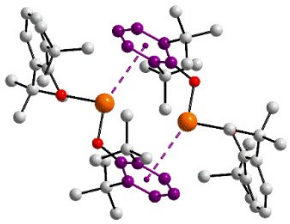
ESI Table S(1). Images for all tin(lp)···π(arene) structures.

1 **HEBXOB01** 3.47 Å 4.5º

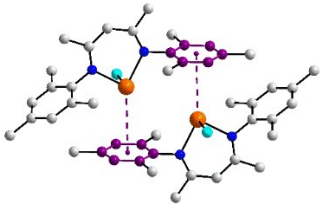
Bis(2,6-di-t-butylphenolato)-tin(II)



Notes: **0-D**. Mononuclear molecule. The Sn(II) interacts to form centrosymmetric dimer. T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans*., 2012, **41**, 9349.

2 **QIVNUE01** 3.62 Å 11.5º

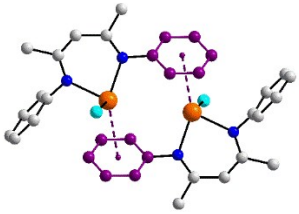
Chloro-(N,N'-dimesitylpenta-2,4-diiminato)-tin(II)



Notes: **0-D**. Mononuclear molecule. The Sn(II) interacts to form centrosymmetric dimer. S. L. Choong, W. D. Woodul, C. Schenk, A. Stasch, A. F. Richards and C. Jones, *Organometallics*, 2011, **30**, 5543.

3 **QOXQID** 3.76 Å 11.2º

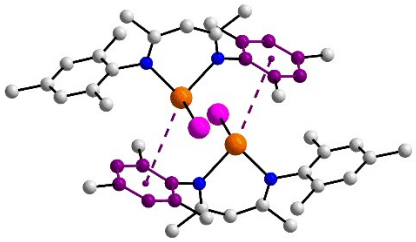
Chloro-(N,N'-diphenyl-2,4-pentanediiminato)-tin(II)



Notes: **0-D**. Mononuclear molecule. The Sn(II) interacts to form centrosymmetric dimer. A. Akkari, J. J. Byrne, I. Saur, G. Rima, H. Gornitzka and J. Barrau, *J. Organomet. Chem*., 2001, **622**, 190.

4 **ZUNYAK** 3.80 Å 17.5º

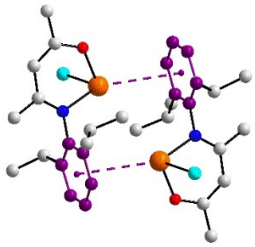
Iodo-(N,N'-dimesitylpentane-2,4-di-iminato-N,N')-tin(II)



Notes: **0-D**. Mononuclear molecule. Two independent molecules. In one, the Sn(II) interacts to form centrosymmetric dimer. M. Ibarra-Rodriguez, V. M. Jimenez-Perez, B. M. Munoz-Flores, N. Waksman, R. Ramirez, M. Sanchez and I. F. Hernandez-Ahuactzi, *Arab. J. Chem.*, 2015, doi:10.1016/j.arabjc.2015.08.030

5 **OGAPES** 3.85 Å 8.0º

Chloro-[2-(2,6-di-isopropylphenylamino)-pent-2-en-4-onato-N,O]-tin(II)

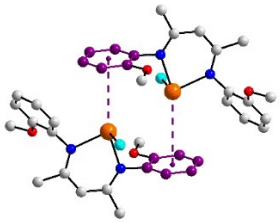


Notes: **0-D**. Mononuclear molecule. The Sn(II) interacts to form centrosymmetric dimer.

H.-M. Kao, S.-M. Ho, I-C. Chen, P.-C. Kuo, C.-Y. Lin, C.-Y. Tu, C.-H. Hu, J.-H. Huang and G.-H. Lee, *Inorg. Chim. Acta*, 2008, **361**, 2792.

6 **ZOBGEE** 3.86 Å 12.5º

Chloro-(N,N'-bis(2-methoxyphenyl)-pentane-2,4-di-iminato)-tin(II)

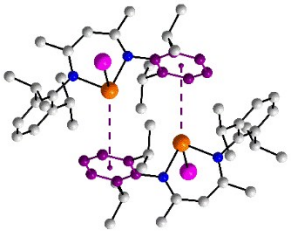


Notes: Notes: **0-D**. Mononuclear molecule. The Sn(II) interacts to form centrosymmetric dimer.

R. Olejnik, Z. Padelkova, R. Mundil, J. Merna and A. Ruzicka, *Appl. Organomet. Chem*., 2014, **28**, 405.

7 **YOMVAY** 4.02 Å 19.6º

Iodo-(N,N'-bis(2,6-di-isopropylphenyl)-penta-2,4-diiminato)-tin(II)

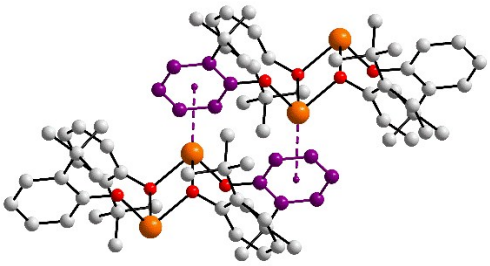


Notes: **0-D**. Mononuclear molecule. The Sn(II) interacts to form centrosymmetric dimer.

A. Jana, H. W. Roesky, C. Schulzke, A. Doring, T. Beck, A. Pal and R. Herbst-Irmer, *Inorg. Chem.* 2009, **48**, 193.

8 **VAYTEW** 3.25 Å 7.6º

Bis(μ_2-2-t-Butylphenolato)-bis(2-t-butylphenolato)-di-tin(II)

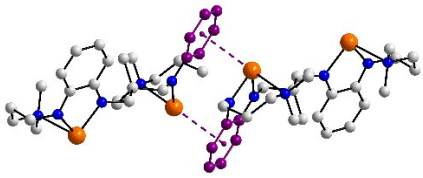


Notes: **0-D**. Two, centrosymmetric, binuclear molecules self-associate about a centre of inversion.

T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans*. 2012, **41**, 9349.

9 **TOMWIC** 3.34 Å 7.1º

(μ_2-N^2,N$^{2'}$-(2,2-dimethylpropane-1,3-diyl)bis(N-[3-(dimethylamino)propyl]benzene-1,2-diamine))-di-tin(II)

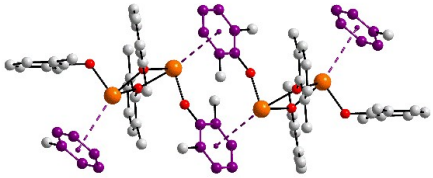


Notes: **0-D**. Binuclear molecule. One Sn(II) interacts to form centrosymmetric dimer.

F. E. Hahn, A. V. Zabula, T. Pape, A. Hepp, R. Tonner, R. Haunschild and G. Frenking, *Chem.-Eur. J.*, 2008, **14**, 10716.

10 **VAYTIA** 3.36 Å 10.8º; solvent: 3.59 Å 7.6º

bis(μ_2-2,6-Dimethylphenolato)-bis(2,6-dimethylphenolato)-di-tin(II) toluene solvate

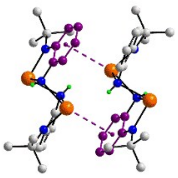


Notes: **0-D**. Two binuclear molecules self-associate about a centre of inversion. While solvates are generally excluded, it is noted in this sample additional Sn(II)…π(arene) contacts with solvent toluene molecules occur.

T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans.* 2012, **41**, 9349.

11 **BUHTIJ** 3.37 Å 7.2º

[N-t-Butyl-N'-(1-t-butyl-2,3-dihydro-1H-1,3,2-benzodiazastannol-2-yl)benzene-1,2-diaminato](hydrido)tin tetrahydrofuran solvate

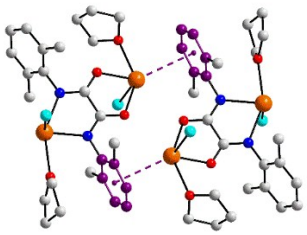


Notes: **0-D**. Binuclear molecule. One Sn(II) interacts to form centrosymmetric dimer.

S. Krupski, C. S. to Brinke, H. Koppetz, A. Hepp and F. E. Hahn, *Organometallics*, 2015, **34**, 2624.

12 **BEMMOX** 3.40 Å 4.0º

[μ_2-N,N'-Bis(2,6-dimethylphenyl)oxamidato]-dichloro-bis(tetrahydrofuran)-di-tin(II)

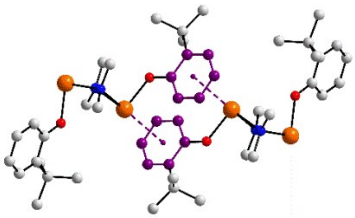


Notes: **0-D**. Binuclear molecule. One Sn(II) interacts to form centrosymmetric dimer.

M. Ibarra-Rodriguez, H. V. R. Dias, V. M. Jimenez-Perez, B. M. Munoz-Flores, A. Flores-Parra and S. Sanchez, *Z. Anorg. Allg. Chem.* 2012, **638**, 1486.

13 **VAYRUK** 3.44 Å 8.9º

Bis(μ_2-dimethylamido)-bis(2-t-butylphenolato)-di-tin(II)

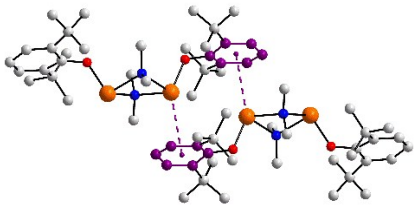


Notes: **0-D**. Two independent molecules, one centred about an inversion point. The molecule in the general position associates with a centrosymmetric molecule to form a dimer.

T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans*. 2012, **41**, 9349.

14 **VAYSIZ** 3.68 Å 5.7º

Bis(μ_2-dimethylamido)-bis(2,6-di-t-butylphenolato)-di-tin(II)

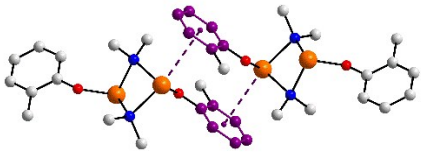


Notes: **0-D**. Binuclear molecule. One Sn(II) interacts to form centrosymmetric dimer.

T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans*. 2012, **41**, 9349.

15 **VAYRIY** 3.69 Å 8.2º

Bis(μ_2-dimethylamido)-bis(2-methylphenolato)-di-tin(II)

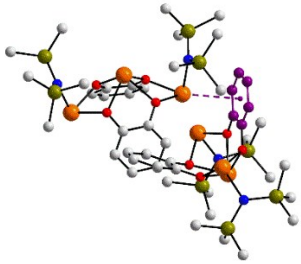


Notes: **0-D**. Binuclear molecule. One Sn(II) interacts to form centrosymmetric dimer.

T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans*. 2012, **41**, 9349.

16 **LUCZIT** 3.58 Å 11.3º

Bis(μ_3-Benzene-1,2-diolato)-bis[bis(trimethylsilyl)amido]-tri-tin(II)

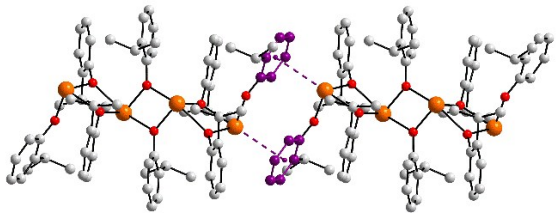


Notes: **0-D**. Two independent trinuclear molecules. One Sn(II) from one molecule interacts with an arene ring of another to give a dimer sustained by a single interaction.

A.V. Zabula, T. Pape, F. Hupka, A. Hepp and F. E. Hahn, *Organometallics*, **28**, 4221.

17 **VAYTAS** 3.26 Å 11.9º

Hexakis(μ_2-2-isopropylphenolato)-bis(2-isopropylphenolato)-tetra-tin(II)

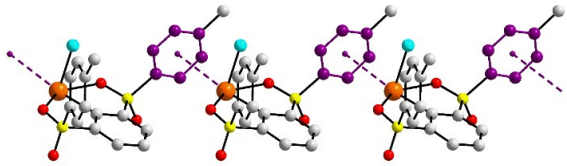


Notes: **0-D**. Two, centrosymmetric, tetranuclear molecules self-associate about a centre of inversion.

T. J. Boyle, T. Q. Doan, L. A. M. Steele, C. Apblett, S. M. Hoppe, K. Hawthorne, R. M. Kalinich and W. M. Sigmund, *Dalton Trans*. 2012, **41**, 9349.

18 **KOXCUX** 3.71 Å 11.6º

[2,6-Bis((4-methylphenyl)sulfonyl)phenyl]-chloro-tin(II) dichloromethane solvate

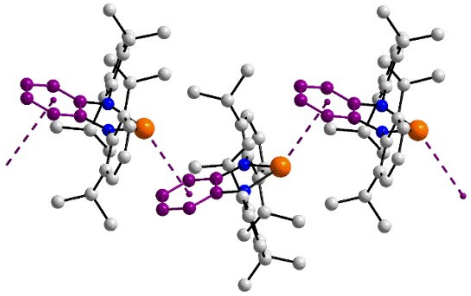


Notes: **1-D**. Mononuclear molecule. The Sn(II) interacts to form a linear chain.

M. El Ezzi, R. Lenk, D. Madec, J.-M. Sotiropoulos, S. Mallet-Ladeira and A. Castel, *Angew. Chem*., *Int. Ed*. 2015, **54**, 805.

19 **LIJMOI** 3.63 Å 13.3º

1,3-bis(2,6-Di-isopropylphenyl)-1,3-dihydro-1,3,2λ^2-benzodiazastannole

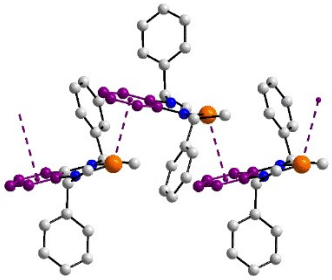


Notes: **1-D**. Mononuclear molecule. Mirror symmetry. The Sn(II) interacts to form a zigzag chain.

S. Krupski, R. Pöttgen, I. Schellenberg and F. E. Hahn, *Dalton Trans*. 2014, **43**, 173.

20 **ULOLOX** 3.44 Å 8.9º

(1,2-Bis(1-phenylethylamido)benzene)-tin(II)

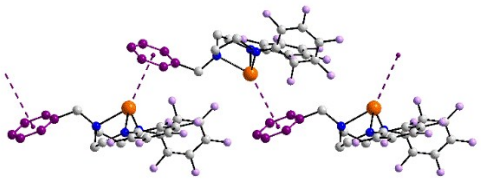


1-D. Mononuclear molecule. The Sn(II) interacts to form a helical chain.

J. V. Dickschat, S. Urban, T. Pape, F. Glorius and F. E. Hahn, *Dalton Trans*., 2010. **39**, 11519.

21 **NIDTOL** 3.76 Å 2.8º

(N-Benzyl-N'-(pentafluorophenyl)-N-[2-((pentafluorophenyl)amino)ethyl]ethane-1,2-diaminato)-tin(II)

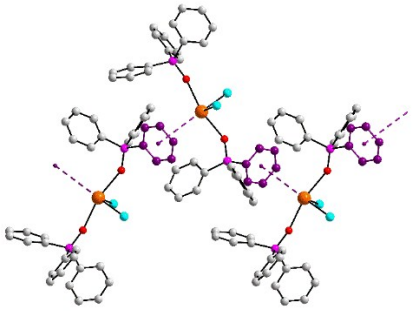


Notes: **1-D**. Mononuclear molecule. The Sn(II) interacts to form a helical chain.

M. Huang, M. M. Kireenko, E. Kh Lermontova, A. V. Churakov, Y. F. Oprunenko, K. V. Zaitsev, D. Sorokin, K. Harms, J. Sundermeyer, G. S. Zaitseva and S. S. Karlov, *Z. Anorg. Allg. Chem*., 2013, **639**, 502.

22 **NUMWEX** 4.00 Å 16.6º

Dichloro-bis(triphenylphosphineoxide)-tin(II)

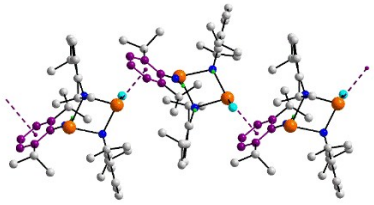


Notes: **1-D**. Mononuclear molecule. The Sn(II) interacts to form a helical chain.

R. Selvaraju, K. Panchanatheswaran and V. Parthasarathi, *Acta Crystallogr., Sect. C: Cryst. Struct. Commun*., 1998, **54**, 905.

23 **BOKBOT** 3.38 Å 8.2º

Bis(μ_2-diisopropylanilido)-chloro-(isopropylanilido)-di-tin(II)



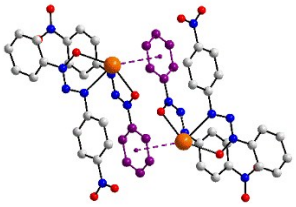
Notes: **1-D**. Binuclear molecule. One Sn(II) interacts to form a helical chain.

W. A. Merrill, J. Steiner, A. Betzer, I. Nowik, R. Herber and P. P. Power, *Dalton Trans.* 2008, 5905.

ESI Table S(2). Images for all lead(lp)···π(arene) structures.

24 **GISDET** 3.47 Å 4.3º

bis(3-(oxido)-1-(4-nitrophenyl)-3-phenyltriaz-1-ene)-lead(II)

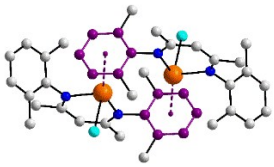


Notes: **0-D**. Centrosymmetric dimer between two mononuclear molecules.

B. A. Iglesias, D. F. Back, M. Horner, E. R. Crespan and F. Broch, *J. Organomet. Chem.*, 2014, **752**, 12.

25 **DABCUH** 3.49 Å 11.6º

Chloro-(N,N'-bis(2,6-dimethylphenyl)-2,4-pentanediiminato)-lead(II) toluene solvate

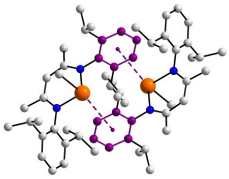


Notes: **0-D**. Centrosymmetric dimer between two mononuclear molecules. Dimer formation in the presence of a potential acceptor in lattice toluene.

E. C. Y. Tam, M. P. Coles, J. D. Smith and J. R. Fulton, *Polyhedron*, 2015, **85**, 284.

26 **HUGVUB** 3.89 Å 18.9º

(N,N'-bis(2,6-Diisopropylphenyl)pentane-2,4-diiminato-N,N')-methyl-lead(II)

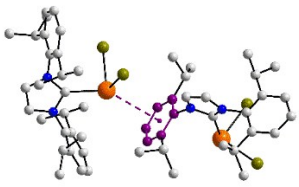


Notes: **0-D**. Centrosymmetric dimer between two mononuclear molecules.

A. Jana, S. P. Sarish, H. W. Roesky, C. Schulzke, A. Doring and M. John, *Organometallics*, 2009, **28**, 2563.

27 **DAYVOQ** 3.75 Å 3.6º

(1,3-bis(2,6-diisopropylphenyl)imidazol-2-ylidene)-dibromo-lead(II)

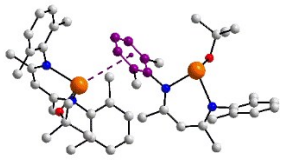


Notes: **0-D**. Dimer sustained by a single interaction between two independent mononuclear molecules.

C. Jones, A. Sidiropoulos, N. Holzmann, G. Frenking and A. Stasch, *Chem. Commun.*, 2012, **48**, 9855.

28 **DUZRIB** 3.75 Å 12.1º

(N^2,N^4-bis(2,6-dimethylphenyl)pentane-2,4-diiminato)-(t-butoxy)-lead(II)

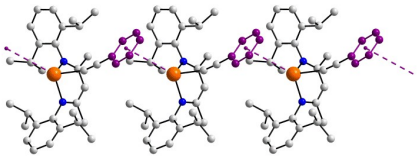


Notes: **0-D**. Dimer sustained by a single interaction between two independent mononuclear molecules.

E. C. Y. Tam, M. P. Coles, J. D. Smith and J. R. Fulton, *Polyhedron*, 2015, **85**, 284.

29 **HUGWEM** 3.91 Å 17.3º

(N,N'-bis(2,6-Diisopropylphenyl)pentane-2,4-diiminato-N,N')-phenylethynyl-lead(II)

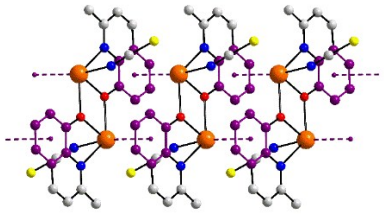


Notes: **1-D**. Mononuclear molecule that assembles into a linear chain.

A. Jana, S. P. Sarish, H. W. Roesky, C. Schulzke, A. Doring and M. John, *Organometallics*, 2009, **28**, 2563.

30 **KUQFAE01** 3.17 Å 8.3º

bis(μ_2-2-Methylquinolin-8-olato)-bis(isothiocyanato)-di-lead(II)

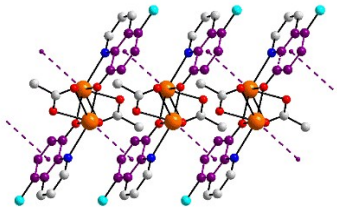


Notes: **1-D**. Centrosymmetric, binuclear molecule. Both lead(II) atoms form an interaction leading to a linear supramolecular chain.

G. Mohammadnezhad, M. M. Amini and V. Langer, *Acta Crystallogr., Sect. C: Cryst. Struct. Commun*., 2010, **66**, m44.

31 **GOLMOK** 3.47 Å 12.8º

Bis(μ_2-5-Chloroquinolin-8-olato-κ^3N,O:O;κ^3O:N,O)-bis[(acetato-κ^2O,O')-lead(II)]

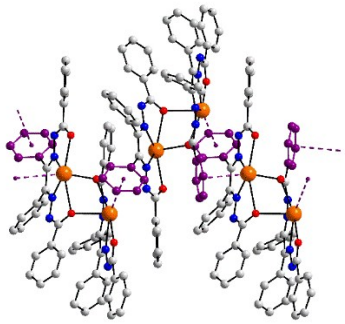


Notes: **1-D**. Centrosymmetric, binuclear molecule. Both lead(II) atoms form an interaction leading to a linear supramolecular chain.

G. Mohammadnezhad Sh., M. M. Amini and S. W. Ng, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2009, **65**, m261.

32 **TUMFAJ** 3.34 Å 8.3º; 3.40 Å 12.0º

bis(μ_2-Benzil bis(benzoylhydrazonato))-di-lead(II)



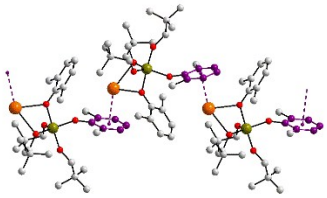
Notes: **1-D**. Non-symmetric, binuclear molecule. Both lead(II) atoms form an interaction leading to a helical supramolecular chain.

E. Lopez-Torres and M. A. Mendiola, *Dalton Trans*., 2009, 7639.

ESI Table S(3). Images for all thallium(lp)···π(arene) structures.

33 **MIBZIG** 3.06 Å 6.8º

(μ_2-2,6-Dimethylphenolato)-(μ_2-neopentoxo)-bis(neopentoxy)-(2,6-dimethylphenolato)-titanium-thallium

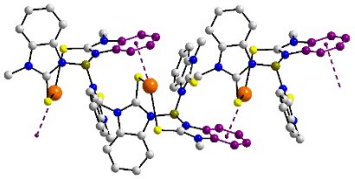


Notes: **1-D**. Mononuclear molecules are linked into a helical chain.

T. J. Boyle, C. A. Zechmann, T. M. Alam, M. A. Rodriguez, C. A. Hijar and B. L. Scott, *Inorg. Chem*., 2002, **41**, 946.

34 **DIPSAY** 3.35 Å 11.5º

(1,1',1"-Boranetriyltris(3-methyl-1,3-dihydro-2H-benzimidazole-2-thione))-thallium(I)

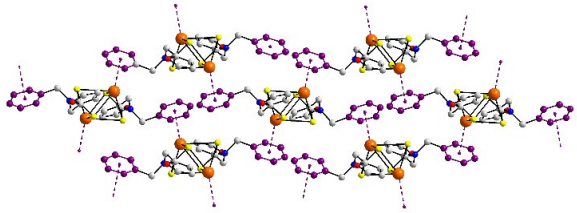


Notes: **1-D**. Mononuclear molecules are linked into a helical chain.

Y. Rong, J. H. Palmer and G. Parkin, *Dalton Trans*., 2014, **43**, 1397.

35 **QUQZIN** 3.24 Å 2.6º

Benzyl(2-furylmethyl)carbamodithioate thallium(I)



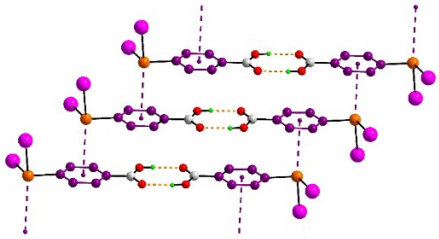
Notes: **2-D**. Centrosymmetric, binuclear molecules are linked into a layer with a flat topology.

G. Gomathi, S. Thirumaran and S. Ciattini, *Polyhedron*, 2015, **102**, 424.

ESI Table S(4). Images for all arsenic(lp)···π(arene) structures.

36 FEFHOP 3.47 Å 9.2º

Diiodo-(4-carboxyphenyl)-arsenic(III)

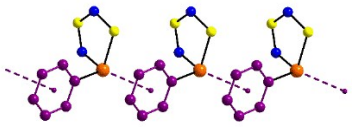


Notes: **1-D**. Mononuclear molecule. The As(III) interacts to form a linear chain. Chains are connected by eight-membered carboxylic acid synthons $\{\ldots HOC{=}O\}_2$.

I. Yu. Ilyin, N. A. Pushkarevsky, N. V. Kuratieva, D. Yu. Naumov and S. N. Konchenko, *Acta Crystallogr., Sect. C: Cryst. Struct. Commun*. 2012, **68**, m323.

37 RUTXUA 3.48 Å 6.9º

5-Phenyl-1,3$\lambda^4\delta^2$,2,4,5-dithiadiazarsole

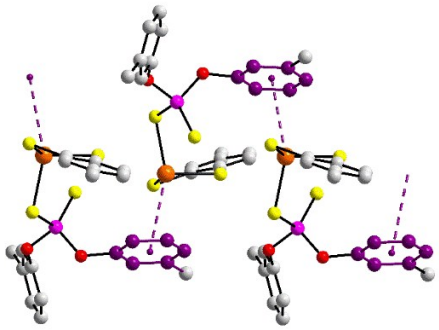


Notes: **1-D**. Mononuclear molecules are connected to form a linear chain.

V. Matuska, A. M. Z. Slawin and J. D. Woollins, *Inorg. Chem*., 2010, **49**, 3064.

38 DIYCOF 3.36 Å 13.4º

[(5-Methyl-1,3,2-benzodithiarsol-2-yl)sulfanyl](bis(3-methylphenoxy))phosphine sulfide

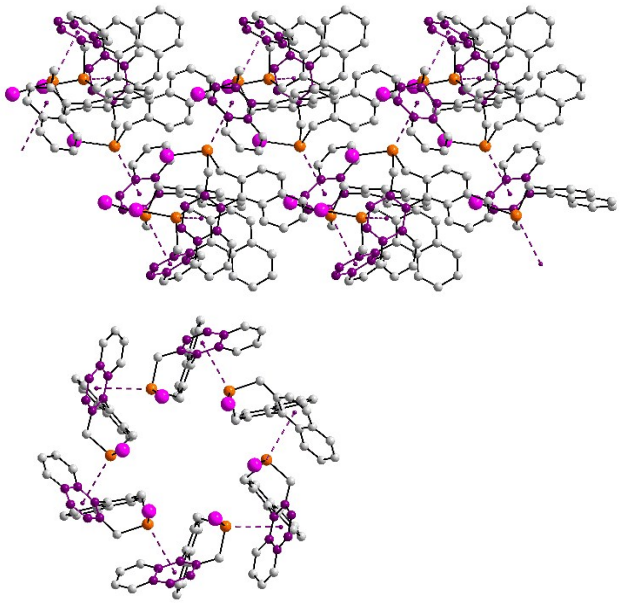


Notes: **1-D**. Mononuclear molecule. The As(III) interacts to form a helical chain.

S. Maheshwari, K. Bundela and K. G. Ojha, *J. Coord. Chem.* 2014, **67**, 1088.

39 **GETLUO** 3.70 Å 12.5º

4-Iodo-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]arsepine



Notes: **1-D**. The molecules self-associates to form a tubular arrangement with crystallographic 6_5 symmetry.

N. L. Kilah and S. B. Wild, *Organometallics*, 2012, **31**, 2658.

40 **GETMAV** 3.76 Å 12.7º

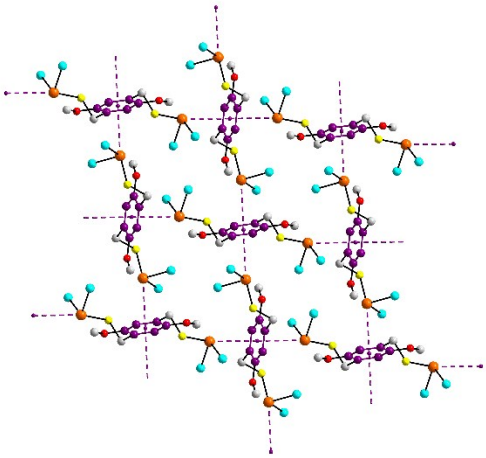
4-Chloro-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]arsepine

Notes: **1-D**. The isostructural chloride analogue of GETLUO.

N. L. Kilah and S. B. Wild, *Organometallics*, 2012, **31**, 2658.

41 **LUFTOW** 3.60 Å 9.9º

(2,5-Dimethoxy-1,4-phenylene)-bis(methylene)-diarsenodichloridothioite



Notes: **2-D**. The binuclear molecule is centrosymmetric with the central phenyl ring participating in two interactions leading to a 2-D array with a flat topology.

V. M. Cangelosi, T. G. Carter, L. N. Zakharov and D. W. Johnson, *Chem. Commun.*, 2009, 5606.

ESI Table S(5). Images for all antimony(lp)···π(arene) structures.

42 **WEWDOT** 3.67 Å 10.6º

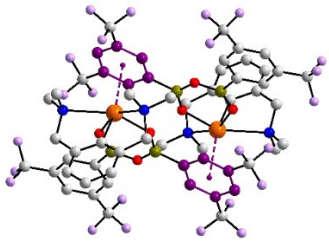
14-Chloro-7,14-dihydro-5H-benzo(c)naphtho(1,2-f)(1,5)oxastibocine

Notes: **0-D**. Mononuclear molecule. The Sb(III) interacts to form a centrosymmetric dimer.

N. Tan, Y. Chen, S.-F. Yin, R. Qiu, Y. Zhou and C. T. Au, *Dalton Trans*., 2013, **42**, 9476.

43 **YUGSOK** 3.78 Å 17.3º

2,6-Bis(2,6-bis(Trifluoromethyl)phenyl)-4-(2,6-bis(dimethylaminomethyl)phenyl)-4-stibaboroxin

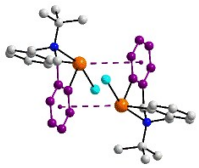


Notes: **0-D**. Mononuclear molecule. The Sb(III) interacts to form a centrosymmetric dimer.

L. Dostál, R. Jambor, A. Růžička, R. Jirásko, A. Lyčka, J. Beckmann and S. Ketkov, *Inorg. Chem*., 2015, **54**, 6010.

44 **TOMQAP** 3.85 Å 15.1º

Chloro-(2,2'-((t-butylimino)dimethanediyl)diphenyl)-antimony(III)

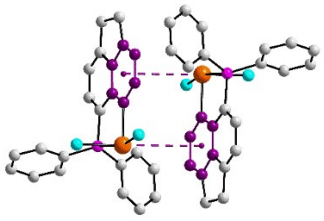


Notes: **0-D**. Mononuclear molecule. The Sb(III) interacts to form a centrosymmetric dimer.

Y. Chen, K. Yu, N.-Y. Tan, R.-H. Qiu, W. Liu, N.-L. Luo, L. Tong, C.-T. Au, Z.-Q. Luo and S.-F. Yin, *Eur. J. Med. Chem*., 2014, **79**, 391.

45 **MOZPAU** 3.95 Å 14.3º

2,2-Dichloro-1,1-diphenyl-1,2,5,6-tetrahydro-1λ^5,2λ^5-acenaphtho[5,6-cd][1,2]phosphastibole

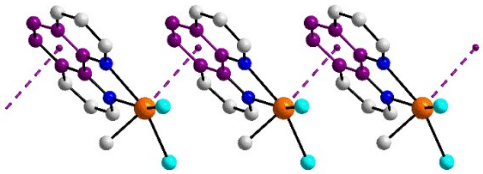


Notes: **0-D**. Mononuclear molecule. The Sb(III) interacts to form a centrosymmetric dimer.

E. Hupf, E. Lork, S. Mebs, L. Chęcińska and J. Beckmann, *Organometallics*, 2014, **33**, 7247.

46 **SEKGEW** 3.37 Å 0.2º

Dichloro-methyl-(1,10-phenanthroline-N,N')-antimony(III)

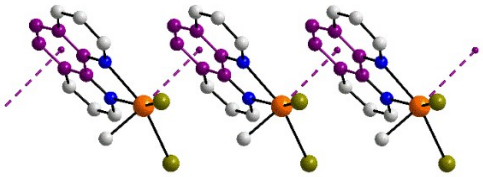


Notes: **1-D**. Mononuclear molecule with mirror symmetry. The Sb(III) interacts to form a linear chain. $P2_1/m$ *cf.* *Cm* for SEKGIA.

S. L. Benjamin, W. Levason, G. Reid and R. P. Warr, *Organometallics*, 2012, **31**, 1025.

47 **SEKGIA** 3.38 Å 2.4º

Dibromo-methyl-(1,10-phenanthroline-N,N')-antimony(III)

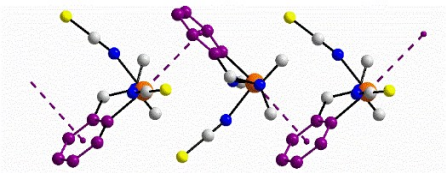


Notes: **1-D**. Mononuclear molecule with mirror symmetry. The Sb(III) interacts to form a linear chain. *Cm cf.* $P2_1/m$ for SEKGEW.

S. L. Benjamin, W. Levason, G. Reid and R. P. Warr, *Organometallics*, 2012, **31**, 1025.

48 **HIJRID** 3.61 Å 5.4º

(N,N-Dimethyl-1-phenylmethanamine)-bis(isothiocyanate)-antimony(III)

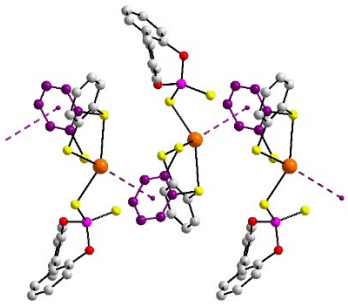


Notes: **1-D**. Mononuclear molecule. The Sb(III) interacts to form a helical chain.

A. Toma, C. I. Rat, A. Silvestru, T. Ruffer, H. Lang and M. Mehring, *J. Organomet. Chem.*, 2013, **745**, 71.

49 **HORPIP** 3.94 Å 17.5º

(6-Sulfanyldibenzo[d,f][1,3,2]dioxaphosphepine 6-sulfido)-(2,2'-sulfanediyldibenzene-thiolato)-antimony(III)



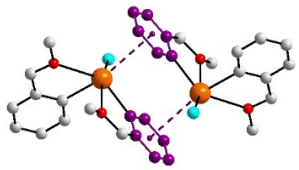
Notes: **1-D**. Mononuclear molecule. The Sb(III) interacts to form a helical chain.

J. G. Alvarado-Rodriguez, S. Gonzalez-Montiel and N. Andrade-Lopez, *Main Group Met. Chem.*, 2013, **36**, 21.

ESI Table S(6). Images for all bismuth(lp)···π(arene) structures.

50 **BIQVAA** 3.51 Å 4.5º

Bis(benzyl methyl ether)-chloro-bismuth(III)

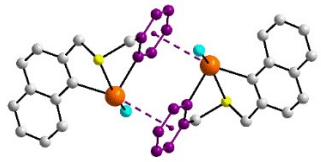


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

N. Tan, Y. Chen, Y. Zhou, C.-T. Au, S.-F. Yin, *ChemPlusChem*, 2013, **78**, 1363.

51 **VICKAV** 3.52 Å 3.7º

(2-([(Benzen-2-idylmethyl)sulfanyl]methyl)naphthalen-1-ide)-chloro-bismuth(III)

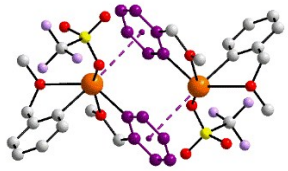


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

N. Tan, Y. Chen, S.-F. Yin, R. Qiu, Y. Zhou and C. T. Au, *Dalton Trans*., 2013, **42**, 9476.

52 **BIQGEP** 3.55 Å 5.9º

Bis(benzyl methyl ether)-trifluoromethanesulfonate-bismuth(III)

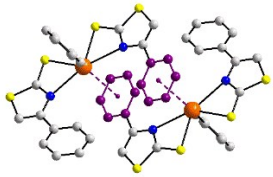


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

N. Tan, Y. Chen, Y. Zhou, C.-T. Au, S.-F. Yin, *ChemPlusChem*, 2013, **78**, 1363.

53 **WOXFUM** 3.59 Å 14.1º

Bis(4-Phenyl-1,3-thiazole-2-thiolato)-phenyl-bismuth(III)

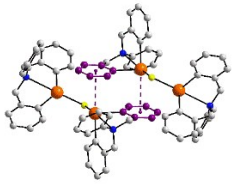


Notes: **0-D**. Centrosymmetric mononuclear molecules associate *via* Bi(lp)…π(arene) form a dimer between two bismuth centres.

A. Luqman, V. L. Blair, R. Brammananth, P. K. Crellin, R. L. Coppel, L. Kedzierski and P. C. Andrews, *Eur. J. Inorg. Chem*., 2015, 725.

54 **WAZWOL** 3.67 Å 4.9º

(μ_2-Sulfido)-bis(2,2'-[(phenylimino)dimethanediyl]diphenyl)-di-bismuth(III)

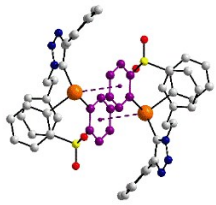


Notes: **0-D**. Binuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer between two bismuth centres.

R. Qiu, Z. Meng, S. Yin, X. Song, N. Tan, Y. Zhou, K. Yu, X. Xu, S. Luo, C.-T. Au and W.-Y. Wong, *ChemPlusChem*, 2012, **77**, 404.

55 **LONJUV** 3.71 Å 11.0º

5-(5,5-Dioxido-10H-dibenzo[b,e][1,4]thiabismin-10-yl)-4-(4-methylphenyl)-1-(2-phenylethyl)-1H-1,2,3-triazole

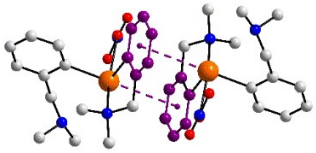


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

B. T. Worrell, S. P. Ellery and V. V. Fokin, *Angew. Chem., Int. Ed*., 2013, **52**, 13037.

56 **MATQEF** 3.74 Å 13.7º

(2-((Dimethylamino)methyl)phenyl-C,N)-(2-((dimethylamino)methyl)phenyl)-(nitrato-O)-bismuth(III)

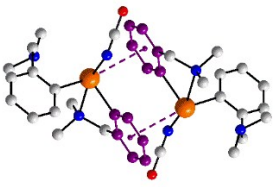


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

M. G. Nema, H. J. Breunig, A. Soran and C. Silvestru, *J. Organomet. Chem*., 2012, **705**, 23.

57 **HIJROJ** 3.76 Å 13.1º

(N,N-Dimethyl-1-phenylmethanamine-C)-(N,N-dimethyl-1-phenylmethanamine-C,N)-isocyanate-bismuth(III)

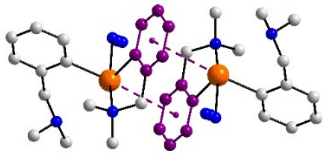


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

A. Toma, C. I. Rat, A. Silvestru, T. Ruffer, H. Lang, and M. Mehring, *J. Organomet. Chem*., 2013, **745**, 71.

58 **IZUHIV** 3.76 Å 13.4º

(2-(Dimethylaminomethyl)phenyl-N,C)-(2-(dimethylaminomethyl)phenyl)-azido-bismuth(III)

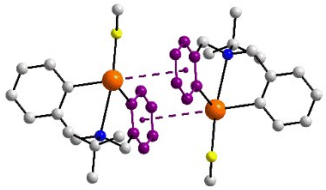


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

A.Schulz and A. Villinger, *Organometallics*, 2011, **30**, 284.

59 **WAZWUR** 3.78 Å 3.9º

(2,2'-[(t-Butylimino)dimethanediyl]diphenyl)-methanethiolato-bismuth(III)

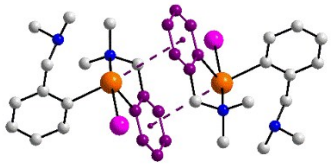


Notes: **0-D**. Centrosymmetric mononuclear molecules associate *via* Bi(lp)…π(arene) form a dimer between two bismuth centres.

R. Qiu, Z. Meng, S. Yin, X. Song, N. Tan, Y. Zhou, K. Yu, X. Xu, S. Luo, C.-T. Au and W.-Y. Wong, *ChemPlusChem*, 2012, **77**, 404.

60 **NOCGES01** 3.92 Å 18.2º

(2-(Dimethylaminomethyl)phenyl-N,C)-(2-(dimethylaminomethyl)phenyl)-iodo-bismuth(III)

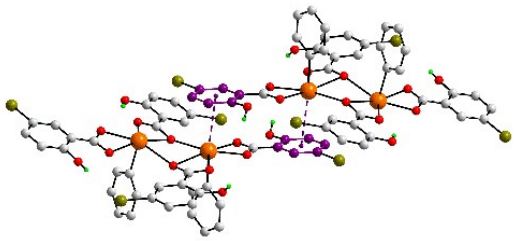


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Bi(lp)…π(arene) form a dimer.

A.Schulz and A. Villinger, *Organometallics*, 2011, **30**, 284.

61 **DUGLIC** 3.72 Å 13.2º

cis-Bis(μ-5-bromosalicylato)-bis(5-bromosalicylato)-diphenyl-dibismuth(III)

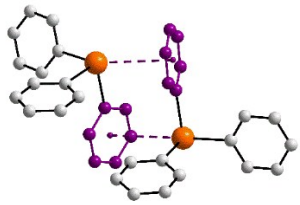


Notes: **0-D**. One Bi(III) atom in the binuclear molecule forms a Bi(lp)…π(arene) interaction with a centrosymmetrically related molecule to form a dimer. While it is likely that two acidic H atoms have been misplaced, this does not mask hydrogen bonding between neighbouring units.

I.Kumar, P. Bhattacharya and K. H. Whitmire, *J. Organomet. Chem*., 2015, **794**, 153.

62 **BITRPH11** 3.79 Å 12.7º; 3.94 Å 13.0º

Triphenylbismuthine

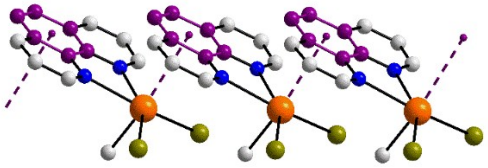


Notes: **0-D**. Two crystallographically independent mononuclear molecules associate *via* two Bi(lp)…π(arene) interactions to form a dimer.

H.-G. Stammler and B. Neumann, Private Communication to the CSD (BITRPH11).

63 **HAQMAP** 3.37 Å 2.0º

Dibromo-methyl-(1,10-phenanthroline-N,N')-bismuth(III)

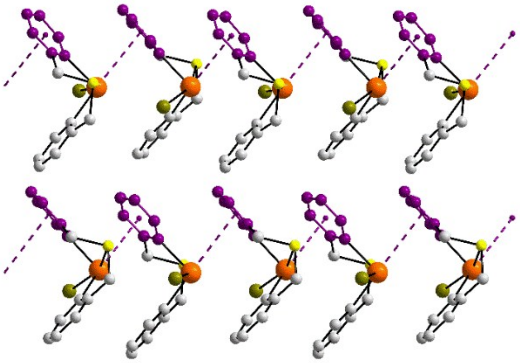


Notes: **1-D**. The Bi(III) atom in the mononuclear molecule lies on a mirror plane and connects to translationally related molecules to form a linear chain.

S. L. Benjamin, W. Levason, G. Reid, M. C. Rogers and R. P. Warr, *J. Organomet. Chem*., 2012, **708**, 106.

64 **XAJHUO** 3.55 Å 13.0º; 3.59 Å 13.8º; 3.56 Å 12.4º; 3.61 Å 14.2º (lower image)

(2,2'-[Sulfanediylbis(methylene)]di(phenyl))-bromo-bismuth(III)

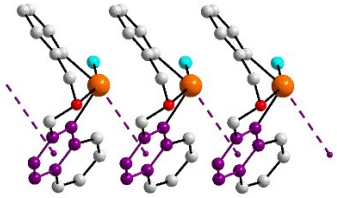


Notes: **1-D**. There are four independent mononuclear molecules in the asymmetric unit and each forms a Bi(lp)…π(arene) interaction. Pairs self-associate to form a chain with a linear topology.

A. Toma, C. I. Rat, A. Silvestru, T. Ruffer, H. Lang and M. Mehring, *J. Organomet. Chem*., 2016, **806**, 5.

65 **LEYZIA** 3.93 Å 15.2º

Chloro-(2-((naphthalen-1-id-2-ylmethoxy)methyl)phenyl)-bismuth(III)

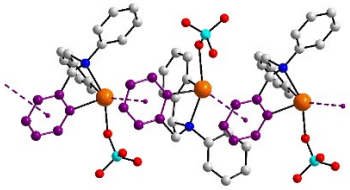


Notes: **1-D**. The Bi(III) atom in the mononuclear molecule connects to translationally related molecules to form a linear chain.

N. Tan, Y. Chen, S.-F. Yin, R. Qiu, Y. Zhou and C. T. Au, *Dalton Trans*., 2013, **42**, 9476.

66 **ETUXIB** 3.85 Å 12.3º

6-Phenyl-6,7-dihydrodibenzo[c,f][1,5]azabismocin-12(5H)-yl perchlorate

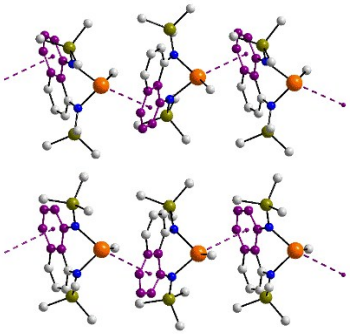


Notes: **0-D**. The Bi(III) atom in the mononuclear molecule forms a Bi(lp)…π(arene) interaction with a molecule related by glide symmetry to generate a zigzag chain.

X.-W. Zhang and T. Fan, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2011, **67**, m875.

67 **KIKRED** 3.42 Å 9.8º; 3.71 Å 13.0º (lower view)

2-Methyl-1,3-bis(trimethylsilyl)-2,3-dihydro-1H-naphtho[1,8-de][1,3,2]diazabismine

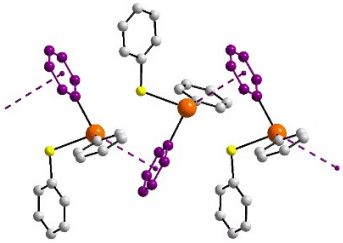


Notes: **1-D**. Two independent, mononuclear molecules, and each self-associates to form a chain with a helical topology.

B. Nekoueishahraki, P. P. Samuel, H. W. Roesky, D. Stern, J. Matussek, D. Stalke, *Cryst. Growth Des.*, 2012, **31**, 6697.

68 **PAFQIY** 3.73 Å 2.8º

Diphenyl(phenylsulfanyl)bismuthine

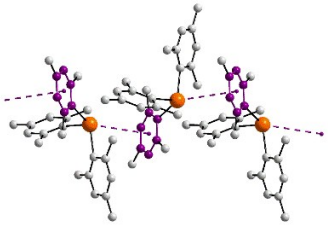


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

G. G. Briand, A. Decken, N. M. Hunter, G. M. Lee, J. A. Melanson and E. M. Owen, *Polyhedron*, 2012, **31**, 796.

69 **MSTLBI02** 3.93 Å 15.1º

Trimesityl-bismuth(III)

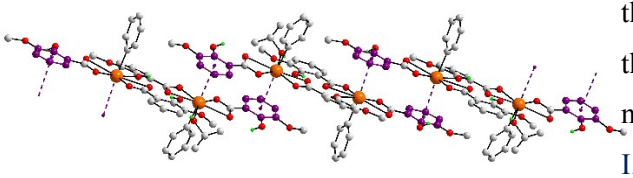


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

M. L. N. Rao and R. J. Dhanorkar, RSC Advances, 2016, **6**, 1012.

70 **DUGKOH** 3.28 Å 1.8º; 3.40 Å 2.1º

(μ-2-hydroxy-3-methoxybenzoato)-tris(2-hydroxy-3-methoxybenzoato)-diphenyl-(propan-2-ol)-di-bismuth(III)

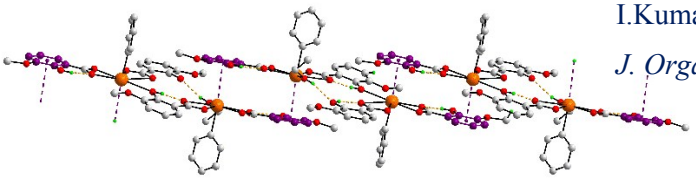


Notes: **1-D**. Each Bi(III) atom in the binuclear molecule forms Bi(lp)…π(arene) interactions leading to a stepped chain. While it is likely that two acidic H atoms have been misplaced, this does not mask hydrogen bonding between neighbouring units.

I.Kumar, P. Bhattacharya and K. H. Whitmire, *J. Organomet. Chem*., 2015, **79**4, 153.

71 **DUGKIB** 3.27 Å 4.9º; 3.36 Å 3.7º

(μ-2-Hydroxy-3-methoxybenzoato)-tris(2-hydroxy-3-methoxybenzoato)-diphenyl-ethanol-di-bismuth(III)



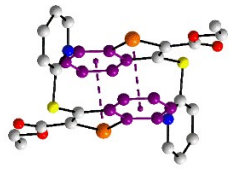
Notes: **1-D**. Each Bi(III) atom in the binuclear molecule forms Bi(lp)…π(arene) interactions leading to a stepped chain.

I.Kumar, P. Bhattacharya and K. H. Whitmire, *J. Organomet. Chem*., 2015, **79**4, 153.

ESI Table S(7). Images for all selenium(II)···π(arene) structures.

72 **NARWUA** 3.47 Å 5.0º

Ethyl 3-(pyridin-2-ylsulfanyl)-1-benzoselenophene-2-carboxylate

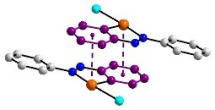


Notes: **0-D**. Mononuclear, centrosymmetrically related molecules associate *via* Se(lp)…π(arene) to form a dimer.

P. Arsenyan, E. Paegle, S. Belyakov, I. Shestakova, E. Jaschenko, I. Domracheva and J. Popelis, *Eur. J. Med. Chem*., 2011, **46**, 3434.

73 **ERUWIY** 3.49 Å 8.6º

Chloro-(2-(phenylazo)phenyl)-selenium

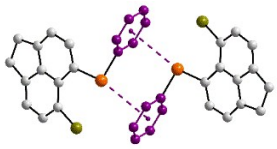


Notes: **0-D**. Two independent mononuclear molecules. For one of these, centrosymmetric molecules associate *via* Se(lp)…π(arene) to form a dimer.

K. Srivastava, T. Chakraborty, H. B. Singh and R. J. Butcher, *Dalton Trans*., 2011, **40**, 4489.

74 **WARJIK** 3.49 Å 12.2º

6-Bromo-1,2-dihydroacenaphthylen-5-yl phenyl selenide

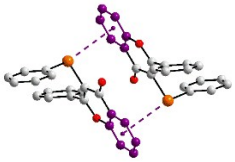


Notes: **0-D**. Mononuclear molecule. Self-associates about a centre of inversion to form a dimeric aggregate.

L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

75 **OXAWOA** 3.51 Å 10.3º

2-Phenyl-3-(phenylselanyl)-4H-chromen-4-one

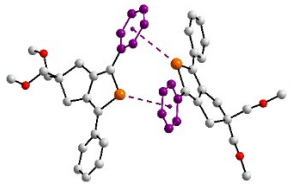


Notes: **0-D**. Mononuclear. Centrosymmetric molecules associate *via* Se(lp)…π(arene) to form a dimer.

B. Godoi, A. Sperança, C. A. Bruning, D. F. Back, P. H. Menezes, C. W. Nogueira and G. Zeni, *Adv. Synth. Catal*., 2011, **353**, 2042.

76 **QOMTIX** 3.57 Å 14.2º

5,5-bis(Methoxymethyl)-1,3-diphenyl-5,6-dihydro-4H-cyclopenta[c]selenophene

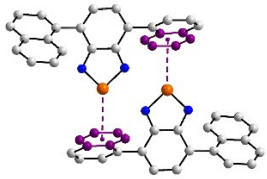


Notes: **0-D**. Mononuclear. Molecules related about a two-fold axis associate *via* Se(lp)…π(arene) to form a dimer.

A. Bedi, S. Debnath, H. S. Chandak and S. S. Zade, *RSC Advances*, 2014, **4**, 35653.

77 **WUSJUR** 3.57 Å 16.4º

4,7-Bis(1-naphthyl)-1,3-dihydro-2,1,3-benzoselenadiazole

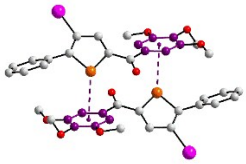


Notes: **0-D**. Mononuclear molecule. Self-associates about a centre of inversion to form a dimeric aggregate.

S. Mondal, M. Konda, B. Kauffmann, M. K. Manna and A. K. Das, *Cryst. Growth Des*., 2015, **15**, 5548.

78 **SAGTOM** 3.58 Å 11.2º

(4-Iodo-5-phenylselenophen-2-yl)(3,4,5-trimethoxyphenyl)methanone

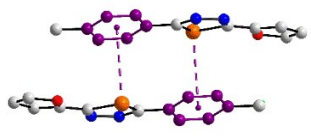


Notes: **0-D**. Mononuclear molecule. Self-associates about a centre of inversion to form a dimeric aggregate.

J. A. Roehrs, R. P. Pistoia, D. F. Back and G. Zeni, *J. Org. Chem*., 2015, **80**, 12470.

79 **SADVOK** 3.66 Å 11.2º

2-(2-Furyl)-5-(4-methylphenyl)-1,3,4-selenadiazole

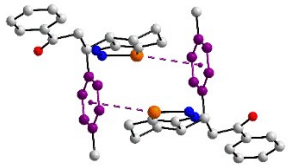


Notes: **0-D**. Two independent mononuclear molecules. One self-associates about a centre of inversion to form a dimeric aggregate.

D. B. Cordes, G. Hua, A. M. Z. Slawin and J. D. Woollins, *Acta Crystallogr., Sect. C: Cryst. Struct. Commun*., 2011, **67**, o509.

80 **EVAVED** 3.67 Å 8.2º

3-(4-Methylphenyl)-1-phenyl-3-(4,5,6,7-tetrahydro-1,2,3-benzoselenadiazol-4-yl)propan-1-one

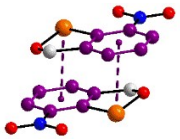


Notes: **0-D**. Mononuclear. Centrosymmetric molecules associate *via* Se(lp)…π(arene) to form a dimer.

J. Muthukumaran, M. Nishandhini, S. Chitra, P. Manisankar, S. Bhattacharya, S. Muthusubramanian, R. Krishna and J. Jeyakanthan, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2011, **67**, o1660.

81 **ISUJAI** 3.69 Å 19.0º

7-Nitro-3H-2,1-benzoxaselenole

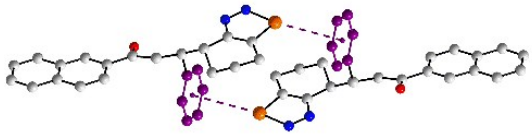


Notes: **0-D**. Mononuclear. Centrosymmetrically related molecules associate *via* Se(lp)…π(arene) to form a dimer.

V. P. Singh, H. B. Singh and R. J. Butcher, *Chem. Asian J., 2011*, **6**, 1431.

82 **AXAGOW** 3.70 Å 12.3º

1-(2-Naphthyl)-3-phenyl-3-(4,5,6,7-tetrahydro-1,2,3-benzoselenadiazol-4-yl)propan-1-one

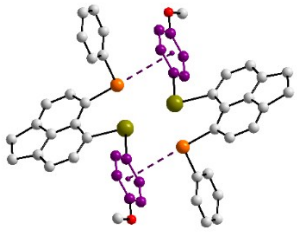


Notes: **0-D**. Mononuclear molecule. Centrosymmetric molecules associate *via* Se(lp)…π(arene) form a dimer.

J. Muthukumaran, M. Nachiappan, S. Chitra, P. Manisankar, S. Bhattacharya, S. Muthusubramanian, R. Krishna and J. Jeyakanthan, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2011, **67**, o2010.

83 **MIVYUN** 3.86 Å 13.3º

5-((4-Methoxyphenyl)tellanyl)-6-(phenylselanyl)-1,2-dihydroacenaphthylene

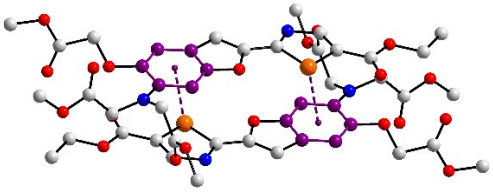


Notes: **0-D**. Mononuclear, centrosymmetrically related molecules associate *via* Se(lp)…π(arene) to form a dimer.

M. W. Stanford, F. R. Knight, K. S. A. Arachchige, P. S. Camacho, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D, Woollins, *Dalton Trans*., 2014, **43**, 6548.

84 **QOJWET** 3.87 Å 18.9º

Ethyl 2-(6-(bis(2-methoxy-2-oxoethyl)amino)-5-(2-methoxy-2-oxoethoxy)-1-benzofuran-2-yl)-1,3-selenazole-5-carboxylate

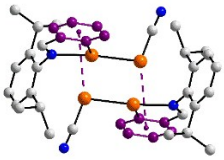


Notes: **0-D**. Mononuclear. Centrosymmetric molecules associate *via* Se(lp)…π(arene) to form a dimer.

M. S. Afzal, J.-P. Pitteloud and D. Buccella, *Chem. Commun*., 2014, **50**, 11358.

85 **QODXUE** 3.53 Å 16.7º

1-(Cyanoselanyl)-2-(2,6-diisopropylphenyl)-1H-1,2-benzoselenazole

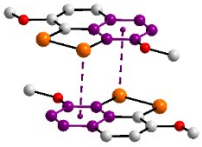


Notes: **0-D**. Mononuclear. Centrosymmetric molecules associate *via* Se(lp)…π(arene) to form a dimer.

P. Rakesh, H. B. Singh, J. P. Jasinski and J. A. Golen, *Dalton Trans*., 2014, **43**, 9431.

86 **ZOSSIL** 3.84 Å 12.8º

3,8-Dimethoxynaphtho[1,8-cd][1,2]diselenole

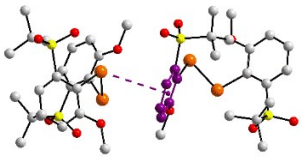


Notes: **0-D**. Mononuclear molecule. Self-associates about a centre of inversion to form a dimeric aggregate.

C. Figliola, L. Male, P. N. Horton, M. B. Pitak, S. J. Coles, S. L. Horswell and R. S. Grainger, *Organometallics*, 2014, **33**, 4449.

87 **FUXTOI** 3.91 Å 11.2º

Bis(2-(t-butylsulfonyl)-6-methoxyphenyl)diselane chloroform solvate

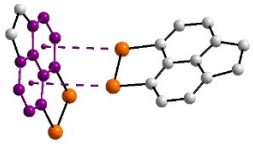


Notes: **0-D**. Two independent binuclear molecules in the asymmetric unit connected by a single interaction leading to a dimer.

D. M. Freudendahl, M. Iwaoka and T. Wirth, *Eur. J. Org. Chem*., 2010, pp. 3934.

88 **RIHVEL** 3.75 Å 18.3º; 3.92 Å 19.4º

5,6-Dihydroacenaphtho[5,6-cd][1,2]diselenole

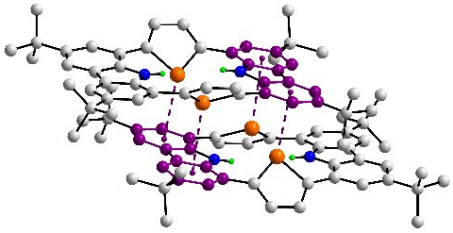


Notes: **0-D**. Two independent binuclear molecules. Both Se(II) atoms of one connect with two rings of the other to form a dimeric aggregate.

C. G. M. Benson, C. M. Schofield, R. A. M. Randall, L. Wakefield, F. R. Knight, A. M. Z. Slawin and J. D. Woollins, *Eur. J. Inorg. Chem*., 2013, pp. 427.

89 **CENBAA** 3.36 Å 8.0º; 3.45 Å 4.7º

4,12,21,29-Tetra-t-butyl-35,36-diselena-8,25-diazanonacyclo-[30.2.1.115,18.02,7.06,10.09,14.019,24.023,27.026,31]hexatriaconta-1(34),2,4,6,9,11,13,15,17,19,21,23,26,28,30,32-hexadecaene

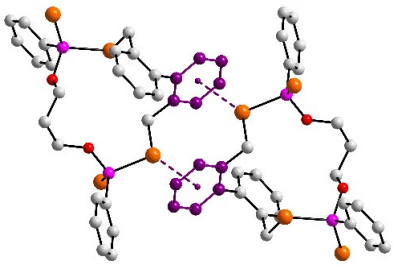


Notes: **0-D**. Binuclear molecule where both selenoether atoms associate *via* Se(lp)…π(arene) to form a centrosymmetric dimer.

M. Masuda, C. Maeda and N. Yoshioka, *Org. Lett*., 2013, **15**, 578.

90 **BEYCIT** 3.71 Å 14.9º

7,13-Diphenyl-5,10,11,15-tetrahydro-9H-dibenzo[e,g][1,12,3,10,2,11]-dioxadiselenadiphosphacyclopentadecine 7,13-diselenide

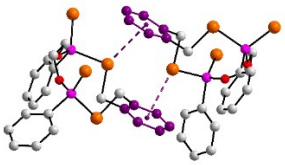


Notes: **0-D**. Tetranuclear molecule, two selenoether atoms and two selenides. Centrosymmetric molecules associate *via* Se(lp)…π(arene) form a dimer, involving a selenoether atom.

G. Hua, A. M. Z. Slawin, R. A. M. Randall, D. B. Cordes, L. Crawford, M. Buhl and J. D. Woollins, *Chem. Commun*., 2013, **49**, 2619.

91 **BEYCUF** 3.50 Å 9.0º

3,8-Diphenyl-1,5,6,10-tetrahydro-4,7,2,9,3,8-benzodioxadiselenadiphosphacyclododecine 3,8-diselenide

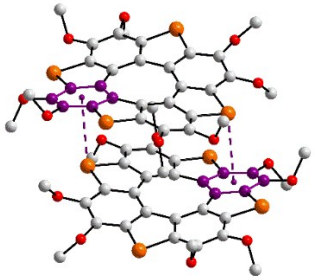


Notes: **0-D**. Tetranuclear molecule, two selenoether atoms and two selenides. Molecules related by two-fold symmetry associate *via* Se(lp)…π(arene) to form a dimer, involving a selenoether atom.

G. Hua, A. M. Z. Slawin, R. A. M. Randall, D. B. Cordes, L. Crawford, M. Buhl and J. D. Woollins, *Chem. Commun*., 2013, **49**, 2619.

92 **JOLZER** 3.48 Å 1.6º

2,3,5,6,8,9,11,12-Octamethoxytrisselenopheno-[2',3',4',5':12,13;2",3",4",5":4,5;2"',3"',4"',5"':8,9]tetraphenyleno[1,16-bcd]selenophene

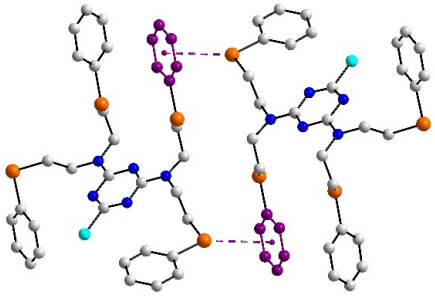


Notes: **0-D**. Tetranuclear molecules, each with two-fold symmetry, associate *via* Se(lp)…π(arene) interactions between centrosymmetrically related molecules involving one Se(II) atom only to form a dimer.

X. Xiong, C.-L. Deng, B. F. Minaev, G. V. Baryshnikov, X.-S. Peng and H. N. C. Wong, *Chem. Asian J*., 2015, **10**, 969.

93 **JANKIT** 3.59 Å 12.4º

2-Chloro-4,6-bis(bis(2-(phenylseleno)ethyl)amino)-1,3,5-triazine

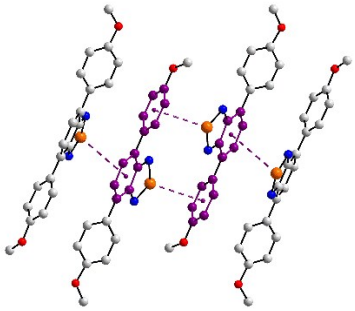


Notes: **0-D**. Tetranuclear molecules associate *via* Se(lp)…π(arene) interactions between centrosymmetrically related molecules involving one Se(II) atom only to form a dimer.

M. D. Milton, N. Kumar, S. S. Sokhi, S. Singh, M. Maheshwari, J. D. Singh, M. Asnani and R. J. Butcher, *Tetrahedron Lett*., 2004, **45**, 8941.

94 **WUSKAY** 3.43 Å 10.6º; 3.91 Å 16.8º

4,7-Bis(4-methoxyphenyl)-1,3-dihydro-2,1,3-benzoselenadiazole

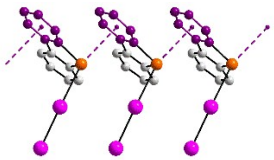


Notes: **0-D**. Two independent mononuclear molecules. One self-associates about a centre of inversion to form a dimeric aggregate which is connected to two of the other molecules to form a four molecular aggregate.

S. Mondal, M. Konda, B. Kauffmann, M. K. Manna and A. K. Das, *Cryst. Growth Des*., 2015, **15**, 5548.

95 **UJIVUF** 3.60 Å 12.8º

5-(1λ^3-Diiodan-1-yl)-5H-5λ^4-dibenzo[b,d]selenophene

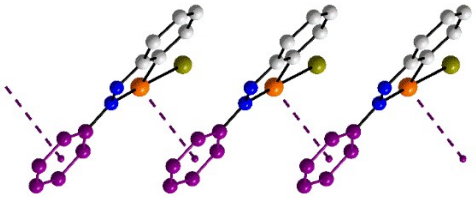


Notes: **1-D**. Mononuclear molecules associate *via* Se(II) to form a linear chain.

T. M. Klapotke, B. Krumm and M. Scherr, *Z. Anorg. Allg. Chem*., 2010, **636**, 1955.

96 **ERUVUJ** 3.63 Å 8.5º

Bromo-(2-(phenylazo)phenyl)-selenium

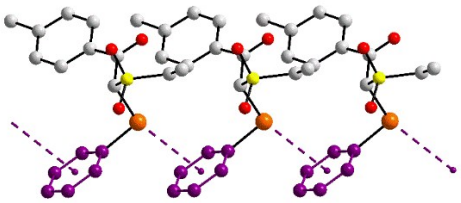


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a linear topology.

K. Srivastava, T. Chakraborty, H. B. Singh and R. J. Butcher, *Dalton Trans*., 2011, **40**, 4489.

97 **TOVQEC** 3.64 Å 14.8º

2-(Ethylsulfonyl)-1-(4-methylphenyl)-2-(phenylselanyl)ethanone

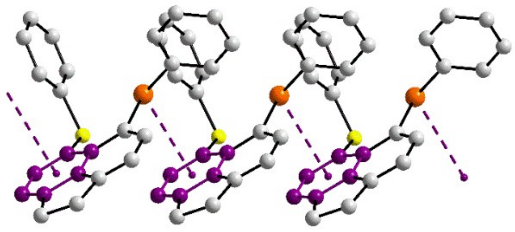


Notes: **1-D**. Mononuclear molecules associate *via* Se(II) to form a linear chain.

C. R. Cerqueira Jr, P. R. Olivato, D. N. S. Rodrigues, J. Zukerman-Schpector, E. R. T. Tiekink and M. D. Colle, *J. Mol. Struct*., 2015, **1084**, 190.

98 **WARLAE** 3.78 Å 7.8º

5-(Phenylsulfanyl)-6-(phenylselanyl)-1,2-dihydroacenaphthylene

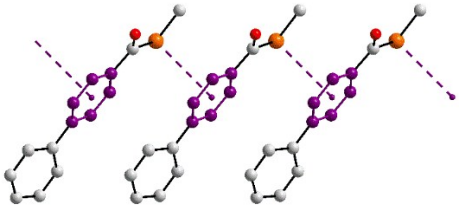


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a linear chain.

L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

99 **ZOMMIZ** 3.83 Å 6.8º

Se-methyl biphenyl-4-carboselenoate

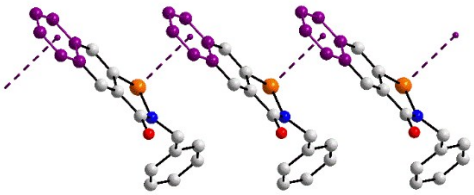


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a linear chain.

T. Murai, D. Nishi, S. Hayashi and W. Nakanishi, *Bull. Chem. Soc. Jpn*, 2014, **87**, 677.

100 **OPUYII** 3.84 Å 15.4º

2-Benzylnaphtho[2,3-d][1,2]selenazol-3(2H)-one

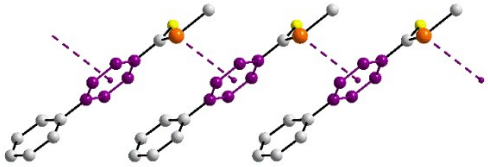


Notes: **1-D**. Mononuclear molecules associate *via* Se(II) to form a linear chain.

S. J. Balkrishna, B. S. Bhakuni, D. Chopra and S. Kumar, *Org.Lett*., 2010, **12**, 5394.

101 **ZOMMOF** 3.85 Å 16.1º

Se-methyl biphenyl-4-carboselenothioate

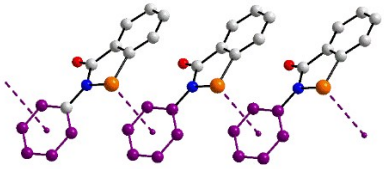


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a linear chain.

T. Murai, D. Nishi, S. Hayashi and W. Nakanishi, *Bull. Chem. Soc. Jpn*, 2014, **87**, 677.

102 **SENGOH01** 3.91 Å 12.6º

2-Phenyl-1,2-benzoselenazol-3(2H)-one

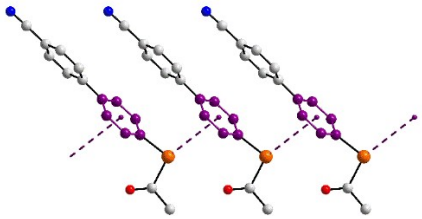


Notes: **1-D**. Mononuclear molecules associate *via* Se(II) to form a linear chain.

S. P. Thomas, K. Satheeshkumar, G. Mugesh and T. N. Guru Row, *Chem.-Eur. J.*, 2015, **21**, 6793.

103 **XEYZIM** 3.95 Å 9.9º

Se-(4'-cyanobiphenyl-4-yl) ethaneselenoate

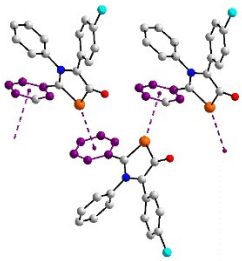


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a linear chain.

K. Grenader, M. Kind, L. Silies, A. Peters, J. W. Bats, M. Bolte and A. Terfort, *J. Mol. Struct*., 2013, **1039**, 61.

104 **ZUBWAW** 3.48 Å 4.5º

4-(4-Chlorophenyl)-2,3-diphenyl-1,3-selenazolidin-5-one

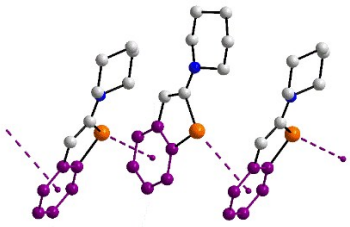


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a zigzag chain.

G. Hua, J. Du, A. L. Fuller, K. S. A. Arachchige, D. B. Cordes, A. M. Z. Slawin, J. D. Woollins, *Synlett*, 2015, **26**, 839.

105 **QOVGAL** 3.58 Å 18.0º

1-(1-Benzoselenophen-2-yl)piperidine

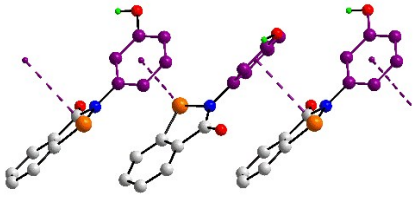


Notes: **1-D**. Mononuclear molecules associate *via* Se(II) to form a zigzag chain.

E. A. Popova, M. L. Petrov and A. G. Lyapunova, Private Communication to the CSD (QOVGAL).

106 **EDIGUU02** 3.75 Å 4.2º

2-(3-Hydroxyphenyl)-1,2-benzoselenazol-3(2H)-one

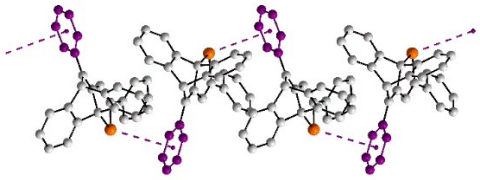


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a zigzag topology.

S. P. Thomas, K. Satheeshkumar, G. Mugesh and T. N. Guru Row, *Chem.-Eur. J.*, 2015, **21**, 6793.

107 **XAYCIL** 3.91 Å 19.3º

16,19-Diphenyl-15-selenapentacyclo[6.6.5.$0^{1,18}$.$0^{2,7}$.$0^{9,14}$]nonadeca-2,4,6,9,11,13,16,18-octaene

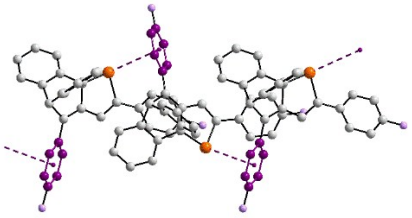


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a zigzag chain.

A. Ishii, T. Annaka and N. Nakata, *Chem.-Eur. J.*, 2012, **18**, 6428.

108 **XAYCUX** 3.97 Å 19.8º

16,19-Bis(4-fluorophenyl)-15-selenapentacyclo[6.6.5.$0^{1,18}$.$0^{2,7}$.$0^{9,14}$]nonadeca-2,4,6,9,11,13,16,18-octaene

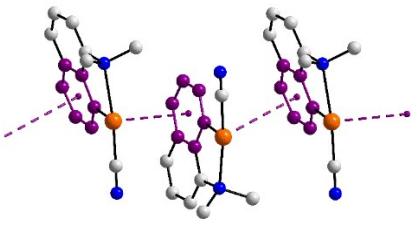


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a zigzag chain.

A. Ishii, T. Annaka and N. Nakata, *Chem.-Eur. J.*, 2012, **18**, 6428.

109 **GIYJUV** 3.98 Å 9.5º

8-(Dimethylamino)-1-naphthyl selenocyanate

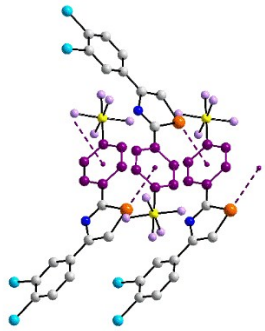


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a zigzag topology.

P. Rakesh, H. B. Singh and R. J. Butcher, *Organometallics*, 2013, **32**, 7275.

110 **DIZSIQ** 3.48 Å 8.6º

4-(3,4-Dichlorophenyl)-2-(4-(pentafluoro-sulfanyl)phenyl)-1,3-selenazole

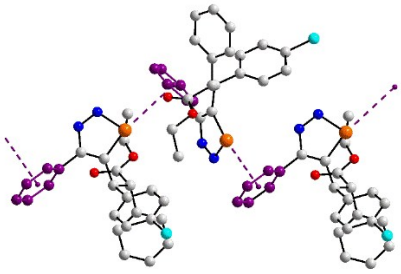


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

G. Hua, J. Du, A. M. Z. Slawin and J. D. Woollins, *J. Org. Chem*., 2014, **79**, 3876.

111 **AFUPEY** 3.51 Å 16.4º

Ethyl 3-(4-chlorophenyl)-2-phenyl-3-(4-phenyl-1,2,3-selenadiazol-5-yl)propanoate

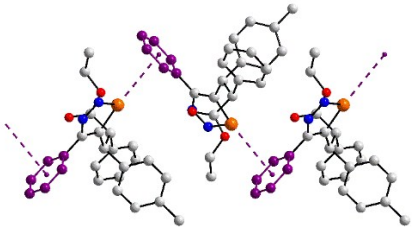


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

P. Sugumar, S. Sankari, P. Manisankar, V. Thiruselvam and M. N. Ponnuswamy, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2013, **69**, o1239.

112 **GAQQEW** 3.54 Å 17.3º

Ethyl 3-(4-methylphenyl)-2-phenyl-3-(4-phenyl-1,2,3-selenadiazol-5-yl)propanoate

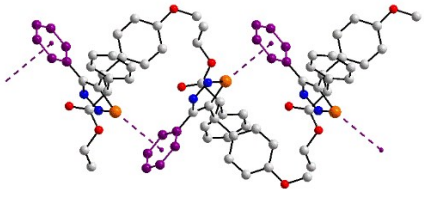


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

S. Sankari, P. Sugumar, T. Manisankar, S. Muthusubramanian and M. N. Ponnuswamy, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2012, **68**, o447.

113 **LEDZIF** 3.57 Å 11.8º

Ethyl 3-(4-methoxyphenyl)-2-phenyl-3-(4-phenyl-1,2,3-selenadiazol-5-yl)propanoate

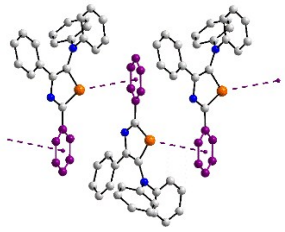


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

P. Sugumar, S. Sankari, P. Manisankar and M. N. Ponnuswamy, *Acta Crystallogr., Sect. E: Struct. Rep. Online*, 2012, **68**, o2347.

114 **ZOGFIM** 3.74 Å 17.2º

N,N,2,4-Tetraphenyl-1,3-selenazol-5-amine

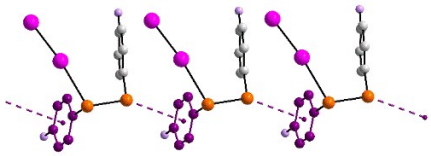


Notes: **1-D**. Mononuclear molecule. These associate *via* Se(II) interactions to form a helical chain.

T. Murai, K. Yamaguchi, F. Hori and T. Maruyama, *J. Org. Chem*., 2014, **79**, 4930.

115 **WEKWOA** 3.53 Å 15.3º

1,2-Bis(4-fluorophenyl)-1-(diiodo)diselane diselane

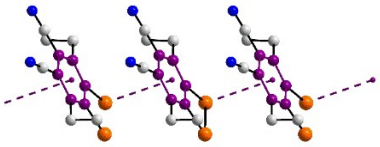


Notes: **1-D**. Binuclear molecule. One of the Se(II) atoms form Se(II) interactions to form a linear chain.

N. A. Barnes, S. M. Godfrey, J. Hughes, R. Z. Khan, I. Mushtaq, R. T. A. Ollerenshaw, R. G. Pritchard and S. Sarwar, *Dalton Trans*., 2013, **42**, 2735.

116 **HOGBOW** 3.69 Å 8.4º

2,5-Diethyl-7,8-diselenabicyclo[4.2.0]octa-1,3,5-triene-3,4-dicarbonitrile

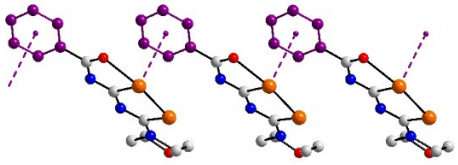


Notes: **1-D**. Binuclear molecules self-associate *via* one Se(II) atom only to form a chain with a linear topology.

T. Kimura, T. Nakahodo, H. Fujihara and E. Suzuki, *Inorg. Chem*., 2014, **53**, 4411.

117 **COFBAC** 3.87 Å 9.4º

6-(Morpholin-4-yl)-2-phenyl-4H-4λ^4,5 λ^4-[1,2,4]diselenazolo[1,5-b][1,2,4]oxaselenazole

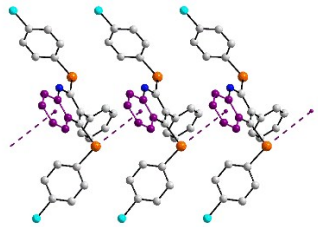


Notes: **1-D**. Binuclear molecules self-associate via one selenium(II) atom to form a chain with a linear topology.

A. Linden, Y. Zhou and H. Heimgartner, *Acta Crystallogr., Sect. C: Cryst. Struct. Chem*., 2014, **70**, 482.

118 **LIFFUD** 3.95 Å 18.8º

2,4-bis((4-Chlorophenyl)selanyl)-3-phenylquinoline

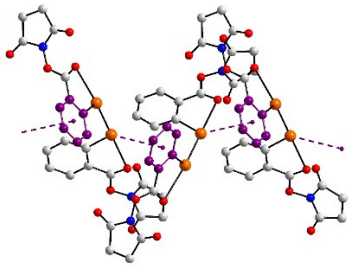


Notes: **1-D**. Binuclear molecules associate via one Se(II) atom only to form a linear chain.

T. Mitamura, K. Iwata, A. Nomoto and A. Ogawa, *Org. Biomol. Chem*., 2011, **9**, 3768.

119 **ICEWIY** 3.52 Å 11.6º

1,1'-(Diselane-1,2-diylbis(2,1-phenylenecarbonyloxy))dipyrrolidine-2,5-dione

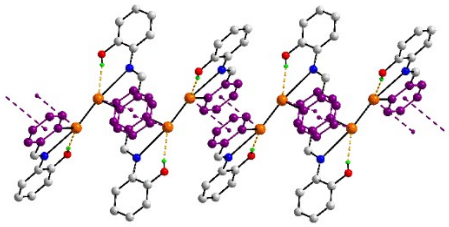


Notes: **1-D**. Binuclear molecules self-associate *via* one Se(II) atom only to form a chain with a zigzag topology.

K. Selvakumar, P. Shah, H. B. Singh and R. J. Butcher, *Chem.-Eur. J*., 2011, **17**, 12741.

120 **REDGUE** 3.94 Å 16.8º

2,2'-(Diselane-1,2-diylbis(2,1-phenylenemethylylidenenitrilo))diphenol

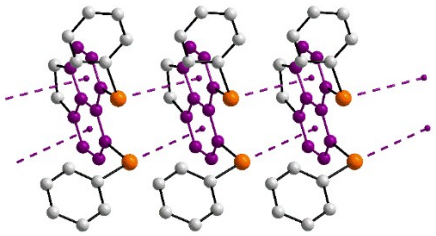


Notes: **1-D**. Binuclear molecules with two-fold symmetry. These associate into a twisted chain *via* two Se(II) involving one Se(II) centre only.

S. Panda, P. Kr. Dutta, G. Ramakrishna, C. M. Ready and S. S. Zade, *J. Organomet. Chem*., 2012, **717**, 45.

121 **WARKOR** 3.54 Å 15.2º; 3.79 Å 6.7º

5,6-Bis(phenylselanyl)-1,2-dihydroacenaphthylene

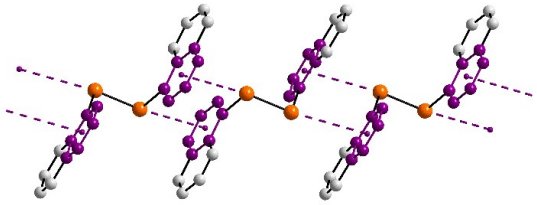


Notes: **1-D**. Binuclear molecule. These associate *via* two Se(II) interactions to form a linear chain.

L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

122 **IGIXIH** 3.69 Å 17.0º

Bis(1-naphthyl) diselenide

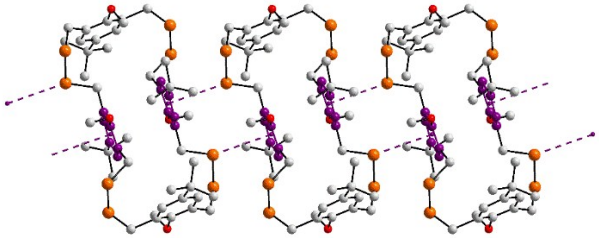


Notes: **1-D**. Binuclear molecules, with two-fold symmetry, self-associate *via* both Se(II) atoms to form a chain with a linear topology.

E. M. Takaluoma, T. T. Takaluoma, R. Oilunkaniemi and R. S. Laitinen, *Z. Anorg. Allg. Chem*., 2015, **641**, 772.

123 **SUWFIB** 3.68 Å 2.8º

8,17,26,35-Tetra-t-butyl-37,38,39,40-tetramethoxy-3,4,12,13,21,22,30,31-octaselenapentacyclo[31.3.1.16,10.115,19.124,28]tetraconta-1(37),6(40),7,9,15(39),16,18,24(38),25,27,33,35-dodecaene



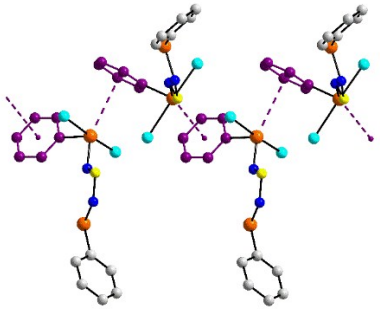
Notes: **1-D**. Octanuclear molecule located about a centre of inversion. Two of the Se(II) atoms per molecule form interactions to generate a linear chain.

J. Thomas, L. Dobrzańska, L. Van Meervelt, M. A. Quevedo, K. Woźniak, M. Stachowicz, M. Smet, W. Maes and W. Dehaen, Chem.-Eur. J., 2015, 22, 979.

ESI Table S(8). Images for a sellenium(IV)···π(arene) structure.

124 **PAHFOV** 3.56 Å 2.4º

1,1-Dichloro-1,5-diphenyl-1,5-diselena-2,4-diaza-3-thiapenta-2,3-diene



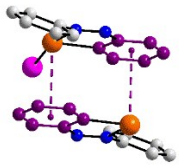
Notes: **1-D**. Binuclear molecules, containing both Se(II) and Se(IV). These associate *via* Se(IV) to form a zigzag chain.

A. G. Makarov, T. D. Grayfer, A. Yu. Makarov, I. Yu. Bagryanskaya, V. G. Vasiliev and A. V. Zibarev, *Mendeleev Commun*., 2011, **21**, 320.

ESI Table S(9). Images for all tellurium(II)···π(arene) structures.

125 POYGIT01 3.61 Å 8.8º

Iodo-(phenyldiazenylphenyl)-tellurium(II)

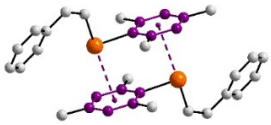


NOTES: **0-D**. Mononuclear molecule which associates about a centre of inversion *via* Te(II) interactions to form a dimeric aggregate.

K. Srivastava, P. Shah, H. B. Singh and R. J. Butcher, *Organometallics*, 2011, **30**, 534.

126 HUJROV 3.67 Å 14.3º

(*Z*)-(2,4,6-Trimethylphenyl)(2-phenylvinyl)telluride

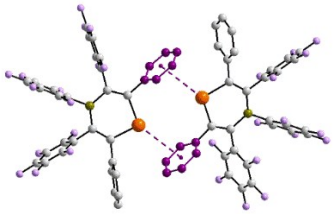


NOTES: **0-D**. Mononuclear molecule which associates about a centre of inversion *via* Te(II) interactions to form a dimeric aggregate.

B. Singh, A. K. S. Chauhan, R. C. Srivastava, A. Duthie and R. J. Butcher, *RSC Advances*, 2015, **5**, 58246.

127 VUBPIT 3.69 Å 8.9º; 3.72 Å 12.1º

3,4,5-Tris(pentafluorophenyl)-2,6-diphenyl-4H-1,4-telluraborinine

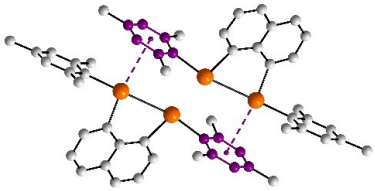


NOTES: **0-D**. Two independent mononuclear molecules associate *via* a pair Te(II) interactions to form a dimeric aggregate.

F. A. Tsao, A. J. Lough and D. W. Stephan, *Chem. Commun*., 2015, **51**, 4287.

128 TOWZOW 3.54 Å 5.7º

1,2-Dimesityl-1,2-dihydro-1,2-naphtho[1,8-cd][1,2]ditellurole

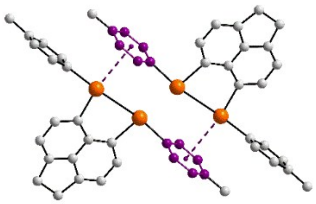


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J*., 2015, **21**, 3613.

129 **TOWYEL** 3.58 Å 9.8º

1,2-Bis(4-methylphenyl)-1,2,5,6-tetrahydro-1,2-acenaphtho[5,6-cd][1,2]ditellurole

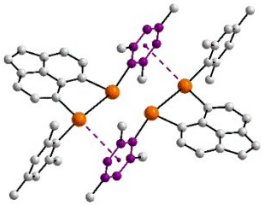


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

130 **TOXCAM** 3.62 Å 14.1º

1,2-Dimesityl-1,2-dihydro-1,2-acenaphtho[5,6-cd][1,2]ditellurole

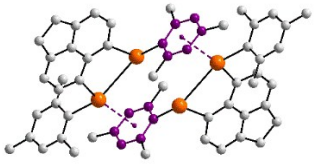


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

131 **KIBTEW** 3.63 Å 14.4º

1,2-Dimesityl-1,2,5,6-tetrahydro-1λ^4,2λ^4-acenaphtho[5,6-cd][1,2]ditellurole

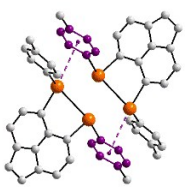


Notes: **0-D**. Binuclear molecule. Centrosymmetrically related molecules associate *via* two Te(II) interactions involving only one of the Te centres.

M. Buehl, F. R. Knight, A. Kristkova, I. M. Ondik, O. L. Malkina, R. A. M. Randall, A. M. Z. Slawin and J. D. Woollins, *Angew. Chem., Int. Ed.*, 2013, **52**, 2495.

132 **TOXBIT** 3.65 Å 9.3º

1,2-Bis(4-methylphenyl)-1,2-dihydro-1,2-acenaphtho[5,6-cd][1,2]ditellurole

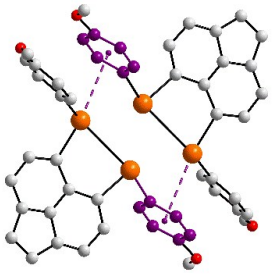


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

133 **TOXBOZ** 3.68 Å 12.7º

1,2-Bis(4-methoxyphenyl)-1,2-dihydro-1,2-acenaphtho[5,6-cd][1,2]ditellurole

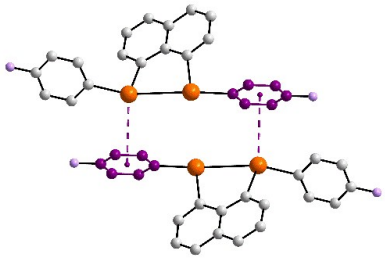


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

134 **TOXCIU** 3.69 Å 10.4º

1,2-Bis(4-fluorophenyl)-1,2-dihydro-1,2-naphtho[1,8-cd][1,2]ditellurole

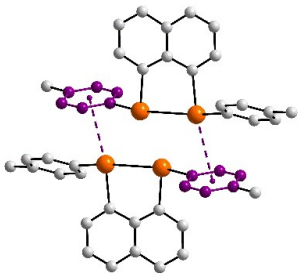


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

135 **TOXCOA** 3.71 Å 9.9º

1,2-Bis(4-methylphenyl)-1,2-dihydro-1,2-naphtho[1,8-cd][1,2]ditellurole

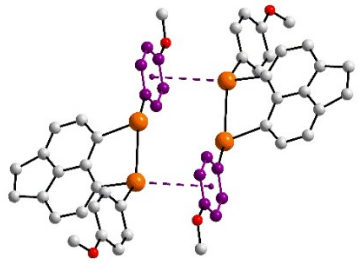


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

136 **TOWYIP** 3.72 Å 9.9º

1,2-Bis(4-methoxyphenyl)-1,2,5,6-tetrahydro-1,2-acenaphtho[5,6-cd][1,2]ditellurole

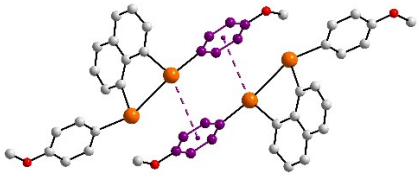


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

137 **TOWZAI** 3.78 Å 16.6º

1,2-Bis(4-methoxyphenyl)-1,2-dihydro-1,2-naphtho[1,8-cd][1,2]ditellurole

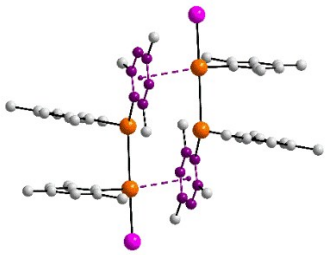


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* a pair Te(II) interactions involving one Te centre only to form a dimeric aggregate.

F. R. Knight, L. M. Diamond, K. S. A. Arachchige, P. S. Camacho, R. A. M. Randall, S. E. Ashbrook, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Chem.-Eur. J.*, 2015, **21**, 3613.

138 **BETDAG01** 3.85 Å 18.6º

1-Iodo-1,2,2-trimesityl-1λ^4,2λ^4-ditellane

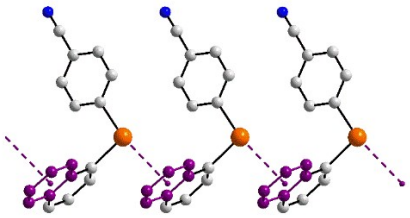


Notes: **0-D**. Binuclear molecule. Centrosymmetrically related molecules associate *via* two Te(II) interactions involving only one of the Te centres.

E. Faoro, G. M. de Oliveira, E. S. Lang and C. B. Pereira, *J. Organomet. Chem.*, 2011, **696**, 2438.

139 **NECVOI** 3.48 Å 12.7º

4-(1-Naphthyltellanyl)benzonitrile

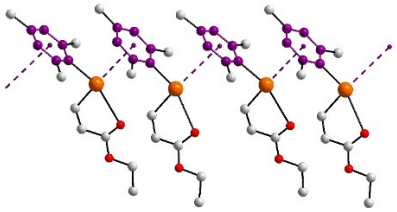


NOTES: **1-D**. Mononuclear molecule which associates into a linear chain *via* Te(II) interactions.

T. Nakai, N. Nishino, S. Hayashi, M. Hashimoto and W. Nakanishi, *Dalton Trans.*, 2012, **41**, 7485.

140 **HUHMII** 3.67 Å 10.0º; 3.58 Å, 1.5º

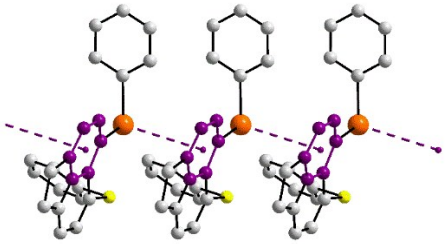
Ethyl 3-(mesityltellanyl)acrylate



NOTES: **1-D**. Two independent mononuclear molecules which associate into a linear chain *via* Te(II) interactions.
B. Singh, A. K. S. Chauhan, R. C. Srivastava, A. Duthie and R. J. Butcher, *RSC Advances*, 2015, **5**, 58246.

141 **WARLEI** 3.74 Å 5.3º

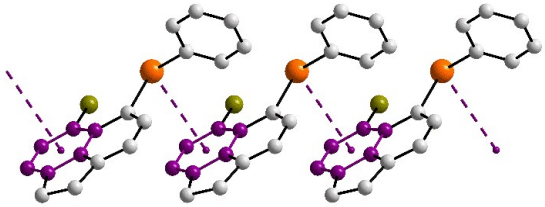
5-(Phenylsulfanyl)-6-(phenyltellanyl)-1,2-dihydroacenaphthylene



NOTES: **1-D**. Mononuclear molecule which associates into a linear chain *via* Te(II) interactions.
L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

142 **WARJOQ** 3.85 Å 3.7º

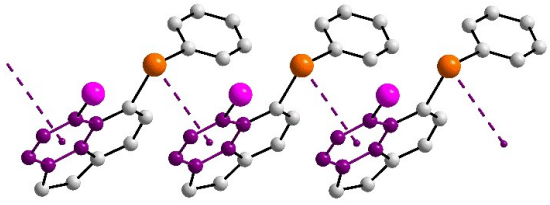
6-Bromo-1,2-dihydroacenaphthylen-5-yl phenyl telluride



NOTES: **1-D**. Mononuclear molecule which associates into a linear chain *via* Te(II) interactions.
L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

143 **WARKEH** 3.92 Å 4.2º; 3.92 Å 4.8º

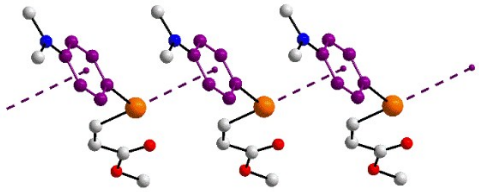
6-Iodo-1,2-dihydroacenaphthylen-5-yl phenyl telluride



NOTES: **1-D**. Two independent mononuclear molecules. Each self-associates into a linear chain *via* Te(II) interactions.
L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

144 **HUJRAH** 3.93 Å 8.1º

Ethyl 3-(1-naphthyltellanyl)acrylate

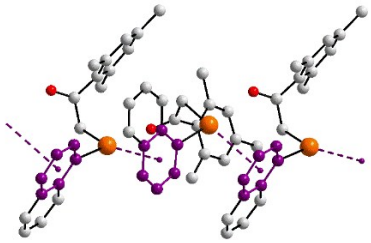


NOTES: **1-D**. Mononuclear molecule which associates into a linear chain *via* Te(II) interactions.

B. Singh, A. K. S. Chauhan, R. C. Srivastava, A. Duthie and R. J. Butcher, *RSC Advances*, 2015, **5**, 58246.

145 **UJOSES** 3.62 Å 7.5º

(2-Mesityl-2-oxoethyl)-(1-naphthyl)-tellurium(II)

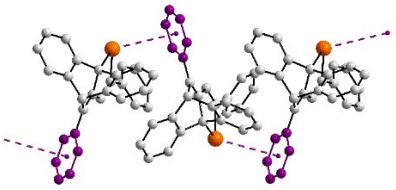


NOTES: **1-D**. Mononuclear molecule which associates into a zigzag chain *via* Te(II) interactions.

A. K. S. Chauhan, P. Singh, R. C. Srivastava, R. J. Butcher and A. Duthie, *J. Organomet. Chem*., 2010, **695**, 2118.

146 **GUFPAA** 3.79 Å 11.6º

16,19-Diphenyl-15-tellurapentacyclo[6.6.5.$0^{1,18}$.$0^{2,7}$.$0^{9,14}$]nonadeca-2,4,6,9,11,13,16,18-octaene

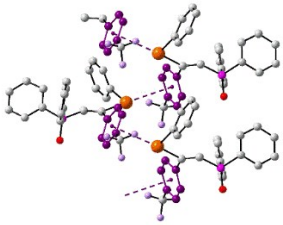


Notes: **1-D**. Mononuclear molecule as a benzene solvate. Self-associate to form a chain with a zigzag topology.

T. Annaka, N. Nakata and A. Ishii, *Organometallics*, 2015, **34**, 1272.

147 **EHUSOQ** 3.62 Å 0.8º

Phenyl-(2-(diphenylphosphine oxide)-(4-trifluorophenyl)vinyl)-tellurium(II)

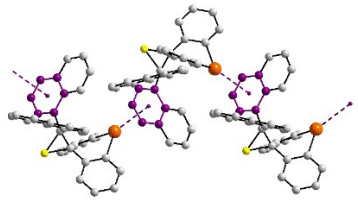


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a helical topology.

S. Kawaguchi, T. Ohe, T. Shirai, A. Nomoto, M. Sonoda and A. Ogawa, *Organometallics*, 2010, **29**, 312.

148 **GUDGET** 3.71 Å 11.1º

3',3'-Bis(1-naphthyl)spiro[telluroxanthene-9,2'-thiirane] benzene solvate

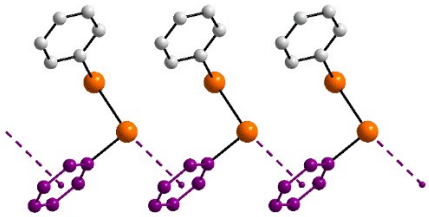


Notes: **1-D**. Mononuclear molecule as a benzene solvate. Self-associate to form a chain with a helical topology; the solvent does not form an interaction.

N. Assadi, S. Cohen, S. Pogodin and I. Agranat, *Struct. Chem*., 2015, **26**, 319.

149 **YUXQEO** 3.55 Å 9.3º

(P)-Diphenyl ditelluride

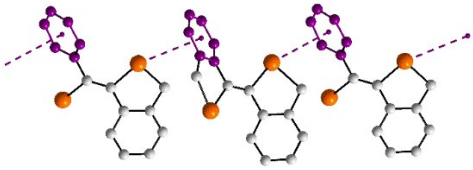


Notes: **1-D**. Binuclear molecule. One Te centre forms interactions to generate a linear chain.

A. L. Fuller, L. A. S. Scott-Hayward, Y. Li, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *J. Am. Chem. Soc*., 2010, **132**, 5799.

150 **MUWFIU** 3.72 Å 8.5º

trans-1-(2-Benzotellurophen-1(3H)-ylidene)-1,3-dihydro-2-benzotellurophene

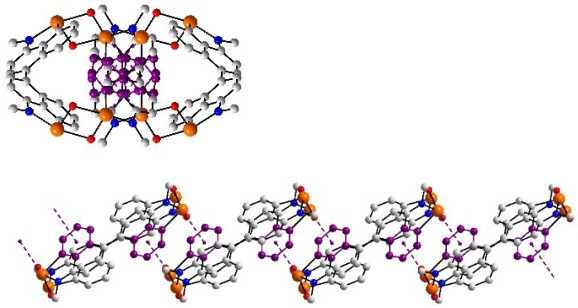


NOTES: **1-D**. Mononuclear molecule which associates into a zigzag chain *via* Te(II) interactions.

H. Sashida, M. Kaname, A. Nakayama, H. Suzuki and M. Minoura, *Tetrahedron*, 2010, **66**, 5149.

151 **INIXAF** 3.62 Å 9.3º

Bis(μ_2-4,4'-bis(methylamido)-1,1'-binaphthalene-5,5'-diyl)-tetrakis(μ_2-oxo)-tetra-tellurium tetrahydrofuran solvate



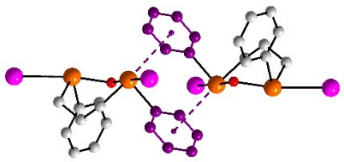
NOTES: **1-D**. Tetranuclear molecule with two independent Te(II) centres and with two-fold symmetry. One Te(II) atom, two per molecule, forms Te(II) interactions to form a linear chain.

J. Beckmann and J. Bolsinger, *Z. Anorg. Allg. Chem*., 2011, **637**, 29.

ESI Table S(10). Images for all tellurium(IV)···π(arene) structures.

152 **RATFID** 3.51 Å 11.7º

(μ_2-Oxo)-(μ_2-propane-1,3-diyl)-di-iodo-diphenyl-di-tellurium

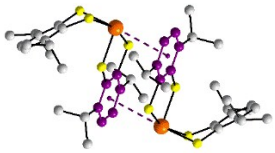


NOTES: **0-D**. Binuclear molecule associates about a centre of inversion *via* Te(IV) interactions to form a dimeric aggregate.

R. Cargnelutti, E. S. Lang, G. M. de Oliveira and P. C. Piquini, *Polyhedron*, 2012, **39**, 106.

153 **IRUKEM** 3.58 Å 9.9º

4,4',7,7'-Tetraisopropyl-2,2'-spirobi[[1,3,2]benzodithiatellurole]

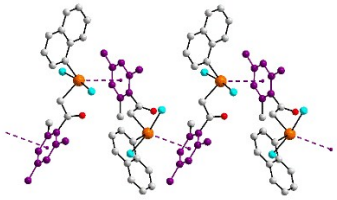


Notes: **0-D**. Mononuclear molecule. Centrosymmetrically related molecules associate *via* two Te(IV) interactions.

S. Ogawa, S. Ohwada, M. Yoshida and H. Muraoka, *Heteroat. Chem*., 2011, **22**, 586.

154 **UJOSIW** 3.64 Å 8.1º

(2-Mesityl-2-oxoethyl)-(1-naphthyl)-dichloro-tellurium(IV)

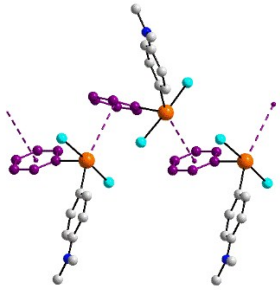


NOTES: **1-D**. Mononuclear molecule which associates into a zigzag chain *via* Te(IV) interactions.

A. K. S. Chauhan, P. Singh, R. C. Srivastava, R. J. Butcher and A. Duthie, *J. Organomet. Chem*., 2010, **695**, 2118.

155 **KAKCOP** 3.76 Å 19.4º

Dichloro-(4-dimethylaminophenyl)-phenyl-tellurium(IV)

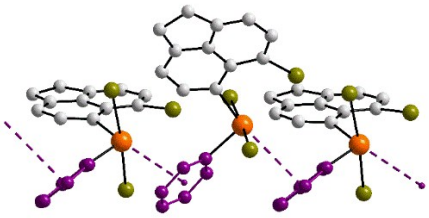


Notes: **1-D**. Mononuclear molecules self-associate to form a chain with a zigzag topology.

J. Beckmann, D. Dakternieks, A. Duthie, C. Mitchell and M. Schurmann, *Aust. J. Chem.,* 2005, **58**, 119.

156 **WARNEK** 3.83 Å 18.0º

(6-Bromo-1,2-dihydroacenaphthylen-5-yl)-tribromo-tellurium

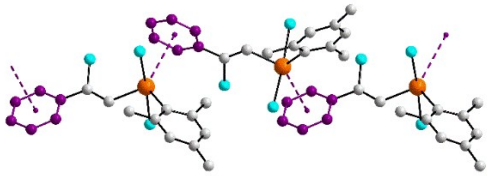


NOTES: **1-D**. Mononuclear molecule which associates into a zigzag chain *via* Te(IV) interactions.

L. K. Aschenbach, F. R. Knight, R. A. M. Randall, D. B. Cordes, A. Baggott, M. Buhl, A. M. Z. Slawin and J. D. Woollins, *Dalton Trans*., 2012, **41**, 3141.

157 **HAQHOY** 3.85 Å 9.6º

2-(Dichloro(2-chloro-2-phenylvinyl)-λ^4-tellanyl)-1,3,5-trimethylbenzene



Notes: **1-D**. Mononuclear molecule as a benzene solvate. Self-associate to form a chain with a zigzag topology.

A.K. S. Chauhan, S. N. Bharti, R. C. Srivastava, R. J. Butcher and A. Duthie, *J. Organomet. Chem*., 2012, **708**, 75.