cdot}3(C_{12}H_{18}N_4O_2){\cdot}4H_2O$
MAJFAI	1.542 Å	Li, B.; Zhang, W.; Lu, S.; Zheng, B.; Zhang, D.; Li, A.; Li, X.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2020**, *142*, 21160. $(CH_3)_4N)_6(PO_4)_2{\cdot}3(C_{40}H_{32}N_{10}O_8){\cdot}xH_2O$
UFEMEB	1.542 Å	Li, B.; Wei, T.; Zhao, X.; Wang, Y.; Xu, L.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2023**, *62*, e202301300. $((C_2H_5)_4N)_{18}(PO_4)_6{\cdot}6C_{60}H_{48}N_{15}O_{13}P{\cdot}8(CH_3)_2CO{\cdot}(i\text{-}C_3H_7)_2O{\cdot}4H_2O$

VULYEI	1.542 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CCl_3F$
VULYIM	1.542 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CCl_2F_2$
WUJHUH	1.542 Å	Li, B.; Zheng, B.; Zhang, W.; Zhang, D.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2020**, *142*, 6304. $((CH_3)_4N)_9(C_6H_{16}NO)_3(PO_4)_4{\cdot}6(C_{34}H_{28}N_{10}O_8){\cdot}6CH_3CN$
69967	1.543 Å	Å Scitt Ercit, T. *Can. Minral.* **1991**, *29*, 569. Li_2NaPO_4
FIZNIO	1.543 Å	Zuo, W.; Jia, C.; Zhang, H.; Zhao, Y.; Yang, X.-J.; Wu, B. *Chem. Sci.* **2019**, *10*, 2483. $((CH_3)_2(C_2H_5OH)NH)_3PO_4{\cdot}(C60H57N13O6){\cdot}2CH_3CN{\cdot}H_2O$
INIZOX	1.543 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{12}H_{24}O_6]((CH_3)_2(C_2H_5)NH)_4)_5(PO_4)_2{\cdot}3(C_{36}H_{32}N_{10}O_8)$
LIHZAF	1.543 Å	Li, R.; Zhao, Y.; Li, S.; Yang, P.; Huang, X.; Yang, X.-J.; Wu, B. *Inorg. Chem.* **2013**, *52*, 5851. $((n\text{-}C_4H_9)_4P)_3P[KC_{32}H_{40}N_6O_{12}]_2PO_4{\cdot}C_{20}H_{16}N_6O_6$
VUMLUM	1.543 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_3PO_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}1.75(C_{12}H_{24}O_6){\cdot}1.5(CH_3)_2CO{\cdot}3.5H_2O$
50058	1.544 Å	Yamaguchi, H.; Matsuhiro, T.; Take, S. *Osaka Kyoiku Daigaku Kiyo, Dai-3-bumon: Shizen Kagaku, Oyo Kagaku* **1997**, *45*, 265. Li_3PO_4
60780	1.544 Å	Zalkin, A.; Templeton, D. H.; Eimerl, D.; Velsko, S. P. *Acta Crystallogr., Sect. C* **1986**, *42*, 1686.
77095	1.544 Å	Yakubovich, O. V.; Urusov, V. S. *Kristallografiya* **1997**, *42*, 301. Li_3PO_4
112808	1.544 Å	Yuan, F.; Hu, L.; Bai, Z.; Liu, L.; Huang, Y.; Zhang, Li.; Wei, D.; Lin, Z. *Inorg. Chem.* **2021**, *60*, 8103. $NH_4[Mg(H_2O)_6]PO_4$
LUDZIV	1.544 Å	Mezei, G. *Chem. Commun.* **2015**, *51*, 10341. $[Cu_{15}C_{54}H_{62}N_{36}O_8]((n\text{-}C_4H_9)N)_2(PO_4)_2{\cdot}1.5C6H_5NO_2{\cdot}1.5C_6H_5Br$
10257	1.545 Å	Keffer, C.; Mighell, A. D.; Mauer, F.; Swanson, H.; Block, S. *Inorg. Chem.* **1967**, *6*, 119. Li_3PO_4
NOWCOT	1.545 Å	Wu, B.; Li, S.; Lei, Y.; Hu, H.; Amadeu, N. de S.; Janiak, C.; Mathieson, J. S.; Long, D.-L.; Cronin, L.; Yang, X.-J. Chem. Eur. J. 2015, 21, 2588. $K_6(PO_4)_2{\cdot}3(C_{31}H_{30}N_{10}O_8)_6(C_{12}H_{24}O_6){\cdot}3(C_2H_5)_2O{\cdot}2(CH_3)_2CO{\cdot}H_2O$
XECVOU	1.545 Å	Wang, Y.; Li, B.; Zhu, J.; Zhang, W.; Zheng, B.; Zhao,W.; Tang, J.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2022**, *61*, e202201789. $((CH_3)_4N))_{12}(PO_4)_4{\cdot}6(C_{48}H_{40}N_{12}O_9){\cdot}3CH_3CN{\cdot}3H_2O$
681	1.546 Å	Weil, M.; Stöger, B. *Acta Crystallogr., Sect. E* **2020**, *76*, 177. $K_3PO_4{\cdot}7D_2O$

GOXNOZ	1.546 Å	Li, B.; Zheng, B.; Zhang, W.; Zhang, D.; Yang, X.-J.; Wu, B. *Cryst. Growth Des.* **2019**, *19*, 6527. $((CH_3)_4N)_6(PO_4)_2{\cdot}4(C_{38}H_{38}N_8O_4){\cdot}9(CH_3)_2CO{\cdot}CH_3CN10H_2O$
INIZIR	1.546 Å	Liang, L.; Li, B.; Zhang, W.; Li, A.; Zheng, B.; Yang, X.-J.; Wu, B. *Angew. Chem., Int. Ed.* **2021**, *60*, 9389. $[KC_{12}H_{24}O_6]_2((CH_3)_2(C_2H_5)NH)_4)(PO_4)_2{\cdot}3(C_{36}H_{32}N_{10}O_8)$
KEBKEL	1.546 Å	Li, H.; Kou, L.; Liang, L.; Li, B.; Zhao, W.; Yang, X.-J.; Wu, B. *Chem. Sci.* **2022**, *13*, 4915. $((CH_3)_4N)_3PO_4{\cdot}(C_{52}H_{50}N_{12}O_6){\cdot}((CH_3)_2CO){\cdot}2H_2O$
SISPOD	1.546 Å	Biswas, R.; Ghorai, S.; Paul, B.; Maji, S.; Natarajan, R. *Crystal Growth Des.* **2023**, *23*, 4384. $((n\text{-}C_4H_9)_4)_3PO_4{\cdot}3C_{37}H_{44}N_6O_3{\cdot}2CH_3CN$
ZIVSOQ	1.546 Å	Zhang, W.; Zhao, J.; Yang, D.; Li, B.; Feng, Y.; Wang, Y.; Zheng, X.; Yang, X.-J.; Wu, B. *Inorg. Chem. Front.* **2023**, *10*, 6384. $((n\text{-}C_4H_9)_4)_{11}{\cdot}((CH_3)_3NC_3H_7NO)(PO_4)_3{\cdot}4C_{63}H_{48}N_{18}O_{12}{\cdot}3CH_3CN$
161677	1.547 Å	Voronin, V. I.; Berger, I. F.; Proskurnina, N. V.; Sheptyakov, D. V.; Goshchitskii, B. N.; Burmakin, E. I.; Stroev, S. S.; Shekhtman, G.S. *Neorg. Mater.* **2008**, *44*, 740. Rb_3PO_4
IZOWEA	1.547 Å	Nohra, B.; Moll, H. E.; Albelo, L. M. R.; Mialane, P.; Marrot, J.; Mellot-Draznieks, C.; O'Keeffe, M.; Biboum, R. N.; Lemaire, J.; Keita, B.; Nadjo, L.; Dolbecq, A. *J. Am. Chem. Soc.* **2011**, *133*, 13363. $(n\text{-}C_4H_9)_4N)_3[Mo_{12}Zn_4C_9H_6O_{42}]PO_4$
OMIHUP	1.547 Å	Ji, L.; Yang, Z.; Zhao, Y.; Sun, M.; Cao, L.; Yang,X.-J.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2016**, *52*, 7310. $(C_6H_{11}N_2)_2[KC_{49}H_{66}N_6O_{15}]PO_4{\cdot}2(C_{37}H_{42}N_6O_9){\cdot}(O(C_2H_5)_2{\cdot}2(CH_3)_2CO$
257439	1.549 Å	Ayu, N. I. P.; Kartini, E.; Prayogi, L. D.; Faisal, M.; Supardi *Ionics* **2016**, *22*, 1051. Li_3PO_4
BALHIJ	1.549 Å	Zhao, C; Zhao, J.; Yang, D.; Ronson, T. K.; Yu, L.; Zhang, H.; Zhang, W.; Zhao, F.; Sun, W.; Yang, X.-J.; Wu, B. CCS Chem. 2021, 3, 1990. $[KC_{180}H_{228}N_{32}O_{64}](PO_4)_2{\cdot}0.33CHCl_3$
VUMBAI	1.549 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}n\text{-}C_4H_9Cl{\cdot}CH_3CN$
34221	1.550 Å	Baur, W. H. *Inorg. Nucl. Chem. Lett.* **1980**, *16*, 525. Li_3PO_4
ESICOZ	1.550 Å	Li, S.; Jia, C.; Wu, B.; Luo, Q.; Huang, X.; Yang, Z.; Li, Q.-S.; Yang, X.-J. *Angew. Chem., Int. Ed.* **2011**, *50*, 5721. $[KC_{12}H_{24}O_6]_6(PO_4)_2{\cdot}3(C_{30}H_{28}N_{10}O_8){\cdot}5(CH_3)_2OS){\cdot}2(C_2H_5)_2O{\cdot}3H_2O$
252841	1.551 Å	Li, L.; Wang, Yi; Lei, B.-H.; Han, S.; Yang, Z.; Poeppelmeier, K. R.; Shilie, P. *J. Am. Chem. Soc.* **2016**, *138*, 9101. $LiCs_2PO_4$
23474	1.553 Å	Ganne, M.; Tournoux, M. *Compt. Rend. Seances l'Acad Sci, Ser. C* **1973**, *276*, 1755. Tl_3PO_4
253046	1.553 Å	Shen, Y.; Yang, Y.; Zhao, S.; Zhao, B.; Lin, Z.; Ji, Ch.; Li, L.; Fu, P.; Hong, M.; Luo, J. *Chem. Mater.* **2016**, *28*, 7110. $LiCs_2PO_4$
LAWNUV	1.553 Å	Yang, D.; Zhao, J.; Yu, L.; Lin, X.; Zhang, W.; Ma, H.; Gogoll, A.; Zhang, Z.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2017**, *139*, 5946. $K_3PO_4{\cdot}(C_{66}H_{51}N_{15}O_{12}){\cdot}3(C_{12}H_{24}O_6){\cdot}0.25P_4{\cdot}xH_2O$

VULYAE	1.555 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CH_3CN$
WUJHOB	1.555 Å	Li, B.; Zheng, B.; Zhang, W.; Zhang, D.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2020**, *142*, 6304. $((CH_3)_4N)_9(C_6H_{16}NO)_3(PO_4)_4{\cdot}6(C_{34}H_{28}N_{10}O_8){\cdot}CH_3CN$
XUBPES	1.555 Å	Fu, J.; Zheng, B.; Zhang, H.; Zhao, Y.; Zhang, D.; Zhang, W.; Yang, X.-J.; Wu, B. *Chem. Commun.* **2020**, *56*, 2475. $((n\text{-}C_3H_7)_4N)_3PO_4{\cdot}C_{66}H_{63}N_{13}O_6 \cdot 0.5CH_3CN{\cdot}0.5H_2O$
161677	1.557 Å	Voronin, V. I.; Berger, I. F.; Proskurnina, N. V.; Sheptyakov, D. V.; Goshchitskii, B. N.; Burmakin, E. I.; Stroev, S. S.; Shekhtman, G.S. *Neorg. Mater.* **2008**, *44*, 740. Cs_3PO_4
25816	1.559 Å	Zemann, J. *Acta Crystallogr.* **1960**, *13*, 863. Li_3PO_4
VULZIN	1.561 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CCl_4{\cdot}2CH_3CN$
LAWPAD	1.562 Å	Yang, D.; Zhao, J.; Yu, L.; Lin, X.; Zhang, W.; Ma, H.; Gogoll, A.; Zhang, Z.; Yang, X.-J.; Wu, B. *J. Am. Chem. Soc.* **2017**, *139*, 5946. $K_3PO_4{\cdot}(C_{66}H_{51}N_{15}O_{12}){\cdot}3(C_{12}H_{24}O_6){\cdot}0.25As_4{\cdot}xH_2O$
VULZAF	1.563 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CH_2Cl_2$
VULZEJ	1.57 Å	Yang, D.; Zhao, J.; Zhao, Y.; Lei, Y.; Cao, L.; Yang, X.-J.; Davi, M.; de Sousa, N. A.; Janiak, C.; Zhang, Z.; Wang, Y.-Y.; Wu, B. *Angew. Chem., Int. Ed.* **2015**, *54*, 8658. $K_{12}(PO_4)_4{\cdot}4(C_{66}H_{51}N_{15}O_{12}){\cdot}12(C_{12}H_{24}O_6){\cdot}CHCl_3$
IZOWIE	1.573 Å	Nohra, B.; Moll, H. E.; Albelo, L. M. R.; Mialane, P.; Marrot, J.; Mellot-Draznieks, C.; O'Keeffe, M.; Biboum, R. N.; Lemaire, J.; Keita, B.; Nadjo, L.; Dolbecq, A. *J. Am. Chem. Soc.* **2011**, *133*, 13363. $(n\text{-}C_4H_9)_4N)_3[Mo_{12}Zn_4C_9H_6O_{42}](PO_4)_3{\cdot}8H_2O$
Mean	**1.540 Å/118 structures**	

Arsenate ion, AsO_4^{3-}

ICSD/CSD code	*d(As-O)*	*Reference*
AXIGIZ	1.641 Å	Mhadhbi, N.; Naili, H.; Jarraya, K. *Phys. E* **2017**, *87*, 171. $(C_5H_8N_2)(C_5H_7N_2)AsO_4{\cdot}H_2O$
GOJRUU	1.641 Å	Ennaceur, N. CCDC deposition number 849637, **2011**. $(C_5H_8N_2)(C_5H_7N_2)AsO_4{\cdot}H_2O$
24548	1.657 Å	Ferrari, A.; Cavalca, L.; Nardelli, M. *Gazz. Chim. Ital.* **1954**, *84*, 169. $CsMg(AsO_4)(H_2O)_6$
419835	1.659 Å	Weil, M. *Cryst. Res. Technol.* **2008**, *43*, 1286. $Rb(Mg(H_2O)_6)(AsO_4)$
BIRSUO	1.661 Å	Rius, J.; Gali, S. *Cryst. Struct. Commun.* **1982**, *11*, 829. $[Co(H_2NCH_2CH_2NH_2)_3]_6AsO_4{\cdot}3H_2O$
9159	1.670 Å	Tillmanns, E.; Baur, W. H. *Acta Crystallogr. Sect. B* **1971**, *27*, 21124. $Na_3AsO_4{\cdot}NaOH{\cdot}12H_2O$
2832	1.674 Å	Dickens, B.; Brown, W. *Acta Crystallogr. Sect. B* **1972**, *B 28*, 3056. $CaKAsO_4(H_2O)_8$
419836	1.674 Å	Weil, M. *Cryst. Res. Technol.* **2008**, *43*, 1286. $Rb(Mg(H_2O)_6)(AsO_4)$
412391	1.677 Å	Emmerling, F.; Idilbi, M.; Rohr, C. *Z. Naturforsch., Sect. B* **2002**, *57*, 599. Cs_3AsO_4
LEPRUX	1.678 Å	Dey, S. K.; Gil-Hernandez, B.; Gobre, V. V.; Woschko, D.; Harmalkar, S. S.; Gayen, F. R.; Saha, B.; Goswamee, R. L.; Janiak, C. *Dalton Trans.* **2022**, *51*, 15239. $((n\text{-}C_4H_9)_4N)_3AsO_4{\cdot}2(C_{48}H_{45}N_{13}O_{12})$
78158	1.681 Å	Abrahams, I.; Bruce, P. G.; David, W. I. F.; West, A. R. *J. Solid State Chem.* **1994**, *110*, 243. Li_3AsO_4
412391	1.681 Å	Emmerling, F.; Idilbi, M.; Röhr, C. *Z. Naturforsch., Sect. B* **2002**, *57*, 599. K_3AsO_4
LINKUQ	1.684 Å	Jana, D.; Mani, G.; Schulzke, C. *Inorg. Chem.* **2013**, *52*, 6427. $(C_{39}H_{54}N_{11})AsO_4{\cdot}17H_2O$
1319	1.685 Å	Hseu, T.; Lu, T. *Acta Crystallogr. Sect. B* **1977**, *33*, 3947. $(NH_4)_3AsO_4$
SISPUJ	1.685 Å	Biswas, R.; Ghorai, S.; Paul, B.; Maji, S.; Natarajan, R. *Cryst. Growth Des.* **2023**, *23*, 4384. $(n\text{-}C4H_9)_4N)_3AsO_4{\cdot}3(C_{37}H_{44}N_6O_3){\cdot}3CH_3CN$
TAWSUJ	1.685 Å	Wang, D.; Wei, Z.; Bai, Z.; Liu, L.; Lin, Z.; Zhang, L. *Dalton Trans.* **2022**, *51*, 463. $(C(NH_2)_3)_3AsO_4{\cdot}2H_2O$
36533	1.688 Å	Schneidersmann, C.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1991**, *605*, 67. Cs_2NaAsO_4
73200	1.688 Å	Schneidersmann, C.; Hoppe, R. *Anorg. Allg. Chem.* **1993**, *619*, 766. Na_2LiAsO_4
75927	1.689 Å	Elfakir, A.; Wallez, G.; Quarton, M.; Pannetier, J. *Phase Trans.* **1993**, *45*, 281. Li_3AsO_4
87465	1.689 Å	Mathew, M. *J. Chem. Crystallogr.* **1998**, *28*, 741.$SrK(AsO_4)(H_2O)_8$
PIQXIA	1.689 Å	Zhou, W.; Wang, F.; Li, A.; Bai, S.; Feng, X.; He, Q. *Cell Rep. Phys. Sci.* **2023**, *4*, 101295. $(n\text{-}C4H_9)_4N)_2(C_{84}H_{116}N_{18}O_6)AsO_4{\cdot}2H_2O$
36644	1.690 Å	Schneidersmann, C.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1992**, *610*, 103. Rb_2LiAsO_4
LUDZOB	1.691 Å	Mezei, G. *Chem. Commun.* **2015**, *51*, 10341. $[Cu_{15}C_{54}H_{62}N_{36}O_8]((n\text{-}C_4H_9)_4N)_2(AsO_4)_2{\cdot}C_6H_5Br{\cdot}C_6H_5NO_2$
407561	1.692 Å	Effenberger, H. *Z. Kristallogr.* **1998**, *213*, 42. Tl_3AsO_4
36645	1.696 Å	Schneidersmann, C.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1992**, *610*, 103. Cs_2LiAsO_4
412392	1.702 Å	Emmerling, F.; Idilbi, M.; Röhr, C. *Z. Naturforsch., Sect. B* **2002**, *57*, 599. Cs_3AsO_4

Mean **1.679 Å/26 structures**

Vanadate, VO_4^{3-}

ICSD/CSD code	*d(V-O)*	*Reference*
4138	1.623 Å	Olazcuaga, R.; Reau, J. M.; le Fem, G.; Hagemuller, P. . *Z. Anorg. Allg. Chem.* **1975**, *412*, 271. K_3VO_4
64423	1.671 Å	Sánchez-Martín, J.; Errandonea, D.; Rahimi Mosafer, H. S.; Paszkowicz, W.; Minikayev, R.; Turnbull, R.; Berkowski, M.; Ibáñez-Insa, J.; Popescu, C.; Fitch, A.; Rodríguez-Hernández, P.; Muñoz, A. *CrystEngComm* **2023**, *25*, 1240. $Ca_3(VO_4)_2$
123625	1.677 Å	Kuz'micheva, G. M.; Ivleva, L. I.; Kaurova, I. A.; Khramov, E. V.; Lazarenko, V. A.; Rybakov, V. B.; Svetogorov, R. D.; Doroshenko, M. E. *Dalton Trans.* **2022**, *51*, 5673. $Ca_{3.01}(VO_4)_2$
54655	1.679 Å	Fop, S.; Dawson, J. A.; Tawse, D. N.; Skellern, M. G.; Skakle, J. M. S.; Mclaughlin, A. C. *Chem. Mater.* **2022**, *34*, 8190. $Sr_3(VO_4)_2$
80667	1.691 Å	Jouanneaux, A.; Joubert, O.; Fitch, A. N.; Ganne, M. *Mater. Res. Bull.* **1991**, *26*, 973. Tl_3VO_4
54740	1.708 Å	Matsuura, M.; Okudera, H. *Acta Crystallogr., Sect. B* **2022**, *78*, 789. $Ca_5(VO_4)_3Cl$
49917	1.711 Å	Kato, K.; Takayama Muromachi, E. *Acta Crystallogr., Sect. C* **1987**, *43*, 2040. $K_3VO_4 \cdot H_2O$
173216	1.711 Å	Schnabel, S.; Roehr, C. *Z. Naturforsch., Teil B* **2007**, *62*, 1235. $Li_3VO_4 \cdot 6H_2O$
54658	1.712 Å	Fop, S.; Dawson, J. A.; Tawse, D. N.; Skellern, M. G.; Skakle, J. M. S.; Mclaughlin, A. C. *Chem. Mater.* **2022**, *34*, 8190. $Ba_3(VO_4)_2$
40218	1.714 Å	Kissel, J.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1989**, *571*, 113. Rb_2LiVO_4
416171	1.715 Å	Kerp, O.; Möller, A. *Z. Anorg. Allg. Chem.* **2006**, *632*, 1187. Na_4VO_4OH
416170	1.717 Å	Kerp, O.; Möller, A. *Z. Anorg. Allg. Chem.* **2006**, *632*, 1187. Na_5VO_4O
62533	1.716 Å	Kato, K.; Takayama Muromachi, E. *Acta Crystallogr., Sect. C* **1987**, *43*, 1030. $Na_3VO_4 \cdot 3H_2O$
173217	1.718 Å	Schnabel, S.; Roehr, C. *Z. Naturforsch., Teil B* **2007**, *62*, 1235. $Li_3VO_4 \cdot 8H_2O$
65963	1.719 Å	Kissel, J.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1990**, *587*, 29. Cs_2NaVO_4
173218	1.719 Å	Schnabel, S.; Roehr, C. *Z. Naturforsch., Teil B* **2007**, *62*, 1235. $Li_3VO_4 \cdot 8H_2O$
61171	1.721 Å	Kato, K.; Takayama Muromachi, E. *Acta Crystallogr., Sect. C* **1985**, *41*, 1415. $Rb_3VO_4 \cdot 4H_2O$
281577	1.722 Å	Boström, D.; Bergquist, G.; Pettersson, L. *Acta Crystallogr., Sect. E* **2003**, *59*, i151. $NaRb_2VO_4 \cdot H_2O$
108936	1.729 Å	Olazcuaga, R.; Reau, J. M.; le Flem, G.; Hagenmuller, P. *Z. Anorg. Allg. Chem.* **1975**, *412*, 271. Tl_3VO_{41}
38121	1.731 Å	Synecek, V.; Hanic, P. *Czech. J. Phys.* **1954**, *4*, 120. $(NH_4)_3VO_4$
138916	1.731 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $RbSrVO_4$

138852	1.732 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $Ca_5(VO_4)_3Br$
138851	1.735 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $Ba_5(VO_4)_3Br$
164689	1.737 Å	Smrcok, L.; Bitschnau, B.; Filinchuk, Y. *Cryst. Res. Technol.* **2009**, *44*, 978. $(NH_4)_3VO_4$
40219	1.742 Å	Kissel, J.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1989**, *571*, 113. Cs_2LiVO_4
Mean	**1.715 Å/24 structures**	

Hydrogenvanadate, HVO_4^{2-}

ICSD/CSD code	*d(V-O)*	*Reference*
PEVXAP	3*1.674+1.817 Å	Aschwanden, S.; Schmalle, H. W.; Reller, A.; Oswald, H. R. *Mater. Res. Bull.* **1993**, *28*, 575.
Mean	**1.710 Å/1 structure**	

Structure of CrO_4^{2-}

ICSD/CSD code	*d(Cr-O)*	*Reference*
KUJPOV	1.556 Å	Bian, S.-D.; Wu, H.-B.; Wang, Q.-M. *Angew. Chem., Int Ed.* **2009**, *48*, 5363. $[Ag_{22}C_{108}H_{162}]CrO_4(BF_4)_2$
76001	1.600 Å	Niggli, A. *Acta Crystallogr.* **1954**, *7*, 776. Na_2CrO_4
159511	1.600 Å	Miller J. J. *Z. Kristallogr.* **1936**, *94*, 131. Na_2CrO_4
30204	1.602 Å	Miller J. J. *Z. Kristallogr.* **1938**, *99*, 32. Cs_2CrO_4
30266	1.603 Å	Zachariasen, W. H.; Ziegler, G. E. *Z. Kristallogr.* **1931**, *80*, 164. K_2CrO_4
30224	1.606 Å	Smith, H. W.; Colby, M. Y. *Z. Kristallogr.* **1941**, 103, 90. Rb_2CrO_4
NEMPAW	1.606 Å	Wojciechowska, A.; Staszak, Z.; Bronowska, W.; Pietraszko, A.; Cieslak-Golonka, M. *Polyhedron* **2001**, *20*, 2063. $[Zn(C_{10}H_8N_2)_3]$ $CrO_4 \cdot 7.5H_2O$
QIXPAO	1.618 Å	Maubert, B. M.; Nelson, J.; McKee, V.; Town, R. M.; Pal, I. *J. Chem. Soc., Dalton Trans.* **2001**, 1395. $(C_{36}H_{60}N_8)CrO_4(ClO_4)_4 \cdot 7H_2O$
CIMTAW	1.624 Å	Sukhikh, A. S.; Khranenko, S. P.; Pishchur, D. P.; Gromilov, S. A. *J. Struct. Chem.* **2018**, *59*, 657. $[Cu(H_2N(CH_2)_2NH_2)_3]CrO_4$
2732	1.625 Å	Khan, A. A.; Baur W. H. *Acta Crystallogr., Sect. B* **1972**, *28*, 683. $NaNH_4CrO_4 \cdot 2H_2O$
CIMTAW02	1.627 Å	Sukhikh, A. S.; Khranenko, S. P.; Pishchur, D. P.; Gromilov, S. A. *J. Struct. Chem.* **2018**, *59*, 657. $[Cu(H_2N(CH_2)_2NH_2)_3]CrO_4$
VADPUM	1.627 Å	Pietraszko, A.; Bronowska, W.; Wojciechowska, A.; Staszak, Z.; Cieslak-Golonka, M. *J. Pol. Chem.* **2002**, *76*, 309. $[Ni(C_{10}H_8N_2)_3]$ $CrO_4 \cdot 7.5H_2O$
EHIHUY	1.628 Å	Wojciechowska, A.; Staszak, Z.; Bronowska, W.; Pietraszko, A.; Cieslak-Golonka, M. *J. Mol. Struct.* **2003**, *654*, 197. $[Co(C_{10}H_8N_2)_3]CrO_4(NO_3)_2 \cdot 14H_2O$ $[Cr(OCN_2H_4)_6]$.
JABVAN	1.629 Å	Chen, X.; Dai, X.; Xie, R.; Li, J.; Khayambashi, A.; Xu, L.; Yang, C.; Shen, N.; Wang, Y.; He, L.; Zhang, Y.; Xiao, C.; Chai, Z.; Wang, S. *Chin. Chem. Lett.* **2020**, *31*, 1974. $(C_{10}H_{16}N_8)CrO_4 \cdot 2H_2O$
OWORUO	1.629 Å	Liao, J.-H.; Chang, H.-W.; You, C.-H.; Fang, C.-S.; Liu, C. W. *Inorg. Chem.* **2011**, *50*, 2070. $[Ag_{32}C_{96}H_{240}O_{48}P_{24}S_4](CrO_4)_2(PF_6)_4$
VOBMII	1.629 Å	de Brauer, C.; Jannin, M.; Puget, R.; Perret, R. *Acta Crystallogr., Sect. C* **1991**, *47*, 2231. $(C_3H_9OS)_2CrO_4$
DIDNAJ	1.630 Å	Al Isawi, W. A.; Hartman, C. K.; Singh, P.; Zeller, M.; Mezei, G. *Inorg. Chem.* **2023**, *62*, 5716. $(n\text{-}C_4H_9)_4N)_2CrO_4 \cdot [Cu_{31}C_{84}H_{112}N_{56}O_{28}] \cdot 2.38C_7H_{16} \cdot 3.95C_6H_5Cl$
DIDNEN	1.630 Å	Al Isawi, W. A.; Hartman, C. K.; Singh, P.; Zeller, M.; Mezei, G. *Inorg. Chem.* **2023**, *62*, 5716. $(n\text{-}C_4H_9)_4N)_2CrO_4 \cdot [Cu_{31}C_{93}H_{124}N_{62}O_{31}] \cdot 1.31C_6H_{14} \cdot 3.85C_6H_5Cl$
72550	1.632 Å	Makarova, I. P.; Verin, I. A.; Aleksandrov, K. S. *Acta Crystallogr., Sect. B* **1993**, *49*, 19. $RbLiCrO_4$

280457	1.632 Å	Aleksovska, S.; Nyburg, S. C.; Pejov, L.; Petrusevski, V. M. *Acta Crystallogr., Sect. B* .**1998**, *54*, 115. Rb_2CrO_4
MEVPIM	1.632 Å	Chebbi, H.; Driss, A. *Acta Crystallogr., Sect. C* **2001**, *57*, 1369. $(C_9H_{22}N_2)CrO_4 \cdot 2H_2O$
DIDMUC	1.634 Å	Al Isawi, W. A.; Hartman, C. K.; Singh, P.; Zeller, M.; Mezei, G. *Inorg. Chem.* **2023**, *62*, 5716. $(n\text{-}C_4H_9)_4N)_2CrO_4 \cdot [Cu_{28}C_{93}H_{124}N_{62}O_{31}] \cdot 3.05C_5H_{12} \cdot 3.37C_6H_5Cl$
KUJQAI	1.634 Å	Bian, S.-D.; Wu, H.-B.; Wang, Q.-M. *Angew. Chem., Int. Ed.* **2009**, *48*, 5363. $[Ag_{35}C_{248}H_{204}N_8](CrO_4)_2(BF_4)_3$
DIDNIR	1.635 Å	Al Isawi, W. A.; Hartman, C. K.; Singh, P.; Zeller, M.; Mezei, G. *Inorg. Chem.* **2023**, *62*, 5716. $(n\text{-}C_4H_9)_4N)_2CrO_4 \cdot [Cu_{31}C_{93}H_{124}N_{62}O_{31}] \cdot 5.11C_5H_{12}$
UQUXIP	1.635 Å	Guchhait, T., Mani, G.; Schulzke, C. *Dalton Trans.* **2016**, *45*, 11781. $(C_{32}H_{48}N_6)CrO_4$
XUJDEL	1.635 Å	Wojciechowska, A.; Bronowska, W.; Pietraszko, A.; Staszak, Z.; Cieslak-Golonka, M. *J. Mol. Struct.* **2002**, *608*, 309. $[Zn(C_{10}H_8N_2)_3]_2CrO_4(NO_3)_2 \cdot 13H_2O$
88581	1.636 Å	Edwards, C. M.; Haines, J.; Butler, I. S.; Leger, J. M. *J. Phys. Chem. Solids* **1999**, *60*, 529. K_2CrO_4
LEPSUU	1.636 Å	Kotila, S.; Valkonen, J. *Acta Chem. Scand.* **1994**, *48*, 200. $[Cu(C_4H_{11}N_2O_3)(C_4H_{10}N_2O_3)H_2O]_2CrO_4$
DIDNUD	1.636 Å	Al Isawi, W. A.; Hartman, C. K.; Singh, P.; Zeller, M.; Mezei, G. *Inorg. Chem.* **2023**, *62*, 5716. $(n\text{-}C_4H_9)_4N)_2CrO_4 \cdot [Cu_{31}C_{94}H_{126}N_{62}O_{31}] \cdot 5.11C_6H_5NO_2 \cdot CH_3OH$
74557	1.637 Å	Fabry, J.; Breczewski, T.; Madariaga, G. *Acta Crystallogr., Sect. B* **1994**, *50*, 13. $K_3Na(CrO_4)_2$
40945	1.638 Å	Klevtsov, P. V.; Perepelitsa, A. P.; Ishchenko, V. N.; Klevtsova, R.F.; Glinskaya, L. A.; Kruglik, A. I.; Aleksandrov, K. S.; Simonov, M. A. *Kristallografiya* **1989**, *34*, 147. $CsLiCrO_4$
110041	1.638 Å	Abrahams, B. F.; Haywood, M. G.; Hudson, T. A.; Robson, R. *Angew. Chem., Int. Ed.* **2004**, *43*, 6157. $(CH_3)_4N(C(NH_2)_3)_2CrO_4$
FAQCEG	1.638 Å	Abrahams, B. F.; Haywood, M. G.; Hudson, T. A.; Robson, R. *Angew. Chem., Int. Ed.* **2004**, *43*, 6157. $(C_4H_{12}N)(CH_6N_3)CrO_4$
34766	1.639 Å	Ruben, H.; Olovsson, I.; Zalkin, A.; Templeton, D. H. *Acta Crystallogr., Sect. B* **1973**, *29*, 2963. $Na_2CrO_4 \cdot 2H_2O$
63415	1.639 Å	Aleksandrov, K. S.; Mel'nikova, S. V.; Kruglik, A. I.; Tret'yak, S. M.; Mitkevich, V. V. *Kristallografiya* **1989**, *34*, 147. $CsLiCrO_4$
68464	1.639 Å	Madariaga, G.; Breczewski, T. *Acta Crystallogr., Sect. C* **1990**, *46*, 2019. $K_3Na(CrO_4)_2$
74558	1.639 Å	Fabry, J.; Breczewski, T.; Madariaga, G. *Acta Crystallogr., Sect. B* **1994**, *50*, 13. $K_3Na(CrO_4)_2$
39403	1.640 Å	Makarova, I. I.; Aleksandrov, K. S.; Vasil'ev, A. D.; Kruglik, A. I.; Simonov, V. I. *Kristallografiya* **1991**, *36*, 326. $RbLiCrO_4$
72547	1.640 Å	Makarova, I. P.; Verin, I. A.; Aleksandrov, K. S. *Acta Crystallogr., Sect. B* **1993**, *49*, 19. $RbLiCrO_4$

RUYYIU	1.641 Å	Wojciechowska, A.; Pietraszko, A.; Bronowska, W.; Staszak, Z.; Jezierska, J.; Cieslak-Golonkam, M. *Polyhedron* **2010**, *29*, 2574. $[Cu(N_2C_{10}H_{10})_3]CrO_4 7.5\cdot H_2O$
74559	1.642 Å	Fabry, J.; Breczewski, T.; Madariaga, G. *Acta Crystallogr., Sect. B* **1994**, *50*, 13. $K_3Na(CrO_4)_2$
2828	1.643 Å	M^{c}Ginnety, J. A. *Acta Crystallogr., Sect. B* **1972**, *28*, 2845. K_2CrO_4
201236	1.643 Å	Figgis, B. N.; Skelton, B. W.; White, A. H. *Aust. J. Chem.* **1979**, *32*, 417. $[Co(NH_3)_6]CrO_4Cl\cdot 3H_2O$
CIMTAW01	1.643 Å	Sukhikh, A. S.; Khranenko, S. P.; Pishchur, D. P.; Gromilov, S. A. *J. Struct. Chem.* **2018**, *59*, 657. $[Cu(H_2N(CH_2)_2NH_2)_3]CrO_4$
16047	1.645 Å	Stephens, J. S.; Cruickshank, D. W. J. *Acta Crystallogr., Sect. B* **1970**, *26*, 437. $(NH_4)_2CrO_4$
34776	1.645 Å	Cygler, M.; Grabowski, M. J.; Stepien, A.; Wajsman, E. *Acta Crystallogr., Sect. B* **1976**, *32*, 2391. $(C(NH_2)_3)_2CrO_4$
78991	1.645 Å	Barlage, H.; Jacobs, H. *Z. Anorg. Allg. Chem.* **1996**, *622*, 721. $Li_2CrO_4\cdot 2H_2O$
280978	1.645 Å	Kolitsch, U. *Acta Crystallogr., Sect. E* **2002**, *58*, 88. $K_4CrO_4(NO_3)_2$
GUACRO10	1.645 Å	Cygler, M.; Grabowski, M. J.; Stepien, A.; Wajsman, E. *Acta Crystallogr., Sect. B* **1976**, *32*, 2391. $(CH_6N_3)_2CrO_4$
PADBAY	1.645 Å	Nelson, J.; Nieuwenhuyzen, M.; Pal, I.; Town, R. M *Dalton Trans.* **2004**, 2303. $(C_{30}H_{54}N_8O_3)CrO_4(ClO_4)_4\cdot 6H_2O$
26330	1.646 Å	Nimmo, J. K. *Acta Crystallogr., Sect. B* **1981**, *37*, 431. Na_2CrO_4
34794	1.646 Å	Montgomery, H.*Acta Crystallogr., Sect. B* **1979**, *35*, 155. $(H_4N)_2[Ni(H_2O)_6](CrO_4)_2$
72997	1.646 Å	Laligant, Y. *Eur. J. Solid State Inorg. Chem.* **1993**, *30*, 681. $[Pd(NH_3)_4]CrO_4$
300003	1.646 Å	Hodgson. P. G.; Montgomery, H.; Moore, F. H.; Smith, G.; Eggins, R.; Kennard, C. H. L. *Crystal Struct. Commun.* **1978**, *7*, 127. $(NH_4)_2[Ni(H_2O)_6](CrO_4)_2$
FAWLOF	1.646 Å	Hyoung-Sil Moon, Chong-Hyeak Kim, Sueg-Geun Lee *J. Coord. Chem.* **2004**, *57*, 1425. $(C_6H_{11}NH_3)_2CrO_4$
XUXKIM	1.646 Å	Custelcean, R.; Bonnesen, P. V.; Duncan, N. C.; Zhang, X.; Watson, L. A.; Van Berkel, G.; Parson, W. B.; Hay, B. P. *J. Am. Chem. Soc.* **2012**, *134*, 8525. $[Zn_4C_{186}H_{216}N_{36}O_6]CrO_4\ 3CH_3OH\cdot 16H_2O$
2402	1.647 Å	Toriumi, K.; Saito, Y. *Acta Crystallogr., Sect. B* **1978**, *34*, 3149. K_2CrO_4
110979	1.637 Å	Dumbrava, A.; Maxim, C.; Olar, R.; Badea, M.; Stefan, M.; Nicoleta Grecu, M.; Andruh, M. *Inorg. Chim Acta* **2020**, *509*, 119663. $[Cu(NH_3)_4CrO_4$
424199	1.647 Å	Kahlenberg, V. Z. *Kristallogr. – Crystal. Mater.* **2012**, *227*, 621. $Na_2CrO_4\cdot 10H_2O$
OJEVII	1.647 Å	Srinivasan, B. R.; Nather, C.; Bensch, W. *Acta Crystallogr., Sect. E* **2003**, *59*, m639. $(C_4H_{12}N_2)CrO_4$
63416	1.648 Å	Aleksandrov, K. S.; Mel'nikova, S. V.; Kruglik, A. I.; Tret'yak, S. M.; Mitkevich, V. V. *Kristallografiya* **1989**, *34*, 147. $CsLiCrO_4$
YABVAB	1.648 Å	Moon, D.; Cho, C.-H. *Acta Crystallogr., Sect. E* **2016**, *72*, 1872. $C_6H_8(NH_3)_2CrO_4$

300021	1.650 Å	Morris, A. J.; Kennard, C. H. L.; Moore, F. H.; Smith, G.; Montgomery, H. *Crystal Struct. Commun.* **1981**, *10*, 529. Cs_2CrO_4
48111	1.651 Å	Montgomery, H. Acta Crystallogr., Sect. C 1984, 40, 14. $Cs_2[Mg(H_2O)_6](CrO_4)_2$
138774	1.651 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $CsLiCrO_4$
MOCRUU	1.651 Å	Trabelsi, S.; Issaoui, N.; Brandan, S. A.; Bardak, F.; Roisnel, T.; Atac, A.; Marouani, H. *J. Mol. Struct.* **2019**, *1185*, 168. $(C_6H_5(CH_2)_2NH_3)_2CrO_4$
65005	1.652 Å	Klevtsova, R. F.; Glinskaya, L. A.; Klevtsov, P. V.; Perepelitsa, A. P.; Ishchenko, V. N.; Kruglik, A. I.; Aleksandrov, K. S. *Kristallografiya* **1988**, *33*, 630. $KLiCrO_4$
IWUZAB01	1.652 Å	Srinivasan, B. R.; Dhuri, S. N.; Nather, C.; Bensch, W. *Indian J. Chem., Sect. A* **2003**, *42*, 2735. $(H_3N(CH_2)_2NH_3)CrO_4$
WOBVUE	1.652 Å	Chebbi, H.; Hajem, A. A.; Driss, A. *Acta Crystallogr., Sect. C* **2000**, *56*, e333. $(C_5H_{16}N_2)CrO_4$
MOCROL	1.653 Å	Chebbi, H.; Driss, A. *Acta Crystallogr., Sect. E* **2002**, *58*, m147. $(C_4H_{14}N_2)CrO_4$
1972	1.654 Å	Brown, I. D.; Faggiani, R. *Acta Crystallogr., Sect. B* **1975**, *31*, 2364. Li_2CrO_4
NIXSUK	1.654 Å	Trabelsi, S.; Essid, M.; Roisnel, T.; Rzaigui, M.; Marouani, H. *Acta Crystallogr., Sect. E* **2014**, *70*, m84. $(H_3NCH(CH_3)CH_2NH_3)CrO_4$
IWUZAB	1.656 Å	Chebbi, H.; Driss, A. *Acta Crystallogr., Sect. E* **2004**, *60*, m904. $(H_3N(CH_2)_2NH_3)CrO_4$
63417	1.657 Å	Aleksandrov, K. S.; Mel'nikova, S. V.; Kruglik, A. I.; Tret'yak, S. M.; Mitkevich, V. V. *Kristallografiya* **1989**, *34*, 147. $CsLiCrO_4$
RARXOB	1.657 Å	Sperlich, E.; Kockerling, M. *Chemistry Open* **2021**, *10*, 248. $[Nb_6C_{18}H_{24}Cl_{12}N_{12}]CrO_4{\cdot}2C_3H_4N_2{\cdot}2CH_3OH$
138627	1.659 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $KNaCrO_4$
138658	1.660 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev Mater.* **2021**, *5*, 105003. K_2CrO_4
138661	1.661 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev Mater.* **2021**, *5*, 105003. Rb_2BaCrO_4
138669	1.661 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev Mater.* **2021**, *5*, 105003. $Rb_2Sr(CrO_4)_2$
VURRAC	1.662 Å	Ou, G.-C.; Jiang, L.; Feng, X.-L.; Lu, T.-B. *Sci. China., Ser B* **2009**, *52*, 465. $[NiC_{16}H_{36}N_4]_3(ClO_4)_2(CrO_4)_2{\cdot}4H_2O$
16120	1.663 Å	Gatehouse, B. M.; Leverett, P. *J. Chem. Soc. A* **1969**, 1857. $(NH_4)_2CrO_4$
247477	1.666 Å	Fabry, J.; Dusek, M.; Fejfarova, K.; Krupkova, R.; Vanek, P. *Acta Crystallogr., Sect. C* **2010**, *66*, i45. Tl_2CrO_4
9399	1.680 Å	Carter, R. L.; Margulis, T. N. *J. Solid State Chem.* **1972**, *5*, 75. Tl_2CrO_4
Mean	**1.643 Å/75 structures**	

Structure of $Cr_2O_7^{2-}$

ICSD/CSD code	*d(Cr-O$_t$+Cr-O$_b$;Cr···Cr)*	*Reference*
OJATEA	1.537+1.817; 3.217 Å	Shi, P.-P. Ye, Q.; Wang, H.-T.; Li, Q.; Fu, D.-W.; Zhang, Y. *Eur. J. Inorg. Chem.* **2015**, 3255.
OJATEA01	1.532+1.793; 3.224 Å	$((CH_3)_4P)_2Cr_2O_7$
YIKJOT	1.548+1.777; 3.266 Å	Li, X.; Xu, H.; Kong, F.; Wang, R. *Angew. Chem., Int. Ed.* **2013**, *52*, 13769. $[Ag_2C_8H_8N_{12}]Cr_2O_7·H_2O$
ZAWWOJ	1.559+1.761; 3.116 Å	Benetollo, F.; Bombieri, G.; Gilli, P.; Harlow, P. M.; Polo, A., Vallarino, L. M. *Polyhedron* **1995**, *14*, 2255. $[CrSmC_{22}H_{28}N_6O_5]_2Cr_2O_7·2H_2O$
WAGGAM	1.567+1.777; 3.198 Å	Jannin, M.; Puget, R.; de Brauer, C.; Perret, R. *Acta Crystallogr., Sect. C* **1993**, *49*, 749. $((CH_3)_3SO_3)_2(Cr_2O_7$
JIVQIO	1.568+1.751; 3.179 Å	Fosse, N.; Caldes, M.; Joubert, O.; Ganne, M.; Brohan, L. *J. Solid State Chem.* **1998**, *139*, 310. $((CH_3)_3C_{18}H_{39}N)_2Cr_2O_7$.
XAZDUO	1.569+1.757; 3.299 Å	Li, C.-P.; Zhou, H.; Wang, S.; Chen, J.; Wang, Z.-L.; Du, M. *Chem. Commun.* **2017**, *53*, 9206. $[AgC_{17}H_{12}N_6]_2Cr_2O_7·2CH_3CN$
281584	1.581+1.756; 3.163 Å	Dagur, P.; Chopra, D.; Prakash, A.; Guru Row, T.N.; Hegde, M. S. *Acta Crystallogr., Sect. E* **2003**, *59*, m1129. $[NiH_2O)_6]Cr_2O_7·2((CH_2)_6N_4)·H_2O$.
CUNZUG	1.590+1.772; 3.226 Å	J.-K.Tang, E.-Q.Gao, D.-Z.Liao, Z.-H.Jiang, S.-P.Yan *Pol. J. Chem.* **2000**, *74*, 137. $[Ni(C_{12}H_8N_2]Cr_2O_7·3H_2O$.
IRETEF	1.590+1.774; 3.226 Å	Padhi, S. K.; Sahu, R.; Saha, D.; Manivannan, V. *Inorg. Chim. Acta* **2011**, *372*, 383. $(C_{10}H_{28}N_4)(Cr_2O_7)_2$
16181	1.591+1.956, 3.026 Å	Datt, I. D.; Rannev, N. V.; Balicheva, T. G.; Ozerov, R. P. *Kristallografiya* **1970**, *15*, 949. $Li_2Cr_2O_7·2H_2O$
HAFJII	1.592+1.790; 3.149 Å	Cameron, T. S.; Clyburne, J. A. C.; Dubey, P. K.; Grossert, J. S.; Ramaiah, K.; Ramanatham, J.; Sereda, S. V. *Can. J. Chem.* **2003**, *81*, 612. $(C_{10}H_{13}N)_2Cr_2O_7$.
HAFJII	1.592+1.790; 3.149 Å	Ramaiah, K.; Dubey, P. K.; Ramanatham, J.; Kumar, C. R.; Grossert, J. S.; Cameron, T. S.; Sareda, S. V. *Indian J. Chem., Sect.B* **2002**, *41*, 2136. $(C_{10}H_{13}N)_2Cr_2O_7$.
WADJIV	1.592+1.798; 3.324 Å	Sundar, T. V.; Parthasarathi, V.; Thamotharan, S.; Sekar, K. G *Acta Crystallogr., Sect. E* **2003**, *59*, m327. $(C_9H_8N)_2Cr_2O_7$.
ZZZAYY01	1.592+1.748; 3.395 Å	Fosse, N.; Joubert, O.; Ganne, M.; Brohan, L. *Solid State Sci.* **2001**, *3*, 121. $(C_4H_{12}N)_2Cr_2O_7$.
INAZEC INAZEC01	1.593+1.753; 3.163 Å	Dagur, P.; Chopra, D.; Prakash, A. S.; Row, T. N. G.; Hegde, M. S. *Acta Crystallogr., Sect. E* **2003**, *59*, m1129; *J. Crystal Growth* **2005**, *275*, e2043. $[Ni(H_2O)_6]Cr_2O_7·2C_6H_{12}N_4·H_2O$.
HMTCRC10	1.595+1.764; 3.184 Å	Dahan, F. *Acta Crystallogr., Sect. B* **1975**, *31*, 423. $Ca(C_6H_{12}N_4)_2Cr_2O_7·7H_2O$.

SINHAZ	1.595+1.775; 3.321 Å	Jin, Y.; Che, Y. X.; Zheng, J. M. *Inorg. Chem. Commun.* **2007**, *10*, 514. $[Ni(N_2C_{12}H_8)_3]Cr_2O_7 \cdot 5H_2O$
DULTEK	1.596+1.770; 3.227 Å	Liu, H.-X. *Acta Crystallogr. Sect. E* **2010**, *66*, m144. $[Ni(C_{12}H_8N_2)_3]Cr_2O_7 \cdot 4H_2O$
MUBWUC	1.596+1.756; 3.186 Å	Liu, H.-X.; Dong, G.-Y.; Ma, Z.-H.; Cui, G.-H. *Acta Crystallogr., Sect. E* **2009**, *65*, m1026. $[Mg(H_2O)_2(N_2C_{12}H_8)_2]Cr_2O_7 \cdot 2C_{12}H_8N_2$
ZEFNAZ	1.596+1.779; 3.299 Å	Park, J. T.; Nishioka, T.; Suzuki, T.; Isobe, K. *Bull. Chem. Soc. Jpn.* **1994**, *67*, 1968. $[Ir_2C_{20}H_{33}O_3]_2Cr_2O_7 \cdot 8H_2O$
15033	1.597+1.796; 3.155 Å	Löfgren, P. *Acta Chem. Scand.* **1971**, *25*, 44. $Rb_2Cr_2O_7$
34326	1.597+1.792; 3.177 Å	Kuzmin, E. A.; Ilyukhin, V. V.; Kharitonov, Y. A.; Belov, N. V. *Krist. Technik* **1969**, *4*, 441.
166635		Kuzmin, E. A.; Ilyukhin, V. V.; Belov, N. V. *Dokl. Acad. SSSR* **1967**, *173*, 1068. $K_2Cr_2O_7$
EDUQIE	1.597+1.762; 3.188 Å	Smail, R. B.;Chebbi, H.; Driss, A. *Acta Crystallogr. Sect. E* **2010**, *66*, m144· *Acta Crystallogr. Sect. E* **2007**, *63*, m859. $(H_3N(CH_2)_2NH_3)_2(CrO_4)(Cr_2O_7)$
EFIWOF	1.597+1.775; 3.222 Å	Ejsmont, K.; Wasielewski, M.; Zaleski, J. *Acta Crystallogr., Sect. E* **2002**, *58*, m200. $[Zn(C_{12}H_8N_2)_3]Cr_2O_7 \cdot 4H_2O$.
ISAPAV	1.597+1.749; 3.445 Å	Moon, D.; Ryoo, K. S.; Choi, J.-H. *Acta Crystallogr., Sect. E* **2016**, *72*, 1293. $[FeC_6H_{20}N_4Cl_2]Cr_2O_7$
GUANDC01	1.597+1.789; 3.161 Å	Stepien, A.; Wajsman, E.; Cygler, M.; Grabowski, M. J. *Rocz. Chem* **1976**, *50*, 1587. $(CH_6N)_2Cr_2O_7$.
YAFFOC	1.599+1.760; 3.429 Å	Jin, L.; Liu; N. *Acta Crystallogr., Sect. E* **2011**, *67*, m1586. $((CH_3)_3CH_2C_6H_5N)_2(Cr_2O_7$
20947	1.600+1.780; 3.235 Å	Bondar, V. I.; Rozman, S. P.; Potekhin, K. A.; Rau, V. G.; Struchkov, Y.T. *Dokl. Akad. Nauk SSSR* **1984**, *279*, 373. $[Cr(OCN_2H_4)_6](Cr_2O_7)Cl \cdot H_2O$
VENRAI	1.600+1.773; 3.220 Å	Khadhrani, H.; Smail, R. B.; Driss, A. *C. R. Chim.* **2006**, *9*,1322. $(C_6H_{18}N_2)_3(C_2O_4)(Cr_2O_7)_24 \cdot H_2O$.
HAFJAA	1.601+1.774; 3.266 Å	Ramaiah, K.; Dubey, P. K.; Ramanatham, J.; Kumar, C. R.; Grossert, J. S.; Cameron, T. S.; Sareda, S. V. *Indian J. Chem., Sect.B* **2002**, *41*, 2136. $(C_9H_{11}N)_2Cr_2O_7$.
POFMUU	1.601+1.752; 3.373 Å	Liu, H.-X. *Z. Kristallogr. New Cryst. Struct.* **2009**, *224*, 717. $(C_{14}H_{13}N_2)_2(Cr_2O_7) \cdot 2H_2O$
MUGFIE	1.602+1.780; 3.205 Å	Srinivasan, B. R.; Naik, A. R.; Nather, C.; Pausch, H.; Bensch, W. *J. Coord. Chem.* **2009**, *62*, 3583. $[Ni(H_2N(CH_2)_2NH_2)_3]Cr_2O_7$
UQUXOV	1.602+1.767; 3.080 Å	Guchhait, T.; Mani, G.; Schulzke, C. *Dalton Trans.* **2016**, *45*, 11781. $(C_{32}H_{48}N_6)Cr_2O_7 \cdot 9H_2O$
HAFJEE02	1.603+1.790; 3.230 Å	Qinghua Meng, Wenfan Yan, Shi Xu, Deyin Huang *J. Chem. Cryst.* **2004**, *34*, 333. $(C_7H_7N)_2Cr_2O_7$.
MEBLEL	1.603+1.793; 3.189 Å	Khadrani, H.; Smail, R. B.; Driss, A.; Jouini, T. *Acta Crystallogr., Sect. E* **2006**, *62*, m146.; $(C_6H_{18}N_2)Cr_2O_7 \cdot H_2O$.

PEDWIG	1.603+1.779; 3.212 Å	Bala, R.; Kashyap, M.; Kaur, A.; Golobic, A. *J. Mol. Struct.* **2013**, *1031*, 246. $[Cr(OC(NH_2)_2)_6]Cr_2O_7$.
YIMKEL	1.603+1.779; 3.254 Å	Bock, H.; Nather, C.; John, A.; Nick, S.; Ruppert, K. CDCC deposit number 226885, **2007**.
XAZBAC	1.604+1.827; 3.325 Å	Sharma, R. P.;Sharma, .; Bala, R.; Salas, J. M.; Quiros, M. *J. Chem. Cryst.* **2005**, *35*, 769. $[Co(H_2N(CH_2)_2NH_2)_2(H_2O)_2]Cr_2O_7$
HAFJEE	1.605+1.795; 3.243 Å	Ramaiah, K.; Dubey, P. K.; Ramanatham, J.; Kumar, C. R.; Grossert, J. S.; Cameron, T. S.; Sareda, S. V. *Indian J. Chem., Sect.B* **2002**, *41*, 2136. $(C_7H_7N)_2Cr_2O_7$.
QOLHOP	1.605+1.760; 3.398 Å	Akriche, S.; Rzaigui, M. *Acta Crystallogr., Sect. E* **2009**, *65*, m123. $(C_5H_6N_3O)_2Cr_2O_7$
REYJOX	1.605+1.788; 3.248 Å	Ben Smail, R.; Zid, M. F.; Driss, A. *Zh. Strukt. Khim.* **2017**, *58*, 734. $(C_{13}H_{28}N_2)_2(CrO_4)(Cr_2O_7)$
VETSIW	1.605+1.805; 3.230 Å	Pressprich, M. R.: Willett, R. D.; Sheets, R. M.; Paudler, W. W.; Gard, G. L. *Acta Crystallogr., Sect. C* **1990**, *46*, 1635. $(C_4H_5N_2O)_2Cr_2O_7$.
RINYEW	1.607+1.793; 3.165 Å	Sahoo, R. ; Mondal, S. ; Chand, S. ; Manna, A. K. ; Das, M. C. *Small* **2023**, *19*, 2304581. $(H_2N(i\text{-}C_3H_7)_2Cr_2O_7$
23546	1.608+1.775; 3.215 Å	Panagiotopoulos, N. C.; Brown, I. D. *Can. J. Chem.* **1970**, *48*, 537. $Rb_2Cr_2O_7$
PAJHIS	1.608+1.789; 3.119 Å	Zhi-Min Jin, Hui-Min Zhang, Hai-Bin Wang, Mao-Lin Hu, Liang Shen *Acta Crystallogr., Sect. C* **2004**, *60*, m572. $(C_6H_{14}N_2)Cr_2O_7$.
PELREH	1.608+1.769; 3.266 Å	Dhawan, P. ; Saini, A. ; Goel, S. ; Tyagi, N. ; Yadav, H. J. Mol. Struct. 2022, 1270, 133869. $(i\text{-}C_3H_7)_2NH)_2Cr_2O_7$
LABXAN	1.609+1.806; 3.169 Å	Pecaut, J.; Masse, R. *Acta Crystallogr., Sect. B* **1993**, *49*, 277. $(C_5H_6N_3)_2Cr_2O_7$.
2534	1.609+1.678; 3.267 Å	Panagiotopoulos, N. C.; Brown, I. D. *Acta Crystallogr., Sect. B* **1973**, *29*, 890. $Na_2Cr_2O_7$
LEHFUB	1.609+1.774; 3.248 Å	Trabelai, S.; Marouani, H.; Al-Deyab, S. S.; Rzaigui, M. *Acta Crystallogr., Sect. E* **2012**, *68*, m1056. $(H_3N(CH_2)_3NH_3))Cr_2O_7$
10371	1.610+1.783; 3.171 Å	Brunton, G. Mater. *Res. Bull.* **1973**, *8*, 271. $K_2Cr_2O_7$
PAJHIS01	1.610+1.789; 3.121 Å	Javanshir, Z.; Ghammamy, S.; Di Vaira, M.; Baghy, M. R..; Sahebalzamani, H.; Shakeri, R.; Salehzade, J. *J. Chem.Cryst.* **2011**, *41*, 1751. $(C_6H_{14}N_2)Cr_2O_7$.
VEWFIP	1.610+1.783; 3.224 Å	Hadhri, M.; Chebbi, H.; Haddad, A.; Ayed , B. *J. Coord. Chem.* **2018**, *71*, 1035. $(C_5H_6N_5)(Cr_2O_7$
2829	1.611+1.759; 3.291 Å	Panagiotopoulos, N. C.; Brown, I. D. *Acta Crystallogr., Sect B* **1972**, *28*, 2880. $NaKCr_2O_7$
20693	1.611+1.792; 3.197 Å	Fykin, L. E.; Nozik, Y. Z. *Kristallografiya* **1983**, *28*, 1033. $Li_2Cr_2O_7{\cdot}2H_2O$
PELREH	1.611+1.769; 3.264 Å	Dhawan, P. ; Saini, A. ; Goel, S. ; Tyagi, N. ; Yadav, H. *J. Mol. Struct.* **2022**, *1270*, 133869. $(H_2N(i\text{-}C_3H_7)_2Cr_2O_7$

YIMJOU	1.611+1.784; 3.322 Å	Bock, H.; Nather, C.; John, A.; Nick, S.; Ruppert, K. CDCC deposit number 226885, **2007**.
20207	1.612+1.792; 3.207 Å	Simonov, M. A.; Nozik, Y. Z.;Yamnova, N. A.; Belokoneva, E. L.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1978**, *240*, 85-87. $Li_2Cr_2O_7 \cdot 2H_2O$
59983	1.612+1.785; 3.173 Å	Weakley, T. J. R.; Ylvisaker, E. R.; Yager, R. J.; Stephens, J. E.; Wiegel, R. D.; Mengis, M.; Wu, P.; Photinos, P.; Abrahams, S. C. *Acta Crystallogr., Sect. B* **2004**, *60*, 705. $K_2Cr_2O_7$
59984	1.612+1.784; 3.174 Å	Weakley, T. J. R.; Ylvisaker, E. R.; Yager, R. J.; Stephens, J. E.; Wiegel, R. D.; Mengis, M.; Wu, P.; Photinos, P.; Abrahams, S. C. *Acta Crystallogr., Sect. B* **2004**, *60*, 705. $K_2Cr_2O_7$
WIHNUX	1.612+1.766; 3.453 Å	Sieron, L. *Acta Crystallogr., Sect. E* **2007**, *63*, m2068. $(C_3H_7N_2S)_2Cr_2O_7$
2771	1.613+1.784; 3.251 Å	Panagiotopoulos, N. C.; Brown, I. D. *Acta Crystallogr., Sect B* **1972**, *28*, 1352. $Na_2Cr_2O_7$
IKOMIG	1.613+1.772; 3.177 Å	Vetrivel, S.; Vinoth, E.; Mullai, R. U.; Aruljothi, R.; NizamMohideen, M. *Acta Crystallogr., Sect. E* **2016**, *72*, 616. $(C_{10}H_{28}N_4)(Cr_2O_7)_2$
OZIGAH	1.613+1.795; 3.168 Å	Trabelsi, S.; Roisnel, T.; Marouani, H. CDCC deposit number 1038891, **2016**. $(H_3N(CH_2)_3C_6H_5)_2Cr_2O_7$
409745	1.614+1.786; 3.280 Å	Kolitsch, U. *Z. Kristallogr. - New Crystal Struct.* **2003**, *218*, 401. $Rb_2Cr_2O_7$.
ACABAH	1.614+1.768; 3.307 Å	Weil, M. *Acta Crystallogr., Sect. E* **2001**, *57*, m322. $[HgC_{10}H_{10}N_2]Cr_2O_7$
COXYAP02	1.614 +1.817; 3.273 Å	Lennartson, A.; Håkansson M. *Acta Crystallogr., Sect. C* **2009**, *65*, m182. $(C_5H_6N)_2Cr_2O_7$
KIJZAF	1.614+1.773; 3.238 Å	Sieron, L. *Acta Crystallogr., Sect. E* **2007**, *63*, m2336. $(C_4H_6N_3)_2Cr_2O_7$
HMTMGC10	1.615+1.804; 3.241 Å	Dahan, F. *Acta Crystallogr., Sect. B* **1974**, *30*, 22. $[Mg(H_2O)_6](C_6H_{12}N_4)_2Cr_2O_7$.
MEBDON	1.615+1.786; 3.210 Å	Fosse, N.; Brohan, L. *J. Solid State Chem.* **1999**, *145*, 655. $(C_7H_{10}N)_2Cr_2O_7$.
OCABOK	1.615+1.786; 3.059 Å	Srinivasan, B. R.; Naik, A. R.; Nather, C.; Bensch, W. *Acta Crystallogr., Sect. E* **2004**, *60*, m1384. $(C_4H_{12}N_2)Cr_2O_7$.
VAPHUS	1.615+1.789; 3.303 Å	Moon, D.; Choi, J.-H. *Acta Crystallogr., Sect. E* **2017**, *73*, 755. $(C_{10}H_{28}N_{34})(Cr_2O_7)_2 \cdot H_2O$
24199	1.616+1.779; 3.167 Å	Brandon, J. K.; Brown, I. D. *Can. J. Chem.* **1968**, *46*, 933. $K_2Cr_2O_7$
280204	1.616+1.782; 3.135 Å	Krivovichev, S. V.; Kir'yanova, E. V.; Filatov, S. K.; Burns, P. C. *Acta Crystallogr., Sect. C* **2000**, *56*, 629-630. $K_2Cr_2O_7$
413593	1.616+1.783; 3.161 Å	Sharma, R. P.; Bala, R.; Sharma, R.; Salas, J. M.; Quiros, M. *J. Coord. Chem.* **2005**, *58*, 217. $[Co(NH_3)_6]ClCr_2O_7 \cdot H_2O$
YUHLIW01	1.616+1.777; 3.140 Å	Srinivasan, B. R.; Dhuri, S, N.; Nather, C.; Bensch, W. *Indian J. Chem., Sect. A* **2003**, *42*, 2735. $(C_2H_{10}N_2)_2Cr_2O_7$.
DACYEO	1.616+1.791; 3.211 Å	Beheshti, A.; Hashemi, F.; Monavvar, M. F.; Khorrmdin, R.; Abrahams, C. T.; Motamedi, H.; Shakerzadeh, E. *J. Mol. Struct.* **2017**, *1133*, 591. $[Ag(NC_4H_6N)_2]Cr_2O_7$
166614	1.617+1.793; 3.121 Å	Nozik, Y. Z.; Bukin, V. I.; Fykin, L. E.; Belov, N. V. *Dokl. Akad. Nauk SSSR* **1975**, *224*, 580. $Na_2Cr_2O_7 \cdot 2H_2O$

413950	1.617+1.780; 3.278 Å	Locock, A. J.; Burns, P. C. *Z. Kristallogr.* **2004**, *219*, 259. $Tl_2Cr_2O_7$.
LAMVOM	1.617+1.784; 3.205 Å	Gholizadeh, M.; Pourayoubi, M.; Kia, M.; Rheingold, A. L.; Golen, J. A. *Acta Crystallogr., Sect. E* **2012**, *68*, m305. $(C_5H_5(CH_2)_2C_5H_5))Cr_2O_7$
OWUFIX	1.617+1.779; 3.158 Å	Chebbi, H.; Ben Smail, R.; Zid, M. F. *Zh. Strukt. Khim.* **2016**, *57*, 632. $(C_{10}H_{22}N_2)Cr_2O_7$
6103	1.618+1.781; 3.100 Å	Dalgaard, G. A. P.; Hazell, A. C.; Hazell, R. G. *Acta Chem. Scand., Ser. A* **1974**, *28*, 541. $(NH_4)_2Cr_2O_7$
15034	1.618+1.774; 3.116 Å	Löfgren, P.; Waltersson, K. *Acta Chem. Scand.* **1971**, *25*, 35. $Rb_2Cr_2O_7$
UXOWEK	1.618+1.784; 3.216 Å	Goddard, P. A.; Singleton, J.; Sengupta, P.; McDonald, R. D.; Lancaster, T.; Blundell, S. J.; Pratt, F. L.; Cox, S.; Harrison, N.; Manson, J. L.; Southerland, H. I.; Schlueter, J. A. *New. J. Phys.* **2008**, *10*, 83025. $(CuC_8H_{12}N_4O_2]$ Cr_2O_7·
417523	1.619+1.786; 3.093 Å	Casari, B. M.; Eriksson, A. K.; Langer, V. *Z. Naturforsch., Teil B* **2007**, *62*, 771. $(NH_4)_2Cr_2O_7$.
417524	1.623+1.803; 3.134 Å	Casari, B. M.; Eriksson, A. K.; Langer, V. *Z. Naturforsch., Teil B* **2007**, *62*, 771. $Na_2Cr_2O_7{\cdot}2H_2O$
YUHLIW	1.624+1.782; 3.150 Å	Lorenzo-Luis, P. A.; Martin-Zarza, P.; Gili, P.; Arrieta, J. M.; Germain, G.; Dupont, L. *Acta Crystallogr., Sect. C* **1995**, *51*, 1073. $(C_2H_{10}N_2)_2Cr_2O_7$.
78663	1.627+1.833; 3.112 Å	Laligant, Y. ; Le Bail, A. *Powder Diffraction* **1995**, *10*, 159. $[Pd(NH_3)_4]Cr_2O_7$
ONISAI	1.632+1.790; 3.272 Å	Agarwal, R. A. *Cryst. Growth Des.* **2021**, *21*, 2046. $[Cd_4C_{108}H_{74}N_{12}O_{16}]Cr_2O_7{\cdot}33H2O$
27732	1.634+1.791; 3.162 Å	Kharitonov, Y. A.; Kuz'min, E. A.; Belov, N. V. *Kristallografiya* **1970**, *15*, 942. $Na_2Cr_2O_7{\cdot}2H_2O$
6129	1.642+1.829; 3.060 Å	Datt, I.D.; Ozerov, R.P. *Kristallografiya* **1974**, *19*, 110-117. $Li_2Cr_2O_7{\cdot}2H_2O$
HAFJOO	1.652+1.809; 3.287 Å	Ramaiah, K.; Dubey, P. K.; Ramanatham, J.; Kumar, C. R.; Grossert, J. S.; Cameron, T. S.; Sareda, S. V. *Indian J. Chem., Sect.B* **2002**, *41*, 2136. $(C_8H_9N)_2Cr_2O_7$.
ABULAL	1.659+1.809; 3.162 Å	Sheming Lu, Shoubo Qin, Yanxiong Ke, Jianmin Li, Hongxia Pei, Shuxi Zhou, Xintao Wu, Wenxin Du *Cryst. Res. Technol.* **2004**, *39*, 89. $[Ag_2C_{12}H_{24}N_8]_n(Cr_2O_7)_n{\cdot}nH_2O$
ZAWWID	1.659+1.823; 3.017 Å	Benetollo, F.; Bombieri, G.; Gilli, P.; Harlow, P. M.; Polo, A., Vallarino, L. M. *Polyhedron* **1995**, *14*, 2255. $[CrEuC_{22}H_{28}N_6O_5]_2Cr_2O_7{\cdot}2H_2O$
CUBQUL	1.662+1.712; 3.232 Å	Gili, P. *Rev. Chim. Miner.* **1984**, *21*, 171. $(C_5H_6N)_2Cr_2O_7$
MAPNUM	1.681+1.783; 3.273 Å	Fosse, N.; Brohan, L. *J. Solid State Chem.* **1999**, *145*, 655. $(N(CH_3)_2C_{16}H_{33})_2)_2Cr_2O_7$
Mean	**1.608+1.780 Å; 3.219 Å/82 structures**	

Molybdate, MoO_4^{2-}

ICSD/CSD code	*d(Mo-O)*	*Reference*
150842	1.677 Å	Guarniere, A. A. ; Moreira, A. M. ; Pinheiro, C. B. ; Speziali, N. L. *Phys. B.* **2003**, *334*, 303. K_2MoO_4
95859	1.686 Å	Schweda, E.; Hofmann, M.; Dittmann, M.; Glaser, J. *Z. Kristallogr.* **2002**, *217*, 164. $(NH_4)_2MoO_4$
74028	1.698 Å	Laligant, Y. *Eur. J. Solid State Inorg. Chem.* **1993**, *30*, 1017. $[Pd(NH_3)_4]MoO_4$
GAWSIG01	1.701 Å	Lin, B.-Z.; Han, G.-H.; Geng, F.; Ding, C. *J. Indian Chem. Soc.* **2006**, *62*, m532. $[Ni(H_2N(CH_2)_2NH_2)_3]MoO_4$
35442	1.708 Å	van den Berg, A.J.; Overeijnder, H.; Tuinstra, F. *Acta Crystallogr., Sect. C* **1983**, *39*, 678. K_2MoO_4
GAWSIG01	1.708 Å	Bi-Zhou Lin, Guo-Hua Han, Feng Geng, Cong Ding *Acta Crystallogr., Sect. E* **2006**, *62*, m532. $[Ni(H_2N(CH)_2NH_2)_3]MoO_4$
QIKSOK	1.715 Å	Ren-Zhang Wang, Ya-Feng Li, Xiao-Guang Qiao, Guo-Yu Yang, Yong-Heng Xing, Qing-Xin Zeng, Ji-Qing Xu, Yong-Hua Lin, Yan Xing, Heng-Qing Jia *Gaodeng Xuexiao Huaxue Xuebao* **1999**, *20*, 1186. $[Co(H_2N(CH)_2NH_2)_3]MoO_4$
280056	1.719 Å	Friese, K.; Madariaga, G.; Breczewski, T. *Acta Crystallogr., Sect. C* **1999**, *55*, 1753. Tl_2MoO_4
OWOSAV	1.721 Å	Liao, J.-H.; Chang, H.-W.; You, H.-C.; Fang, C.-S.; Liu, C. W. *Inorg. Chem.* **2011**, *50*, 2070. $[Ag_{32}C_{96}H_{240}O_{48}P_{24}S_{48}](MoO_4)_2(PF_6)_4{\cdot}2CH_3COCH_3$
280608	1.730 Å	Friese, K.; Aroyo, M. I.; Folcia, C. L.; Madariaga, G.; Breczewski, T. *Acta Crystallogr., Sect. B* **2001**, *57*, 142. Tl_2MoO_4
AREGUA	1.730 Å	Kondracka, M.; Merzweiler, K. *Z. Anorg. Allg. Chem.* **2011**, *637*, 348. $[Sn(CH_2C_6H_5)_3]MoO_4$
YASQAL	1.730 Å	Guo-Hua Han, Bi-Zhou Lin, Zhen Li *Crystallogr., Sect. E* **2005**, *61*, m313. $[Zn(H_2N(CH)_2NH_2)_3]MoO_4$
VIDHAU	1.733 Å	Krivovichev, S. V.; Cahill, C. L.; Nazarchuk, E. V.; Burns, P. C.; Armbruster, T.; Depmeier, W. *Micropor. Mesopor. Mater.* **2005**, *78*, 209. $((C_2H_5)_2NH_2)_2(UO_2)_4(MoO_4)_5{\cdot}2H_2O$
VAHVUW	1.735 Å	Guoyou Luan, Yangguang Li, Enbo Wang, Zhengbo Han, Changwen Hu, Ninghai Hu, Hengqing Jia *J. Solid State Chem.* **2001**, *165*,1. $[Cu(H_2N(CH)_2NH_2)_2]_4(MoO_4)_2[Mo_8O_{42}SiV_6]{\cdot}5H_2O$
MIQPEK	1.741 Å	Sarr, B.; Mbaye, A.; Diop, C. A. K.; Melin, F.; Hellwig, P.; Sidibe, M.; Rousselin, Y. *Acta Crystallogr., Sect. E* **2018**, *74*, 1684. $(i\text{-}C_3H_7)_2NH_2)_2MoO_4$
XAMWAK	1.741 Å	Guo-Hua Han, Bi-Zhou Lin, Zhen Li, Dong-Ya Sun, Pei-De Liu *J. Mol. Struct.* **2005**, *741*, 31. $[Cd(H_2N(CH)_2NH_2)_3]MoO_4$
DCHXMO	1.742 Å	Thiele, A.; Fuchs, J. *Z. Naturforsch., Teil B* **1979**, *34*, 145. $(C_{12}H_{24}N)_2MoO_4{\cdot}2H_2O$
11773	1.743 Å	Liu, J.; Sharma, N. *Inorg. Chem.* **2019**, *58*, 9964.Li_2MoO_4
20805	1.746 Å	Klevtsova, R. F.; Klevtsov, P. V.; Aleksandrov, K. S. *Dokl. Akad. Nauk SSSR* **1980**, *255*, 1379. $CsLiMoO_4$
ELIMUH	1.746 Å	Qing-Xin Zeng, Guo-Yu Yang, Ji-Qing Xu *Jiegou Huaxue* **2003**, *22*, 336. $[Ni(C_{10}H_8N_2)_3]MoO_4{\cdot}7.5H_2O$

NASQUX	1.747 Å	Guo, Y.; Deng, Y.; Zheng, T.; Huang, L.; Gao, D.; Bi, J.; Zou, G. *Inorg. Chem. Front* **2021**, *9*, 440. $Cs_3MoO_4(HOOCO)$
WINDIG	1.749 Å	E.C.Alyea, E. C.; Ferguson, G.; Zheng Xu *Crystallogr., Sect. C* **1995**, *51*, 353. $(C_6H_{21}N_4)_4(MoO_4)_6\cdot 6H_2O$
1512	1.751 Å	Sivestre, J. P. F.; Durif, A. *J. Solid State Chem.* **1978**, *24*, 97. $K_3MoO_4ReO_4$
240370	1.753 Å	Reinoso, S.; Dickman, M. H.; Reicke, M.; Kortz, U. *Inorg. Chem.* **2006**, *45*, 9014. $(CH_3)_2Sn)MoO_4$
WEYDEJ	1.753 Å	Shamuratov, E. B.; Batsanov, A. S.; Struchkov, Y. T.; Yunuskhodzhaev, A. N. *Izv. Akad. Nauk SSSR, Ser. Khim.* **1992**, 1073. $(C_{20}H_{25}N_2O_2)_2MoO_4\cdot H_2O$
RAHTIG	1.754 Å	Sun, Y.-C.; Zhu, H.-T.; Lu, M.-D.; Zheng, S.-L.; Li, X.-H.; Zhang, L.-C. CDCC deposit number 715138, **2016**. $[Ni(H_2O)_4(N_2C_6H_6N_2)]MoO_4)\cdot H_2O$
XUXKOS	1.754 Å	Custelcean, R.; Bonnesen, P. V.; Duncan, N. C.; Zhang, X.; Watson, L. A.; Van Berkel, G.; Parson, W. B., Hay, B. P. *J. Am. Chem. Soc.* **2012**, *134*, 8525. $[Zn_4C_{186}H_{216}N_{36}O_6]MoO_4\cdot 2CH_3OH\cdot 11H_2O$
VUWRAJ01	1.755 Å	Khranenko, S. P; Sukhikh, A. S.; Nikolaev, R. E.; Gromilov, S. A. *J. Struct. Chem.* **2020**, 61, 267. $[Cu(NH_2(CH_2)_2NH_2)_3]MoO_4$
84597	1.756 Å	Fabry, J.; Petricek, V.; Vanek, P.; Cisarova, I. *Acta Crystallogr., Sect. B* **1997**, *53*, 596. $K_3Na(MoO_4)_2$
20860	1.757 Å	Klevtsova, R. F.; Solov'eva, L. P.; Ishchenko, V. N.; Perepelitsa, A.; Klevtsov, P. N. *Kristallografiya* **1984**, *29*, 232. $RbLiMoO_4$
68568	1.757 Å	Makitova, D. D.; Tkachev, V. V.; Mirzoev, R. S.; Karov, Z. G. *Koord. Khim.* **1989**, *15*, 1334. $Na_3Li(MoO_4)_2\cdot 2H_2O$
BAGPEE	1.757 Å	Timmins, T.; Weakley, T. J. R. *Cryst. Struct. Commun.* **1981**,*10*, 1037. $(CH_6N_3)_2MoO_4$
EKABAT	1.757 Å	Li-Mei Duan, Cheng-Ling Pan, Ji-Qing Xu, Xiao-Bing Cui, Feng-Tong Xie, Tie-Gang Wang *Eur. J. Inorg. Chem.* **2003**, 2578. $H_3[Cu(H_2N(CH)_2NH_2)_2]_4[Mo_8O_{42}V_7](MoO_4)_2\cdot 14H_2O$
84291	1.758 Å	Colbeau-Justin, C.; Wallez, G.; Xuriguera, A. M.; Elfakir, A.; Jaulmes, S.; Quarton, M. *Eur. J. Solid State Inorg. Chem.* **1997**, *34*, 1097. $Tl_3Li(MoO_4)_2$
131739	1.758 Å	Shi, T.; Zhang, F.; Li, Y.; Gao, L.; Yang, Z.; Pan, S. *Inorg. Chem.* **2020**, *79*, 3034. $Na_3MoO_4IO_3$
FOCVUO	1.758 Å	Bensch, W.; Hug, P.; Emmenegger, R.; Reller, A.; Oswold, H. R. *Mater. Res. Bull.* **1987**, *22*, 447. $(H_3N(CH)_2NH_3)_2MoO_4$
NIMPEF	1.758 Å	Liu, Z.-H.; Li, H.-J. *J. Alloys Compd.* **2006**, *426*, 97. $[Ni)H_2N(CH_2)_2NH_2)_3](MoO_4)_2\cdot B(OH)_3\cdot 6H_2O$
110042	1.759 Å	Abrahams, B. F.; Haywood, M. G.; Hudson, T. A.; Robson, R. *Angew. Chem.* **2004**, *43*, 6157. $((CH_3)_4N)(C(NH_2)_3)MoO_4$
182821	1.760 Å	Gudkova, I. A.; Solodovnikova, Z. A.; Solodovnikov, S. F.; Zolotova, E. S.; Kurat'eva, N. V. *Zh. Neorg. Khim.* **2011**, *56*, 1517. $KLiMoO_4$
FAQCIK	1.759 Å	Abrahams, B. F.; Haywood, M. G.; Hudson, T. A.; Robson, R. *Angew. Chem., Int. Ed.* **2004**, *43*, 6157. $(C_4H_{12}N)(CH_6N_3)MoO_4$

39293	1.760 Å	Klevtsova, R. F.; Glinskaya, L. A.; Perepelitsa, A. P.; Ishchenko, V. N.; Klevtsov, P. V. *Kristallografiya* **1990**, *35*, 1094. $Na_3Rb(MoO_4)_2 \cdot 9H_2O$
IXAFIW	1.760 Å	Liendo, G.; Briceno, A.; Gonzalez, T.; Atencio, R. *Crystallogr., Sect. E* **2004**, *60*, m1028. $[Co(C_{10}H_8N_2)_3NO_3]MoO_4 \cdot H_2O$
136884	1.761 Å	Tillard, M.; Granier, D.; Reibel, C.; Daenens, L.; Armand, P. *J. Solid State Chem.* **2022**, *306*, 122809. $BaMoO_4$
408450	1.761 Å	Dittmann, M.; Schweda, E. *Z. Anorg. Allg. Chem.* **1998**, *624*, 2033. $(NH_4)_2MoO_4$
DIPBOW	1.761 Å	Zavalij, P. Y.; Li, A.-M.; Eichhorn, W. B, CDCC deposit number 1881473, **2018**.
OVUVUX	1.761 Å	Wutkowski, A.; Srinivasan, B. R.; Naik, A. R.; Schutt, C.; Nather, C.; Bensch, W. *Eur. J. Inorg. Chem.* **2011**, 2254. $(C_4H_9NH_3)_8[Mo_7O_{24}](MoO_4) \cdot 3H_2O$
20493	1.762 Å	Kruglik, A. I.; Klevtsova, R. F.; Aleksandrov, K. S. *Dokl. Akad. Nauk SSSR* **1983**, *271*, 1388. $RbLiMoO_4$
18229	1.762 Å	Shusharina, E. A.; Plyusnin, P. E.; Khranenko, S. P.; Gromilov, S. A. *J. Struct. Chem.* **2011**, *52*, 125. $[Ir(NH_3)_5Cl]MoO_4$
257503	1.762 Å	Zolotova, E. S.; Solodovnikova, Z. A.; Yudin, V. N.; Solodovnikov, S. F.; Khaikina, E. G.; Basovich, O. M.; Korolkov, I. V.; Filatova, I. Y. *J. Solid State Chem.* **2016**, *233*, 23. $Cs_3Na(MoO_4)$
16154	1.763 Å	Gatehouse, B. M.; Leverett, P. *J. Chem. Soc. A* **1969**, 849. K_2MoO_4
408479	1.763 Å	Dittmann, M.; Schweda, E. *Z. Anorg. Allg. Chem.* **1998**, *624*, 2033. $(NH_4)_2MoO_4$
CHAMMO	1.763 Å	Thiele, A.; Fuchs, J. *Z. Naturforsch., Teil B* **1979**, *34*, 145. $(C_6H_{14}N)_2MoO_4$
JUSLOA	1.763 Å	Kuang, Y.; Yang, B.; Pan, J.; Meng, X.; Xiao, F. *Z. Anorg. Allg. Chem.* 2015, 641, 1684. $[Cu_4C_{48}H_{40}N_8O_6](MoO_4)_2 \cdot 10H_2O$
49910	1.764 Å	Ozeki, T.; Ichida, H.; Sasaki, Y. *Acta Crystallogr., Sect. C* **1987**, *43*, 2220. $(C(NH_2)_3)_2MoO_4$
94489	1.764 Å	Kolitsch, U. *Z. Kristallogr.* **2001**, *216*, 449. Li_2MoO_4
BAGPEE01	1.764 Å	Ozeki, T.; Ichida, H.; Sasaki, Y. *Crystallogr., Sect. C* **1987**, *43*, 2220. $(CH_6N_3)_2MoO_4$
CUFSII	1.764 Å	Srinivasan, B. R.; Morajkar, S. M.; Kandolkar, S. S.; Gobre, V. V.; Apreyan, R. A. *J. Mol. Struct.* **2020**, *1204*, 127518. $(C(C2H_4OH)_3NH_3)NH_4MoO_4$
HEKFOS	1.765 Å	P.Roman, P.; San Jose, A.; Luque, A.; Gutierrez-Zorrilla, J. M.; Martinez-Ripoll, M. *Acta Crystallogr., Sect. C* **1994**, *50*, 1189. $(t\text{-}C_3H_7NH_3)_2MoO_4$
422142	1.766 Å	Shusharina, E. A.; Khranenko, S. P.; Plyusin, P. E.; Kardash, T. Y.; Gromilov, S. A. *Zh. Strukt, Khim.* **2011**, *52*, 946. $[Co(NH_3)_5Cl)MoO_4$
VIFSUC	1.766 Å	Sukmana, N. C. Sugiarto, Shinogi, J.; Kojima, T.; Higashiura, A.; Yamamoto, A.; Sakaguchi, T.; Sadakane, M. *Chem. Lett.* **2023**, *52*, 167. $(CH_3NH_3)_2MoO_4$
54019	1.767 Å	Klevtsov, P. V.; Glinskaya, L. A.; Klevtsova, R. F.; Aleksandrov, K. S. *Zh. Strukt. Khim.* **1997**, *38*, 739. $CsNaMoO_4 \cdot 2H_2O$

187074	1.772 Å	Khranenko, S. P.; Shusharina, E. A.; Smolentsev, A. I.; Plyusnin, P. E.; Gromilov, S. A. *Z. Strukt. Khim.* **2010**, *51*, 601. $[Rh(NH_3)_5Cl)]ClMoO_4 \cdot H_2O$
415412	1.767 Å	Capitelli, F.; Selim, M. D.; Mukherjea, K. K. *Asian J. Chem.* **2006**, *18*, 2856. $Na_2MoO_4 \cdot 2H_2O$
RINMIM	1.767 Å	Sheikhshoaie, I.; Ghazizadeh, M. *Bull. Chem. Soc. Ethiop.* **2013**, *27*, 69. $(HOCH_2(CH_3)_2CNH_3)_2MoO_4$
ROFPAG	1.767 Å	Wane, A.; Kama, A. B.; Diop, M. B.; Diop, L.; Plasseraud, L.; Cattey, H. *IUCrData* **2019**, *4*, x190500. $H_3N(CH_2)_3NH_3MoO_4$.
39263	1.768 Å	Makitova, D. D.; Tkachev, V. V.; Atovmyan, L. O. *Koord. Khim.* **1990**, *16*, 616. $NaLiMoO_4 \cdot 2H_2O$
92904	1.769 Å	Barinova, A. V.; Rastsvetaeva, R. K.; Nekrasov, Y. V.; Pushcharovskii, D. Y. *Dokl. Akad. Nauk* **2001**, *376*, 343. Li_2MoO_4
COVFOK	1.769 Å	Senchyk, G. A.; Lysenko, A. B.; Babaryk, A. A.; Rusanov, E, B.; Krautscheid, H.; Neves, P.; Valente, A. A.; Goncalves, I. S.; Kramer, K. W.; Liu, S.-X.; Decurtins, S.; Domasevitch, K. V. *Inorg. Chem.* 2014, 53, 10112. $Cu_4(C_{14}H_{18}N_6)_2O(MoO_4)_3 \cdot 7.5H_2O$
4156	1.773 Å	Matsumoto, K.; Kobayashi, A.; Sasaki, Y. *Bull. Chem. Soc. Jpn.* **1975**, *48*, 1009. $Na_2MoO_4 \cdot 2H_2O$
9278	1.773 Å	Gonschorek, W.; Hahn, T. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1973**, *138*, 167. Cs_2MoO_4
65006	1.773 Å	Klevtsova, R. F.; Glinskaya, L. A.; Klevtsov, P. V. *Kristallografiya* **1988**, *33*, 636. $Na_3Li(MoO_4)_2 \cdot 2H_2O$
33406	1.774 Å	Guo, X.; Song, S.; Jiang, X.; Cui, J.; Li, Y.; Lv, W.; Liu, H.; Han, Y.; Wang, L. *J. Alloys Compds.* **2021**, *857*, 157515. $CaMoO_4$
421983	1.774 Å	Machon, D.; Friese, K.; Breczewski, T.; Grzechnik, A. *J. Solid State Chem.* **2010**, *183*, 2558. Tl_2MoO_4
259254	1.775 Å	Smith, A. L.; Kauric, G.; van Eijck, l.; Goubitz, K.; Wallez, G.; Griveau, J. C.; Clavier, N.; Konings, R. J. M. *J. Solid State Chem.* **2017**, *253*, 89. Cs_2MoO_4
151970	1.787 Å	Bramnik, K. G.; Ehrenberg, H. *Z. Anorg. Allg. Chem.* **2004**, *630*, 1336. Na_2MoO_4
14555	1.787 Å	Perera, S. S.; Munasinghe, H. N.; Yatooma, E. N.; Rabuffetti, F. A. *Dalton Trans.* **2020**, *49*, 7914. Na_2MoO_4
138662	1.787 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Mater.* **2021**, *5*, 105003. $Rb_2Ba(MoO_4)_2$
43145	1.793 Å	Dixit, P.; Chauhan, V.; Rai, S. B.; Pandey, P. C. *J. Alloys Compds.* **2022**, *897*, 162820. $CaMoO_4$
SETXIA	1.799 Å	Zhang, Z.; Yang, J.; Liu, Y.-Y.; Ma, J.-F. *CrystEngComm* **2013**, *15*, 3843. $Na_2[Cu_6Mo_6C_{96}H_{96}N_{72}O_{19}](MoO_4)_6 \cdot 9H_2O$
248567	1.834 Å	Wallez, G.; Raison, P. E.; Smith, A. L.; Clavier, N.; Dacheux, N. *J. Solid State Chem.* **2014**, *215*, 225. Cs_2MoO_4
36905	1.836 Å	Shandilya, A.; Y., Ram S.; Gupta, A. K.; Sreenivas, K. *Mater. Chem. Phys.* **2021**, *264*, 124441. $SrMoO_4$
24904	1.847 Å	Kools, F. X. N. M.; Koster, A. S.; Rieck, G. D. *Acta Crystallogr., Sect. B* **1970**, *26*, 1974. Rb_2MoO_4

14556	1.847 Å	Perera, S. S.; Munasinghe, H. N.; Yatooma, E. N.; Rabuffetti, F. A. *Dalton Trans.* **2020**, *49*, 7914.
		Na_2WO_4
Mean	**1.759 Å/69 structures**	

Tungstate, WO_4^{2-}

ICSD/CSD code	*d(W-O)*	*Reference*
TBUAMW	1.753 Å	Thiele, A.; Fuchs, J. *Z. Naturforsch., Teil B* **1979**, *34*, 145. $(C_4H_{12}N)_2WO_4 \cdot H_2O$
PEHLUJ	1.760 Å	Clegg, W.; Errington, R. J.; Fraser, K. A.; Richards, D. G. *Chem. Commun.* **1993**, 1105 $(C_{10}H_{16}N)_2WO_4 \cdot H_2O$
LUQQOG	1.762 Å	Clegg, W.; Fraser, K. A. CCDC deposition number 2018987, **2020**. $(((CH_3)_4N)_2WO_4 \cdot H_2O$
182291	1.768 Å	Shusharina, E. A.; Plyusnin, P. E.; Khranenko, S. P.; Gromilov, S. A. *J. Struct. Chem.* **2011**, *52*, 125. $[Ir(NH_3)_5Cl]WO_4$
417289	1.771 Å	Hartenbach, I.; Schleid, T. *Z. Anorg. Allg. Chem.* **2007**, *633*, 524. Na_3FWO_4
HUKYER	1.771 Å	McMullan, J. *J. Chem. Phys.* **1959**, *31*, 1231. $(C_2H_{24}N)WO_4 \cdot 2H_2O$
182716	1.772 Å	Khranenko, S. P.; Shusharina, E. A.; Smolentsev, A. I.; Plyusnin, P. E.; Gromilov, S. A. *Z. Strukt. Khim.* **2010**, *51*, 601. $[Rh(NH_3)_5Cl]WO_4$
KIHQEX	1.773 Å	Choi, K.-Y.; Ryu, H.; Suh, I.-H. *Inorg. Chim. Acta* **2000**, *299*, 268. $[Cu_2W_2C_{40}N_8O_2)]WO_4 \cdot 11H_2O$
14879	1.774 Å	Bai, S.; Liu, Y.; Tan, G.; Liu, W.; Liu, D.; Wang, R.; Zhu, Y.; Ye, S.; Ren, H. *J. Luminescence* **2020**, *225*, 117351. $CaWO_4$
422139	1.774 Å	Shusharina, E. A.; Khranenko, S. P.; Plyusnin, P. E.; Kardash, T. Y.; Gromilov, S. A. *Z. Strukt. Khim.* **2011**, *52*, 946. $[Co(NH_3)_5Cl]WO_4$
8212	1.775 Å	Okada, K.; Ossaka, J. *Acta Crystallogr., Sect. B* **1979**, *35*, 2189. Tl_2WO_4
240882	1.775 Å	Farrugia, L. J. *Acta Crystallogr., Sect. E* **2007**, *63*, i142. $Na_2WO_4 \cdot 2H_2O$
183200	1.776 Å	Shigematsu, H.; Nomura, K.; Nishiyama, K.; Tojo, T.; Kawaji, H.; Atake, T.; Kawamura, Y.; Miyoshi, T.; Matsushita, Y.; Tanaka, M.; Mashiyama, H. *Ferroelectrics* **2011**, *414*, 195. Rb_2WO_4
18860	1.780 Å	Nobre, F. X.; Nogueira, I. C.; da Silva Souza, G.; de Matos, J. M. E.; da Costa Couceiro, P. R.; Brito, W. R.; de la Cruz, J. P.; Leyet Ruiz, Y. *Inorg. Chem.* **2020**, *59*, 6029. $CaWO_4$
33179	1.780 Å	Sousa, P. B. de; Gouveia, A. F.; Sczancoski, J. C.; Nogueira, I. C.; Longo, E.; San-Miguel, M. A.; Cavalcante, L. S. *J. Alloys Compds.* **2021**, *855*, 157377. $CaWO_4$
49595	1.780 Å	Wang, X.; Lv, J.; Xu, Y.; Zhang, L.; Shen, Y.; Zhou, H.; Zhou, D; Song, K.; Guo, H.; Shi, F. *J. Alloys Compds.* **2022**, *925*, 166669. $CaWO_4$
LUQSIC	1.781 Å	Clegg, W.; Elsegood, M. R. J. CCDC deposition number 2019003, **2020**. $(((C_2H_5)_4N)_2WO_4 \cdot CH_3CN$
244164	1.782 Å	Krause, L.; Herbst_irmer, R.; Sheldrick, G. M.; Stalke, D. *J. Appl. Crystallogr.* **2015**, *48*, 3. $Na_2WO_4 \cdot 2H_2O$
195519	1.783 Å	Fortes, A. D. *Acta Crystallogr., Sect. E* **2015**, *71*, 592. Na_2WO_4
160721	1.786 Å	Singh, D.-J. *Phys. Rev., Ser. 3. B* **2008**, *77*, 113101. Li_2WO_4
14082	1.787 Å	Okada, K.; Ossaka, J. *Acta Crystallogr., Sect. B* **1980**, *36*, 657. $CsLiWO_4$

15395	1.789 Å	Zachariasen, W. H.; Plettinger, H. A. *Acta Crystallogr.* **1961**, *14*, 229. Li_2WO_4
26181	1.789 Å	Koster, A. S.; Kools, F. X. N. M.; Rieck, G. D. *Acta Crystallogr., Sect. B* **1969**, *25*, 1704. K_2WO_4
67236	1.789 Å	Hartmann, P. *Z. Kristallogr.* **1989**, *187*, 139. Li_2WO_4
2133	1.819 Å	Okada, K.; Morikawa, H.; Marumo, F.; Iwai, S. I. *Acta Crystallogr., Sect. B* **1974**, *30*, 1872. Na_2WO_4
187076	1.843 Å	Khranenko, S. P.; Alexeyev, A. V.; Naumov, D. Y.; Plyusnin, P. E.; Gromilov, S. A. *J. Struct. Chem.* **2012**, *53*, 748. $[Co(NH_3)_6]ClWO_4$
Mean	**1.776 Å/24 structures**	

Permanganate, MnO_4^-

ICSD/CSD code	*d(Mo-O)*	*Reference*
CUWMAI	1.471 Å	Karaman, H.; Barton, R. J.; Robertson, B. E.; Lee, D. G. *J. Org. Chem.* **1984**, *49*, 4509. $(C_6H_5)_3P(C_7H_{15})MnO_4$
MASLEY	1.422 Å	Winpenny, R.; Brechin, E.; Gio-Batta, M.; Coxall, B.; Parsons, S.; Messenger, D. CCDC 278269.
MEPHMN10	1.452 Å	Karaman, H.; Barton, R. J.; Robertson, B. E.; Lee, D. G. *J. Org. Chem.* **1984**, *49*, 4509. $(C_6H_5)_3P(CH_3)MnO_4$
MEPHMN01	1.540 Å	Karaman, H.; Barton, R. J.; Robertson, B. E.; Lee, D. G. *J. Org. Chem.* **1984**, *49*, 4509.
52378	1.534 Å	Mooney, R. C. L. *Phys. Rev.* **1931**, *37*, 1306. $KMnO_4$
MEPHMN10	1.468 Å	$(CH_3(C_6H_5)_3P)MnO_4$
44416	1.552 Å	Venkatesan, K. *Thesis University of Madras*, **1959**. $KMnO_4$
44625	1.553 Å	Ramaseshan, S.; Venkatesan, K.; Mani, N. V. *Proc. Indian Acad. Sci., Sect. A* **1957**, *46*, 95. $KMnO_4$
ZONSOM	1.585 Å	Yi, X.-Y.; Wang, G.-C.; Ip, H.-F.; Wong, W.-Y.; Chen, L.; Sung, H. H.-Y.; Williams, L. D.; Leung, W.-H. *Eur. J. Inorg. Chem.* **2014**, 6097. $[Ce_2Co_4C_{64}H_{134}O_{38}P_{12}](MnO_4)_2\cdot 0.4C_6H_{14}\cdot 0.2CH_2Cl_2$
26803	1.588 Å	Stanley, E. *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.* **1968**, *127*, 450. $K_3MnO_4CrO_4$
432611	1.594 Å	Henning, H.; Bauchert, J. M.; Conrad, M.; Schleid, T. *Z. Naturforsch., Teil B* **2017**, *72*, 555. $Sr(MnO_4)_2\cdot 3H_2O$
116545	1.595 Å	Fogaca, L. A.; Kováts, É.; Németh, G.; Kamarás, K.; Béres, K. A.; Németh, P.; Petruševski, V.; Bereczki, L.; Holló, B. B.; Sajó, I. E.; Klébert, S.; Farkas, A.; Szilágyi, I. M.; Kótai, L. *Inorganics* **2022**, *10*, 18. $[Co(NH_3)_5Cl]MnO_4$
89506	1.603 Å	Hoppe, R.; Fischer, D.; Schneider, J. *Z. Anorg. Allg. Chem.* **1999**, *625*, 1135. $KMnO_4$
89507	1.603 Å	Hoppe, R.; Fischer, D.; Schneider, J. *Z. Anorg. Allg. Chem.* **1999**, *625*, 1135. $RbMnO_4$
89508	1.604 Å	Hoppe, R.; Fischer, D.; Schneider, J. *Z. Anorg. Allg. Chem.* **1999**, *625*, 1135. $CsMnO_4$
425408	1.605 Å	Henning, H.; Bauchert, J. M.; Conrad, M.; Schleid, T. *Z. Naturforsch., Teil B* **2017**, *72*, 555. $Ca(MnO_4)_2\cdot 4H_2O$
KELPIE	1.606 Å	Beres, K. A.; Homonnay, Z.; Kvitek, L.; Durvanger, Z.; Kubikova, M.; Harmat, V.; Szilagyi, F.; Czegeny, Z.; Nemeth, P.; Bereczki, L.; Petrusevski, V. M.; Papai, M.; Farkas, A.; Kotai, L. *Inorg. Chem.* **2022**, *61*, 14403. $[Fe(OC(NH_2)_2)_6](MnO_4)_3$
22244	1.607 Å	Palenik, G. J. *Inorg. Chem.* **1967**, *6*, 503. $KMnO_4$
61243	1.607 Å	Seferiadis, N.; Dubler, E.; Oswald, H. R. *Acta Crystallogr., Sect. C* **1986**, *42*, 942. $[Cu(NH_3)_4](MnO_4)_2$
391439	1.607 Å	Bauchert, J. M.; Strobel, S.; Glaeser, R. J.; Hasse, H.; Schleid, T. *Z. Anorg. Allg. Chem.* **2008**, *634*, 2028. $[Ni(H_2O)_6](MnO_4)_2$

111796	1.609 Å	Fogaca, L A.; Kováts, É.; Németh, G.; Kamarás, K.; Béres, K. A.; Németh, P.; Petruševski, V.; Bereczki, L.; Holló, B. B.; Sajó, I. E.; Klébert, S.; Farkas, A.; Szilágyi, I. M.; Kótai, L. *Inorg. Chem.* **2021**, *60*, 3749. $[Ag(NH_3)_2]MnO_4$
61051	1.610 Å	Chang, F. M.; Jansen, M. *Acta Crystallogr., Sect. C* **1985**, *41*, 1693. NH_4MnO_4
431105	1.610 Å	Bauchert, J. M.; Henning, H.; Schleid, T. *Z. Naturforsch., Teil B* **2016**, *71*, 993. $NaMnO_4$
VOGVOC	1.610 Å	Whang, D.; Chung, S.-K.; Kim, K. *Acta Crystallogr., Sect. C* **1991**, *47*, 2672. $((C_2H_5)_4N)MnO_4$
67580	1.611 Å	Hursthouse, M. B.; Quillin, K. C.; Rosseinsky, D. R. *J. Chem. Soc., Faraday Trans.* **1992**, *88*, 3071. $K_3MnO_4CrO_4$
33776	1.614 Å	Fischer, D.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1990**, *590*, 18. $LiMnO_4 \cdot 3H_2O$
413443	1.616 Å	Marabello, D.; Bianchi, R.; Gervasio, G.; Cargnoni, F. *Acta Crystallogr., Sect. A* **2004**, *60*, 494. $KMnO_4$
432612	1.616 Å	Henning, H.; Bauchert, J. M.; Conrad, M.; Schleid, T. *Z. Naturforsch., Teil B* **2017**, *72*, 555. $Ba(MnO_4)_2$
170088	1.617 Å	Marabello, D.; Bianchi, R.; Gervasio, G.; Cargnoni, F. *Acta Crystallogr., Sect. A* **2004**, *60*, 494. $KMnO_4$
260045	1.622 Å	Bauchert, J. M.; Strobel, S.; Glaeser, R. J.; Hasse, H.; Schleid, T. *Z. Anorg. Allg. Chem.* **2008**, *634*, 2028. $LiMnO_4 \cdot 3H_2O$
417413	1.622 Å	Bauchert, J. M.; Glaeser, R. J.; Hartenbach, I.; Hasse, H.; Schleid, T. *Z. Kristallogr.* **2007**, *25*, 20. $LiMnO_4 \cdot 3H_2O$
55420	1.623 Å	Cannon, R. D.; Jayasooriya, U. A.; Tilford, C.; Anson, C. E.; Sowrey, F. E.; Rosseinsky, D. R.; Stride, J. A.; Tasset, F.; Ressouche, E.; White, R. P.; Ballou, R. *Inorg. Chem.* **2004**, *43*, 7061. $KMnO_4$
73115	1.623 Å	Fischer, D.; Hoppe, R.; Schaefer, W.; Knight, K. S. *Z. Anorg. Allg. Chem.* **1993**, *619*, 1419. $LiMnO_4$
30931	1.622 Å	Chang, F. M.; Jansen, M. *Z. Kristallogr.* **1984**, *169*, 295. $AgMnO_4$
89505	1.623 Å	Hoppe, R.; Fischer, D.; Schneider, J. *Z. Anorg. Allg. Chem.* **1999**, *625*, 1135. $LiMnO_4$
16819	1.630 Å	Prout, E. G.; Nassimbeni, L. R. *Nature (London)* **1966**, *211*, 70. $CsMnO_4$
Mean	**1.610 Å/28 structures**	

Pertechnate, TcO_4^-

ICSD/CSD code	*d(Tc-O)*	*Reference*
110196	1.676 Å	German, K. E.; Grogorev, M. S. Kuzina, A. F.; Gulev, B. F.; Spitsyn, V. I. *Dokl. Akad. Nauk SSSR* **1986**, *287*, 650. $(CH_3)_4NTcO_4$
DUGNEY	1.676 Å	German, K. E.; Grigor'ev, M. S.; Kuzina, A. F.; Gulev, B. F.; Spitsin, V. I. *Proc. Nat. Acad. Sci. USSR* **1986**, *287*, 650. $((CH_3)_4N)TcO_4$
255280	1.686 Å	Weaver, J.; Soderquist, C, Z.; Washton, N. M.; Lipton, A. S.; Gassman, P. L.; Lukens, W. W.; Kruger, A. A.; Wall, N. A.; McCloy, J. S. *Inorg. Chem.* **2017**, *56*, 2533. $CsTcO_4$
AMUCAM	1.692 Å	Noll, B.; Leibnitz, P.; Spies, H. *Forschungszent Rossendorf (Ber)* **1999**, *270*, 153. $[Tc(CNCH_2COOCH_3)_6]TcO_4$
39540	1.699 Å	Tarasov, V. P.; Kirakosyan, G. A.; German, K. E.; Grogorev, M. S. *Koord. Khim.* **1991**, *17*, 1643. $CsTcO_4$
ORAGEW	1.700 Å	Xie, R.; Shen, N.; Chen, X.; Li, J.; Wang, Y.; Zhang, C.; Xiao, C.; Chai, Z.; Wang, S. *Inorg. Chem.* **2021**, *60*, 6463. $(C_{12}H_{21}N_{12})(TcO_4)_3$
10427	1.703 Å	Faggiani, R.; Lock, C. J.L.; Poce, J. *Acta Crystallogr., Sect. B* **1980**, *36*, 231. NH_4TcO_4
WURNAB	1.703 Å	Andreev, G.; Budantseva, N.; Sokolova, M.; Fedoseev, A. *Inorg. Chem.* **2020**, *59*, 11357. $Pu(OS(CH_3)_2)_6](TcO_4)\cdot(CH_3)_2SO$
AYAKET	1.704 Å	Xueyu Wang, X.; Ding, S.; Wang, Z.; Song, L.; Yang, X.; Xiao, Q.; Xu, H.; Wang, J.; Shen, Z..; Wang, H. *Inorg. Chem.* **2021**, *60*, 10899. $(HN(C_6H_{12}NO)_3)TcO_4\cdot 0.5H_2O$
ORAFUL	1.705 Å	Xie, R.; Shen, N.; Chen, X.; Li, J.; Wang, Y.; Zhang, C.; Xiao, C.; Chai, Z.; Wang, S. *Inorg. Chem.* **2021**, *60*, 6463. $(C_{10}H_{16}N_8)(TcO_4)_2$
10428	1.708 Å	Faggiani, R.; Lock, C. J.L.; Poce, J. *Acta Crystallogr., Sect. B* **1980**, *36*, 231. NH_4TcO_4
YEJYEV	1.709 Å	Artemjev, A. A.; Novikov, A. P.; Burkin, G. M.; Sapronov, A. A.; Kubasov, A. S.; Nenajdenko, V. G.; Khrustalev, V. N.; Borisov, A. V.; Kirichuk, A. A.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Int. J. Mol. Sci.* **2022**, *23*, 6372. $(C_7H_4Cl_3N_2Se)TcO_4$
61	1.711 Å	Krebs, B; Hasse, K. *Acta Crystallogr., Sect. B* **1976**, *32*, 1334. $KTcO_4$
10429	1.711 Å	Faggiani, R.; Lock, C. J.L.; Poce, J. *Acta Crystallogr., Sect. B* **1980**, *36*, 231. NH_4TcO_4
243806	1.713 Å	Poineau, F.; Mausolf, E.; Kerlin, W.; Czerwinski, K. *J. Radioanal. Nucl. Chem.* **2017**, *311*, 775. $[Co(NH_3)_6](TcO_4)_3\cdot H_2O$
365	1.714 Å	Mayer, G.; Hoppe, R. *Z. Allg. Anorg. Chem.* **1976**, *420*, 40. $CsTcO_4$
YEJYUL	1.716 Å	Artemjev, A. A.; Novikov, A. P.; Burkin, G. M.; Sapronov, A. A.; Kubasov, A. S.; Nenajdenko, V. G.; Khrustalev, V. N.; Borisov, A. V.; Kirichuk, A. A.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Int. J. Mol. Sci.* **2022**, *23*, 6372. $(C_7H_6ClN_2Se)TcO_4$

YEJYUL	1.716 Å	Artemjev, A. A.; Novikov, A. P.; Burkin, G. M.; Sapronov, A. A.; Kubasov, A. S.; Nenajdenko, V. G.; Khrustalev, V. N.; Borisov, A. V.; Kirichuk, A. A.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Int. J. Mol. Sci.* **2022**, *23*, 6372. $(C_7H_6FN_2Se)TcO_4$
GEQHUJ	1.717 Å	Novikov, A. P.; German, K. E.; Safonov, A. V.; Grigoriev, M. S. *Chem. Sel.* **2022**, *7*, e2022028. $(C_5H_5N_5O)TcO_4$
243964	1.718 Å	German, K. E.; Grigoriev, M. S., Garashschenko, B. L.; Kopytin, A. V.; Tyupina, E. A. *Acta Crystallogr., Sect. E* **2017**, *73*, 1037. $NaTcO_4$
11774	1.720 Å	Kennedy, B. J.; Injac, S.; Thorogood, G. J.; Brand, H. E. A.; Poineau, F. *Inorg. Chem.* **2019**, *58*, 10119. $CsTcO_4$
243963	1.721 Å	German, K. E.; Grigoriev, M. S., Garashschenko, B. L.; Kopytin, A. V.; Tyupina, E. A. *Acta Crystallogr., Sect. E* **2017**, *73*, 1037. $NaTcO_4$
141005	1.723 Å	Reynolds, E. M.; Yu, M.; Thorogood, G. J.; Brand, H. E. A.; Poineau, F.; Kennedy, B. J. *J. Solid State Chem.* **2019**, *274*, 64. NH_4TcO_4
255279	1.723 Å	Weaver, J.; Soderquist, C, Z.; Washton, N. M.; Lipton, A. S.; Gassman, P. L.; Lukens, W. W.; Kruger, A. A.; Wall, N. A.; McCloy, J. S. *Inorg. Chem.* **2017**, *56*, 2533. $RbTcO_4$
11774	1.732 Å	Kennedy, B. J.; Injac, S.; Thorogood, G. J.; Brand, H. E. A.; Poineau, F. *Inorg. Chem.* **2019**, *58*, 10119. $KTcO_4$
255277	1.737 Å	Weaver, J.; Soderquist, C, Z.; Washton, N. M.; Lipton, A. S.; Gassman, P. L.; Lukens, W. W.; Kruger, A. A.; Wall, N. A.; McCloy, J. S. *Inorg. Chem.* **2017**, *56*, 2533. $NaTcO_4$
255278	1.739 Å	Weaver, J.; Soderquist, C, Z.; Washton, N. M.; Lipton, A. S.; Gassman, P. L.; Lukens, W. W.; Kruger, A. A.; Wall, N. A.; McCloy, J. S. *Inorg. Chem.* **2017**, *56*, 2533. $KTcO_4$
11779	1.741 Å	Kennedy, B. J.; Injac, S.; Thorogood, G. J.; Brand, H. E. A.; Poineau, F. *Inorg. Chem.* **2019**, *58*, 10119. $KTcO_4$
11775	1.744 Å	Kennedy, B. J.; Injac, S.; Thorogood, G. J.; Brand, H. E. A.; Poineau, F. *Inorg. Chem.* **2019**, *58*, 10119. $RbTcO_4$
JUVJUF	1.746 Å	John, C. S.; Costello, C. E.; Schlemper, E. O. *Polyhedron* **1992**, *11*, 2651. $[Sn(C_6H_{12}NS)_3]TcO_4 \cdot CHCl_3$
Mean	**1.713 Å/30 structures**	

Perrhenate, ReO_4^-

ICSD/CSD code	*d(Re-O)*	*Reference*
ROLMUC01	1.650 Å	Volkov, M. A.; Novikov, A. P.; Grigoriev, M. S.; Kuznetsov, V. V.; Sitanskaia, A. V.; Belova, E. V.; Afanasiev, A. V.; Nevolin, I. M.; German, K. E. *Int. J. Mol. Sci.* **2023**, *24*, 2015. $((n\text{-}C_4H_9)_4N)ReO_4$
TEPQOW	1.650 Å	Lum, R.; Zhang, H.; Bai, S.; Zhang, W.; Zhao, J.; Hor, T. S. A. *Dalton Trans.* **2013**, *42*, 871. $[Re(O)OH(C_{13}H_{20}N_4)_2](ReO_4)_{0.6}(PF_6)_{1.4}$
CIRPOM	1.653 Å	Li, L.; Zhao, Y.; Zhou, Y.; Bai, W. *Z. Anorg. Allg. Chem.* **2023**, *649*, e202300114. $[ReC_{59}H_{59}Cl_2P_3]ReO_4$
LOYBOQ	1.653 Å	Whitmire, K. H.; Derringer, D. R.; Kongkasuwan, K. R. *Acta Crystallogr., Sect. E* **2002**, *58*, m363. $[Re(P((C_6H_5)_2)_2)_3]ReO_4$
KIYZOP	1.653 Å	Breimair, J.; Robl, C.; Beck, W. *J. Organometal. Chem.* **1991**, *411*, 395. $[CO_3(Re(CO)_5)_3]ReO_4{\cdot}[Re_4(OH)_4(CO)_{12}]$
UZURAJ	1.654 Å	Abate, A.; Marti-Rujas, J.; Metrangolo, P.; Pilati, T.; Resnati, G.; Terraneo, G. *Cryst. Growth Des.* **2011**, *11*, 4220. $((n\text{-}C_4H_9)_4N)_2(ReO_4)_2{\cdot}3C_6F_4I_2$
BOYMUA	1.655 Å	Liu, H.; Hadzovic, A. CCDC deposition number 1973603, **2019**. $[Re(P(C_6H_5)_3)_2Cl(ON_2C_{11}H_{13})]ReO_4$
RUWNEE	1.655 Å	Gryca, I.; Machura, B.; Malecki, J. G.; Kusz, J.; Shul'pina, L. S.; Ikonnikov, N. S.; Shul'pin, G. B. *Dalton Trans.* **2016**, *45*, 334. $[ReBr(P(C_6H_5)_3)_2(NC_6H_4(CH_3))(NOC_{13}H_4N_3)]ReO_4$
GADFUM	1.657 Å	Miranda, J. M.; Oliveira, M. A.; Castellano, E. E.;Scoralick, E.; Zinner, L. B.; Vicentini, G. *Inorg. Chim. Acta* **1987**, *139*, 131. $([Ho_2Re_2C_{24}H_{60}O_{26}S_{12}](ReO_4)_4{\cdot}C_4H_8O_2S_2$
LOJHIB	1.658 Å	Tomura, M.; Yamashita, Y. *CrystEngComm* **2000**, *2*, 86. $(C_{28}H_{14}F_4S_4)ReO_4$
KIJMIA	1.660 Å	Engelbrecht, H. P.; Jurisson, S. S.; Cutler, C. S.; den Drijver, L.; Roodt, A. *Synth. React. Inorg., Met.-Org., Nano-Met. Chem.* **2005**, *35*, 83. $[ReCl_2(P(CH_3)_2(CH_2)_2P(CH_3)_2)_2]ReO_4$
BONGIU	1.660 Å	Suescun, L.; Mombru, A. W.; Mariezcurrena, R. A.; Kremer, C.; Rivero, M.; Kremer, E.; Dominguez, S.; Mederos, A. *Acta Crystallogr., Sect. C* **1999**, *55*, 1785. $[Re(O)_2(P_2C_{27}H_{26})_2](ReO_4)_{0.83}I_{0.17}{\cdot}CH_3OH{\cdot}0.17H_2O$
BOWMOQ04	1.660 Å	Shao, X.: Yoshida, Y.; Nakano, Y.; Yamochi, H.; Sakata, M.; Maesato, M.; Otsuka, A.; Saito, G.; Koshihara, S. *Chem. Mater.* **2009**, *21*, 1085. $(C_9H_8O_2S_4)ReO_4{\cdot}C_9H_8O_2S_4$
GISNAX	1.660 Å	Drew, M. G. B.; Felix, V.; Goncalves, I. S.; Kuhn, F. E.; Lopes, A. D.; Romao, C. C. *Polyhedron* **1998**, *17*, 1091. $[Mo(CO)_2(C_5H_5)(C_6H_6N_4)]ReO_4$
TAQQIP	1.661 Å	Dobbelaar, E.; Jakobsen, V. B.; Trzop, E.; Lee, M.; Chikara, S.; Ding, X.; Muller-Bunz, H.; Esien, K.; Felton, S.; Carpenter, E.;Collet, E.; Morgan, G. G.; Zapf, V. S. *Angew. Chem., Int. Ed.* **2022**, *61*, e202114021. $[MnC_{22}H_{28}N_4O_2]ReO_4$

BONGOA	1.662 Å	Suescun, L.; Mombru, A. W.; Mariezcurrena, R. A.; Kremer, C.; Rivero, M.; Kremer, E.; Dominguez, S.; Mederos, A. *Acta Crystallogr., Sct. C* **1999**, *55*, 1785. $[Re(O)_2(P_2C_{27}H_{26})_2](ReO_4)_{0.64}I_{0.36}\cdot CH_3OH\cdot 0.36H_2O$
CAVNES	1.664 Å	Kobayashi, H.; Kobayashi, A.; Sasaki, Y.; Saito, G.; Inokuchi, H. *Bull. Chem. Soc. Jpn.* **1983**, *56*, 2894. $(C_{10}H_{12}Se_4)ReO_4\cdot Cl_2HCCH_2Cl$
ILAPES	1.664 Å	Kovalev, V. V.; Gorbunova, Y. E.; Kozyukhin, S. A.; Kokunov, Y. V. *Koord. Khim.* **2015**, *41*, 332. $[Ag_2C_{12}H_{30}N_6]_n(ReO_4)_2$
GEZKEF	1.665 Å	Bloch, W. M.; Horiuchi, S.; Holstein, J. J.; Drechsler, C.; Wuttke, A.; Hiller, W.; Mata, R. A.; Clever, G. H. *Chem. Sci.* **2023**, *14*, 1524. $[Pd_2C_{160}H_{124}N_{12}]_2(ReO_4)_2(NO_3)_2$
KIWPOV	1.665 Å	McGhee, E. M.; Hoffman, B. M.; Ibers, J. A. *Inorg. Chem.* **1991**, *30*, 2161. $[Pd(N_4C_{24}H_{20}]ReO_4\cdot[Pd(N_4C_{24}H_{20}]$
KEXSEL	1.666 Å	Herrmann, W. A.; Kuchler, J. G.; Kiprof, P.; Riede, J. *J. Organometal. Chem.* **1990**, *395*, 55. $(C_{18}H_{25}N_2)ReO_4$
ONELIF	1.666 Å	Li, C.-P.; Zhou, H.; Wang, J.-J.; Liu, B.-L.; Wang, S.; Yang, X.; Wang, Z.-L.; Liu, C.-S.; Du, M.; Zhou, W. *ACS Appl. Mater. Interfaces* **2019**, *11*, 42375. $[AgC_{17}H_{12}N_6]_nReO_4$
IVAKIZ	1.668 Å	John, G. H.; May, I.; Sarsfield, M. J.; Steele, H. M.; Collison, D.; Helliwell, M.; McKinne, J. D. *Dalton Trans.* **2004**, 734. $[((C_6H_5)_3PO)_3UO_2(O)_2UO_2(OP(C_6H_5))_3](ReO_4)_2$
SAYXAV	1.668 Å	Feng, H.; Xiong, X.; Gong, L.; Zhang, H.; Xu, Y.; Feng, X.; Luo, F. *Nano Res.* **2022**, *15*, 1472. $[Re_3Th_3C_{27}H_{20}N_9O_{22}]ReO_4$
NUJZAW	1.668 Å	Xu, L.; Zhang, D.; Ronson, T.; Nitschke, J. *Angew. Chem., Int. Ed.* **2020**, *59*, 7435. $[Zn_4C_{228}H_{156}N_{36}O_{12}]ReO_4(N(CSO_2CF3)_2)_5\cdot CH_3CN$
QUXROR	1.668 Å	Toumi Akriche, S.; Al Othman, Z. A.; Rzaigui, M.; Mahfouz, R. M. *Acta Crystallogr., Sect. E* **2010**, *66*, m816. $[Co(N_2C_{12}H_8)_3](ReO_4)_2\cdot H_2O$
FASLEU	1.669 Å	Zhang, D.; Gan, Q.: Plajer, A. J.; Lavendomme, R.; Ronson, T. R. Lu, Z.; Jensen, J. D.; Laursen, B. W.; Nitschke, J. R. *J. Am. Chem. Soc.* **2022**, *144*, 1106. $[Fe_2C_{189}H_{132}N_{21}O_6](ReO_4)_{2.6}(BF_4)_{4.4}\cdot 3CH_3CN$
DAGVAM	1.669 Å	Belaj, F.; Schachner, J. A.; Mosch-Zanetti, N. C. CCDC depostion number 2113424, **2021**. $[Re_2C_{45}H_{48}N_5O_{10}](ReO_4)_{0.68}(CF_3SO_3)_{0.32}$
HIRRAB	1.671 Å	Abram, U.; Voigt, A.; Kirmse, R.; Ortner, K.; Hubener, R.; Carballo, R.; Vazquez-Lopez, E. *Z. Anorg. Allg. Chem.* **1998**, *624*, 1662. $[Re(O)Cl_2(OP(C_6H_5)_3)_3]ReO_4\cdot 0.5C_2H_5OH$
FUSGUW	1.672 Å	Sharutin, V. V.; Senchurin, V. S.; Fastovets, O. A.; Pakusina, A. P.; Sharutina, O. K. *Russ. J. Inorg. Chem.* **2009**, *54*, 436. $(Sb(C_6H_5)_4)ReO_4$
LUCVIQ	1.672 Å	Schoultz, X.; Gerber, T. I. A.; Hosten, E.; Betz, R.; Rhyman, L.; Ramasami, P. *Polyhedron* **2015**, *96*, 6. $[ReC_{47}H_{44}Cl_2N_2OP_2]ReO_4\cdot H_2O$

MIGBUZ	1.672 Å	Gardberg, A. S.; Sprauve, A. E.; Ibers, J. A. *Inorg. Chim. Acta* **2002**, *328*, 179. $[Ni(N_4C_{16}H_8)_2]_2(ReO_4)_2 \cdot [Ni(N_4C_{16}H_8)_2] \cdot C_{10}H_7Cl$
SAFBIK	1.672 Å	Gable, K. P.; Zhuravlev, F. A. Yokochi, A. F. T. *Chem. Commun.* **1998**, 799. $[ReC_{30}H_{45}O_9]ReO_4 \cdot CH_3CN$
HIQWAJ	1.674 Å	Bagchi, S.; Kamilya, S.; Mehta, S.; Mandal, S.; Bandyopadhyay, A.; Narayan, A.; Ghosh, S.; Mondal, A. *Dalton Trans.* **2023**, *52*, 11335. $[MnC_{22}H_{26}Br_2N_4O_2]ReO_4$
VUDSUI	1.675 Å	Ara, I.; Fanwick, P. E.; Walton, R. A. *Polyhedron* **1992**, *11*, 1277; Ara, I.; Fanwick, P. E.; Walton, R. A. *J. Cluster Sci* **1992**, *3*, 83. $[Re_2Br_3C_{62}H_{55}NO_2P_5]ReO_4 \cdot 2CH_2Cl_2$
JECGON10	1.675 Å	Godfrey, M. R.; Newcomb, T. P.; Hoffman, B. M.; Ibers, J. A. *J. Am. Chem. Soc.* **1990**, *112*, 7260. $[CuN_4C_{33}H_{17}N_3]_2(ReO_4)_2 \cdot [CuN_4C_{33}H_{17}N_3] \cdot C_{10}H_7Cl$
MICWOL	1.675 Å	Nieto, S.; Perez, J.; Riera, L.; Riera, V.; Miguel, D.; Golen, J. A.; Rheingold, A. L. *Inorg. Chem.* **2007**, *46*, 3407. $[Mn(CO)_3(NC_7H_6N)_3](ReO_4)_2 \cdot 3C_4H_8O$
RUWHIC	1.675 Å	Gryca, I.; Machura, B.; Malecki, J. G.; Kusz, J.; Shul'pina, L. S.; Ikonnikov, N. S.; Shul'pin, G. B. *Dalton Trans.* **2016**, *45*, 334. $[ReCl(P(C_6H_5)_3)_2(NC_6H_4(CH_3))(NOC_{13}H_{10}N_3O)]ReO_4$
SOKHOS	1.676 Å	Mei, L.; Li, F.-Z.; Lan, J.-H.; Wang, C.-Z.; Xu, C.; Deng, H.; Wu, Q.-Y.; Hu, K.-Q.; Wang, L.; Chai, Z.-F.; Chen, J.; Gibson, J. K.; Sh, W.-Q. *Nature Chem.* **2019**, *10*, 1532. $[Cu(H_2O)_4(NC_{10}H_{12}N)_2](ReO_4)_2 \cdot C_{48}H_{48}N_{32}O_{16}$
VOVMUO	1.676 Å	Hesse, D.; Roesky, H. W.; Noltemeyer, M. *Chem. Ber.* **1992**, *125*, 833. $(C_{62}H_{48}P_2)(ReO_4)_2 \cdot 5CHCl_3$
AFEYER	1.677 Å	Maruk, A. Y.; Grogorev, M. S.; German, K. E. *Koord. Khim.* **2013**, *39*, 264. $[Ag(C_{12}H_8N_2)_2(H_2O)]ReO_4$
HAGWAO	1.677 Å	Farrell, D.; Gloe, K.; Gloe, K.; Goretzki, G.; McKee, V.; Nelson, J.; Nieuwenhuyzen, M.; Pal, I.; Stephan, H.; Town, R. M.; Wichmann, K. *Dalton Trans.* **2003**, 1961. $(C_{33}H_{57}N_2)_2(ReO_4)_{10}(ClO_4)_2 \cdot 3H_2O$
CIWWOV	1.677 Å	Ruth, K.; Morawitz, T.; Lerner, H.-W.; Bolte, M. *Acta Crystallogr., Sect. E* **2008**, *64*, m496. $[OH(Re(CO)_3(N_2C_{10}H_8))_2]ReO_4$
QOLQAJ	1.677 Å	Xu, L.; Perreroy, J.; Patrick, B. O.; Orvig, C. *Inorg. Chem.* **2001**, *40*, 2005. $[ReCl(N_2C_{14}H_{17}N_2)(O_2C_6H_5O)]ReO_4$
JEWKAX	1.678 Å	Cotton, F. A.; Jennings, J. G.; Price, A. C.; Vidyasagar, K. *Inorg. Chem.* **1990**, *29*, 4138. $[(ReCl_2(P(CH_3)_3)_2)_2]ReO_4$
JOVTOF	1.678 Å	Schoultz, X.; Gerber, T. I. A.; Betz, R.; Hosten, E. C. *Inorg. Chem. Commun.* **2014**, *47*, 162. $[Re(O)_2(CNC_6H_{11})_2(P(C_6H_5)_3)_2]ReO_4$
BEZTEJ	1.679 Å	Daolio, A.; Pizzi, A.; Calabrese, M.; Demitri, N.; Murray, J. S.; Politzer, P.; Resnati, G. Cryst. Growth Des. 2023, 23, 574. $(C_4H_7N_2)ReO_4$
HIQWUD01	1.679 Å	Bagchi, S.; Kamilya, S.; Mehta, S.; Mandal, S.; Bandyopadhyay, A.; Narayan, A.; Ghosh, S.; Mondal, A. *Dalton Trans.* **2023**, *52*, 11335. $[MnC_{22}H_{26}N_6O_6]ReO_4$

PITYOU	1.679 Å	Nishijo, J.; Enomoto, M. *Inorg. Chem.* **2013**, *52*, 13263. $[CrC_{32}H_{38}N_4S_{12}](ReO_4)_2{\cdot}2C_6H_5Cl{\cdot}CH_3CN$
GERJAP	1.680 Å	Alegria, F. C. B.; Martins, L. M. D. R. S.; Haukka, M.; Pombeiro, A. J. L. *Dalton Trans.* **2006**, 4954. $[ReC_{16}H_{18}N_8O_5S]ReO_4$
KAZQIL	1.680 Å	Perez-Benitez, A.; Rovira, C.; Veciana, J.; Vidal-Gancedo, J.; Laukhin, V. N.; Zorina, L.V.; Khasanov, S. S.; Narymbetov, B. Z; Shibaeva, R. P. M. *Synth. Met.* **1999**, *102*, 1707. $(C_{10}H_8S_6)_2(ReO_4)_2{\cdot}C_{10}H_8S_6$
KAZQIL01	1.680 Å	Khasanov, S. S.; Perez-Benitez, A.; Narymbetov, B. Z.; Zorina, L.V.; Shibaeva, R. P.; Singleton, J.; Klehe, A.-K.; Laukhin, V. N.; Vidal-Gancedo, J.; Veciana, J.; Canadell, E.; Rovira, C. *J. Mater Chem.* **2002**, *12*, 432. $(C_{10}H_8S_6)_2(ReO_4)_2{\cdot}C_{10}H_8S_6$
NACBAV	1.680 Å	Antonioli, B.; Gloe, K.; Gloe, K.; Goretzki, G.; Grotjahn, M.; Hesske, H.; Langer, M.; Lindoy, L. F.; Mills, A. M.; Sohnel, T. *Z. Anorg. Allg. Chem.* **2004**, *630*, 998. $(NH((CH2)_2NHCH_2C_6H_5)_3)Cl_3ReO_4$
SILLAA	1.680 Å	Saito, K.; Ishikawa, Y.; Ishibashi, M.; Kikuchi, K.; Kobayashi, K.; Ikemoto, I. *Bull Chem. Soc. Jpn.* **1990**, *63*, 1865. $(C_{10}H_{10}S_4Se_2)ReO_4{\cdot}C_{10}H_{10}S_4Se_2$
52337	1.682 Å	Beintema, J. *Strukturber.* **1937**, *3*, 421. $NaReO_4$
DUGNIC02	1.682 Å	Volkov, M. A.; Novikov, A. P.; Grigoriev, M. S.; Kuznetsov, V. V.; Sitanskaia, A. V.; Belova, E. V.; Afanasiev, A. V.; Nevolin, I. M.; German, K. E. *Int. J. Mol. Sci.* **2023**, *24*, 2015. $((CH_3)_4N)ReO_4$
HIQWEN02	1.682 Å	Bagchi, S.; Kamilya, S.; Mehta, S.; Mandal, S.; Bandyopadhyay, A.; Narayan, A.; Ghosh, S.; Mondal, A. *Dalton Trans.* **2023**, *52*, 11335. $[MnC_{22}H_{26}Cl_2N_4O_2]ReO_4$
ROLMUC	1.682 Å	Fronczek, F. R. CCDC deposition number 1028434, **2014**. $((n\text{-}C_4H_9)_4N)ReO_4$
RUWNUU	1.682 Å	Gryca, I.; Machura, B.; Malecki, J. G.; Kusz, J.; Shul'pina, L. S.; Ikonnikov, N. S.; Shul'pin, G. B. *Dalton Trans.* **2016**, *45*, 334. $[ReBr(P(C_6H_5)_3)_2(NC_6H_4(CH_3))(NOC_{13}H_8NS)]ReO_4$
TEHYAH	1.682 Å	Machura, B.; Kruszynski, R.; Jaworska, M. *Polyhedron* **2006**, *25*, 1111. $[Re(O)Cl_2(NC_3H_4N)_2(OAs(C_6H_5)_3)ReO_4$
MECVOJ	1.683 Å	Georgieva, I.; Kossev, K.; Titorenkova, R.; Petrova, N.; Zahariev, T.; Nikolova, R. *J. Solid State Chem.* **2022**, *312*, 123263. $[Mg(OC(NH_2)_2)_6](ReO_4)_2$
MICVOK	1.683 Å	Nieto, S.; Perez, J.; Riera, L.; Riera, V.; Miguel, D.; Golen, J. A.; Rheingold, A. L. *Inorg. Chem.* **2007**, *46*, 3407. $((n\text{-}C_4H_9)_4N)[Mn(CO)_3(NC_7H_{12}N)_3]ReO_4B(3,5\text{-}C_6H_3(CF_3)_2)_4$
KOGFIX	1.683 Å	Hernandez, J. G.; Butler, I. S.; Friscic, T. *Chem. Sci.* **2014**, *5*, 3576. $[Re(CO)_2(N_2C_{12}H_8)_2]ReO_4{\cdot}CH_3CN$
NUDFEY	1.683 Å	Thuery, P. *CrystEngComm* **2009**, *11*, 1150. $[U(O)_2(H_2O)_2(NO_3)(OC_{42}H_{42}N_{29}O_{18}]ReO_4{\cdot}10H_2O$
WONPIY	1.684 Å	Thuery, P.; Nierlich, M.; Asfari, Z.; Vicens, J.; Dozol, J.-F. *Polyhedron* **2000**, *19*, 1749. $Cs_2(ReO_4)_2{\cdot}C_{48}H_{60}O_{12}$
YENROZ	1.684 Å	Machura, B.; Kruszynski, R.; Jaworska, M.; Klak, J.; Mrozinski, J. *Polyhedron* **2006**, *25*, 2537. $[ReCl_2(P(C_6H_5)_3)_2(N_2C_{12}H_8)]ReO_4{\cdot}0.5H_2O$
72817	1.685 Å	Range, K. J.; Rögner, P.; Heyns, A. M.; Prinsloo, L. C. *Z. Naturforsch., Sect. B* **1992**, *47*, 1513. $CsReO_4$

AROJUM	1.685 Å	Xavier, C.; Paulo, A.; Domingos, A.; Santos, I. *Eur. J. Inorg. Chem.* **2004**, 243. $[ReO(Cl)(C_8H_{19}N_4)]_3Cl_2ReO_4$
HAGVUH	1.685 Å	Farrell, D.; Gloe, K.; Gloe, K.; Goretzki, G.; McKee, V.; Nelson, J.; Nieuwenhuyzen, M.; Pal, I.; Stephan, H.; Town, R. M.; Wichmann, K. *Dalton Trans.* **2003**, 1961. $(C_{36}H_{60}N_8)(ReO_4)_6{\cdot}5H_2O$
JOCLIW01	1.685 Å	Shibaeva, R. P.; Zavodnik, V. E. *Kristallografiya* **1993**, *38*, 114. $(C_{10}H_8N_4S_4)ReO_4{\cdot}C_{10}H_8N_4S_4{\cdot}H_2O$
PIGLUM	1.685 Å	Matsumiya, S.; Izuoka, A.; Sugawara, T.; Taruishi, T.; Kawada, Y.; Tokumoto, M. *Bull Chem. Soc. Jpn.* **1993**, *66*, 1949. $(C_{12}H_{12}S_8)ReO_4{\cdot}C_{12}H_{12}S_8$
LIBVEX	1.686 Å	Sundermeyer, J.; Weber, K.; Peters, K.; von Schnering, H. G. *Organometallics* **1994**, *13*, 2560. $[Re(O)_3(C(P(C_6H_5)_3)_2]ReO_4$
QIWYIG	1.686 Å	Kokunov, Y. V.; Gorbunova, Y. E.; Kovalev, V. V.; Kozyukhin, S. A. *Koord. Khim.* **2013**, *39*, 468. $[Ag(NC_5H_7N_2)_2]ReO_4$
HIQXEO	1.687 Å	Bagchi, S.; Kamilya, S.; Mehta, S.; Mandal, S.; Bandyopadhyay, A.; Narayan, A.; Ghosh, S.; Mondal, A. *Dalton Trans.* **2023**, *52*, 11335. $[MnC_{22}H_{24}Br_4N_4O_2]ReO_4{\cdot}H_2O$
KIZCII	1.687 Å	Li, C.-P.; Ai, J.-Y.; Zhou, H.; Chen, Q.; Yang, Y.; He, H.; Du, M. *Chem. Commun.* **2019**, *55*, 1841. $[Ag_2C_{36}H_{28}N_{16}]_n(ReO_4)_2{\cdot}2(CH_3)_2NCHO$
LOPTUF	1.687 Å	Melian, C.; Kremer, C.; Suescun, L.; Mombru, A. W.; Mariezcurrena, R. A.; Kremer, E. *Inorg. Chim. Acta* **2000**, *306*, 70. $[ReC_9H_{20}N_4O_3]ReO_4$
NEQDAS	1.687 Å	Sovari, S. N.; Kolly, I.; Schindler, K.; Cortat, Y.; Liu, S.-C.; Crochet, A.; Pavic, A.; Zobi, F. *Molecules* **2021**, *26*, 5302. $(C_{11}H_{11}N_2)ReO_4$
NOMDEY	1.687 Å	Cotton, F. A.; Dikarev, E. V.; Petrukhina, M. A. *Inorg. Chem.* **1998**, *37*, 1949. $[Re_2C_{32}H_{44}Cl_4P_4]ReO_4{\cdot}CH_2Cl_2$
NUFCID	1.687 Å	Ghosh, R.; Ghosh, T. K.; Ghosh, P. *Dalton Trans.* **2020**, *49*, 3039. $(C_6(C_6H_{10}N_2)_6)(ReO_4)_6{\cdot}6CH_3CN$
RUWDUK	1.687 Å	Gryca, I.; Machura, B.; Malecki, J. G.; Kusz, J.; Shul'pina, L. S.; Ikonnikov, N. S.; Shul'pin, G. B. *Dalton Trans.* **2016**, *45*, 334. $[ReCl(P(C_6H_5)_3)_2(NC_6H_4(CH_3))(NOC_{13}H_8S)]ReO_4$
SIWKEP	1.687 Å	Szafranski, M.; Katrusiak, A.; McIntyre, G. J. *Phys. Rev. Lett.* **2002**, *89*, 215507. $(C_6H_{13}N_2)ReO_4$
WONNUI	1.687 Å	Thuery, P.; Nierlich, M.; Asfari, Z.; Vicens, J.; Dozol, J.-F. *Polyhedron* **2000**, *19*, 1749. $[Na_2C_{48}H_{64}O_{14}](ReO_4)_2$
ABEYUD	1.688 Å	Ion, L.; Nieto, S.; Perez, J.; Riera, L.; Riera, V.; Diaz, J.; Lopez, R.; Anderson, K. M.; Steed, J. W. *Inorg. Chem.* **2011**, *50*, 8524. $[Re(CO)_2(NC_4H_6N)_2(2\text{-}NC_5H_4(NH_2))]ReO_4$
HULTUD	1.688 Å	Khasanov, S. S.; Perez-Benitez, A.; Narymbetov, B. Z.; Zorina, L. V.; Shibaeva, R. P.; Singleton, J.; Klehe, A.-K.; Laukhin, V. N.; Vidal-Gancedo, J.; Veciana, J.; Canadell, E.; Rovira, C. *J. Mater. Chem.* **2002**, *12*, 432. $(C_{10}H_8S_6)_4(ReO_4)_4{\cdot}5C_{10}H_8S_6{\cdot}2C_4H_8O$

IXODOR	1.688 Å	Li, F.-Z.; Geng, J.-S.; Hu, K.-Q.; Yu, J.-P.; Liu, N.; Chai, Z.-F.; Mei, L.; Shi, W.-Q. *Inorg. Chem.* **2021**, *60*, 10522. $(UC_{36}H_{40}N_4O_{10}]_n(ReO_4)_2{\cdot}2C_{36}H_{36}N_{24}O_{12}{\cdot}16H_2O$
OHIYIN	1.688 Å	Selivanova, S. V.; Dolphin, D.; van Lier, J. E.; Kudrevich, S. V. *Inorg. Chim. Acta* **2003**, *349*, 58. $[Re_3C_{72}H_{60}N_6O_{10}S_6]ReO_4{\cdot}2C_2H_5OH$
BEKXOI	1.689 Å	Zhou, W.; Li, A.; Gale, P. A.; He, Q. *Cell Rep. Phys. Sci.* **2022**, *3*, 100875. $(C_{78}H_{80}N_{12}O_{12})ReO_4{\cdot}5CHCl_3$
PAVHID	1.689 Å	Rosini, G. P.; Jones, W. D. *J. Am. Chem. Soc.* **1993**, *115*, 965. $[ReH_2(P(C_6H_5)_3)_2(C_9H_{10})]ReO_4$
REDREX	1.689 Å	Wittern, U.; Strahle, J.; Abram, U. *Z. Anorg. Allg. Chem.* **1997**, *623*, 218. $[ReCl(NC_5H_5)_2(OSi(CH_3)_2)(NC_6H_5)(NHC_6H_5)]ReO_4$
TUWRAF	1.689 Å	Machura, B.; Wolff, M.; Kusz, J. *Polyhedron* **2010**, *29*, 1619. $[Re(O)(P(C_6H_5)_3)(OC_8H_7N_2)_2]ReO_4{\cdot}CH_3OH$
BIJPOA	1.690 Å	Kuckmann, T. I.; Abram, U. *Inorg. Chem.* **2004**, *43*, 7068. $[Re(O)_2(C_{22}H_{40}N_4)_2]ReO_4{\cdot}1.5C_4H_8O$
MAVRUA	1.690 Å	Ronson, T. K.; Carpenter, J. P.; Nitschke, J. R. *Chem. (Cell Press)* **2022**, *8*, 557. $[Co_6C_{276}H_{198}N_{48}](ReO_4)_{12}$
LEKGIS	1.690 Å	Stephan, H.; Gloe, K.; Kraus, W.; Spies, H.; Johannsen, B.; Wichmann, K.; Reck, G.; Chand, D. K.; Bharadwaj, P. K.; Müller, U.Müller, W. M..; Vogtle, F. *Fund.Applications Anion Sep.* **2004**, 151. $(C_{36}H_{56}N_8)(ReO_4)_2{\cdot}3H_2O$
BICKEH	1.691 Å	Qin, H.; Jiang, J.; Sun, X.; Lin, N.; Yang, P.; Chen, Y. *Inorg. Chem.* **2023**, *62*, 6458. $(ZnC_{60}H_{30}N_{30}O_{12}]_n(ReO_4)_2{\cdot}(CH_3)_2NCHO$
RARDAT	1.691 Å	Hong Z. CCDC depostion number 1961082, **2022**. $[Ir_3C_{72}H_{81}](ReO_4)_6$
AROGAQ	1.692 Å	Braband, H.; Imstepf, S.; Felber, M.; Spingler, B.; Alberto, R. *Inorg. Chem.* **2010**, *49*, 1283. $[ReO_3(C_{24}H_{27}N_3)]_3(ReO_4)_3{\cdot}4C_4H_8O$
PITZAV	1.693 Å	Nishijo, J.; Enomoto, M. *Inorg. Chem.* **2013**, *52*, 13263. $[CrC_{32}H_{38}N_4S_{12}](ReO_4)_2{\cdot}3C_6H_5Br$
TUJRUL	1.693 Å	Sugimoto, H.; Kamei, M.; Umakoshi, K.; Sasaki, Y.; Suzuki, M. *Inorg. Chem.* **1996**, *35*, 7082. $[Re_2C_{40}H_{44}N_8O_2](ReO_4)_4$
VAJLAU	1.693 Å	Ray, U.; Chand, B.; Dasmahapatra, A. K.; Mostafa, G.; Lu, T.-H.;.; Sinha, C. *Inorg. Chem. Commun.* **2003**, *6*, 634. $(C_{12}H_{15}N_4)ReO_4$
AHIRUF	1.694 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Yb(H_2O)_8](ReO_4)_3{\cdot}(C_{36}H_{36}N_{24}O_{12}){\cdot}6H_2O$
AYAKAP	1.695 Å	Wang, X.; Ding, S.; Wang, Z.; Song, L.; Yang, X.; Xiao, Q.; Xu, H.; Wang, J.; Shen, Z.; Wang, H. *Inorg. Chem.* **2021**, *60*, 10889. $(C_{18}H_{37}N_4O_3)ReO_4{\cdot}0.5H_2O$
KOCVII	1.695 Å	Booysen, I.; Gerber, T. I. A.; Mayer, P. *Inorg. Chem. Commun.* **2008**, *11*, 461. $[ReBr(NO)(P(C_6H_5)_3)_2(OC_{24}H_{19}N)]ReO_4$
ZAVZUR	1.695 Å	Holman, K. T.; Halihan, M. M.; Steed, J. W.; Jurisson, S. S.; Atwood, J. L. *J. Am. Chem. Soc.* **1995**, *117*, 7848. $[Ru_2C_{47}H_{58}O_6](ReO_4)_3CF_3SO_3{\cdot}CH_3NO_2$

ONUZII	1.696 Å	Gomez, J. D. C.; Balcazar, E.; Hagenbach, A.; Noufele, C. N.; Abram, U. *Polyhedron* **2016**, *117*, 293. $[Re(O)_2(P(C_6H_5)_3)_2(NC_9H_{10}NOS)_2]ReO_4$
AHIQAK	1.696 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[SmKC_{30}H_{38}N_{21}O_{17}]_n(ReO_4)_3\cdot 3H_2O$
WONPAQ	1.696 Å	Thuery, P.; Nierlich, M.; Asfari, Z.; Vicens, J.; Dozol, J.-F. *Polyhedron* **2000**, *19*, 1749. $[Cs_2ReO_4[ReO_4(H_2O)_2]\cdot C_{48}H_{60}O_{12}]$
OBONIE	1.697 Å	Landman, M.; van der Westhuizen, B.; Bezuidenhout, D. I.; Liles, D. C. *Acta Crystallogr., Sect E* **2011**, *67*, m1897. $(C_{21}H_{25}N_2)ReO_4$
EBIJEE	1.697 Å	Smith, K. J.; Ondracek, A. L.; Gruhn, N. E.; Lichtenberger, D. L.; Fanwick, P. E.; Walton, R. A. *Inorg. Chim. Acta* **2000**, *300*, 23. $((C(P(CH_3)_3)(CH_3)_2((CH_2COCH_3))ReO_4$
WUQSIK	1.697 Å	Gibson, D. H.; Yin, X.; He, H.; Mashuta, M. S. *Organometallics* **2003**, *22*, 337. $[CO_3(Re(CO_3)(N_2C_{12}H_{12}))_3]ReO_4\cdot 0.75CH_2Cl_2\cdot 0.5O(C_2H_5)_2$
JUYBIO	1.698 Å	Tang, B. W.; Reibenspies, J.; Martell, A. E. *Inorg. Chem.* **1993**, *32*, 988. $[Re(O)OH(N_4C_{10}H_{22}O)]ReO_4$
XIHLIK	1.698 Å	Ota, A.; Yamochi, H.; Saito, G. *J. Low Temp. Phys.* **2006**, *142*, 429. $(C_8H_6O_2S_4)ReO_4\cdot C_8H_6O_2S_4$
XUDMIS02	1.698 Å	Czarnecki, P.; Maluszynska, H. *J. Phys.: Condesed Matter* **2000**, *12*, 4881. $[C_5H_6N)ReO_4$
AMOHAL	1.699 Å	Leibnitz, P.; Reck, G.; Pietzsch, H.-J.; Spies, H. *Forschungszent Rossendorf* **2001**, *211*, 36. $(C_{19}H_{30}N_3)ReO_4$
ASINAR	1.699 Å	Gerber, T. I. A.; Tshentu, Z. R.; Mayer, P. *J. Coord. Chem.* **2003**, *56*, 1357. $[ReC_{27}H_{32}ClN_3O_2P]ReO_4$
DEQLEQ	1.699 Å	Heuze, K.; Fourmigue, D. M.; Batail, P.; Canadell, E.; Auban-Senzier, P. *Chem. – Eur. J.* **1999**, *5*, 2971. $(C_9H_7NOS_6)ReO_4\cdot C_9H_7NOS_6$
ECAFAS	1.699 Å	Kaabel, S.; Adamson, J.; Topic, F.; Kiesila, A.; Kalenius, E.; Oeren, M.; Reimund, M.; Prigorchenko, E.; Lookene, A.; Reich, H. J.; Rissanen, K.; Aav, R. *Chem. Sci.* **2017**, *8*, 2184. $((n\text{-}C_4H_9)_4N)ReO_4\cdot C_{64}H_{96}N_{16}O_8\cdot 1.75CH_3OH$
GAGMEI	1.699 Å	Korenev, S. V.; Vasil'chenko, D. B.; Baidina, I. A.; Filatov, E. Y.; Venediktov, A. B. *Russ. Chem. Bull.* **2008**, 1607. $[RhCl_2(NC_5H_4CH_3)_4]$
MUQNIV	1.699 Å	Ray, U. S.; Mostafa, G.; Lu, T. H.; Sinha, C. *Crystal Eng.* **2002**, *5*, 95. $(C_{16}H_{15}N_4)ReO_4\cdot H_2O$
RESDEY	1.699 Å	Miller, J. R. Lu, C.; Zheng, Y. *Acta Crystallogr., Sect. C* **1997**, *53*, 1039. $(C_{42}H_{34}PSSi)ReO_4\cdot CH_2Cl_2$
WEDCAK	1.699 Å	Gerber, T. I. A.; Hosten, E.; Mayer, P.; Tshentu; Z. R. *J. Coord. Chem.* **2006**, *59*, 243. $[ReCl_2(P(C_6H_5)_3)_2(N_2C_8H_7N)]ReO_4\cdot 0.5CH_3OH$
YAXBUU	1.699 Å	Christie, S. D.; Clerk, M. D.; Zaworotko, M. J. *J. Crystallogr. Spectrosc. Res.* **1993**, *23*, 591. $[Re(CO)_3(ON(CH_3)_3)_3]ReO_4$
160303	1.700 Å	Shubin, Y. V.; Filatov, E. Y.; Baidina, I. A.; Yusenko, K. V.; Zadesenetz, A. V.; Korenev, S. V. *Russ. J. Struct. Chem.* **2006**, *47*, 1115. $[Rh(NH_3)_5Cl](ReO_4)_2$

421687	1.700 Å	Baidina, I. A.; Filatov, E. Y.; Makotchenko, E. V.; Smolentsev, A. I. *J. Struct. Chem.* **2012**, *53*, 112. $[Co(NH_3)_5Cl](ReO_4)_3 \cdot 0.25H_2O$
AVUPUF	1.700 Å	Li, Y.; Huang, C.-R.; Du, Y.; Peng, H.; Zeng, Y.-L.; Liu, J.-C.; Xie, Y.; Xiong, R.-G. *Angew. Chem, Int. Ed.* **2021**, *60*, 16668. $(C_9H_{20}N_2O)ReO_4 \cdot C_{12}H_{24}O_6$
BEZTAF	1.700 Å	Daolio, A.; Pizzi, A.; Calabrese, M.; Demitri, N.; Murray, J. S.; Politzer, P.; Resnati, G. *Cryst. Growth Des.* **2023**, *23*, 574. $(C_4H_7N_2)ReO_4$
RARCUM	1.700 Å	Hong Z. CCDC depostion number 1959195, **2022**. $[Ir_3C_{72}H_{81}]CF_3SO_3(ReO_4)_5$
FASXUT	1.700 Å	Tamm, M.; Beer, S.; Herdtweck, E. *Z. Naturforsch., Sect. B* **2004**, *59*, 1497. $(C_{11}H_{22}N_3)ReO_4$
MICVIE	1.700 Å	Nieto, S.; Perez, J.; Riera, L.; Riera, V.; Miguel, D.; Golen, J. A.; Rheingold, A. L. *Inorg. Chem.* **2007**, *46*, 3407. $[Mn(CO)_3(NC_5H_8N)_3](ReO_4)_2$
ONUTEZ	1.700 Å	Li, C.-P.; Zhou, H.; Chen, J.; Wang, J.-J.; Du, M.; Zhou, W. *ACS Appl. Mater. Interfaces* **2020**, *12*, 15246. $[Ag_2C_{52}H_{36}N_8](ReO_4)_2$
XUDMIS07	1.700 Å	Maluszynska, H.; Cousson, A.; Czarnecki, P. *J. Phys.: Condensed Matter* **2010**, *22*, 235901. $[C_5H_6N)ReO_4$
NEZHAB	1.701 Å	Belanger, S.; Fortin, S.; Beauchamp, A. L. *Can. J. Chem.* **1997**, *75*, 37. $[Re(O)_2(NC_7H_6N)_4][Re(O)OH(NC_7H_6N)_4](ReO_4)_3$
PAKGUD	1.701 Å	Costello, M. T.; Fanwick, P. E.; Green, M. A.; Walton, R. A. *Inorg. Chem.* **1992**, *31*, 2359. $[ReC_{82}H_{82}P_6]ReO_4 \cdot 5C_6H_6$
PIGBAI	1.701 Å	Wang, Y.-P.; Che, C.-M.;Wong, K.-Y.; Peng, S.-M. *Inorg. Chem.* **1993**, *32*, 5827. $[Re(O)_2(N_4C_{10}H_{24})]ReO_4 \cdot 0.5H_2O$
VECKOF	1.701 Å	Amendola, V., Alberti, G.; Bergamaschi, G.; Biesuz, R.; Boiocchi, M.; Ferrito, S.; Schmidtchen, F.-P. *Eur. J. Inorg. Chem.* **2012**, 3410. $(C_{36}H_{60}N_8)(ReO_4)_5Cl \cdot 6H_2O$
VUYPOV	1.701 Å	Al Othman, Z. A.; Akriche, S. T.; Rzaigui, M.; Mahfouz, R. M. *Acta Crystallogr., Sect. E* **2010**, *66*, m689. $(C_5H_6N_3O_2)ReO_4$
XOLXOO	1.701 Å	Harada, J.; Kawamura, Y.; Takahashi, Y.; Uemura, Y.; Hasegawa, T.; Taniguchi, H.; Maruyama, K. *J. Am. Chem. Soc.* **2019**, *141*, 9349. $(C_6H_{12}N)ReO_4$
NENJAV	1.702 Å	Ye, X.; He, W.; Wei, J.; Wei, Z.; You, X.; Cai, H. *Dalton Trans.* **2022**, *51*, 15074. $(C_6H_3F_2(CH_2NH_3))ReO_4 \cdot C_{10}H_{20}O_5$
DEGFAW03	1.702 Å	Kanbara, H.; Tajima, H.; Aratani, A.; Yakushi, K.; Kuroda, H.; Saito, G.; Kawamoto, A.; Tanaka, J. *Chem. Lett.* **1986**, 437. $(C_{10}H_8S_8)_2(ReO_4)_2 \cdot C_{10}H_8S_8$
HUWBOR	1.702 Å	Lin, H.; Wu, X.; Maggard, P. A. *Inorg. Chem.* **2009**, *48*, 11265. $[Ag_2C_{56}H_{40}N_{16}](ReO_4)_2$
KUCCUI	1.702 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{14}H_{14}F_5N_2)ReO_4$

MICVUQ	1.702 Å	Nieto, S.; Perez, J.; Riera, L.; Riera, V.; Miguel, D.; Golen, J. A.; Rheingold, A. L. *Inorg. Chem.* **2007**, *46*, 3407. $[Mn(CO)_3(NC_5H_8N)_3](ReO_4)_2$
PEPDAP	1.702 Å	Englert, U.; Koelle, U.; Nageswara, R. N. *Z. Kristallogr. – New. Struct.* **1993**, *206*, 106. $(C_{10}H_9N_2O)ReO_4$
PIHYOV	1.702 Å	Booysen, I.; Gerber, T. I. A.; Mayer, P.; Schalekamp, H. J. *J. Coord..Chem.* **2007**, *60*, 1755. $[ReI(P(C_6H_5)_3)_2(N_2C_6H_9N_2O_2)(NC_6H_8N_2O_2)]ReO_4{\cdot}2H_2O$
REDJAP	1.702 Å	Gritsenko, V. V.; Dyachenko, O. A.; Kotov, A. I.; Buravov, L. I.; Mizuno, M. *Russ. J. Coord. Chem.* **2001**, *27*, 432. $(C_{12}H_{10}O_2S_8)ReO_4{\cdot}C_{12}H_{10}O_2S_8$
RIWDIK	1.702 Å	Velikova, V.; Petrova, R.; Angelova, O. *Acta Crystallogr., Sect. C* **1997**, *53*, 1230. $(C_6H_8N_3O)ReO_4$
RUWMUT	1.702 Å	Wood, C. S.; Ronson, T. K.; McConnell, A. J.; Roberts, D. A.; Nitschke, J. R. *Chem. Sci.* **2016**, *7*, 1702. $[Zn_9C_{180}H_{146}N_{30}O_{16}](ReO_4)_4(N(SO_2CF_3)_2)_8{\cdot}CH_3CN$
UVEFUX	1.702 Å	Nishiwaki, M.; Nakamura, K.; Shirahata, T.; Misaki, Y. *Chem. Lett.* **2011**, *40*, 452. $(C_{13}H_8S_8)ReO_4{\cdot}2(C_{13}H_8S_8){\cdot}C_6H_5Cl$
VILJEF	1.702 Å	Predota, M.; Petricek, V.; Zak, Z.; Glowiak,T; Novotny, J. *Acta Crystallogr., Sect. E* **1991**, *47*, 738. $(C_{19}H_{15}N_4)ReO_4$
VUPRIK	1.702 Å	Wang, X.; Hu, X.; Song, L.; Yang, X.; Xiao, Q.; Xu, H.; Ding, S. *J. Mol. Struct.* **2020**, *1216*, 128330. $(C_{44}H_{58}N_8O_4)(ReO_4)_2$
WANJOK	1.702 Å	Mhanni, A.; Ouahab, L.; Grandjean, D.; Amouroux, J.; Fabre, J. M. *Acta Crystallogr., Sect. E* **1993**, *49*, 1187. $(C_8H_8S_4)ReO_4$
YALFEZ	1.702 Å	Huimin, S.; Chen, H.; Zhiming, H.; Yajie, Z.; Tianchi, W.; Chongmin, Z. *Chin. J. Org. Chem.* **2015**, *35*, 1904. $(C_{27}H_{39}N_2)ReO_4{\cdot}0.5H_2O$
142692	1.703 Å	Conrad, M.; Russ, P. L.; Schleid, T. *Z. Anorg. Allg. Chem.* **2020**, *646*, 1872. $Sr(ReO_4)_2$
AFEVUE	1.703 Å	Maruk, A. Y.; Grogorev, M. S.; German, K. E. *Koord. Khim.* **2013**, *39*, 264. $(C(NHC_6H_5)_3)ReO_4{\cdot}0.5H_2O$
EJALIL	1.703 Å	Mayer, P.; Hosten, E.; Potgieter, K. C.; Gerber, T. I. A. *J. Chem. Cryst.* **2010**, *40*, 1146. $[ReC_{40}H_{39}Br_2N_6O_2P]ReO_4$
KUWFEO	1.703 Å	Nakano, Y.; Takahashi, M.; Sakata, M.; Yamochi, H.; Saito, G.; Tanaka, K. *Synth. Met.* **2009**, *159*, 2381. $(C_{10}H_8S_5)ReO_4$
MOWZED	1.703 Å	Lang, H.-F.; Fanwick, P. E.; Walton, R. A. *Inorg. Chim. Acta* **2002**, *329*, 1. $(C_{38}H_{58}N2P_2)ClReO_4{\cdot}CH_2Cl_2$
QICSIF	1.703 Å	Middleditch, M.; Anderson, J. C; Blake, A. J.; Wilson, C. *Inorg Chem.* **2007**, *46*, 2797. $[ReC_{24}H_{20}N_6O_4]ReO_4{\cdot}CH_2Cl_2{\cdot}0.25CH_3OH$
ZUJBEN	1.703 Å	Thuery, P. *Eur. J. Inorg. Chem.* **2015**, 2037. $[Th(H_2O)_{8(}NO_3))](ReO_4)_3{\cdot}C_{36}H_{36}N_{24}O_{12}{\cdot}3H_2O$
ASIMUK	1.704 Å	Gerber, T. I. A.; Tshentu, Z. R.; Mayer, P. *J. Coord. Chem.* **2003**, *56*, 1357. $[ReC_{27}H_{32}ClN_2O_2PS]ReO_4$

BAMYEU	1.704 Å	Chakraborty, I.; Sengupta, S.; Das, S.; Banerjee, A.; Chakravorty, A. *Dalton Trans.* **2003**, 134. $[Re(N_2C_{11}H_9N)_3]ReO_4$
BAMYEU01	1.704 Å	Marsch, R. E. *Acta Crystallogr., Sect. B* **2004**, *60*, 252. $[Re(N_2C_{11}H_9N)_3]ReO_4$
CINBIK02	1.704 Å	Williams, J. M.; Beno, M. A.; Wang, H.-H.; Reed, P. E.; Azevedo, L. J.; Schirber, J. E. *Inorg. Chem.* **1984**, *23*, 1790. $(C_{10}H_8S_8)ReO_4{\cdot}C_{10}H_8S_8$
HOWKOW	1.704 Å	Rojas-Dotti, C.; Moliner, N.; Lloret, F.; Martinez-Lillo, J. *Crystals* **2019**, *9*, 23. $[Mn_6C_{76}H_{78}N_{18}O_{16}](ReO_4)_2{\cdot}4C_2H_5OH$
OBEGOU01	1.704 Å	Jankowski, D.; Swietlik, R.; Jeannin, O.; Assaf, A.; Reinheimer, E. W.; Fourmigue, M. J. Raman Spectrosc. 2013, 44, 1765. $(C_{11}H_{12}S_4)ReO_4{\cdot}C_{11}H_{12}S_4$
UHABUB	1.704 Å	Potgieter, K.; Mayer, P.; Gerber, T. I. A.; Booysen, I. N. *Polyhedron* **2009**, *28*, 2808. $[Re(P(C_6H_5)_3)_2(C_{19}H_{13}N_3O_2]ReO_4$
XEMWET01	1.704 Å	Bykova, E. A.; Khranenko, S. P.; Gromilov, S. A. *Russ. J. Struct. Chem.* **2012**, *53*, 186. $[Ni(H_2N(CH_2)_2NH_2)_3](ReO_4)_2$
GUVJIQ	1.705 Å	Cowley, A. R.; Dilworth, J. R.; Donnelly, P. S.; Woollard-Shore, J. *Dalton Trans.* **2003**, 748. $[ReCl_2(P(C_6H_5)_3)_2(C_7H_8N_2)]ReO_4{\cdot}CH_3OH$
HIQXIS	1.705 Å	Bagchi, S.; Kamilya, S.; Mehta, S.; Mandal, S.; Bandyopadhyay, A.; Narayan, A.; Ghosh, S.; Mondal, A. *Dalton Trans.* **2023**, *52*, 11335. $[MnC_{22}H_{24}Cl_4N_4O_2]ReO_4{\cdot}H_2O$
HOBSUN	1.705 Å	Fedosseev, A. M.; Grigoriev, M. S.; Charushnikova, I. A.; Budantseva, N. A.; Starikova, Z. A.; Moisy, P. *Polyhedron* **2008**, *27*, 2007. $[Nd(O_2C_{11}H_{22}N_2)_4](ReO_4)_3$
AHIQOY	1.705 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Yb_2C_{60}H_{76}N_{40}O_{28}]_n(ReO_4)_6{\cdot}2H_2O$
NAFCAB	1.705 Å	Rodrigues, V. H.; Costa, E.M. M. R.; Gomes, E. M.;Isakov, D.; Belsley, M. S. *Central Eur. J. Chem.* **2014**, *12*, 1016. $(CH_3CH(NH_3)COOH)ReO_4$
NIKHAQ	1.705 Å	Smith, C. J.; Katti, K. V.; Volkert, W. A.; Barbour, L. J. *Inorg. Chem.* **1997**, *36*, 3928. $[Re_2C_{24}H_{56}O_{12}P_4S_4](ReO)_2$
NOMCEX	1.705 Å	Botha, J. M.; Umakoshi, K.; Sasaki, Y.; Lamprecht, G. J. *Inorg. Chem.* **1998**, *37*, 1609. $[Re(O)(O(CH_2)_2O)(N_2C_{14}H_{17}NO)]ReO_4$
VUQRIL	1.705 Å	Wang, X.-N.; Zhao, Y.-M.; Kirchon, A.; Li, B.; Zhou, H.-C. *Inorg. Chem.* **2020**, *59*, 11940. $[Zr_6C_{84}H_{68}N_8O_{32}](ReO_4)_4$
402669	1.706 Å	Mujica, C.; Peters, K.; Peters, E. M.; von Schnering, H. G. *Z. Kristallogr. – New Struct.* **1997**, *212*, 294. $[Cu(H_2O)_4](ReO_4)_2$
AMOGOY	1.706 Å	Leibnitz, P.; Reck, G.; Pietzsch, H.-J.; Spies, H. *Forschungszent Rossendorf* **2001**, *211*, 36. $(C_7H_{14}N_3)ReO_4$
DIBNAE	1.706 Å	Lozan, V.; Kersting, B. Eur. J. Inorg. Chem. 2007, 1436. $[ReNi_2C_{38}H_{64}N_6O_4S_2]ReO_4{\cdot}H_2O$

DUBXOO	1.706 Å	Rodrigues, V. H.; Costa, M. M. R. R.; Dekola, T.; d.Matos Gomes, E. *Acta Crystallogr., Sect. E* **2009**, *65*, m1000. $(C_5H_6N_3O_2)ReO_4 \cdot H_2O$
EJEFOR	1.706 Å	Tang, Y.-Y.; Xie, Y.; Ai, Y.; Liao, W.-Q.; Li, P.-F.;; Nakamura, T.; Xiong, R.-G. *J. Am. Chem. Soc.* **2020**, *142*, 21932. $(C_7H_{11}FNO)ReO_4$
EVOFOM02	1.706 Å	Gansle, K. M.; Gash, A. E.; Chambliss, C. K.; Clapsaddle, B. J.; Newell, B. S.; Miller, S. M.; Anderson, O. P.; Hughes, R. P.; Strauss, S. H. *Polyhedron* **2017**, *121*, 88. $[Fe(C_{13}H_{21})_2]ReO_4$
KETKOL	1.706 Å	Machura, B.; Gryca, I. *Polyhedron* **2013**, *53*, 83. $[Re(OCH_3)(P(C_6H_5)_3)Br(NC_6H_4CH_3)(N_2C_{10}H_9H)]ReO_4$
LAJGUC	1.706 Å	Petyuk, M. Y.; Berezin, A. S.; Gushchin, A. L.; Bagryanskaya, I. Y.; Baranov, A. Y.; Artem'ev, A. V. *Inorg. Chim. Acta* **2012**, *516*, 120136. $[Re(CO)_3(C_{15}H_{12}N_3PS)]ReO_4$
PUSSEB	1.706 Å	Wang, T.-F.; Hwu, C.-C.; Tsai, C.-W.; Wen, Y.-S. *J. Chem. Soc., Dalton Trans.* **1998**, 2091. $[ReC_{16}H_{19}NO]ReO_4$
AHISIU	1.707 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[YbC_{84}H_{92}N_{56}O_{23}][YbReC_{42}H_{48}N_{28}O_{21}][YbReH_{10}NO_{12}][Yb(H_2O)_8](ReO_4)_{10} \cdot (C_{42}H_{42}N_{28}O_{14}) \cdot 21H_2O$
BIWJOH	1.707 Å	Tooyama, Y.; Braband, H.; Spingler, B.; Abram, U.; Alberto, R. *Inorg. Chem.* **2008**, *47*, 257. $[Re(O)_3C_{16}H_{22}N_6]ReO_4$
CELMUF	1.707 Å	You, X.; Rao, W.; Han, K.; Wang, L.; Zhang, M.; Wie, Z. *New J. Chem.* **2022**, *46*, 14404. $(C_7H_{15}N_2)ReO_4$
DEZMAX	1.707 Å	Booysen, I.; Gerber, T. I. A.; Hosten, E.; Luzipo, D.; Mayer, P. *J. Coord. Chem.* **2007**, *60*, 635. $[Re(P(C_6H_5)_3)_2Cl(C_{14}H_{11}N_2O)]ReO_4 \cdot H_2O$
HUWDEJ	1.707 Å	Lin, H.; Wu, X.; Maggard, P. A. *Inorg. Chem.* **2009**, *48*, 11265. $[AgC_{24}H_{24}N_4]ReO_4$
JOHBUF	1.707 Å	Malecki, J. G.; Palion, A.; Gryca, I.; Oboz, M.; Gron, T. *Polyhedron* **2014**, *76*, 10. $[Cu(N_2C_{11}H_{16}N_2)(NO_3)]ReO_4 \cdot CH_3CN$
LANHIV	1.707 Å	Nadeem, Q.; Battistin, F.; Blacque, O.; Alberto, R. *Chem.-Eur. J.* **2022**, *28*, e202103566. $[Re(C_8H_{11}N)_2]ReO_4$
LIMTUY	1.707 Å	Yokota, S.; Tsujimoto, K.; Hayashi, S.; Pointillart, F.; Ouahab, L.; Fujiwara, H. *Inorg. Chem.* **2013**, *52*, 6543. $[Cu(NC_{15}H_9S_5)_2](ReO_4)_2$
LIYFIK	1.707 Å	Mallick S.; Ghosh M. K.; Saha R.; Chattopadhyay, S. *Polyhedron* **2014**, *71*, 104. $(C(NHC_6H_5)_3)ReO_4$
NOXLUJ	1.707 Å	Massena, C. J.; Riel, A. M. S.; Neuhaus, G. F.; Decato, D. A.; Berryman, O. B. *Chem. Commun.* **2015**, *51*, 1417. $(C_{22}H_{16}I_2N_2)(ReO_4)_2$
QOLPUC	1.707 Å	Xu, L.; Perreroy, J.; Patrick, B. O.; Orvig, C. *Inorg. Chem.* **2001**, *40*, 2005. $[Re(O)Cl(N_2C_{14}H_{17}N_2)]ReO_4$
YICQUW	1.707 Å	Miyashita, Y.; Mahboob, N.; Tsuboi, S.; Yamada, Y.; Fujisawa, K.; Okamoto, K. *Bull Chem. Soc. Jpn.* **2001**, *74*, 1295. $[Rh_2ReC_{12}H_{36}N_6S_6](ReO_4)Cl \cdot 4H_2O$
AHISAM	1.708 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Yb(H_2O)_8][YbReC_{36}H_{44}N_{24}O_{20}](ReO_4)_4 \cdot (NO_3)_3 \cdot 2H_2O$

COPWUA	1.708 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 825. $[GdRe_2UC_{36}H_{50}N_{25}O_{32}](ReO_4)_2\cdot 4H_2O$
HINRUT	1.708 Å	Baer, S. A.; Pothig, A.; Bawaked, S. M.; Schmidbaur, H.; Kraus, F. *Z. Naturforsch., Sect. B* **2013**, *68*, 1173. $[Au(P(C_6H_5)_3)_2]ReO_4$
IWOJAH	1.708 Å	Afanaseva, V. A.; Glinskaya, L. A.; Piryazev, D. A.; Gromilov, S. A. *Russ. J. Struct. Chem.* **2015**, *56*, 1629. $[AuC_9H_{19}N_4](ReO_4)_2$
IZAMAY	1.708 Å	Baidina, I. A.; Makotchenko, E. V.; Shusharina, E. A.; Plyusnin, P. E.; Smolentsev, A. I.; Gromilov; S. A. *Russ. J. Struct. Chem.* **2010**, *51*, 544. $[AuCl(H_2N(CH_2)_2NH(CH_2)_2NH_2)](ReO_4)_2$
QEXLEK	1.708 Å	Bondy, C. R.; Gale, P. A.; Loeb, S. J. *Chem. Commun.* **2001**, 729. $[Pt(NC_{10}H_{14}NO)_4](ReO_4)_2$
ZUZBEB	1.708 Å	He, Y.-X.; Batchelor, R. J.; Einstein, F. W. B.; Sutton, D. *J. Organometal. Chem.* **1996**, *509*, 37. $[ReC_{17}H_{34}N_2]ReO_4\cdot(CH_3)_2CO$
416499	1.709 Å	Yusenko, K. V.; Baidina, I. A.; Gromilov, S. A.; Korenev, S. V. *Russ. J. Struct. Chem.* **2007**, *48*, 618. $[Pt(NH_3)_5Cl](ReO_4)_3\cdot 2H_2O$
AHIQIS	1.709 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[GdKC_{30}H_{38}N_{21}O_{17}]_n(ReO_4)_2\cdot 4H_2O$
IDIVAT	1.709 Å	Li X.-P.; Mei G.-Q.; Huang, H.-P.; Li, Y.-Z. *Acta Crystallogr., Sectr. E* **2006**, *62*, m1281. $(C_{12}H_9N_2)ReO_4$
MOCYUC	1.709 Å	Wan, M.; Wang, Y.-N.; Zhong, W.-H.; Chen, H.-R.; Li, Z.-M.; Shi, C.-H.; Cao, Q.-L.; Zhu, J.-Y.; Chen, L.-Z. *Chem. Mater.* **2023**, *35*, 8936. $(C_{10}H_{15}FN)ReO_4$
LEBMAG	1.709 Å	Katti, K. V.; Singh, P. R.; Barnes, C. L.; Katti, K. K.; Kopicka, K.; Ketring, A. R.; Volkert, W. A. *Z. Naturforsch. Sect. B* **1993**, *48*, 1381. $(PNH_2(P(C_6H_5)_3)_3]ReO_4$
SITZIF	1.709 Å	Booysen, I.; Gerber, T. I. A.; Hosten, E.; Mayer, P. *Inorg. Chem. Commun.* **2008**, *11*, 33. $[Re(N_2C_{13}H_{11}N)_2]ReO_4$
TAXPEO	1.709 Å	John, G. H.; May, I.; Sharrad, C. A.; Sutton, A. D.; Collison, D.; Helliwell, M.; Sarsfield, M. J. *Inorg. Chem.* **2005**, *44*, 7606. $[ReUC_{75}H_{67}O_{11}P_6](ReO_4)_2\cdot 2CH_3CN$
TUTKOL	1.709 Å	Fu, D.-W.; Cai, H.-L.; Li, S.-H.; Ye, Q.; Zhou, L.; Zhang, W.; Zhang, Y.; Deng, F.; Xiong, R.-G. *Phys. Rev.Lett.* **2013**, *110*, 257601. $(p\text{-}H_3NC_6H_4OCH_3)ReO_4$
ZASYUP	1.709 Å	Isakov, D.; de M.Gomes, E.; Belsley, M. S.; Rodrigues, V. H.; Costa, M. M. R. *CrystEngComm* **2012**, *14*, 3767. $(C_6H_{15}N_4O_2)ReO_4$
BIWYUB02	1.710 Å	Rindorf, G.; Soling, H.; Thorup, N. *Acta Crystallogr., Sect. C* **1984**, *40*, 1137. $(C_{10}H_{12}Se_4)ReO_4\cdot C_{10}H_{12}Se_4$
DIPQOK	1.710 Å	German, K. E.; Grigoriev, M. S.; Den Auwer, C.; Maruk, A. Y.; Obruchnikova, Y. A. *Russ. J. Inorg. Chem.* **2013**, *58*, 691. $((n\text{-}C_3H_7)_4)ReO_4$
HUWBUX	1.710 Å	Lin, H.; Wu, X.; Maggard, P. A. *Inorg. Chem.* **2009**, *48*, 11265. $[AgC_{24}H_{16}N_6]ReO_4\cdot H_2O$

POMKUY	1.710 Å	Rodrigues, V. H. Costa, M. M. R. R.; Dekola, T.; de Matos Gomes, E. *Acta Crystallogr., Sect. E* **2009**, *65*, m19. $(H_3NCHCOOH)ReO_4{\cdot}(H_3NCHCOO)$
SOSQUM	1.710 Å	Xu, L.; Setyawati, I. A.; Pierreroy, J.; Pink, M.; Young Jr., V. G.; Patrick, B. O.; Rettig, S: J.; Orvig, C. *Inorg. Chem.* **2000**, *39*, 5958. $[ReC_{18}H_{20}N_4O_5]ReO_4{\cdot}CH_3OH$
VAJLEY	1.710 Å	Ray, U.; Chand, B.; Dasmahapatra, A. K.; Mostafa, G.; Lu, T.-H.; Sinha, C. *Inorg. Chem. Commun.* **2003**, *6*, 634. $(C_{12}H_{15}N_4)ReO_4{\cdot}H_2O$
CATXEE	1.711 Å	Ming, M.; Zhou, H.; Mao, Y.-N.; Li, H.-R.; Chen, J. *Dalton Trans.* **2022**, *51*, 4458.$(Ag_2ReC_{26}H_{18}N_4O_4)_nReO_4$
KEWNIN01	1.711 Å	Ghosh, R.; Ghosh, T. K.; Pramanik, S.; Islam, A. S. M.; Ghosh, P. *ACS Appl. Mater. Interfaces* **2023**, *15*, 25184. $(C_{30}H_{38}I_4N_8)(ReO_4)_4{\cdot}2CH_3CN$
IPOPUA	1.711 Å	Chan, C. Y..; Barnard, P. J. *Dalton Trans.* **2015**, *44*, 19126. $[Re(CO)_3(C_{19}H_{25}N_5)]ReO_4$
POXDOX	1.711 Å	Deiser, F.; Kraus, F.; Schmidbaur, H. *Chem. Commun.* **2015**, *51*, 6746. $[Ag(P(C_6H_5)_3)_4]ReO_4$
RAHHAL	1.711 Å	Makotchenko, E. V.; Baidina, I. A. *Russ. J. Struct. Chem.* **2011**, *52*, 572. $[Au(H_2N(CH_2)_2NH_2)_2](ReO_4)_3$
SETSIW	1.711 Å	Kumagai, S.; Takaishi, S.; Gao, M.; Iguchi, H.; Breedlove, B. K.; Yamashita, M. *Inorg. Chem.* **2018**, *57*, 3775. $[Pt(H_2N(CH_2)_2NH_2)_2][PtBr_2(H_2N(CH_2)_2NH_2)_2](ReO_4)_4$
WEZSAV	1.711 Å	Petrova, R.; Todorov, T.; Bakardjieva, S.; Mihailova, B.; Angelova, O. *Z. Kristallogr. – Cryst Mater.* **2000**, *215*, 309. $[Ca(OC(NH_2)_2)_6](ReO_4)_2$
WUTPEG	1.711 Å	Pawlicki, S. H.; Noll, B. C.; Dubois, M. R. *J. Coord. Chem.* **2003**, *56*, 41. $[ReC_{65}H_{62}ClOP_3S]ReO_4$
XAGMUO	1.711 Å	Royo, B.; Herdtweck, E.; Romao, C. C. *Eur. J. Inorg. Chem.* **2004**, 3305. $[Re(O)_2(C_9H_{16}N_2)_4]ReO_4{\cdot}C_4H_8O$
AZENAV	1.712 Å	Maruk, A. Y.; Grigor'ev, M. S.; German, K. E. *Koord. Khim.* **2010**, *36*, 381. $(C_6H_5NH_3)ReO_4$
COTTIO01	1.712 Å	Perruchas, S.; Fraxedas, J.; Canadell, E.; Auban-Senzier, P.; Batail, P. *Adv. Mater.* **2005**, *17*, 209. $(C_{10}H_{12}S_4)ReO_4{\cdot}C_{10}H_{12}S_4$
KEKLER	1.712 Å	Danopoulos, A. A; Wong, A. C. C.; Wilkinson, G.; Hursthouse, M. B.; Hussain, B. *J. Chem. Soc., Dalton Trans.* **1990**, 315. $[Re(N_2C_6H_6)_3]ReO_4{\cdot}(CH_3)_2CO$
LAGDII	1.712 Å	Carlucci, L.; Ciani, G.; Maggini, S.; Proserpio, D. M.; Visconti, M. *Chem. – Eur. J.* **2010**, *16*, 12328. $[Ag_3CdC_{51}H_{27}N_6O_6]_n(ReO_4)_2$
NUDZOE	1.712 Å	Ghosh, R.; Ghosh, T. K.; Ghosh, P. *Dalton Trans.* **2020**, *49*, 3039. $(C_6(C_6H_{10}N_2)_6)(ReO_4)_6{\cdot}2H_2O$
WEZQUN	1.712 Å	Petrova, R.; Todorov, T.; Bakardjieva, S.; Mihailova, B.; Angelova, O. *Z. Kristallogr. – Cryst Mater.* **2000**, *215*, 309. $[Cd(OC(NH_2)_2)_6](ReO_4)_2$
ZUYKEL	1.712 Å	Riel, A. M. S.; Decato, D. A.; Berryman, O. B. *Cryst. Growth Des.* **2016**, *16*, 974. $(C_{21}H_{15}N_2)ReO_4$
74505	1.713 Å	Rögner, P.; Range, K. J. *Z. Naturforsch., Sect. B* **1993**, *48*, 685. $CsReO_4$

421685	1.713 Å	Baidina, I. A.; Filatov, E. Y.; Makotchenko, E. V.; Smolentsev, A. I. *J. Struct. Chem.* **2012**, *53*, 112. $[Co(NH_3)_5H_2O](ReO_4)_3{\cdot}2H_2O$
AHISEQ	1.713 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Lu(H_2O)_8][LuRe_2C_{36}H_{44}N_{24}O_{20}](ReO_4)_4{\cdot}(NO_3)_3{\cdot}2H_2O$
AXABAF	1.713 Å	Mroweh, N.; Bogdan, A.; Pop, F.; Auban-Senzier, P.; Vanthuyne, N.; Lopes, E. B.; Almeida, M.; Avarvari, N. *Magnetochem.* **2021**, *7*, 87. $(C_{10}H_{10}S_6)ReO_4$
EVOFIG02	1.713 Å	Gansle, K. M.; Gash, A. E.; Chambliss, C. K.; Clapsaddle, B. J.; Newell, B. S.; Miller, S. M.; Anderson, O. P.; Hughes, R. P.; Strauss, S. H. *Polyhedron* **2017**, *121*, 88. $[Fe(C_{13}H_{21})_2]ReO_4{\cdot}(CH_3)_2CO$
FAWCUF	1.713 Å	Wan, M.; Wang, Y.-N.; Liu, J.-Y.; Tong, L.; Ye, S.-Y.; Li, J.-Y.; Chen, L.-Z. *CrystEngComm* **2022**, *24*, 782. $(C_8H_{17}BrN_2)(ReO_4)_2$
HALGUA	1.713 Å	Xie, Y.; Zheng, J.; Zheng, K.; Liu, Q.; Duan, J.; Chen, W.; Shao, S.; Cai, H. *Chem. Mater.* **2021**, *33*, 3081. $(C_7H_{14}N)ReO_4$
HALHAH	1.713 Å	Xie, Y.; Zheng, J.; Zheng, K.; Liu, Q.; Duan, J.; Chen, W.; Shao, S.; Cai, H. *Chem. Mater.* **2021**, *33*, 3081. $(C_8H_{16}N)ReO_4$
KETKUR	1.713 Å	Machura, B.; Gryca, I. *Polyhedron* **2013**, *53*, 83. $[Re(OCH_3)(P(C_6H_5)_3)Cl(NC_6H_4CH_3)(N_2C_{10}H_9H)]ReO_4$
WIHHAA	1.713 Å	Wenhui, H.; Xing, Y.; Ziyu, W.; Zhenhong, W.; Wenjun, R.; Hu, C. *Chin. Inorg. Chem.* **2022**, *38*, 1586. $(C_9H_{24}N_4)(ReO_4)_2$
PEGTED	1.713 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(C_7H_{10}N)ReO_4$
QUYKEC	1.713 Å	Hou, X.; Li, X.; Ye, H. *Polyhedron* **2015**, *102*, 657. $(C_{10}H_{10}N_2O_2)(ReO_4)_2{\cdot}C_{10}H_8N_2O_2{\cdot}2H_2O$
RASQEH	1.713 Å	Petrova, R.; Angelova, O.; Macicek, J. Acta Crystallogr., Sect. C 1997, 53, 565. $[Cd(SC(NH_2)_2)_6](ReO_4)_2{\cdot}H_2O$
WOLSOG	1.713 Å	Carruthers, C.; Ronson, T. K.; Sumby, C. J.; Westcott, A.; Harding, L. P.; Prior, T. J.; Rizkallah, P.; Hardie, M. J. *Chem. – Eur. J.* **2008**, *14*, 10286. $[AgC_{36}H_{36}N_6O_6]_nReO_4{\cdot}CH_3CN$
ABIWOR	1.714 Å	Fidalgo, E. G.; Plasseraud, L.; Stoeckli-Evans, H.; Suss-Fink, G. *Inorg. Chem. Commun.* **2001**, *4*, 308. $[Ru_2Cl_2(OH)(p\text{-}C_6H_4(CH_3)(i\text{-}C_3H_7))_2]ReO_4$
EKAVOE	1.714 Å	Thevenet, A.; Miljkovic, A.; La Cognata, S.; Marie, C.; Tamain, C.; Boubals, N.; Mangano, C.; Amendola, V.; Guilbaud, P. *Dalton Trans.* **2021**, *50*, 1620. $(C_{36}H_{48}F_{12}N_8)ReO_4(CF_3SO_3)_5{\cdot}5H_2O$
MOCZAJ	1.714 Å	Wan, M.; Wang, Y.-N.; Zhong, W.-H.; Chen, H.-R.; Li, Z.-M.; Shi, C.-H.; Cao, Q.-L.; Zhu, J.-Y.; Chen, L.-Z. *Chem. Mater.* **2023**, *35*, 8936. $(C_{10}H_{15}BrN)ReO_4$
IXAZIR	1.714 Å	Katayev, E. A.; Kolesnikov, G. V.; Khrustalev, V. N.; Antipin, M. Y.; Askerov, R. K.; Maharramov, A. M.; German, K. E.; Kirakosyan, G. A.; Tananaev, I. G.; Timofeeva, T. V. *J. Radioanalytical Nucl. Chem.* **2009**, *282*, 385. $(C_{45}H_{47}N_7O_2)(ReO_4)_2{\cdot}2ClH_2CCH_2Cl$

ONELOL	1.714 Å	Li, C.-P.; Zhou, H.; Wang, J.-J.; Liu, B.-L.; Wang, S.; Yang, X.; Wang, Z.-L.; Liu, C.-S.; Du, M.; Zhou, W. *ACS Appl. Mater. Interfaces* **2019**, *11*, 42375. $[AgC_{17}H_{12}N_6]_nReO_4$
OROWAV	1.714 Å	Harada, J.; Shimojo, T.; Oyamaguchi, H.; Hasegawa, H.; Takahashi, Y.; Satomi, K.; Suzuki, Y.; Kawamata, J.; Inabe, T. *Nature Chem.* **2016**, *8*, 946. $(C_7H_{14}N)ReO_4$
PUFPOY	1.714 Å	Thevenet, A.; Marie, C.; Tamain, C.; Amendola, V.; Miljkovic, A.; Guillaumont, D.; Boubals, N.; Guilbaud, P. *Dalton Trans.* **2020**, *49*, 1446. $(C_{36}H_{60}N_8)_2(ReO_4)_3(NO_3)_7{\cdot}6H_2O$
QAJSIG	1.714 Å	Schmitt, B.; Sabanci, N.; Dedeoglu, B.; Aviyente, V.; Hosten, E.; Gerber, T. I. A.; Habarurema, G. A. *S. Afr. J. Chem.* **2014**, *67*, 189. $[ReBr(P(C_6H_5)_3)_2(N_2OC_{13}H_9)]BrReO_4$
UFELEZ	1.714 Å	Fan, G.-M.; Shi, C.; Qiao, L.; Li, H.-J.; Ye, H.-Y. *J. Mater. Chem. C* **2018**, *6*, 8349. $NH_4(C_7H_{16}N_2)ReO_4$
UWIRUQ	1.714 Å	Djemel, A.; Stefanczyk, O.; Desplanches, C.; Kumar, K.; Delimi, R.; Benaceur, F.; Ohkoshi, S.-I.;.; Chastanet, G. *Inorg. Chem. Front.* **2021**, *8*, 3210. $[Fe(N_3CC_{11}H_9N)_2](ReO_4)_2{\cdot}3H_2O$
XAPTUD	1.714 Å	Zhou, Z.; Xing, Y.; Wu, Y. *J. Inclusion Phenom. Macrocyclic Chem.* **1999**, *34*, 219. $[NaC_{60}H_{80}O_{12}]ReO_4{\cdot}H_2O$
AHIPUD	1.715 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[CeKC_{30}H_{34}N_{22}O_{18}]_n(ReO_4)_2{\cdot}3H_2O$
DELZUQ	1.715 Å	Fuma, Y.; Ebihara, M. *Acta Crystallogr., Sect. E* **2006**, *62*, m1898. $[(Re(H_2O)(NHOCCH_3)_2]ReO_4$
HIDMEN	1.715 Å	Cowley, A. R.; Dilworth, J. R.; Salichou, M. *Dalton Trans.* **2007**, 1621. $[ReCl_3(C_{10}H_{10}N_6)]ReO_4{\cdot}CHCl_3$
MOCDAN	1.715 Å	Wan, M.; Wang, Y.-N.; Zhong, W.-H.; Chen, H.-R.; Li, Z.-M.; Shi, C.-H.; Cao, Q.-L.; Zhu, J.-Y.; Chen, L.-Z. *Chem. Mater.* **2023**, *35*, 8936. $(C_{10}H_{15}ClN)ReO_4$
5920	1.715 Å	Chay, C.; Avdeev, M.; Brand, H. E. A.; Injac, S.; Whittle, T. A.; Kennedy, B. J. *Dalton Trans.* **2019**, *48*, 17524. $CsReO_4$
37118	1.715 Å	Bets, T.; Hoppe, R. *Z. Anorg. Allg. Chem.* **1983**, *500*, 23. $LiReO_4$
COPWIO	1.715 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 825. $[SmRe_2UC_{36}H_{50}N_{25}O_{32}](ReO_4)_2{\cdot}4H_2O$
ITELUR	1.715 Å	Ghosh, R.; Ghosh, T. K.; Ghosh, P. *Chem. Commun.* **2021**, *57*, 5578. $(C_{42}H_{48}N_{12})(ReO_4)_6{\cdot}3H_2O$
KUCBUH	1.715 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{13}H_{17}N_2)ReO_4$
ROGYAP	1.715 Å	orstanje, T. J.; Lutz, M.;Jastrzebski, J. T. B. H.; Gebbinkg, R. J. M. K. *Organometallics* **2014**, *33*, 2201. $[Re(O)Cl_2(C_{31}H_{51}NP_2]ReO_4$
WERBEA	1.715 Å	Gowda, N. M. M.; Zhang, L.; Barnes, C. L. *J. Chem. Cryst.* **1994**, *24*, 89. $(C_{19}H_{22}N_2S)ReO_4$
XACHOA	1.715 Å	Lin, H.; Maggard, P. A. *Inorg. Chem.* **2009**, *48*, 8940. $[Cu_2C_{40}H_{32}N_8]_n(ReO_4)_2{\cdot}H_2O$
5922	1.716 Å	Chay, C.; Avdeev, M.; Brand, H. E. A.; Injac, S.; Whittle, T. A.; Kennedy, B. J. *Dalton Trans.* **2019**, *48*, 17524. $TlReO_4$
SEFBIS	1.716 Å	Das, S.; Saha, A.; Sahu, M.; Mondal, A.; Malla Reddy, C. *Angew. Chem., Int. Ed.* **2022**, *61*, e202115359. $((CH_3)_2NH_2)ReO_4$

5921	1.716 Å	Chay, C.; Avdeev, M.; Brand, H. E. A.; Injac, S.; Whittle, T. A.; Kennedy, B. J. *Dalton Trans.* **2019**, *48*, 17524. $RbReO_4$
101356	1.716 Å	Conrad, M.; Schleid, T. *Z. Anorg. Allg. Chem.* **2019**, *645*, 1255. $CaNa(ReO_4)_3$
CUYLEN10	1.716 Å	Herrmann, W. A.; Serrano, R.; Kusthardt, U.; Guggolz, E.; Nuber, B.; Ziegler, M. L. *J. Organometal. Chem.* **1985**, *287*, 329. $[ReO_6(C_{10}H_{15})_3](ReO_4)_2{\cdot}CH_2Cl_2$
GEJXAW	1.716 Å	Shakirova, O. G.; Daletsky, V. A.; Lavrenova, L. G.; Kurat'eva, N. V.; Shusharina, E. A.; Sheludyakova, L. A.; Vasilevsky, S. F. *Koord. Khim.* **2011**, *37*, 511. $[Fe(C_{10}H_{10}N_6)_2](ReO_4)_2$
GIMREC	1.716 Å	Rice, C. R.; Slater, C.; Faulkner, R. A..; Allan, R. L. *Angew. Chem., Int. Ed.* **2018**, *57*, 13071. $[Cu_3C_{61}H_{60}N_{20}O_3S_6]ReO_4(CF_3SO_3)_3{\cdot}CH_3CN{\cdot}1.63H_2O$
GUTJIP	1.716 Å	Das, B.; Sarkar, S.; Zangrando, E.; Chattopadhyay, P. *Inorg. Chem. Commun.* **2009**, *12*, 1112. $[CuC_{14}H_{16}ClN_2S_2]ReO_4$
HUWCAE	1.716 Å	Lin, H.; Wu, X.; Maggard, P. A. *Inorg. Chem.* **2009**, *48*, 11265. $[AgC_{12}H_{10}N_2O_4]ReO_4{\cdot}H_2O$
TIHNEH	1.716 Å	Savastano, M.; Cappanni, C.; Bazzicalupi, C.; Lofrumento, C.; Bianchi, A. *Crystals* **2023**, *13*, 823. $(C_{19}H_{24}N_8O_2)(ReO_4)_2$
LIDBUX	1.716 Å	Sharutin, V. V.; Senchurin, V. S.; Fastovets, O. A. Butlerov Commun. 2009, 16, 36-4. $(PCH_3(C_6H_5)_3)ReO_4$
LIWSER	1.716 Å	Amendola, V.; Bergamaschi, G.; Boiocchi, M.; Alberto, R.; Braband, H. *Chem. Sci.* **2014**, *5*, 1820. $(C_{44}H_{64}N_8)ReO_4(CF_3SO_3)_5{\cdot}7H_2O$
XUJWOO	1.716 Å	Chryssou, K.; Pelecanou, M.; Pirmettis, I. C.; Papadopoulos, M. S.; Raptopoulou, C.; Terzis, A.; Chiotellis, E.; Stassinopoulou, C. I. *Inorg. Chem.* **2002**, *41*, 4653. $[ReC_{23}H_{39}N_3OS_3]ReO_4$
YECFER	1.716 Å	Xiao, J.; Puddephatt, R. J.; Manojlovic-Muir, L.; Muir, K. W.; Torabi, A. A. *J. Am. Chem.Soc.* **1994**, *116*, 1129. $[Pt3ReC_{75}H_{66}O_3P_6]ReO_4$
40397	1.717 Å	Picard, J. P.; Besse, J. P.; Chevalier, R.; Gasperin, M. *J. Solid State Chem.* **1988**, *75*, 205. $Ca(ReO_4)_2{\cdot}2H_2O$
79692	1.717 Å	Todorov, T.; Macicek, J. *Acta Crystallogr., Sect. C* **1995**, *51*, 1034. $Ba(ReO_4)_2{\cdot}H_2O$
FAWCUF	1.717 Å	Wan, M.; Wang, Y.-N.; Liu, J.-Y.; Tong, L.; Ye, S.-Y.; Li, J.-Y.; Chen, L.-Z. *CrystEngComm* **2022**, *24*, 782. $(C_8H_{17}BrN_2)(ReO_4)_2$
HIRGEY	1.717 Å	Bagchi, S.; Kamilya, S.; Mehta, S.; Mandal, S.; Bandyopadhyay, A.; Narayan, A.; Ghosh, S.; Mondal, A. *Dalton Trans.* **2023**, *52*, 11335. $[MnC_{22}H_{24}Br_2N_4O_2]ReO_4$
MECVUP	1.717 Å	Georgieva, I.; Kossev, K.; Titorenkova, R.; Petrova, N.; Zahariev, T.; Nikolova, R. *J. Solid State Chem.* **2022**, *312*, 123263. $[Mg(OC(NH_2)_2)_4(H_2O)_2](ReO_4)_2$
KUCCOC	1.717 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{13}H_{12}F_5N_2)ReO_4$

MOWJUF	1.717 Å	Cokoja, M.; Markovits, I. I. E.; Anthofer, M. H.; Poplata, S.; Pothig, A.; Morris, D. S.; Tasker, P. A.; Herrmann, W. A.; Kuhn, F. E.; Love, J. B. *Chem. Commun.* **2015**, *51*, 3399. $(C_{28}H_{50}N_3O_2)ReO_4$
PEGTIH	1.717 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(C_6H_{14}N)ReO_4$
POMKUY01	1.717 Å	Dekola, T.; Isakov, D.; de M.Gomes, E.; Rodrigues, V. H. N.; Costa, M. M. R. R, *Eur. Phys. J. B* **2009**, *68*, 519. $(H_3NCHCOOH)ReO_4{\cdot}(H_3NCHCOO)$
WURKIG	1.717 Å	Andreev, G.; Budantseva, N.; Sokolova, M.; Fedoseev, A. *Inorg. Chem.* **2020**, *59*, 11357. $[Np(OS(CH_3)_2)_8(OReO_3)](ReO_4)_3$
WURMUU	1.717 Å	Andreev, G.; Budantseva, N.; Sokolova, M.; Fedoseev, A. *Inorg. Chem.* **2020**, *59*, 11357. $[Pu(OS(CH_3)_2)_8](ReO_4)_4$
83343	1.718 Å	Angelova, O.; Macicek, J. Z. Kristallogr. **1996**, *211*, 513. $Sr(ReO_4)_2{\cdot}3OC(NH_2)_2{\cdot}2H_2O$
COPXAH	1.718 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 825. $[LuRe_2UC_{36}H_{50}N_{25}O_{32}](ReO_4)_2{\cdot}4H_2O$
FAWDIU	1.718 Å	Wan, M.; Wang, Y.-N.; Liu, J.-Y.; Tong, L.; Ye, S.-Y.; Li, J.-Y.; Chen, L.-Z. *CrystEngComm* **2022**, *24*, 782. $(C_8H_{17}FN_2)(ReO_4)_2$
EKIPOG	1.718 Å	Cortat, Y.; Crochet, A.; Zobi, F. CCDC deposition number 2057808, **2021**. $(((CH_3)_2N)_2CC(N(CH_3)_2)_2)BrReO_4{\cdot}0.5CH_2Cl_2$
FAYSUV	1.718 Å	Sanchez, I.; Campo, J. A.; Heras, J. V.; Torres, M. R.; Cano, M. *J. Mater. Chem.* **2012**, *22*, 13329. $(C_{10}H_{11}N_2O)ReO_4$
FIQKUN	1.718 Å	Kato, M.; Shirahata, T.; Misaki, Y. *Chem. Lett.* **2013**, *42*, 1548. $(C_{22}H_{14}OS_8)ReO_4{\cdot}ClH_2CCH_2Cl$
FONRUV	1.718 Å	Oliveira, M. A.; Miranda, J. M.; Castellano, E. E.; Scoralick, E.; Zinner, L. B.; Vicentini, C. *Lanth. Actin. Res.* **1986**, *1*, 205. $[NdReC_{12}H_{32}O_{14}S_6]_n(ReO_4)_2{\cdot}C_4H_8O_2S_2$
HUCNOI	1.718 Å	Zhang, C.; Guzei, I. A.; Espenson, J. H. *Organometallics* **2000**, *19*, 5257. $[SnRe_2C_{44}H_{50}Cl_2N_8O_4](ReO_4)_2$
KEDKIR	1.718 Å	Skabitskii, I. V.; Shapovalov, S. S. *Russ. J. Coord. Chem.* **2021**, *48*, 180. $[ReC_{21}H_{23}B_2N_{14}O_3]ReO_4{\cdot}2(CH_3)_2CO$
MOWNET	1.718 Å	Arrigo, L. M.; Galenas, M.; Bassil, D. B.; Tucker, S. A.; Kannan, R.; Katti, K. V.; Barnes, C. L.; Jurisson, S. S. *Radiochim. Acta* **2008**, *96*, 835. $(C_{14}H_9(PNH(C_6H_5)_2))ReO_4$
PIDTOL01	1.718 Å	Herrmann, W. A.; Roesky, P. W.; Kuhn, F. E.; Elison, M.; Artus, G.; Scherer, W.; Romao, C. C.; Lopes, A.; Basset, J.-M. *Inorg. Chem.* **1995**, *34*, 4701. $[Re(O)_3(N_3C_9H_{21})]ReO_4$
POVCAG	1.718 Å	Browne, A. R.; Deligonul, N.; Anderson, B. L.; Rheingold, A. L.; Gray, T. G. *Chem. – Eur. J.* **2014**, *20*, 17552. $[AuC_{43}H_{35}OP_2]ReO_4$
SETRUH	1.718 Å	Kumagai, S.; Takaishi, S.; Gao, M.; Iguchi, H.; Breedlove, B. K.; Yamashita, M. *Inorg. Chem.* **2018**, *57*, 3775. $[Pd(H_2N(CH_2)_2NH_2)_2][PdBr_2(H_2N(CH_2)_2NH_2)_2](ReO_4)_4$

SETSAO	1.718 Å	Kumagai, S.; Takaishi, S.; Gao, M.; Iguchi, H.; Breedlove, B. K.; Yamashita, M. *Inorg. Chem.* **2018**, *57*, 3775. $[Pd(H_2N(CH_2)_2NH_2)_2][PdI_2(H_2N(CH_2)_2NH_2)_2](ReO_4)_4$
VUQGAR	1.718 Å	Svane, S.; Kuntsche, J.; Steiniger, F.; Eicha, A.; Duelund, L.; McKee, V.; McKenzie, C. J. *Supramol. Chem.* **2015**, *27*, 642. $[Cu2C_{36}H_{43}N_7O_6)(ReO_4)_2{\cdot}2H_2O$
WURKOM	1.718 Å	Andreev, G.; Budantseva, N.; Sokolova, M.; Fedoseev, A. *Inorg. Chem.* **2020**, *59*, 11357. $[U(OS(CH_3)_2)_8(OReO_3)](ReO_4)_3$
YEHFUO	1.718 Å	Nakano, Y.; Yamochi, H.; Saito, G.; Kuratsu, M.; Okada, K. *J. Phys.: Conf. Ser.* **2008**, *132*, 12024. $(C_{18}H_9NO_3)ReO_4$
ZIHNIQ	1.718 Å	Inayoshi, T. *Synth. Meth.* **2018**, *244*, 155. $(C_{10}H_8OS_6)ReO_4{\cdot}C_{10}H_8OS_6$
ZUCQOF	1.718 Å	Kataev, E. A.; Pantos, P.; Karnas, E.; Kolesnikov, G. V.; Tananaev, I. G.; Lynch, V. M.; Sessler, J. L. *Supramol. Chem.* **2015**, *27*, 346. $(C_{64}H_{88}N_8)(ReO_4)_2$
62	1.719 Å	Krebs, B.; Hasse, K. *Acta Crystallogr., Sect. B* **1976**, *32*, 1334. $KReO_4$
41049	1.719 Å	Baur, W. H.; Kassner, D. *J. Solid State Chem.* **1992**, *100*, 166. $Ca(ReO_4)_2{\cdot}2H_2O$
165619	1.719 Å	Watanabe, H.; Imoto, H. *Inorg. Chem.* **1997**, *36*, 4610. $(Sb_4O_5)(ReO_4)_2$
BIHJUY01	1.719 Å	Baudron, S. A.; Avarvari, N.; Canadell, E.; Auban-Senzier, P.; Batail, P. *Chem. - Eur. J.* **2004**, *10*, 4498. $(C_{12}H_{12}N_2O_2S_6)ReO_4{\cdot}C_{12}H_{12}N_2O_2S_6$
CAJYIX	1.719 Å	Cao, R.; McCarthy, B. D.; Lippard, S. J. *Inorg. Chem.* **2011**, *50*, 9499. $[Cu_3ReC_{60}H_{60}Cl_3N_{10}O_4]_n(PF_6)(ReO_4)$
COPWOU	1.719 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 825. $[EuRe_2UC_{36}H_{50}N_{25}O_{32}](ReO_4)_2{\cdot}4H_2O$
FAWDAM	1.719 Å	Wan, M.; Wang, Y.-N.; Liu, J.-Y.; Tong, L.; Ye, S.-Y.; Li, J.-Y.; Chen, L.-Z. *CrystEngComm* **2022**, *24*, 782. $(C_8H_{17}ClN_2)(ReO_4)_2$
KUBRAC	1.719 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{17}H_{17}N_2)ReO_4$
WIHHEE	1.719 Å	Wenhui, H.; Xing, Y.; Ziyu, W.; Zhenhong, W.; Wenjun, R.; Hu, C. *Chin. Inorg. Chem.* **2022**, *38*, 1586. $(C_8H_{22}N_4)(ReO_4)_2$
KUCCIW	1.719 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{12}H_{10}F_2N_2)ReO_4$
MUJCUS	1.719 Å	Nadeem, Q.; Meola, G.; Braband, H.; Bolliger, R.; Blacque, O.; Hernandez-Valdes, D.; Alberto, R. *Angew. Chem., Int. Ed.* **2020**, *59*, 1197. $[Re(C_{10}H_{13}NO)_2]ReO_4$
NAPVUZ	1.719 Å	Daolio, A.; Pizzi, A.; Terraneo, G.; Frontera, A.; Resnati, G. *ChemPhysChem* **2021**, *22*, 2281. $(C_3H_7N_6)ReO_4$
NETMAB	1.719 Å	Seymore, S. B.; Brown, S. N. *Inorg. Chem.* **2006**, *45*, 9540. $[Re(N)Cl(P(C_6H_{11})_2(CH_2)_2P(C_6H_{11})_2)_2]ReO_4{\cdot}CH_2Cl_2{\cdot}1.5C_6H_6$

PAGPOD	1.719 Å	Sutton, A. D.; John, G. H.; Sarsfield, M. J.; Renshaw, J. C.; May, I.; Martin, L. R.; Selvage, A. J.; Collison, D.; Helliwell, M. *Inorg. Chem.* **2004**, *43*, 5480. $[UO_2(OReO_3)(OP(C_6H_5)_2(CH_2)_2P(C_6H_5)_2O)_2]ReO_4{\cdot}CH_3OH$
PEGTAZ	1.719 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(C_7H_{10}N)ReO_4$
PEGTUT	1.719 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(C_8H_{12}N)ReO_4$
QOGROU	1.719 Å	Martinez-Garcia, H.; Morales, D.; Perez, J.; Puerto, M.; del Rio, I. *Chem. – Eur. J.* **2014**, *20*, 5821. $[MoC_{20}H_{22}N_3O_2]ReO_4{\cdot}CH_2Cl_2$
VECKIZ	1.719 Å	Amendola, V., Alberti, G.; Bergamaschi, G.; Biesuz, R.; Boiocchi, M.; Ferrito, S.; Schmidtchen, F.-P. *Eur. J. Inorg. Chem.* **2012**, 3410. $(C_{36}H_{60}N_8)ReO_4(CF_3SO_3)_5{\cdot}8H_2O$
1395	1.720 Å	Kruger, G. J.; Reynhardt, E. C. *Acta Crystallogr., Sect. B* **1978**, *34*, 259. NH_4ReO_4
411646	1.720 Å	Abakumov, A. M.; Rozova, M. G.; Shpanchenko, R. V.; Mironov, A. V.; Antipov, E. V.; Bramnik, K. G. *Solid State Sci.* **2001**, *3*, 581. $LiReO_4{\cdot}H_2O$
421686	1.720 Å	Baidina, I. A.; Filatov, E. Y.; Makotchenko, E. V.; Smolentsev, A. I. *J. Struct. Chem.* **2012**, *53*, 112. $[Co(NH_3)_6](ReO_4)_3{\cdot}2H_2O$
AZUKOY	1.720 Å	Mondal, A.; .Rashid, A.; Ghosh, P. *J. Organometal. Chem.* **2021**, *952*, 122027. $[Ru(N_2C_{12}H_8)_2(C_{14}H_{14}F_5IN_4)](ReO_4)_2{\cdot}2CH_3CN$
INUXEU	1.720 Å	Miyasaka, H.; Clerac, R.; Mizushima, K.; Sugiura, K.; Yamashita, M.; Wernsdorfer, W.; Coulon, C. *Inorg. Chem.* **2003**, *42*, 8203. $[Mn_2NiC_{62}H_{64}N_{10}O](ReO_4)_2$
LOLHIG04	1.720 Å	Gao J.-X. CCDC deposition number 1938432, **2019**. $(C_7H_{13}FN)ReO_4$
MAJPET	1.720 Å	Holynska, M.; Lis, T. *Acta Crystallogr., Sect. C* **2004**, *60*, m648. $(PI(C_6H_5)_3)ReO_4$
NELBEL	1.720 Å	Murmann, R. K.; Barnes, C. CCDC deposition number 101193, **1998**. $(C_{12}H_{28}N_4O2)(ReO_4)_2$
NIVYIB	1.720 Å	Ghosh, S.; Roehm, B.; Begum, R. A.; Kut, J.; Hossain, M. A.; Day, V. W.; Bowman-James, K. *Inorg. Chem.* **2007**, *46*, 9519. $(C_{24}H_{34}N_8O_4)(ReO_4)_2{\cdot}3H_2O$
REVREQ	1.720 Å	Thuery, P. CCDC deposition number 631072, **2006**. $(C_{18}H_{31}N_2O_8)ReO_4$
112618	1.721 Å	Charkin, D. O.; Siidra, O. I.; Plokhikh, I. V.; Borisov, A. S.; Markovski, M. R. *Solid State Sci.* **2021**, *114*, 106576. $Ba_2ReO_4Cl_2$
AHIRAL	1.721 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Pr2ReC_{36}H_{46}N_{27}O_{30}]_n(ReO_4)_2{\cdot}2H_2O$
ALODAI	1.721 Å	Song, X.; Lim, M. H.; Mohamed, D. K. B. Wong, S. M.; Zhao, J.; Andy Hor, T. S. *J. Organometal. Chem.* **2016**, *814*, 1. $(C_9H_{16}N_2O)(ReO_4)_2$
COXPEL	1.721 Å	Thuery, P. *Cryst. Growth Des.* **2009**, *9*, 1208. $[UO_2(C_{30}H_{30}N_{20}O_{10})](ReO_4)_2{\cdot}2H_2O$

CUDYAB	1.721 Å	Kikuchi, K.; Yakushi, K.; Kuroda, H.; Kobayashi, K.; Honda, M.; Katayama, C.; Tanaka, J. *Chem. Lett.* **1984**, 1885. $(C_{11}H_{12}Se_4)ReO_4 \cdot C_{11}H_{12}Se_4$
GUHCEU	1.721 Å	Mroweh, N.; Pop, F.; Meziere, C.; Allain, M.; Auban-Senzier, P.; Vanthuyne, N.; Alemany, P.Canadell, E.; Avarvari, N. *Cryst. Growth Des.* **2020**, *20*, 2516. $(C_{12}H_{12}N_2O_2S_6)ReO_4 \cdot C_{12}H_{12}N_2O_2S_6$
PEGSUS	1.721 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(H_3NC_6H_{13})ReO_4$
PIDTIF	1.721 Å	Herrmann, W. A.; Roesky, P. W.; Kuhn, F. E.; Scherer, W.; Kleine, M. *Angew. Chem., Int. Ed.* **1993**, *32*, 1714. $[Re(O)_3(N_3C_6H_{15})]ReO_4$
RIGYAK	1.721 Å	Bykova, E. A.; Khranenko, S. P.; Gromilov, S. A. *Russ. J. Struct. Chem.* **2018**, *59*, 172. $[NiN_4C_{16}H_{32}](ReO_4)_2$
WOJFIK	1.721 Å	Chantler, J.; Fanwick, P. E.; Walton, R. A. *J. Organometal. Chem.* **2000**, *604*, 219. $[Re_2(O)Cl_3(NCCH_3)_2((C_6H_5)_2PCH_2P(C_6H_5)_2)]ReO_4 \cdot CH_3CN$
73297	1.722 Å	Rögner, P.Macicek, J.; Angelova, O.; Petrova, R.; Range, K. J. *Z. Naturforsch., Sect. B* **1993**, *48*, 233. $RbReO_4$
79119	1.722 Å	Macicek, J.; Angelova, O.; Petrova, R. *Z. Kristallogr.* **1995**, *210*, 319. $Ca(ReO_4)_2 \cdot OC(NH_2)_2 \cdot H_2O$
IJUQUB	1.722 Å	Khranenko, S. P.; Kuratieva, N. V.; Gromilov, S. A. *Russ. J. Struct. Chem.* **2015**, *56*, 367. $[Pt(H_2N(CH_2)_2NH_2)_2](ReO_4)_2$
KUBREG	1.722 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{17}H_{17}F_5N_2)ReO_4$
KUBRIK	1.722 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{17}H_7F_{10}N_2)ReO_4$
KUCBOB	1.722 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{12}H_{15}N_2)ReO_4$
KUCCAO	1.722 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{14}H_{19}N_2)ReO_4$
SAQHOJ	1.722 Å	Vasil'chenko, D. B.; Filatov, E. Y.; Baidina, I. A.; Plyusnin, P. E.; Korenev, S. V. *Koord. Khim.* **2010**, *36*, 347. $[RhCl_2(NC_5H_4(CH_3))_4]ReO_4 \cdot (CH_3)_2NCHO$
SAQHOJ01	1.722 Å	Marsch, R. E. *Acta Crystallogr., Sect. C* **2014**, *70*, 834. $[RhCl_2(NC_5H_4(CH_3))_4]ReO_4 \cdot (CH_3)_2NCHO$
SETSES	1.722 Å	Kumagai, S.; Takaishi, S.; Gao, M.; Iguchi, H.; Breedlove, B. K.; Yamashita, M. *Inorg. Chem.* **2018**, *57*, 3775. $[Pd(H_2N(CH_2)_2NH_2)_2][PdCl_2(H_2N(CH_2)_2NH_2)_2](ReO_4)_4$
TUTKIF	1.722 Å	Fu, D.-W.; Cai, H.-L.; Li, S.-H.; Ye, Q.; Zhou, L.; Zhang, W.; Zhang, Y.; Deng, F.; Xiong, R.-G. *Phys. Rev.Lett.* **2013**, *110*, 257601. $(p\text{-}H_3NC_6H_4OCH_3)ReO_4 \cdot C_{12}H_{24}O_6$

UMEXAL	1.722 Å	Gibson, D. H.; Mashuta, M. S.; Yin, X. *Acta Crystallogr., Sect. E* **2003**, *59*, m911. $[OH(Re(CO)_3(N_2C_{12}H_{12})_2]ReO_4\cdot(CH_3)_2CO$
ZUYKIP	1.722 Å	Riel, A. M. S.; Decato, D. A.; Berryman, O. B. *Cryst. Growth Des.* **2016**, *16*, 974. $(C_{22}H_{18}N_2)(ReO_4)_2\cdot 2CH_2Cl_2$
1921	1.723 Å	Lock, C. J. L.; Turner, G. *Acta Crystallogr., Sect. B* **1975**, *31*, 1764. $KReO_4$
101232	1.723 Å	Louis–Jean, J.; Balasekaran, S. M.; Hagenbach, A.; Poineau, F. *Acta Crystallogr., Sect. E* **2019**, *75*, 1158. $[Co(NH_3)_6]ReO_4(ReF_6)_4\cdot 6H_2O$
DAQVOH	1.723 Å	Mosch-Zanetti, N. C.; Sachse, A.; Pfoh, R.; Vidovic, D.; Magull, J. *Dalton Trans.* **2005**, 2124. $(C_{11}H_{21}N_2)ReO_4$
IGUWUD	1.723 Å	Peters, L.; Hubner, E.; Haas, T.; Heinemann, F. W.; Burzlaff, N. *J. Organometal. Chem.* **2009**, *694*, 2319. $(C_{13}H_{19}N_4O_2)ReO_4$
KATHIW	1.723 Å	Herrmann, W. A.; Kuchler, J. G.; Weichselbaumer, G.; Herdtweck, E.; Kiprof, P. *J. Organometal. Chem.* **1989**, *372*, 351. $[Na(O_5C_{14}H_{20})]ReO_4$
MAPRUT	1.723 Å	Khranenko, S. P.; Bykova, E. A.; Zadesenets, A. V.; Gromilov, S. A. *J. Struct. Chem.* **2017**, *58*, 90. $[Zn(H_2N(CH_2)_2NH_2)_3](ReO_4)_2$
PIDTOL	1.723 Å	Herrmann, W. A.; Roesky, P. W.; Kuhn, F. E.; Scherer, W.; Kleine, M. *Angew. Chem., Int. Ed.* **1993**, *32*, 1714. $[Re(O)_3(N_3C_9H_{21})]ReO_4$
QIVTIB	1.723 Å	Zhu, L.; Sheng, D.; Xu, C.; Dai, X.; Silver, M. A.; Li, J.; Li, P.; Wang, Y.; Wang, Y.; Chen, L.; Xiao, C.; Chen, J.; Zhou, R.; Zhang, C.; Farha, O. K.; Chai, Z.; Albrecht-Schmitt, T. E.; Wang, S. *J. Am. Chem. Soc.* **2017**, *139*, 14873. $[Ni_2C_{76}H_{56}N_{16}O_4]ReO_4$
5917	1.724 Å	Chay, C.; Avdeev, M.; Brand, H. E. A.; Injac, S.; Whittle, T. A.; Kennedy, B. J. *Dalton Trans.* **2019**, *48*, 17524. $KReO_4$
39875	1.724 Å	Khrustalev, V. N.; Varfolomeev, M. B.; Shamrai, N. B.; Lindeman, S. V.; Struchkov, Y. T. *Russ. J. Inorg. Chem.* **1995**, *40*, 208. $LiReO_4\cdot 1.5H_2O$
158875	1.724 Å	Korolkov, I. V.; Zadesenets, A. V.; Gromilov, S. A.; Yusenko, K. V.; Baldina, I. A.; Korenev, S. V. *Russ. J. Struct. Chem.* **2006**, *47*, 503. $[Pt(NH_3)_4](ReO_4)_2$
ANABUO	1.724 Å	Prakasam, T.; Bilbeisi, R. A.; Lusi, M.; Olsen, J.-C.; Platas-Iglesias, C.; Trabolsi, A. *Chem. Commun.* **2016**, *52*, 7398. $[Cd_3C_{105}H_{81}F_9N_{15}O_{12}](ReO_4)_3$
BEMHIL	1.724 Å	Bera, J. K.; Bacsa, J.; Smucker, B. W.; Dunbar, K. R. *Eur. J. Inorg. Chem.* **2004**, 368. $[AgRe_4C_{62}H_{52}N_2O_{12}P_4]_nReO_4\cdot 1.5C_2H_4Cl_2\cdot 2CH_3OH$
FABFOG	1.724 Å	Afanasieva, V. A.; Glinskaya, L. A.; Piryazev, D. A.; Gromilov, S. A. *Russ J. Struct Chem.* **2015**, *56*, 836. $[Au(N_4C_{14}H_{22})]ReO_4$

HUTSOF	1.724 Å	Feng, Y.; Aponte, J.; Houseworth, P. J.; Boyle, P. D.; Ison, E. A. *Inorg. Chem.* **2009**, *48*, 11058. $(C_{17}H_{14}F_{10}N_3)ReO_4$
KAZQEH	1.724 Å	Perez-Benitez, A.; Rovira, C.; Veciana, J.; Vidal-Gancedo, J.; Laukhin, V. N.; Zorina, L.V.; Khasanov, S. S.; Narymbetov, B. Z; Shibaeva, R. P. M. *Synth. Met.* **1999**, *102*, 1707. $(C_{10}H_8S_6)ReO_4$
KAZQEH01	1.724 Å	Khasanov, S. S.; Perez-Benitez, A.; Narymbetov, B. Z.; Zorina, L.V.; Shibaeva, R. P.; Singleton, J.; Klehe, A.-K.; Laukhin, V. N.; Vidal-Gancedo, J.; Veciana, J.; Canadell, E.; Rovira, C. *J. Mater Chem.* **2002**, *12*, 432. $(C_{10}H_8S_6)ReO_4$
KUCCES	1.724 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{11}H_8F_5N_2)ReO_4$
PEGVAB	1.724 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(C_5H_5ClN)ReO_4$
RAFKUF	1.724 Å	Andersen, P.; Glerup, J.; Gumm, A.; Hansen, S. K.; Magnussen, M. *Dalton Trans.* **2004**, 2929. $[Co_2C_{12}H_{36}N_9](ReO_4)_3{\cdot}H_2O$
SAYWOF	1.724 Å	Kochel, A. *Acta Crystallogr., Sect. E* **2006**, *62*, m37. $[C_{15}H_{12}N_3)ReO_4$
XAQDAW	1.724 Å	Sharutin, V. V.; Senchurin, V. S.; Sharutina, O. K.; Pakusina, A. P.; Fastovets, O. A. *Russ. J. Inorg. Chem.* **2011**, *56*, 599. $[Sb(p\text{-}C_6H_4CH_3)_4](ReO_4$
XIBDAO	1.724 Å	Ion, L.; Morales, D.; Nieto, S.; Perez, J.; Riera, L.; Riera, V.; Miguel, D.; Kowenicki, R. A.; McPartlin, M. *Inorg. Chem.* **2007**, *46*, 2846. $[MoC_{17}H_{22}N_5O_2]ReO_4$
35038	1.725 Å	Conrad, M.; Schleid, T. *J. Alloys Compds.* **2021**, *868*, 159097. $BaReO_4Br$
39800	1.725 Å	Khrustalev, V. N.; Varfolomeev, M. B.; Shamrai, N. B.; Pisarevskii, A. P.; Struchkov, Y. T. *Koord. Khim.* **1994**, *20*, 362. $Ba(ReO_4)_2{\cdot}4H_2O$
AROGEU	1.725 Å	Braband, H.; Imstepf, S.; Felber, M.; Spingler, B.; Alberto, R. *Inorg. Chem.* **2010**, *49*, 1283. $[ReO_3(C_6H_{15}N_3)]ReO_4$
HOKZAI	1.725 Å	Bryan, J. C.; Sachleben, R. A.; Hay, B. P. *Inorg. Chim. Acta* **1999**, *290*, 86. $[NaO_8C_{32}H_{32}]ReO_4$
IFIVEY	1.725 Å	Kawamoto, T.; Ashizawa, M.; Mori, T.; Yamaura, J.-I.; Kato, R.; Misaki, Y.; Tanaka, K. *Bull. Chem. Soc. Jpn.* **2002**, *75*, 435. $(C_{18}H_{16}S_{12})ReO_4$
KEWNOT	1.725 Å	Ghosh, R.; Ghosh, T. K.; Pramanik, S.; Islam, A. S. M.; Ghosh, P. *ACS Appl. Mater. Interfaces* **2023**, *15*, 25184. $(C_{30}H_{42}N_8)(ReO_4)_4$
LANHOB	1.725 Å	Nadeem, Q.; Battistin, F.; Blacque, O.; Alberto, R. *Chem.-Eur. J.* **2022**, *28*, e202103566. $[Re(C_{14}H_{23}N_2O)_2](ReO_4)_3{\cdot}3CH_3CN$
LEGBOS	1.725 Å	Shirahata, T.; Kohno, S.; Furuta, K.; Katayama, S.; Suzuki, K.; Kawamoto, T.; Mori, T.; Misaki, Y. *Inorg. Chem.* **2022**, *61*, 7754. $(C_{14}H_{12}S_8)ReO_4{\cdot}C_{14}H_{12}S_8$

KUCBIV	1.725 Å	Reich, R. M.; Cokoja, M.; Markovits, I. I. E.; Munchmeyer, C. J.; Kaposi, M.; Pothig, A.; Herrmann, W. A.; Kuhn, F. E. *Dalton Trans.* **2015**, *44*, 8669. $(C_{11}H_{13}N_2)ReO_4$
UHOBUP	1.725 Å	Brooks, A. C.; Day, P.; Dias, S. I. G.; Rabaca, S.; Santos, I. C.; Henriques, R. T.; Wallis, J. D.; Almeida, M. *Eur. J. Inorg. Chem.* **2009**, 3084. $(C_{20}H_{13}N_2O_8)(ReO_4)_2{\cdot}0.5CH_2Cl_2$
35037	1.726 Å	Conrad, M.; Schleid, T. *J. Alloys Compds.* **2021**, *868*, 159097. $BaReO_4Cl$
79649	1.726 Å	Harrison, W. T. A.; McManus, A. V. P.; Kaminsky, M. P.; Cheetham, A. K. *Chem. Mater.* **1993**, *5*, 1631. $SbOReO_4{\cdot}2H_2O$
141006	1.726 Å	Reynolds, E. M.; Yu, M.; Thorogood, G. J.; Brand, H. E. A.; Poineau, F.; Kennedy, B. J. *J. Solid State Chem.* **2019**, *274*, 64. NH_4ReO_4
187075	1.726 Å	Khranenko, S. P.; Bykova, E. A.; Alexeyev, A. V.; Tyutyunnik, A. P.; Gromilov, S. A. *J. Struct. Chem.* **2012**, *53*, 521. $[Rh(NH_3)_6](ReO_4)_3{\cdot}2H_2O$
AHIQEO	1.726 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[CeKReC_{38}H_{38}N_{21}O_{21}]_n(ReO_4)_2{\cdot}C_{48}H_{48}N_{32}O_{16}{\cdot}2H_2O$
DAGWIV	1.726 Å	Belaj, F.; Schachner, J. A.; Mosch-Zanetti, N. C. CCDC depostion number 2113432, **2021**. $[Re_2C_{48}H_{32}Cl_2N_8O](ReO_4)_2{\cdot}2CH_3CN{\cdot}1.33H_2O$
GEQJEV	1.726 Å	Novikov, A. P.; German, K. E.; Safonov, A. V.; Grigoriev, M. S. *Chem. Sel.* **2022**, *7*, e202202814. $(C_5H_7N_5O)_2(ReO_4)_2$
BOCZOM	1.726 Å	Kazakova, A. A.; Kubasov, A. S.; Chizhov, A. O.; Novikov, A. P.; Volkov, M. A.; Borisov, A. V.; Nenajdenko, V. G.; Dukhnovsky, E. A.; Bely, A. E.; Grishina, M. M.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Inorg. Chim. Acta* **2024**, *563*. 121929. $(C_{11}H_8N_3Se)ReO_4$
JILGAM	1.726 Å	McGhee, E. M.Godfrey, M. R.; Hoffman, B. M.; Ibers, J. A. *Inorg. Chem.* **1991**, *30*, 803. $[Cu(N_4C_{24}H_{20})](ReO_4)_2$
YEJYOF	1.726 Å	Artemjev, A. A.; Novikov, A. P.; Burkin, G. M.: Sapronov, A. A.; Kubasov, A. S.; Nenajdenko, V. G.; Khrustalev, V. N.; Borisov, A. V.; Kirichuk, A. A.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Int. J. Mol. Sci.* **2022**, *23*, 6372. $(C_7H_6ClN_2Se)ReO_4$
PEGTON	1.726 Å	Morris, D. S.; van Rees, K.; Curcio, M.; Cokoja, M.; Kuhn, F. E.; Duarte, F.; Love, J. B. *Cat. Sci. Tech.* **2017**, *7*, 5644. $(C_5H_5BrN)ReO_4$
RAHGUE	1.726 Å	Makotchenko, E. V.; Baidina, I. A. *Russ. J. Struct. Chem.* **2011**, *52*, 572. $[Au(H_2N(CH_2)_2NH_2)_2]Cl(ReO_4)_2$
XEMSEP	1.726 Å	Baidina, I. A.; Filatov, E. Y.; Makotchenko, E. V.; Smolentsev, A. I. *Russ. J. Struct. Chem.* **2012**, *53*, 117. $[Co(H_2N(CH_2)_2NH_2)_3](ReO_4)_3$
ZUYKAH	1.726 Å	Riel, A. M. S.; Decato, D. A.; Berryman, O. B. *Cryst. Growth Des.* **2016**, *16*, 974. $(C_{21}H_{16}N_2)ReO_4$
5918	1.727 Å	Chay, C.; Avdeev, M.; Brand, H. E. A.; Injac, S.; Whittle, T. A.; Kennedy, B. J. *Dalton Trans.* **2019**, *48*, 17524. $TlReO_4$

240895	1.727 Å	Grigoriev, M. S.; German, K. E.; Maruk, A. Y. *Acta Crystallogr., Sect. E* **2007**, *63*, m2061. $(C(NH_2)_3)ReO_4$
AHIREP	1.727 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Ce_3Re_2C_{72}H_{96}N_{48}O_{44}]_n(ReO_4)_7 \cdot 8H_2O$
GEQJAR	1.727 Å	Novikov, A. P.; German, K. E.; Safonov, A. V.; Grigoriev, M. S. *Chem. Sel.* **2022**, *7*, e202202814. $(C_5H_6N_5O)ReO_4$
DUBXII	1.727 Å	Holynska, M.; Lis, T. *Acta Crystallogr., Sect. E* **2009**, *65*, m998. $(C(CH_2OH)_3)(NH_3))ReO_4$
ONELUR	1.727 Å	Li, C.-P.; Zhou, H.; Wang, J.-J.; Liu, B.-L.; Wang, S.; Yang, X.; Wang, Z.-L.; Liu, C.-S.; Du, M.; Zhou, W. *ACS Appl. Mater. Interfaces* **2019**, *11*, 42375. $[AgC_{17}H_{12}N_6]_nReO_4$
RAGWIH	1.727 Å	Baidina, I. A.; Vorob'eva, S. N.; Smolentsev, A. I.; Belyaev, A. V. *Russ. J. Struct. Chem.* **2011**, *52*, 137. $[RhCl_2(H_2N(CH_2)_2NH_2)_2]ReO_4$
WIHNAD	1.727 Å	Grigoriev, M. S.; German, K. E.; Maruk, A. Y. *Acta Crystallogr., Sect. E* **2007**, *63*, m2061. $(C(NH_2)_3)ReO_4$
WONPEU	1.727 Å	Thuery, P.; Nierlich, M.; Asfari, Z.; Vicens, J.; Dozol, J.-F. *Polyhedron* **2000**, *19*, 1749. $Cs_2(ReO_4)_2 \cdot C_{48}H_{60}O_{12}] \cdot 1.5H_2O$
GEWNEF	1.728 Å	Badea, D.; Karpov, A.; Jansen, M.; Bruns, J. *Z. Anorg. Allg. Chem.* **2022**, *648*, e202200267. $[Ag_2C_4H_{16}N_4]_n(ReO_4)_2$
78831	1.728 Å	Atzesdorfer, A.; Range, K. J. *Z. Naturforsch., Sect B* **1995**, *50*, 1417. $NaReO_4$
139285	1.728 Å	Charkin, D. O.; Chachin, P. A.; Nazarchuk, E. V.; Siidra, O. I. *Z. Kristallogr. – New. Struct.* **2023**, *238*, 1. $NaSr(ReO_4)_3$
237299	1.728 Å	Ivanova, M. V.; Kochner, T.; Mercier, He. P. A.; Schrobilgen, G. J. *Inorg. Chem.* **2013**, *52*, 6806. $(CH_3)_4N)ReO_4$
DIPREC	1.728 Å	Ueda, M.; Shirahata, T.; Misaki, Y. *Chem. Sel.* **2017**, *2*, 3490. $(C_{40}H_{20}S_{10})(ReO_4)_4 \cdot CH_3CN$
DUGNIC01	1.728 Å	Ivanova, M. V.; Kochner, T.; Mercier, H. P. A.; Schrobilgen, G. J. *Inorg. Chem.* **2013**, *52*, 6806. $((CH_3)_4N)ReO_4$
GEMKIU	1.728 Å	Khranenko, S. P.; Bykova, E. A.; Alekseev, A. V.; Gromilov, S. A. *Russ. J. Struct. Chem.* **2012**, *53*, 520. $[Pd(N_2C_8H_{16})_2](ReO_4)_2$
HODHER	1.728 Å	Novikov, A. P.; Safonov, A. V.; German, K. E.; Grigoriev, M. S. *CrystEngComm* **2024**, *26*, 31. $(C_6H_{10}N_3O_2)ReO_4$
ZUFYOR	1.728 Å	Oliveira, S.; Goncalves, A. C.; Oliveira, G.; Gunther, D.; Rohwer, A.; Gama, V.; Lopes, E. B.; Santos, I. C.; Rabaca, S.; Almeida, M.; Dressel, M. *Crystals* **2019**, *9*, 608. $(C_{13}H_7NS_6)ReO_4 \cdot C_{13}H_7NS_6$
56322	1.729 Å	Saura-Múzquiz, Matilde; Mullens, Bryce G.; Avdeev, Max; Jharapla, Prathap K.; Vaitheeswaran, G.; Gupta, M.K.; Mittal, R.; Kennedy, Brendan J. *J. Solid State Chem.* **2022**, *315*, 123531. NH_4ReO_4
66755	1.729 Å	Macicek, J.; Angelova, O.; Petrova, R. *Z. Kristallogr.* **1995**, *210*, 24. $Ba(ReO_4)_2 \cdot 3OC(NH_2)_2$

169583	1.729 Å	Khranenko, S. P.; Shusharina, E. A.; Gromilov, S. A.; Smolentsev, A. I. *J. Struct. Chem.* **2009**, *50*, 1201. $[Cu(NH_3)_4](ReO_4)_2$
AHIQUE	1.729 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Ce2ReC_{36}H_{46}N_{27}O_{30}]_n(ReO_4)_2{\cdot}2H_2O$
BEZTIN	1.729 Å	Daolio, A.; Pizzi, A.; Calabrese, M.; Demitri, N.; Murray, J. S.; Politzer, P.; Resnati, G. Cryst. Growth Des. 2023, 23, 574. $(C_5H_{11}O_2S)ReO_4$
BOCZEC	1.729 Å	Kazakova, A. A.; Kubasov, A. S.; Chizhov, A. O.; Novikov, A. P.; Volkov, M. A.; Borisov, A. V.; Nenajdenko, V. G.; Dukhnovsky, E. A.; Bely, A. E.; Grishina, M. M.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Inorg. Chim. Acta* **2024**, *563*. 121929. $(C_{11}H_9N_3Se)(ReO_4)_2$
MAJPAP	1.729 Å	Holynska, M.; Lis, T. *Acta Crystallogr., Sect. C* **2004**, *60*, m648. $(PC_2H_5(C_6H_5)_3)ReO_4$
NOXLOD	1.729 Å	Massena, C. J.; Riel, A. M. S.; Neuhaus, G. F.; Decato, D. A.; Berryman, O. B. *Chem. Commun.* **2015**, *51*, 1417. $(C_{22}H_{18}N_2)(ReO_4)_2$
SELSOR	1.729 Å	Newcomb, T. P.; Godfrey, M. R.; Hoffman, B. M.; Ibers, J. A. *Inorg. Chem.* **1990**, *29*, 223. $[Ni(N_4CF_{24}H_{20})](ReO_4)_2{\cdot}[Ni(N_4CF_{24}H_{20})]$
429650	1.730 Å	Gromilov, S. A.; Khranenko, S. P.; Piryazev, D. A.; Kuratieva, N. V. *J. Struct. Chem.* **2016**, *57*, 725.
BOCZIG	1.730 Å	Kazakova, A. A.; Kubasov, A. S.; Chizhov, A. O.; Novikov, A. P.; Volkov, M. A.; Borisov, A. V.; Nenajdenko, V. G.; Dukhnovsky, E. A.; Bely, A. E.; Grishina, M. M.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Inorg. Chim. Acta* **2024**, *563*. 121929. $(C_{11}H_9N_3Se)(ReO_4)_2$
YEJZEW	1.730 Å	Artemjev, A. A.; Novikov, A. P.; Burkin, G. M.: Sapronov, A. A.; Kubasov, A. S.; Nenajdenko, V. G.; Khrustalev, V. N.; Borisov, A. V.; Kirichuk, A. A.; Kritchenkov, A. S.; Gomila, R. M.; Frontera, A.; Tskhovrebov, A. G. *Int. J. Mol. Sci.* **2022**, *23*, 6372. $(C_7H_6FN_2Se)ReO_4$
73083	1.730 Å	Rögner, P.; Range, K. J. *Z. Anorg. Allg. Chem.* **1993**, *619*, 1017. $TlReO_4$
MAPHUH	1.730 Å	Kochel, A. *Acta Crystallogr., Sect. E* **2005**, *61*, m1368. $(C_{12}H_{13}N_2)_2(I_3)ReO_4$
QAXJEE	1.730 Å	Andersen, P.; Galsbøl, F.; Jensen, A. F.; Matsui, H.; Monsted, L.; Simonsen, K. *Acta Chem. Scand.* **1999**, *53*, 1093. $[Rh(N_3C_8H_{21})_2](ReO_4)_3{\cdot}1.2\ H_2O$
QAGPOG	1.730 Å	Castilla, A. M.; Ronson, T. K.; Nitschke, J. R. *J. Am. Chem. Soc.* **2016**, *138*, 2342. $[Zn_4C_{120}H_{108}N_{28}]ReO_4(N(SO_2CF_3)_2)_7$
TOBBOC	1.730 Å	Bushuev, M. B.; Lavrenova, L. G.; Shvedenkov, Y. G.; Virovets, A. V.; Sheludyakova, L. A.; Larionov, S. V. *Russ. J. Inorg. Chem.* **2007**, *52*, 51. $[Fe_3C_{30}H_{66}N_{18}O_6](ReO_4)_6{\cdot}H_2O$
YIJYIX	1.730 Å	Grigoriev, M. S.; German, K. E.; Maruk, A. Y. *Acta Crystallogr., Sect. E* **2007**, *63*, m2355. $(C_4H_{10}NO)ReO_4$
5915	1.731 Å	Chay, C.; Avdeev, M.; Brand, H. E. A.; Injac, S.; Whittle, T. A.; Kennedy, B. J. *Dalton Trans.* **2019**, *48*, 17524. $NaReO_4$

GEMKAM	1.731 Å	Khranenko, S. P.; Bykova, E. A.; Alekseev, A. V.; Gromilov, S. A. *Russ. J. Struct. Chem.* **2012**, *53*, 520. $[Pd(NH_2(CH_2)_2NH_2)_2](ReO_4)_2$
VISXEE	1.731 Å	Volkov, M. A.; Novikov, A. P.; Borisova, N. E.; Grigoriev, M. S.; German, K. E. *Inorg. Chem.* **2023**, *62*, 13485. $(C_3H_5N_2)ReO_4$
RARDIY	1.731 Å	Hamilton, B. H.; Wagler, T. A.; Espe, M. P.; Ziegler, C. J. *Inorg. Chem.* **2005**, *44*, 4891. $[PbC_{12}H_{12}BN_8]_nReO_4$
UJECOC	1.731 Å	Ashizawa, M.; Ishidzu, K.; Watanabe, M.; Tanahashi, T.Shirahata, T.Kawamoto, T.; Mori, T.; Misaki, Y. *Chem. Lett.* **2010**, *39*, 1093.$(C_{10}H_{10}S_4Se_4)ReO_4$
72503	1.732 Å	Brown, J. C.; Powell, B. M.; Stuart, S. N. *Acta Crystallogr., Sect. C* **1993**, *49*, 214. $KReO_4$
NAPWEK	1.732 Å	Daolio, A.; Pizzi, A.; Terraneo, G.; Frontera, A.; Resnati, G. *ChemPhysChem* **2021**, *22*, 2281. $(CH_3NCH_2COOH)ReO_4{\cdot}H_2O$
YEJYAR	1.732 Å	Artemjev, A. A.; Novikov, A. P.; Burkin, G. M.: Sapronov, A. A.; Kubasov, A. S.; Nenajdenko, V. G.; Khrustalev, V. N.; Borisov, A. V.; Kirichuk, A. A.; Kritchenkov, A. S.; Gomila, R. M. Frontera, A.; Tskhovrebov, A. G. *Int. J. Mol. Sci.* **2022**, *23*, 6372. $(C_7H_4Cl_3N_2Se)ReO_4$
YEBZEM	1.732 Å	Furuta, K.; Kohno, S.; Shirahata, T.; Yamasaki, K.; Hino, S.; Misaki, Y. *Crystals* **2012**, *2*, 393. $(C_{12}H_{10}S_6Se_2)ReO_4{\cdot}0.5H_2O$
72957	1.733 Å	Powell, B. M.; Brown, R. J. C.; Harnden, A. M. C.; Reid, J. K. *Acta Crystallogr., Sect. B* **1993**, *49*, 463. ND_4ReO_4
ZIJGEE	1.733 Å	Hao, L.; Vittal, J. J.;Puddephatt, R. J.; Manojlovic-Muir, L.; Muir, K. W. *Chem. Commun.* **1995**, 2381. $[Pt_4C_{76}H_{133}O_4P_4]ReO_4$
20777	1.734 Å	Matveeva, R. G.; Ilyukhin, V. V.; Varfolomeev, M. B.; Belov, N. V. *Dokl. Akda. Nauk SSSR* **1980**, *252*, 99. $Ca(ReO_4)_2{\cdot}2H_2O$
77921	1.734 Å	Swainson, I. P.; Brown, R. J. C. *Acta Crystallogr., Sect. B* **1997**, *53*, 78. ND_4ReO_4
AHIRIT	1.734 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Sm_4Re_4C_{72}H_{100}N_{52}O_{66}]_n(ReO_4)_4{\cdot}6H_2O$
EZUGUD	1.734 Å	Ueda, M.; Tahara, A.; Shirahata, T.; Misaki, Y. *Bull Chem. Soc. Jpn.* **2016**, *89*, 1500. $(C_{33}H_{16}OS_8](ReO_4)_2{\cdot}1.5CH_3CN{\cdot}0.35H_2O$
IJINIZ	1.734 Å	Berthet, J. C.; Thuery, P.; Ephritikhine, M. CCDC deposition number 729252, **2009**. $(H_3O)ReO_4{\cdot}C_{42}H_{42}N_{28}O_{14}{\cdot}6H_2O$
NOVKIV	1.734 Å	Louis-Jean, J.; Jang, H.; Lawler, K. V.; Forster, P. M.; Ash, J.; Poineau, F. *Inorg. Chim. Acta* **2019**, *498*, 119121. $(C_6H_6N_3)ReO_4$
PAXQIO	1.734 Å	Sharma, C. V. K.; Griffin, S. T.; Rogers, R. D. *Chem Commun.* **1998**, 215; Sharma, C. V. K.; Rogers, R. D. *Cryst. Eng.* **1998**, *1*, 19. $[Ag_4C_{16}H_{16}N_8O_8](ReO_4)_2$
PUQJAN	1.734 Å	Thuery, P.; Masci, B. *Cryst. Growth Des.* **2010**, *10*, 716. $[UO_2(NO_3)(H_2O)(OC_{42}H_{46}N_{28}O_{14})]_nReO_4{\cdot}5H_2O$

73559	1.736 Å	Varfolomeev, M. B.; Samarj, N. B.; Fuchs, J.; Lunk, H. J. *J. Alloys Compds.* **1993**, *201*, 261. $Sr(ReO_4)_2 \cdot 1.5\ H_2O$
112619	1.737 Å	Charkin, D. O.; Siidra, O. I.; Plokhikh, I. V.; Borisov, A. S.; Markovski, M. R. *Solid State Sci.* **2021**, *114*, 106576. $Ba_2ReO_4Br_2$
KETCOB	1.738 Å	Burkert, P. K.; Grommelt, M.; Pietrass, T.; Lachmann, J.; Muller, G. *Z. Naturforsch., Sect. B* **1990**, *45*, 725. $(Sb(CH_3)_4)ReO_4$
VUPREG	1.743 Å	Wang, X.; Hu, X.; Song, L.; Yang, X.; Xiao, Q.; Xu, H.; Ding, S. *J. Mol. Struct.* **2020**, *1216*, 128330. $(C_{32}H_{66}N_8O_4)(ReO_4)_2$
424948	1.744 Å	Khranenko; S. P.; Bykova; E. A.; Yusenko; K. V.; Tyutyunnik; A. P.; Gromilov, S. A. *J. Struct. Chem.* **2013**, *54*, 931. $[Ir(NH_3)_6](ReO_4)_3 \cdot 2H_2O$
AHIROZ	1.745 Å	Thuery, P. *Inorg. Chem.* **2009**, *48*, 4497. $[Gd2Re4C_{36}H_{48}N_{24}O_{34}]_n(ReO_4)_2 \cdot H_2O$
DXENRD	1.745 Å	Glowiak, T.; Kubiak, M.; Jezowska-Trzebiatowska, B. *Bull. Acad. Pol. Sci., Ser. Sci. Chim.* **1977**, *25*, 271. $[Re(O)_2(H_2N(CH_2)_2NH_2)_2]ReO_4$
RENHUQ	1.750 Å	Sheng, D.; Zhu, L.; Xu, C.; Xiao, C.; Wang, Y.; Wang, Y.; Chen, L.; Diwu, J.; Chen, J.; Chai, Z.; Albrecht-Schmitt, T. E.; Wang, S. *Environ. Sci. Tech.* **2017**, *51*, 3471. $[Ag_4C_{74}H_{56}N_{16}]_n(ReO_4)_4$
1512	1.751 Å	Sivestre, J. P. F.; Durif, A. *J. Solid State Chem.* **1978**, *24*, 97. $K_3(MoO_4)(ReO_4)$
23279	1.752 Å	Brown, R. J. C.; Segel, S. L. *Acta Crystallogr., Sect. B* **1980**, *36*, 2195. ND_4ReO_4
138806	1.753 Å	Griesemer, S. D.; Ward, L.; Wolverton, C. *Phys. Rev. Miner.* **2021**, *5*, 105003. $Ba(ReO_4)_2$
XUDMIS04	1.758 Å	Ng, S. K.; Xie, Z.-X. *Chin. J. Struct. Chem.* **2003**, *22*, 691. $[C_5H_6N)ReO_4$
RUJVUO	1.762 Å	Vasil'chenko, D. B.; Baidina, I. A.; Filatov, E. Y.; Korenev, S. V. *Russ J. Struct. Chem.* **2009**, *50*, 349. $[RhCl_2(NC_5H_5)_4]ReO_4$
SADTEA	1.763 Å	Lee, J.; Lim, S.; Kim, D; Jung, O.-K.; Lee, Y.-A. *Dalton Trans.* **2020**, *49*, 15002. $[Pd_2C_{64}H_{96}N_8Si_8](ReO_4)_4 \cdot CH_3OH$
QOWMUK	1.766 Å	Yamashita, Y.; Tomura, M.; Imaeda, K. *Tetrahedron Lett.* **2001**, *42*, 4191. $[C_{24}H_{18}O_2S_8)ReO_4 \cdot 8H_2O$
25832	1.769 Å	Morrow, J. C. *Acta Crystallogr.* **1960**, *13*, 443. $KReO_4$
NIXXAX	1.775 Å	Xu, Y.; Calabrese, M.; Demitri, N.; Pizzi, A.; Nag, T.; Hung, I.; Gan, Z.; Resnati, G.; Bryce, D. L. *Chem. Commun.* **2023**, *59*, 12609. $(C_7H_{16}NO_2)ReO_4$

Mean 1.710 Å/442 structures