Electronic Supplementary Material (ESI) for Dalton Transactions

Supporting Information

Synthesis, Structure and Luminescence Properties of a Series of Novel Sr^{II}-Ln^{III} Coordination Polymers

Yanmei Chen,[a] Wenqian Chen,[a] Zhenghua Ju,[b] Qian Gao,[a] Tao Lei,[c] Wei Liu,[a] Yahong Li,[*a] Dandan Gao[c] and Wu Li[c]

[a] *Key Laboratory of Organic Synthesis of Jiangsu Province, College of Chemistry, Chemical Engineering and Materials Science, Soochow University, Suzhou 215123, China. E-mail:* liyahong@suda.edu.cn

[b] *Key Laboratory of Nonferrous Metals Chemistry and Resources Utilization of Gansu Province, College of Chemistry and Chemical Engineering, Lanzhou University, Lanzhou 730000, China.*

[c] *Qinghai Institute of Salt Lakes, Chinese Academy of Sciences, Xining 810008, China.*

Part 1. Selected bond lengths [Å] and angles [°] for **1**-**8** and hydrogen bond lengths [Å] and angles [°] for **1**-**8**.

Table S1 Selected bond lengths [Å] and angles [°] for complex **1**.

Eu(1)-O(9)	2.430(2)	Sr(2)-O(13)	2.538(3)
Eu(1)-O(7)	2.434(2)	Sr(2)-O(4)#1	2.569(2)
Eu(1)-O(1)	2.444(2)	Sr(2)-O(12)#2	2.601(2)
Eu(1)-O(5)	2.447(2)	Sr(2)-O(15)	2.607(2)
Eu(1)-O(3)	2.451(2)	Sr(2)-O(17)	2.623(3)
Eu(1)-O(11)	2.465(2)	Sr(2)-O(14)	2.647(2)
Eu(1)-N(3)	2.515(2)	Sr(2)-O(2)	2.648(2)
Eu(1)-N(2)	2.524(3)	Sr(2)-O(16)	2.657(2)
Eu(1)-N(1)	2.538(3)		
O(9)-Eu(1)-O(7)	90.87(8)	O(5)-Eu(1)-N(2)	63.46(8)
O(9)-Eu(1)-O(1)	151.97(8)	O(3)-Eu(1)-N(2)	130.71(8)
O(7)-Eu(1)-O(1)	76.31(8)	O(11)-Eu(1)-N(2)	136.72(8)
O(9)-Eu(1)-O(5)	77.18(8)	N(3)-Eu(1)-N(2)	118.25(8)
O(7)-Eu(1)-O(5)	126.97(8)	O(9)-Eu(1)-N(1)	133.49(8)
O(1)-Eu(1)-O(5)	90.64(8)	O(7)-Eu(1)-N(1)	135.63(8)
O(9)-Eu(1)-O(3)	74.98(8)	O(1)-Eu(1)-N(1)	63.23(8)
O(7)-Eu(1)-O(3)	151.09(8)	O(5)-Eu(1)-N(1)	73.12(8)
O(1)-Eu(1)-O(3)	126.55(8)	O(3)-Eu(1)-N(1)	63.33(8)
O(5)-Eu(1)-O(3)	75.03(8)	O(11)-Eu(1)-N(1)	75.77(8)
O(9)-Eu(1)-O(11)	127.68(7)	N(3)-Eu(1)-N(1)	119.06(8)
O(7)-Eu(1)-O(11)	76.24(8)	N(2)-Eu(1)-N(1)	122.51(8)
O(1)-Eu(1)-O(11)	73.90(7)	O(13)-Sr(2)-O(4)#1	140.05(8)
O(5)-Eu(1)-O(11)	148.85(8)	O(13)-Sr(2)-O(12)#2	143.98(8)
O(3)-Eu(1)-O(11)	92.42(8)	O(4)#1-Sr(2)-O(12)#2	75.02(7)
O(9)-Eu(1)-N(3)	64.13(8)	O(13)-Sr(2)-O(15)	81.62(10)
O(7)-Eu(1)-N(3)	76.42(8)	O(4)#1-Sr(2)-O(15)	73.05(8)
O(1)-Eu(1)-N(3)	133.59(8)	O(12)#2-Sr(2)-O(15)	110.03(8)
O(5)-Eu(1)-N(3)	135.65(8)	O(13)-Sr(2)-O(17)	102.36(11)
O(3)-Eu(1)-N(3)	74.72(8)	O(4)#1-Sr(2)-O(17)	82.54(10)
O(11)-Eu(1)-N(3)	63.56(8)	O(12)#2-Sr(2)-O(17)	87.79(9)
O(9)-Eu(1)-N(2)	71.06(8)	O(15)-Sr(2)-O(17)	144.14(9)
O(7)-Eu(1)-N(2)	63.79(8)	O(13)-Sr(2)-O(14)	81.24(9)
O(1)-Eu(1)-N(2)	80.91(8)	O(4)#1-Sr(2)-O(14)	114.82(8)
O(15)-Sr(2)-O(2)	141.24(8)	O(12)#2-Sr(2)-O(14)	73.20(8)
O(17)-Sr(2)-O(2)	72.71(9)	O(15)-Sr(2)-O(14)	67.06(8)
O(14)-Sr(2)-O(2)	78.07(7)	O(17)-Sr(2)-O(14)	148.70(9)
O(13)-Sr(2)-O(16)	70.36(9)	O(13)-Sr(2)-O(2)	76.70(8)
O(4)#1-Sr(2)-O(16)	73.63(8)	O(4)#1-Sr(2)-O(2)	140.34(7)
O(12)#2-Sr(2)-O(16)	144.77(8)	O(12)#2-Sr(2)-O(2)	73.55(7)
O(15)-Sr(2)-O(16)	75.46(8)	O(17)-Sr(2)-O(16)	72.64(9)
O(14)-Sr(2)-O(16)	135.64(9)	O(2)-Sr(2)-O(16)	124.72(8)

Symmetry transformations used to generate equivalent atoms:
#1 x+1/2,-y+1/2,z+1/2 #2 -x+1/2,y-1/2,-z+1/2
#3 x-1/2,-y+1/2,z-1/2 #4 -x+1/2,y+1/2,-z+1/2

Table S2 Hydrogen bond lengths [Å] and angles [°] for complex **1**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
N(4)-H(4A)...O(8)#5	0.86	1.83	2.685(4)	174.9
N(5)-H(5)...O(10)#6	0.86	1.89	2.750(4)	173.6
O(13)-H(13A)...O(18)#7	0.85	1.97	2.789(4)	161.7
O(13)-H(13B)...O(1)	0.85	1.97	2.753(3)	153.3
O(14)-H(14A)...O(2)#4	0.85	2.32	3.119(4)	156.6
O(14)-H(14A)...O(17)#4	0.85	2.49	3.032(4)	122.5
O(14)-H(14B)...O(11)	0.85	2.01	2.821(3)	158.7
O(14)-H(14B)...O(12)	0.85	2.60	3.293(3)	140.0
O(15)-H(15B)...O(5)#1	0.85	1.96	2.808(3)	171.6
O(15)-H(15B)...O(6)#1	0.85	2.50	3.067(4)	125.3
O(16)-H(16A)...O(18)#7	0.85	2.56	3.223(4)	135.9
O(16)-H(16B)...O(3)#1	0.85	1.97	2.809(4)	167.9
O(17)-H(17A)...O(12)#8	0.85	2.53	3.237(4)	141.3
O(17)-H(17B)...O(14)#2	0.85	2.59	3.032(4)	113.8

O(18)-H(18A)...O(6)#6	0.85	2.07	2.894(4)	164.1
O(18)-H(18B)...O(10)#2	0.85	2.03	2.826(3)	155.2
C(18)-H(18)...O(2)#9	0.93	2.53	3.394(4)	155.2
C(22)-H(22)...O(9)#4	0.93	2.57	3.249(4)	130.2
C(23)-H(23)...O(17)#10	0.93	2.58	3.444(5)	155.5

Symmetry transformations used to generate equivalent atoms:
#1 x+1/2,-y+1/2,z+1/2 #2 -x+1/2,y-1/2,-z+1/2
#3 x-1/2,-y+1/2,z-1/2 #4 -x+1/2,y+1/2,-z+1/2
#5 x-1/2,-y+3/2,z+1/2 #6 x,y,z+1 #7 x+1/2,-y+1/2,z-1/2
#8 x,y-1,z #9 x,y+1,z #10 x-1/2,-y+1/2,z+1/2

Table S3 Selected bond lengths [Å] and angles [°] for complex **2**.

Gd(1)-O(3)	2.4197(19)	Sr(2)-O(17)	2.534(2)
Gd(1)-O(5)	2.424(2)	Sr(2)-O(12)#1	2.566(2)
Gd(1)-O(9)	2.431(2)	Sr(2)-O(2)	2.604(2)
Gd(1)-O(7)	2.434(2)	Sr(2)-O(14)	2.607(2)
Gd(1)-O(11)	2.440(2)	Sr(2)-O(15)	2.617(2)
Gd(1)-O(1)	2.455(2)	Sr(2)-O(10)#2	2.643(2)
Gd(1)-N(1)	2.497(2)	Sr(2)-O(13)	2.643(2)
Gd(1)-N(2)	2.514(2)	Sr(2)-O(16)	2.645(2)
Gd(1)-N(3)	2.523(2)		
O(3)-Gd(1)-O(5)	91.03(7)	N(1)-Gd(1)-N(3)	119.11(7)
O(3)-Gd(1)-O(9)	151.44(7)	N(2)-Gd(1)-N(3)	122.60(8)
O(5)-Gd(1)-O(9)	76.19(7)	O(17)-Sr(2)-O(12)#1	140.49(7)
O(3)-Gd(1)-O(7)	76.94(7)	O(17)-Sr(2)-O(2)	143.55(7)
O(5)-Gd(1)-O(7)	127.59(7)	O(12)#1-Sr(2)-O(2)	74.93(7)
O(9)-Gd(1)-O(7)	90.64(7)	O(17)-Sr(2)-O(14)	81.46(8)
O(3)-Gd(1)-O(11)	74.70(7)	O(12)#1-Sr(2)-O(14)	73.43(7)
O(5)-Gd(1)-O(11)	150.39(7)	O(2)-Sr(2)-O(14)	109.83(7)
O(9)-Gd(1)-O(11)	127.25(7)	O(17)-Sr(2)-O(15)	103.99(9)
O(7)-Gd(1)-O(11)	75.05(7)	O(12)#1-Sr(2)-O(15)	81.37(9)
O(3)-Gd(1)-O(1)	128.48(7)	O(2)-Sr(2)-O(15)	86.90(8)
O(5)-Gd(1)-O(1)	76.20(7)	O(14)-Sr(2)-O(15)	144.25(8)
O(9)-Gd(1)-O(1)	73.72(7)	O(17)-Sr(2)-O(10)#2	77.04(7)
O(7)-Gd(1)-O(1)	148.18(7)	O(12)#1-Sr(2)-O(10)#2	139.62(7)
O(11)-Gd(1)-O(1)	92.34(7)	O(2)-Sr(2)-O(10)#2	73.17(7)
O(3)-Gd(1)-N(1)	64.53(7)	O(14)-Sr(2)-O(10)#2	141.40(7)
O(5)-Gd(1)-N(1)	76.03(7)	O(15)-Sr(2)-O(10)#2	72.85(8)
O(9)-Gd(1)-N(1)	133.56(7)	O(17)-Sr(2)-O(13)	70.55(8)
O(7)-Gd(1)-N(1)	135.70(7)	O(12)#1-Sr(2)-O(13)	73.87(7)
O(11)-Gd(1)-N(1)	74.42(7)	O(2)-Sr(2)-O(13)	145.14(7)
O(1)-Gd(1)-N(1)	63.95(7)	O(14)-Sr(2)-O(13)	75.44(7)
O(3)-Gd(1)-N(2)	70.71(7)	O(15)-Sr(2)-O(13)	73.44(8)
O(5)-Gd(1)-N(2)	64.14(7)	O(10)#2-Sr(2)-O(13)	124.93(7)
O(9)-Gd(1)-N(2)	80.73(7)	O(17)-Sr(2)-O(16)	80.83(8)
O(7)-Gd(1)-N(2)	63.74(7)	O(12)#1-Sr(2)-O(16)	114.71(7)
O(11)-Gd(1)-N(2)	130.66(7)	O(2)-Sr(2)-O(16)	73.14(7)
O(1)-Gd(1)-N(2)	136.85(8)	O(14)-Sr(2)-O(16)	66.55(8)
N(1)-Gd(1)-N(2)	118.12(7)	O(15)-Sr(2)-O(16)	148.89(8)
O(3)-Gd(1)-N(3)	133.48(8)	O(10)#2-Sr(2)-O(16)	78.55(7)
O(5)-Gd(1)-N(3)	135.48(7)	O(13)-Sr(2)-O(16)	135.15(8)
O(9)-Gd(1)-N(3)	63.42(7)	O(11)-Gd(1)-N(3)	63.83(7)
O(7)-Gd(1)-N(3)	72.97(7)	O(1)-Gd(1)-N(3)	75.24(7)

Symmetry transformations used to generate equivalent atoms:
#1 -x,-y+1,-z #2 -x+1/2,y-1/2,-z+1/2 #3 -x+1/2,y+1/2,-z+1/2

Table S4 Hydrogen bond lengths [Å] and angles [°] for complex **2**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
O(13)-H(13A)...O(11)#1	0.85	1.96	2.797(3)	166.1
O(14)-H(14A)...O(8)#1	0.85	2.26	3.061(3)	157.0
O(14)-H(14B)...O(7)#1	0.85	2.30	2.801(3)	118.1
O(14)-H(14B)...O(12)#1	0.85	2.60	3.092(3)	118.2
O(13)-H(13B)...O(18)#2	0.85	2.57	3.204(3)	132.3
O(15)-H(15A)...O(1)	0.85	2.54	3.288(4)	146.7
O(15)-H(15A)...O(16)#3	0.85	2.59	3.030(4)	113.0
O(15)-H(15B)...O(2)#3	0.85	2.47	3.233(4)	149.6

O(15)-H(15B)...O(2)#3	0.85	2.47	3.233(4)	149.6
O(16)-H(16A)...O(1)#2	0.85	1.96	2.808(3)	174.0
O(16)-H(16B)...O(10)#4	0.85	2.30	3.102(3)	157.9
O(17)-H(17A)...O(9)#2	0.85	1.98	2.748(3)	149.5
O(17)-H(17B)...O(18)#2	0.85	2.30	2.763(3)	114.9
O(17)-H(17B)...O(13)	0.85	2.40	2.991(3)	126.7
O(18)-H(18A)...O(8)#5	0.85	2.39	2.870(3)	115.9
O(18)-H(18B)...O(4)#6	0.85	2.01	2.797(3)	153.4
N(4)-H(4)...O(6)	0.86	1.82	2.681(4)	173.7
N(5)-H(5)...O(4)#7	0.86	1.89	2.747(4)	171.0
C(2)-H(2)...O(10)#4	0.93	2.50	3.365(4)	154.5
C(3)-H(3)...O(9)#4	0.93	2.59	3.352(4)	139.4
C(23)-H(23)...O(15)#2	0.93	2.54	3.406(5)	154.9
C(24)-H(24)...O(3)#6	0.93	2.54	3.221(4)	130.4

Symmetry transformations used to generate equivalent atoms:
#1 -x,-y+1,-z #2 -x+1/2,y-1/2,-z+1/2 #3 -x+1/2,y+1/2,-z+1/2
#4 x,y-1,z #5 x+1/2,-y+3/2,z+1/2 #6 -x+1,-y+1,-z
#7 x+1/2,-y+1/2,z+1/2

Table S5 Selected bond lengths [Å] and angles [°] for complex **3**.

Tb(1)-O(5)	2.404(2)	Sr(1)-O(15)	2.530(3)
Tb(1)-O(3)	2.411(3)	Sr(1)-O(9)	2.568(3)
Tb(1)-O(11)#1	2.425(3)	Sr(1)-O(8)	2.598(3)
Tb(1)-O(1)	2.424(3)	Sr(1)-O(13)	2.615(3)
Tb(1)-O(10)#1	2.429(3)	Sr(1)-O(17)	2.632(3)
Tb(1)-O(7)	2.440(2)	Sr(1)-O(14)	2.639(3)
Tb(1)-N(2)	2.483(3)	Sr(1)-O(12)#2	2.644(3)
Tb(1)-N(1)	2.499(3)	Sr(1)-O(16)	2.647(3)
Tb(1)-N(3)#1	2.509(3)		
O(5)-Tb(1)-O(3)	90.54(9)	O(10)#1-Tb(1)-N(2)	74.07(9)
O(5)-Tb(1)-O(11)#1	150.70(9)	O(7)-Tb(1)-N(2)	64.05(9)
O(3)-Tb(1)-O(11)#1	76.45(9)	O(5)-Tb(1)-N(1)	70.99(9)
O(5)-Tb(1)-O(1)	77.20(9)	O(3)-Tb(1)-N(1)	64.36(9)
O(3)-Tb(1)-O(1)	128.19(9)	O(11)#1-Tb(1)-N(1)	79.71(9)
O(11)#1-Tb(1)-O(1)	90.25(10)	O(1)-Tb(1)-N(1)	64.04(9)
O(5)-Tb(1)-O(10)#1	74.79(9)	O(10)#1-Tb(1)-N(1)	131.01(9)
O(3)-Tb(1)-O(10)#1	149.62(10)	O(7)-Tb(1)-N(1)	136.70(9)
O(11)#1-Tb(1)-O(10)#1	127.81(9)	N(2)-Tb(1)-N(1)	118.66(10)
O(1)-Tb(1)-O(10)#1	75.06(9)	O(5)-Tb(1)-N(3)#1	133.75(9)
O(5)-Tb(1)-O(7)	128.78(9)	O(3)-Tb(1)-N(3)#1	135.70(9)
O(3)-Tb(1)-O(7)	76.27(9)	O(11)#1-Tb(1)-N(3)#1	63.72(9)
O(11)#1-Tb(1)-O(7)	74.01(9)	O(1)-Tb(1)-N(3)#1	72.71(9)
O(1)-Tb(1)-O(7)	147.56(9)	O(10)#1-Tb(1)-N(3)#1	64.09(9)
O(10)#1-Tb(1)-O(7)	92.17(9)	O(7)-Tb(1)-N(3)#1	74.88(9)
O(5)-Tb(1)-N(2)	64.74(9)	N(2)-Tb(1)-N(3)#1	118.92(10)
O(3)-Tb(1)-N(2)	75.61(9)	N(1)-Tb(1)-N(3)#1	122.29(10)
O(11)#1-Tb(1)-N(2)	133.79(9)	O(15)-Sr(1)-O(9)	140.41(10)
O(1)-Tb(1)-N(2)	135.84(9)	O(15)-Sr(1)-O(8)	143.87(10)
O(9)-Sr(1)-O(12)#2	140.71(9)	O(9)-Sr(1)-O(8)	74.89(9)
O(8)-Sr(1)-O(12)#2	74.06(9)	O(15)-Sr(1)-O(13)	81.61(12)
O(13)-Sr(1)-O(12)#2	140.76(9)	O(9)-Sr(1)-O(13)	73.50(10)
O(17)-Sr(1)-O(12)#2	72.78(12)	O(8)-Sr(1)-O(13)	110.41(10)
O(14)-Sr(1)-O(12)#2	124.33(9)	O(15)-Sr(1)-O(17)	103.34(14)
O(15)-Sr(1)-O(16)	81.26(12)	O(9)-Sr(1)-O(17)	81.81(13)
O(9)-Sr(1)-O(16)	115.03(10)	O(8)-Sr(1)-O(17)	86.37(11)
O(8)-Sr(1)-O(16)	73.30(10)	O(13)-Sr(1)-O(17)	144.62(12)
O(13)-Sr(1)-O(16)	67.18(10)	O(15)-Sr(1)-O(14)	70.54(11)
O(17)-Sr(1)-O(16)	147.95(12)	O(9)-Sr(1)-O(14)	73.66(10)
O(14)-Sr(1)-O(16)	135.83(11)	O(8)-Sr(1)-O(14)	144.62(10)
O(12)#2-Sr(1)-O(16)	77.86(9)	O(13)-Sr(1)-O(14)	75.44(10)
O(15)-Sr(1)-O(12)#2	75.84(10)	O(17)-Sr(1)-O(14)	73.52(12)

Symmetry transformations used to generate equivalent atoms:
#1 -x,-y+1,-z #2 x+1/2,-y+3/2,z+1/2
#3 x-1/2,-y+3/2,z-1/2

Table S6 Hydrogen bond lengths [Å] and angles [°] for complex **3**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)

N(4)-H(4A)...O(6)#4	0.86	1.90	2.755(5)	172.7
N(5)-H(5)...O(4)#5	0.86	1.82	2.678(5)	174.4
O(13)-H(13A)...O(2)#1	0.85	2.33	3.052(4)	142.4
O(13)-H(13B)...O(1)#1	0.85	2.25	2.803(4)	122.9
O(14)-H(14A)...O(10)	0.85	2.08	2.803(4)	142.4
O(14)-H(14B)...O(18)#6	0.85	2.59	3.201(5)	129.6
O(15)-H(15A)...O(18)#6	0.85	2.00	2.791(5)	154.4
O(15)-H(15A)...O(18)#6	0.85	2.00	2.791(5)	154.4
O(15)-H(15A)...O(18)#6	0.85	2.00	2.791(5)	154.4
O(15)-H(15B)...O(11)#2	0.85	1.94	2.742(4)	156.6
O(16)-H(16A)...O(12)#7	0.85	2.31	3.146(4)	167.3
O(16)-H(16B)...O(7)#8	0.85	1.99	2.823(4)	165.2
O(17)-H(17B)...O(16)#9	0.85	2.23	3.014(5)	152.3
O(18)-H(18A)...O(6)#9	0.85	2.04	2.808(4)	150.6
O(18)-H(18B)...O(2)#4	0.85	2.08	2.898(5)	161.5
C(10)-H(10)...O(11)#7	0.93	2.60	3.370(5)	141.0
C(11)-H(11)...O(12)#7	0.93	2.52	3.380(5)	153.6
C(22)-H(22)...O(5)#8	0.93	2.55	3.232(5)	130.3
C(24)-H(24)...O(17)#6	0.93	2.55	3.408(7)	153.9

Symmetry transformations used to generate equivalent atoms:
#1 -x,-y+1,-z #2 x+1/2,-y+3/2,z+1/2 #3 x-1/2,-y+3/2,z-1/2
#4 x,y,z+1 #5 x-1/2,-y+3/2,z+1/2 #6 -x,-y+1,-z+1
#7 -x,-y+2,-z #8 -x+1/2,y+1/2,-z+1/2 #9 -x+1/2,y-1/2,-z+1/2

Table S7 Selected bond lengths [Å] and angles [°] for complex **4**.

Eu(1)-O(11)	2.421(3)	Sr(1)-O(24)#1	2.523(4)
Eu(1)-O(5)	2.428(3)	Sr(1)-O(26)	2.562(3)
Eu(1)-O(1)	2.446(3)	Sr(1)-O(2)	2.596(3)
Eu(1)-O(9)	2.459(3)	Sr(1)-O(27)	2.605(4)
Eu(1)-O(3)	2.460(3)	Sr(1)-O(29)	2.610(4)
Eu(1)-O(7)	2.467(3)	Sr(1)-O(14)	2.618(3)
Eu(1)-N(1)	2.533(3)	Sr(1)-O(25)	2.625(4)
Eu(1)-N(3)	2.534(4)	Sr(1)-O(28)	2.659(4)
Eu(1)-N(2)	2.534(3)		
O(11)-Eu(1)-O(5)	148.61(11)	O(24)#1-Sr(1)-O(26)	137.89(11)
O(11)-Eu(1)-O(1)	85.64(11)	O(24)#1-Sr(1)-O(2)	73.14(11)
O(5)-Eu(1)-O(1)	79.75(11)	O(26)-Sr(1)-O(2)	148.93(11)
O(11)-Eu(1)-O(9)	126.73(11)	O(24)#1-Sr(1)-O(27)	73.09(12)
O(5)-Eu(1)-O(9)	78.20(11)	O(26)-Sr(1)-O(27)	77.67(12)
O(1)-Eu(1)-O(9)	80.75(11)	O(2)-Sr(1)-O(27)	123.33(12)
O(11)-Eu(1)-O(3)	76.31(11)	O(24)#1-Sr(1)-O(29)	82.72(12)
O(5)-Eu(1)-O(3)	90.38(11)	O(26)-Sr(1)-O(29)	106.99(12)
O(1)-Eu(1)-O(3)	126.66(10)	O(2)-Sr(1)-O(29)	69.64(11)
O(9)-Eu(1)-O(3)	148.25(11)	O(27)-Sr(1)-O(29)	145.65(12)
O(11)-Eu(1)-O(7)	77.60(11)	O(24)#1-Sr(1)-O(14)	145.10(10)
O(5)-Eu(1)-O(7)	127.13(10)	O(26)-Sr(1)-O(14)	74.92(11)
O(1)-Eu(1)-O(7)	147.66(10)	O(2)-Sr(1)-O(14)	74.55(10)
O(9)-Eu(1)-O(7)	87.37(11)	O(27)-Sr(1)-O(14)	137.85(11)
O(3)-Eu(1)-O(7)	76.03(10)	O(29)-Sr(1)-O(14)	73.97(11)
O(11)-Eu(1)-N(1)	74.11(11)	O(24)#1-Sr(1)-O(25)	113.02(14)
O(5)-Eu(1)-N(1)	74.51(11)	O(26)-Sr(1)-O(25)	82.94(13)
O(1)-Eu(1)-N(1)	63.46(11)	O(2)-Sr(1)-O(25)	84.35(12)
O(9)-Eu(1)-N(1)	137.94(12)	O(27)-Sr(1)-O(25)	69.12(12)
O(3)-Eu(1)-N(1)	63.38(11)	O(29)-Sr(1)-O(25)	144.56(12)
O(7)-Eu(1)-N(1)	134.68(12)	O(14)-Sr(1)-O(25)	76.21(12)
O(11)-Eu(1)-N(3)	64.06(11)	O(24)#1-Sr(1)-O(28)	71.40(12)
O(5)-Eu(1)-N(3)	134.04(12)	O(26)-Sr(1)-O(28)	72.71(11)
O(1)-Eu(1)-N(3)	71.27(11)	O(2)-Sr(1)-O(28)	130.80(11)
O(9)-Eu(1)-N(3)	62.77(11)	O(27)-Sr(1)-O(28)	76.31(12)
O(3)-Eu(1)-N(3)	135.55(12)	O(29)-Sr(1)-O(28)	73.01(12)
O(7)-Eu(1)-N(3)	76.53(11)	O(14)-Sr(1)-O(28)	123.51(12)
N(1)-Eu(1)-N(3)	119.39(11)	O(25)-Sr(1)-O(28)	141.17(12)
O(11)-Eu(1)-N(2)	134.10(12)	O(3)-Eu(1)-N(2)	72.01(11)
O(5)-Eu(1)-N(2)	63.98(11)	O(7)-Eu(1)-N(2)	63.22(11)
O(1)-Eu(1)-N(2)	140.15(12)	N(1)-Eu(1)-N(2)	117.44(11)
O(9)-Eu(1)-N(2)	76.38(11)	N(3)-Eu(1)-N(2)	123.16(12)

Symmetry transformations used to generate equivalent atoms:
#1 x,y-1,z #2 x,y+1,z

Table S8 Hydrogen bond lengths [Å] and angles [°] for complex **4**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
C(2)-H(2)...O(10)#3	0.93	2.53	3.347(6)	147.5
C(10)-H(10)...O(31)#4	0.93	2.48	3.369(7)	160.2
C(23)-H(23)...O(22)#5	0.93	2.54	3.316(7)	141.0
C(37)-H(37)...N(9)	0.93	2.54	3.353(7)	146.0
C(45)-H(45)...O(28)	0.93	2.57	3.261(7)	131.8
C(46)-H(46)...O(20)#6	0.93	2.30	3.217(7)	168.5
C(48)-H(48)...O(12)#7	0.93	2.28	3.182(6)	163.7
C(49)-H(49)...O(8)#7	0.93	2.54	3.100(7)	118.8
N(7)-H(7)...O(18)	0.86	1.88	2.721(6)	165.8
N(8)-H(8)...O(16)#1	0.86	1.90	2.754(6)	174.9
N(9)-H(9A)...O(7)#7	0.86	1.96	2.809(5)	168.6
N(10)-H(10A)...O(29)#3	0.86	2.18	2.949(6)	148.8
N(10)-H(10A)...O(14)#3	0.86	2.47	3.025(5)	123.2
N(11)-H(11A)...O(31)	0.86	2.11	2.812(7)	138.0
N(11)-H(11A)...O(10)#3	0.86	2.52	3.182(8)	133.9
N(12)-H(12)...O(12)#2	0.86	1.86	2.702(6)	166.8
N(13)-H(13)...O(3)#2	0.86	1.94	2.795(6)	173.4
N(14)-H(14)...O(6)	0.86	1.76	2.615(6)	171.2
O(25)-H(25A)...O(13)	0.85	2.16	2.976(5)	160.0
O(25)-H(25B)...O(10)#3	0.85	2.12	2.960(5)	172.6
O(26)-H(26A)...O(17)	0.85	1.99	2.805(5)	161.1
O(26)-H(26B)...O(34)#5	0.85	1.91	2.743(7)	165.2
O(27)-H(27A)...O(35)	0.85	2.14	2.947(5)	159.0
O(27)-H(27B)...O(19)#1	0.85	2.01	2.834(5)	162.4
O(28)-H(28A)...O(23)#1	0.85	2.22	2.797(5)	125.2
O(28)-H(28B)...O(34)#5	0.85	2.49	3.275(7)	154.6
O(29)-H(29A)...O(1)	0.85	2.02	2.845(5)	163.9
O(29)-H(29B)...O(32)#5	0.85	1.97	2.811(6)	168.5
O(30)-H(30B)...O(4)#8	0.85	2.05	2.829(5)	151.1
O(31)-H(31A)...O(30)	0.85	2.09	2.902(6)	159.4
O(31)-H(31B)...O(9)#3	0.85	2.08	2.782(5)	140.2
O(32)-H(32A)...O(22)	0.85	1.94	2.710(7)	149.8
O(32)-H(32B)...O(35)	0.85	2.37	2.908(6)	121.3
O(33)-H(33A)...O(35)	0.85	2.33	2.884(10)	123.5
O(33)-H(33B)...O(16)#9	0.85	2.02	2.766(9)	146.2
O(34)-H(34)...O(32)	0.82	2.08	2.880(8)	165.3
O(35)-H(35A)...O(18)	0.85	2.21	2.944(7)	145.3
O(35)-H(35B)...O(20)#1	0.85	1.95	2.733(6)	152.3

Symmetry transformations used to generate equivalent atoms:
#1 x,y-1,z #2 x,y+1,z #3 x+1,y,z #4 -x,-y+1,-z+2
#5 x-1,y,z #6 -x+1,-y+2,-z+1 #7 x+1,y+1,z
#8 -x+1,-y+1,-z+2 #9 x+1,y-1,z

Table S9 Selected bond lengths [Å] and angles [°] for complex **5**.

Gd(1)-O(11)	2.400(3)	Gd(2)-O(19)	2.452(3)
Gd(1)-O(5)	2.418(3)	Gd(2)-O(17)	2.465(3)
Gd(1)-O(1)	2.440(3)	Gd(2)-N(6)	2.499(4)
Gd(1)-O(9)	2.444(3)	Gd(2)-N(4)	2.508(3)
Gd(1)-O(3)	2.448(3)	Gd(2)-N(5)	2.521(3)
Gd(1)-O(7)	2.454(3)	O(2)-Sr(3)	2.596(3)
Gd(1)-N(3)	2.520(4)	Sr(3)-O(22)#1	2.524(3)
Gd(1)-N(2)	2.522(3)	Sr(3)-O(28)	2.566(3)
Gd(1)-N(1)	2.525(3)	Sr(3)-O(29)	2.605(4)
Gd(2)-O(23)	2.423(3)	Sr(3)-O(26)	2.606(3)
Gd(2)-O(15)	2.425(3)	Sr(3)-O(14)	2.610(3)
Gd(2)-O(13)	2.429(3)	Sr(3)-O(25)	2.630(3)
Gd(2)-O(21)	2.440(3)	Sr(3)-O(27)	2.681(4)
O(11)-Gd(1)-O(5)	147.97(11)	O(15)-Gd(2)-O(21)	77.19(10)
O(11)-Gd(1)-O(1)	85.62(10)	O(13)-Gd(2)-O(21)	92.05(10)
O(5)-Gd(1)-O(1)	79.75(10)	O(23)-Gd(2)-O(19)	91.83(11)
O(11)-Gd(1)-O(9)	127.17(11)	O(15)-Gd(2)-O(19)	77.33(10)
O(5)-Gd(1)-O(9)	78.24(11)	O(13)-Gd(2)-O(19)	148.79(10)
O(1)-Gd(1)-O(9)	80.18(10)	O(21)-Gd(2)-O(19)	74.47(10)
O(11)-Gd(1)-O(3)	76.44(10)	O(23)-Gd(2)-O(17)	75.08(11)
O(5)-Gd(1)-O(3)	89.95(11)	O(15)-Gd(2)-O(17)	88.05(10)
O(1)-Gd(1)-O(3)	127.16(9)	O(13)-Gd(2)-O(17)	77.14(10)

O(9)-Gd(1)-O(3)	148.09(10)	O(21)-Gd(2)-O(17)	150.78(10)
O(11)-Gd(1)-O(7)	77.95(10)	O(19)-Gd(2)-O(17)	127.05(10)
O(5)-Gd(1)-O(7)	127.38(10)	O(23)-Gd(2)-N(6)	64.48(12)
O(1)-Gd(1)-O(7)	147.06(10)	O(15)-Gd(2)-N(6)	136.69(11)
O(9)-Gd(1)-O(7)	87.27(10)	O(13)-Gd(2)-N(6)	74.42(10)
O(3)-Gd(1)-O(7)	76.49(10)	O(21)-Gd(2)-N(6)	64.09(11)
O(11)-Gd(1)-N(3)	64.40(10)	O(19)-Gd(2)-N(6)	74.37(10)
O(5)-Gd(1)-N(3)	134.09(10)	O(17)-Gd(2)-N(6)	135.24(11)
O(1)-Gd(1)-N(3)	70.87(10)	O(23)-Gd(2)-N(4)	133.40(11)
O(9)-Gd(1)-N(3)	62.84(11)	O(15)-Gd(2)-N(4)	63.98(10)
O(3)-Gd(1)-N(3)	135.93(10)	O(13)-Gd(2)-N(4)	63.89(10)
O(7)-Gd(1)-N(3)	76.29(10)	O(21)-Gd(2)-N(4)	74.86(11)
O(11)-Gd(1)-N(2)	134.22(10)	O(19)-Gd(2)-N(4)	134.76(10)
O(5)-Gd(1)-N(2)	64.24(10)	O(17)-Gd(2)-N(4)	76.01(11)
O(1)-Gd(1)-N(2)	140.08(11)	N(6)-Gd(2)-N(4)	119.13(11)
O(9)-Gd(1)-N(2)	76.29(10)	O(23)-Gd(2)-N(5)	71.64(11)
O(3)-Gd(1)-N(2)	71.89(10)	O(15)-Gd(2)-N(5)	77.23(10)
O(7)-Gd(1)-N(2)	63.21(11)	O(13)-Gd(2)-N(5)	133.17(11)
N(3)-Gd(1)-N(2)	123.00(11)	O(21)-Gd(2)-N(5)	134.52(10)
O(11)-Gd(1)-N(1)	73.69(11)	O(19)-Gd(2)-N(5)	63.59(11)
O(5)-Gd(1)-N(1)	74.28(11)	O(17)-Gd(2)-N(5)	63.58(10)
O(1)-Gd(1)-N(1)	63.84(10)	N(6)-Gd(2)-N(5)	116.68(11)
O(9)-Gd(1)-N(1)	137.69(10)	N(4)-Gd(2)-N(5)	124.16(11)
O(3)-Gd(1)-N(1)	63.48(9)	O(22)#1-Sr(3)-O(28)	138.43(11)
O(7)-Gd(1)-N(1)	135.04(10)	O(22)#1-Sr(3)-O(2)	72.95(10)
N(3)-Gd(1)-N(1)	119.30(11)	O(28)-Sr(3)-O(2)	148.49(10)
N(2)-Gd(1)-N(1)	117.69(11)	O(22)#1-Sr(3)-O(29)	113.21(12)
O(23)-Gd(2)-O(15)	148.65(11)	O(28)-Sr(3)-O(29)	83.04(12)
O(23)-Gd(2)-O(13)	74.53(10)	O(2)-Sr(3)-O(29)	85.30(11)
O(15)-Gd(2)-O(13)	127.79(10)	O(22)#1-Sr(3)-O(26)	73.45(11)
O(23)-Gd(2)-O(21)	128.57(11)	O(28)-Sr(3)-O(26)	77.65(12)
O(2)-Sr(3)-O(25)	69.14(11)	O(2)-Sr(3)-O(26)	124.93(11)
O(29)-Sr(3)-O(25)	144.45(12)	O(29)-Sr(3)-O(26)	69.79(12)
O(26)-Sr(3)-O(25)	145.36(11)	O(22)#1-Sr(3)-O(14)	144.86(10)
O(14)-Sr(3)-O(25)	73.97(10)	O(28)-Sr(3)-O(14)	74.70(10)
O(22)#1-Sr(3)-O(27)	71.97(11)	O(2)-Sr(3)-O(14)	74.07(9)
O(28)-Sr(3)-O(27)	72.81(11)	O(29)-Sr(3)-O(14)	75.52(11)
O(2)-Sr(3)-O(27)	129.51(10)	O(26)-Sr(3)-O(14)	137.66(9)
O(29)-Sr(3)-O(27)	142.22(13)	O(22)#1-Sr(3)-O(25)	83.26(11)
O(26)-Sr(3)-O(27)	76.83(12)	O(28)-Sr(3)-O(25)	105.80(12)
O(14)-Sr(3)-O(27)	123.03(11)	O(25)-Sr(3)-O(27)	71.69(12)

Symmetry transformations used to generate equivalent atoms:
#1 x,y+1,z #2 x,y-1,z

Table S10 Hydrogen bond lengths [Å] and angles [°] for complex **5**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
N(13)-H(13A)...O(16)	0.86	1.85	2.709(5)	172.1
N(14)-H(14)...O(18)#2	0.86	1.88	2.728(6)	167.3
O(25)-H(25A)...O(31)#3	0.85	2.06	2.894(6)	167.5
O(25)-H(25B)...O(1)	0.85	2.07	2.858(5)	153.9
O(26)-H(26A)...O(19)#1	0.85	2.04	2.817(5)	150.9
O(26)-H(26A)...O(21)#1	0.85	2.60	3.219(4)	130.8
O(26)-H(26B)...O(30)	0.85	2.06	2.855(5)	155.2
O(27)-H(27A)...O(21)#1	0.85	2.07	2.780(5)	141.1
O(26)-H(26B)...O(30)	0.85	2.06	2.855(5)	155.2
O(27)-H(27A)...O(21)#1	0.85	2.07	2.780(5)	141.1
O(28)-H(28B)...O(17)	0.85	1.99	2.803(4)	159.1
O(29)-H(29A)...O(13)	0.85	2.20	2.916(5)	141.8
O(28)-H(28A)...O(34)#3	0.85	2.04	2.766(6)	143.3
O(29)-H(29B)...O(10)#4	0.85	2.29	3.023(5)	144.6
O(30)-H(30A)...O(18)	0.85	2.09	2.935(5)	170.5
O(30)-H(30B)...O(20)#1	0.85	2.33	2.750(5)	110.7
O(31)-H(31A)...O(30)	0.85	2.02	2.830(6)	158.0
O(31)-H(31B)...O(24)	0.85	1.97	2.730(6)	148.2
O(32)-H(32A)...O(33)	0.85	2.17	2.863(7)	138.6
O(32)-H(32B)...O(9)#4	0.85	1.95	2.769(5)	160.5
O(33)-H(33A)...O(4)#5	0.85	2.02	2.844(5)	162.2
O(33)-H(33B)...O(8)#6	0.85	2.04	2.880(5)	167.8

O(34)-H(34)...O(31)	0.82	2.05	2.826(7)	158.7
N(45)-H(45)...O(6)#4	0.86	1.76	2.611(5)	171.8
N(47)-H(47)...O(3)#6	0.86	1.92	2.778(5)	173.5
N(48)-H(48A)...O(25)#4	0.86	2.22	2.985(6)	148.1
N(48)-H(48A)...O(14)#4	0.86	2.45	3.016(5)	123.9
N(49)-H(49)...O(7)#6	0.86	1.96	2.807(5)	167.2
N(51)-H(51)...O(12)#2	0.86	1.84	2.690(5)	168.5
N(53)-H(53)...O(32)	0.86	2.20	2.839(6)	130.7
N(53)-H(53)...O(10)#4	0.86	2.33	3.014(7)	137.0
C(1C)-H(1C)...O(12)#6	0.93	2.29	3.188(6)	162.8
C(1D)-H(1D)...O(9)#4	0.93	2.58	3.507(6)	174.0
C(2)-H(2)...O(10)#4	0.93	2.50	3.336(5)	149.7
C(8)-H(8)...O(4)#5	0.93	2.38	3.136(6)	137.9
C(12)-H(12)...O(32)#7	0.93	2.41	3.297(7)	160.0
C(23)-H(23)...O(24)#3	0.93	2.54	3.335(6)	143.3
C(39)-H(39)...N(49)	0.93	2.59	3.350(7)	139.5
C(48)-H(48)...O(29)	0.93	2.47	3.311(7)	149.9
C(50)-H(50)...O(8)#6	0.93	2.51	3.074(7)	119.3
C(52)-H(52)...O(33)	0.93	2.58	3.479(8)	162.2
C(55)-H(55)...O(20)#8	0.93	2.27	3.196(6)	171.6

Symmetry transformations used to generate equivalent atoms:
#1 x,y+1,z #2 x,y-1,z #3 x+1,y,z #4 x-1,y,z
#5 -x+1,-y+2,-z #6 x-1,y-1,z #7 -x+2,-y+2,-z
#8 -x+1,-y,-z+1

Table S11 Selected bond lengths [Å] and angles [°] for complex **6**.

Gd(1)-O(5)	2.398(6)	Sr(2)-O(2)	2.533(6)
Gd(1)-O(9)	2.406(6)	Sr(2)-O(15)	2.540(9)
Gd(1)-O(3)	2.413(6)	Sr(2)-O(8)#2	2.575(7)
Gd(1)-O(11)	2.435(6)	Sr(2)-O(13)	2.618(9)
Gd(1)-O(1)	2.452(6)	Sr(2)-O(16')	2.642(12)
Gd(1)-O(7)	2.456(6)	Sr(2)-O(14)	2.644(9)
Gd(1)-N(3)	2.500(7)	Sr(2)-O(16)	2.748(13)
Gd(1)-N(2)	2.506(8)	Sr(2)-O(16')#3	2.935(15)
Gd(1)-N(1)	2.510(7)	Sr(2)-O(14)#3	3.143(15)
Sr(2)-O(4)#1	2.524(7)		
O(5)-Gd(1)-O(9)	78.1(2)	O(4)#1-Sr(2)-O(8)#2	146.3(2)
O(5)-Gd(1)-O(3)	148.7(2)	O(2)-Sr(2)-O(8)#2	72.2(2)
O(9)-Gd(1)-O(3)	90.8(2)	O(15)-Sr(2)-O(8)#2	88.6(3)
O(5)-Gd(1)-O(11)	88.0(2)	O(4)#1-Sr(2)-O(13)	92.7(3)
O(9)-Gd(1)-O(11)	128.2(2)	O(2)-Sr(2)-O(13)	72.0(2)
O(3)-Gd(1)-O(11)	76.0(2)	O(15)-Sr(2)-O(13)	151.5(3)
O(5)-Gd(1)-O(1)	79.0(2)	O(8)#2-Sr(2)-O(13)	83.8(3)
O(9)-Gd(1)-O(1)	78.9(2)	O(4)#1-Sr(2)-O(16')	132.0(3)
O(3)-Gd(1)-O(1)	127.9(2)	O(2)-Sr(2)-O(16')	148.2(3)
O(11)-Gd(1)-O(1)	146.9(2)	O(15)-Sr(2)-O(16')	89.0(4)
O(5)-Gd(1)-O(7)	128.3(2)	O(8)#2-Sr(2)-O(16')	78.0(3)
O(9)-Gd(1)-O(7)	147.1(2)	O(13)-Sr(2)-O(16')	116.0(4)
O(3)-Gd(1)-O(7)	74.6(2)	O(4)#1-Sr(2)-O(14)	75.2(3)
O(11)-Gd(1)-O(7)	77.4(2)	O(2)-Sr(2)-O(14)	150.0(3)
O(1)-Gd(1)-O(7)	87.0(2)	O(15)-Sr(2)-O(14)	93.9(4)
O(5)-Gd(1)-N(3)	76.2(2)	O(8)#2-Sr(2)-O(14)	137.3(3)
O(9)-Gd(1)-N(3)	64.8(2)	O(13)-Sr(2)-O(14)	110.2(4)
O(3)-Gd(1)-N(3)	72.7(2)	O(16')-Sr(2)-O(14)	59.5(3)
O(11)-Gd(1)-N(3)	63.4(2)	O(4)#1-Sr(2)-O(16)	122.1(4)
O(1)-Gd(1)-N(3)	139.3(2)	O(2)-Sr(2)-O(16)	131.1(5)
O(7)-Gd(1)-N(3)	133.6(2)	O(15)-Sr(2)-O(16)	62.7(5)
O(5)-Gd(1)-N(2)	64.4(2)	O(8)#2-Sr(2)-O(16)	76.8(4)
O(9)-Gd(1)-N(2)	135.9(2)	O(13)-Sr(2)-O(16)	140.4(4)
O(3)-Gd(1)-N(2)	133.2(2)	O(16')-Sr(2)-O(16)	26.4(4)
O(11)-Gd(1)-N(2)	74.9(2)	O(14)-Sr(2)-O(16)	66.9(4)
O(1)-Gd(1)-N(2)	72.1(2)	O(4)#1-Sr(2)-O(16')#3	89.7(3)
O(7)-Gd(1)-N(2)	63.9(2)	O(2)-Sr(2)-O(16')#3	128.9(3)
N(3)-Gd(1)-N(2)	122.6(2)	O(15)-Sr(2)-O(16')#3	145.4(3)
O(5)-Gd(1)-N(1)	137.2(2)	O(8)#2-Sr(2)-O(16')#3	116.6(3)
O(9)-Gd(1)-N(1)	74.7(2)	O(13)-Sr(2)-O(16')#3	60.2(3)
O(3)-Gd(1)-N(1)	64.1(2)	O(16')-Sr(2)-O(16')#3	74.9(5)
O(11)-Gd(1)-N(1)	134.8(2)	O(14)-Sr(2)-O(16')#3	51.5(4)

O(1)-Gd(1)-N(1)	63.9(2)	O(16)-Sr(2)-O(16')#3	98.6(5)
O(7)-Gd(1)-N(1)	72.4(2)	O(4)#1-Sr(2)-O(14)#3	140.5(2)
N(3)-Gd(1)-N(1)	119.1(2)	O(2)-Sr(2)-O(14)#3	124.9(2)
N(2)-Gd(1)-N(1)	118.2(2)	O(15)-Sr(2)-O(14)#3	134.2(3)
O(4)#1-Sr(2)-O(2)	74.8(2)	O(8)#2-Sr(2)-O(14)#3	68.0(2)
O(4)#1-Sr(2)-O(15)	78.6(3)	O(13)-Sr(2)-O(14)#3	67.3(3)
O(2)-Sr(2)-O(15)	79.5(2)	O(16')-Sr(2)-O(14)#3	48.9(4)
O(16)-Sr(2)-O(14)#3	73.5(5)	O(14)-Sr(2)-O(14)#3	80.4(4)
O(16')#3-Sr(2)-O(14)#3	51.0(3)		

Symmetry transformations used to generate equivalent atoms:
#1 x-1,y,z #2 -x+2,-y+1,-z #3 -x+1,-y+1,-z
#4 x+1,y,z

Table S12 Hydrogen bond lengths [Å] and angles [°] for complex **6**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
N(4)-H(4A)...O(18)	0.86	2.03	2.862(14)	164.1
N(5)-H(5)...O(10)	0.86	1.85	2.702(13)	168.2
O(13)-H(13A)...O(19)#3	0.85	2.19	3.04(2)	172.5
O(13)-H(13B)...O(1)	0.85	1.99	2.769(11)	152.0
O(13)-H(13B)...O(2)	0.85	2.56	3.029(11)	116.2
O(14)-H(14A)...O(7)#1	0.85	2.01	2.727(11)	140.8
O(14)-H(14B)...O(13)#3	0.85	2.54	3.220(13)	137.3
O(15)-H(15A)...O(12)#5	0.85	1.91	2.747(10)	169.5
O(15)-H(15B)...O(6)#6	0.85	1.97	2.686(11)	140.9
O(17)-H(17A)...O(18)	0.85	2.55	3.11(2)	124.5
O(17)-H(17B)...O(6)#6	0.85	2.23	2.946(14)	141.7
O(18)-H(18A)...O(4)#1	0.85	2.27	2.963(12)	138.3
O(18)-H(18A)...O(2)	0.85	2.44	3.096(12)	134.0
O(18)-H(18B)...O(10)#7	0.85	2.50	3.235(17)	144.6
O(19)-H(19A)...O(12)#2	0.85	2.13	2.67(2)	121.2
O(19)-H(19B)...O(12)#5	0.85	2.54	2.965(19)	111.9
C(2)-H(2)...O(6)#6	0.93	2.52	3.238(11)	134.2
C(22)-H(22)...O(9)	0.93	2.53	3.115(15)	121.4

Symmetry transformations used to generate equivalent atoms:
#1 x-1,y,z #2 -x+2,-y+1,-z #3 -x+1,-y+1,-z
#4 x+1,y,z #5 x-1,y-1,z #6 x,y-1,z #7 -x+1,-y+1,-z+1

Table S13 Selected bond lengths [Å] and angles [°] for complex **7**.

Tb(1)-O(9)	2.380(5)	Sr(2)-O(16)	2.523(8)
Tb(1)-O(3)	2.380(5)	Sr(2)-O(2)	2.538(5)
Tb(1)-O(5)	2.394(5)	Sr(2)-O(12)#2	2.556(6)
Tb(1)-O(7)	2.406(5)	Sr(2)-O(13)	2.581(8)
Tb(1)-O(1)	2.419(5)	Sr(2)-O(15)	2.619(10)
Tb(1)-O(11)	2.423(5)	Sr(2)-O(17)	2.651(10)
Tb(1)-N(2)	2.472(6)	Sr(2)-O(15')	2.746(14)
Tb(1)-N(1)	2.479(6)	Sr(2)-O(17')	2.756(14)
Tb(1)-N(3)	2.484(6)	Sr(2)-O(15)#3	2.837(11)
Sr(2)-O(4)#1	2.507(6)	Sr(2)-O(17)#3	2.927(12)
O(9)-Tb(1)-O(3)	148.00(19)	O(16)-Sr(2)-O(15)	100.5(3)
O(9)-Tb(1)-O(5)	78.5(2)	O(2)-Sr(2)-O(15)	154.3(2)
O(3)-Tb(1)-O(5)	90.3(2)	O(12)#2-Sr(2)-O(15)	133.5(3)
O(9)-Tb(1)-O(7)	88.0(2)	O(13)-Sr(2)-O(15)	104.6(3)
O(3)-Tb(1)-O(7)	75.73(19)	O(4)#1-Sr(2)-O(17)	132.1(3)
O(5)-Tb(1)-O(7)	128.67(17)	O(16)-Sr(2)-O(17)	88.3(3)
O(9)-Tb(1)-O(1)	79.19(18)	O(2)-Sr(2)-O(17)	147.8(3)
O(3)-Tb(1)-O(1)	128.41(18)	O(12)#2-Sr(2)-O(17)	77.9(3)
O(5)-Tb(1)-O(1)	79.24(17)	O(13)-Sr(2)-O(17)	115.9(3)
O(7)-Tb(1)-O(1)	146.39(18)	O(15)-Sr(2)-O(17)	57.1(3)
O(9)-Tb(1)-O(11)	128.62(18)	O(4)#1-Sr(2)-O(15')	68.8(3)
O(3)-Tb(1)-O(11)	74.86(18)	O(16)-Sr(2)-O(15')	83.5(4)
O(5)-Tb(1)-O(11)	146.6(2)	O(2)-Sr(2)-O(15')	142.2(3)
O(7)-Tb(1)-O(11)	77.10(17)	O(12)#2-Sr(2)-O(15')	141.0(3)
O(1)-Tb(1)-O(11)	86.83(17)	O(13)-Sr(2)-O(15')	118.9(4)
O(9)-Tb(1)-N(2)	76.14(19)	O(15)-Sr(2)-O(15')	18.7(3)
O(3)-Tb(1)-N(2)	72.0(2)	O(17)-Sr(2)-O(15')	63.9(4)
O(5)-Tb(1)-N(2)	64.82(18)	O(4)#1-Sr(2)-O(17')	122.1(3)

O(7)-Tb(1)-N(2)	63.87(18)	O(16)-Sr(2)-O(17')	61.7(3)
O(1)-Tb(1)-N(2)	139.57(18)	O(2)-Sr(2)-O(17')	130.2(3)
O(11)-Tb(1)-N(2)	133.52(18)	O(12)#2-Sr(2)-O(17')	76.5(3)
O(9)-Tb(1)-N(1)	137.33(19)	O(13)-Sr(2)-O(17')	140.5(4)
O(3)-Tb(1)-N(1)	64.65(18)	O(15)-Sr(2)-O(17')	68.5(4)
O(5)-Tb(1)-N(1)	74.51(19)	O(17)-Sr(2)-O(17')	26.7(4)
O(7)-Tb(1)-N(1)	134.62(19)	O(15')-Sr(2)-O(17')	66.1(4)
O(1)-Tb(1)-N(1)	63.86(18)	O(4)#1-Sr(2)-O(15)#3	141.4(2)
O(11)-Tb(1)-N(1)	72.12(19)	O(16)-Sr(2)-O(15)#3	131.0(3)
N(2)-Tb(1)-N(1)	119.04(19)	O(2)-Sr(2)-O(15)#3	127.3(2)
O(9)-Tb(1)-N(3)	64.35(19)	O(12)#2-Sr(2)-O(15)#3	68.3(3)
O(3)-Tb(1)-N(3)	133.4(2)	O(13)-Sr(2)-O(15)#3	70.1(3)
O(5)-Tb(1)-N(3)	136.3(2)	O(15)-Sr(2)-O(15)#3	71.9(4)
O(7)-Tb(1)-N(3)	74.2(2)	O(17)-Sr(2)-O(15)#3	46.0(3)
O(1)-Tb(1)-N(3)	72.20(19)	O(15')-Sr(2)-O(15)#3	89.0(4)
O(11)-Tb(1)-N(3)	64.30(19)	O(17')-Sr(2)-O(15)#3	70.9(4)
N(2)-Tb(1)-N(3)	122.4(2)	O(4)#1-Sr(2)-O(17)#3	89.6(2)
N(1)-Tb(1)-N(3)	118.44(19)	O(16)-Sr(2)-O(17)#3	145.6(3)
C(6)-O(1)-Tb(1)	125.2(5)	O(2)-Sr(2)-O(17)#3	128.9(2)
N(1)-C(1)-C(2)	122.1(7)	O(12)#2-Sr(2)-O(17)#3	116.6(3)
N(1)-C(1)-C(6)	113.8(6)	O(13)-Sr(2)-O(17)#3	59.9(3)
C(2)-C(1)-C(6)	124.0(6)	O(15)-Sr(2)-O(17)#3	45.3(3)
C(5)-N(1)-C(1)	119.2(6)	O(17)-Sr(2)-O(17)#3	75.4(4)
C(5)-N(1)-Tb(1)	119.6(5)	O(15')-Sr(2)-O(17)#3	62.2(4)
C(1)-N(1)-Tb(1)	121.2(5)	O(17')-Sr(2)-O(17)#3	99.5(4)
O(4)#1-Sr(2)-O(16)	79.1(2)	O(15)#3-Sr(2)-O(17)#3	51.8(3)
O(4)#1-Sr(2)-O(2)	74.87(17)	O(4)#1-Sr(2)-O(13)	92.9(3)
O(16)-Sr(2)-O(2)	79.5(2)	O(16)-Sr(2)-O(13)	151.9(2)
O(4)#1-Sr(2)-O(12)#2	146.22(19)	O(2)-Sr(2)-O(13)	72.4(2)
O(16)-Sr(2)-O(12)#2	88.2(2)	O(12)#2-Sr(2)-O(13)	83.7(3)
O(2)-Sr(2)-O(12)#2	72.07(18)	O(4)#1-Sr(2)-O(15)	79.9(3)

Symmetry transformations used to generate equivalent atoms:
#1 x-1,y,z #2 -x+1,-y,-z #3 -x,-y,-z #4 x+1,y,z

Table S14 Hydrogen bond lengths [Å] and angles [°] for complex **7**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
O(13)-H(13A)...O(1)	0.850(10)	2.06(6)	2.779(9)	142(9)
O(13)-H(13B)...O(14)#3	0.852(10)	2.53(10)	3.06(2)	121(10)
O(14)-H(14A)...O(8)#2	0.87	2.19	2.653(18)	112.8
O(14)-H(14A)...O(17)	0.87	2.33	2.83(2)	116.7
O(14)-H(14A)...O(17')	0.87	1.63	1.99(2)	100.9
O(14)-H(14B)...O(15')	0.88	2.40	3.25(2)	160.9
O(16)-H(16A)...O(8)#5	0.85	1.91	2.751(9)	169.5
O(16)-H(16B)...O(10)#6	0.85	1.86	2.706(9)	176.7
O(18)-H(18A)...O(9)	0.88	2.44	3.309(15)	170.3
O(18)-H(18A)...O(10)	0.88	2.44	2.973(13)	119.6
O(18)-H(18B)...O(19)#1	0.85	2.44	3.14(2)	141.0
O(19)-H(19A)...O(2)#7	0.85	2.32	3.089(10)	150.3
O(19)-H(19A)...O(4)#8	0.85	2.33	2.916(10)	126.9
O(19)-H(19B)...O(6)#9	0.85	2.55	3.179(15)	132.0
N(22)-H(22A)...O(6)#10	0.86	1.87	2.708(11)	164.8
N(23)-H(23A)...O(19)#11	0.86	2.02	2.843(12)	160.3
C(2)-H(2)...O(10)#6	0.93	2.51	3.236(10)	135.4
C(22)-H(22)...O(5)#10	0.93	2.58	3.167(14)	121.1

Symmetry transformations used to generate equivalent atoms:
#1 x-1,y,z #2 -x+1,-y,-z #3 -x,-y,-z #4 x+1,y,z
#5 x-1,y-1,z #6 x,y-1,z #7 x+1,y+1,z #8 x,y+1,z
#9 -x+1,-y+1,-z+1 #10 -x+1,-y,-z+1 #11 -x+2,-y+1,-z+1

Table S15 Selected bond lengths [Å] and angles [°] for complex **8**.

Gd(1)-O(7)	2.429(2)	O(2)-Sr(2)	2.560(2)
Gd(1)-O(1)	2.429(2)	O(2)-Sr(2)#1	2.736(2)
Gd(1)-O(11)	2.433(2)	Sr(2)-O(17)	2.563(2)
Gd(1)-O(5)	2.440(2)	Sr(2)-O(13)	2.574(3)
Gd(1)-O(3)	2.448(2)	Sr(2)-O(14)	2.583(3)
Gd(1)-O(9)	2.467(2)	Sr(2)-O(8)#2	2.584(2)

Gd(1)-N(2)	2.509(3)	Sr(2)-O(16)	2.622(3)
Gd(1)-N(1)	2.518(2)	Sr(2)-O(15)	2.648(3)
Gd(1)-N(3)	2.520(3)	Sr(2)-O(2)#1	2.736(2)
O(7)-Gd(1)-O(1)	91.04(8)	O(9)-Gd(1)-N(3)	63.25(8)
O(7)-Gd(1)-O(11)	77.04(7)	N(2)-Gd(1)-N(3)	124.21(8)
O(1)-Gd(1)-O(11)	151.46(7)	N(1)-Gd(1)-N(3)	118.90(8)
O(7)-Gd(1)-O(5)	127.48(8)	O(3)-Gd(1)-N(3)	72.95(8)
O(1)-Gd(1)-O(5)	77.13(8)	Sr(2)-O(2)-Sr(2)#1	113.89(8)
O(11)-Gd(1)-O(5)	89.59(8)	O(2)-Sr(2)-O(17)	140.68(7)
O(7)-Gd(1)-O(3)	77.29(8)	O(2)-Sr(2)-O(13)	82.01(11)
O(1)-Gd(1)-O(3)	127.10(7)	O(17)-Sr(2)-O(13)	92.34(12)
O(11)-Gd(1)-O(3)	75.96(8)	O(2)-Sr(2)-O(14)	126.95(9)
O(5)-Gd(1)-O(3)	148.15(8)	O(13)-Sr(2)-O(14)	142.15(10)
O(7)-Gd(1)-O(9)	148.28(8)	O(2)-Sr(2)-O(8)#2	75.36(7)
O(1)-Gd(1)-O(9)	74.93(7)	O(17)-Sr(2)-O(8)#2	143.95(8)
O(11)-Gd(1)-O(9)	127.21(7)	O(13)-Sr(2)-O(8)#2	94.82(12)
O(5)-Gd(1)-O(9)	77.67(8)	O(14)-Sr(2)-O(8)#2	73.71(9)
O(3)-Gd(1)-O(9)	88.60(8)	O(2)-Sr(2)-O(16)	84.90(8)
O(7)-Gd(1)-N(2)	63.88(8)	O(17)-Sr(2)-O(16)	78.80(9)
O(1)-Gd(1)-N(2)	72.40(8)	O(13)-Sr(2)-O(16)	146.67(10)
O(11)-Gd(1)-N(2)	79.07(8)	O(14)-Sr(2)-O(16)	68.09(9)
O(5)-Gd(1)-N(2)	63.76(8)	O(8)#2-Sr(2)-O(16)	111.29(9)
O(3)-Gd(1)-N(2)	137.53(8)	O(2)-Sr(2)-O(15)	134.85(9)
O(9)-Gd(1)-N(2)	133.69(8)	O(17)-Sr(2)-O(15)	76.55(9)
O(7)-Gd(1)-N(1)	73.53(8)	O(13)-Sr(2)-O(15)	69.48(11)
O(1)-Gd(1)-N(1)	63.83(8)	O(14)-Sr(2)-O(15)	72.67(10)
O(11)-Gd(1)-N(1)	133.76(8)	O(8)#2-Sr(2)-O(15)	73.10(9)
O(5)-Gd(1)-N(1)	136.65(8)	O(16)-Sr(2)-O(15)	136.73(10)
O(3)-Gd(1)-N(1)	63.37(8)	O(2)-Sr(2)-O(2)#1	66.11(8)
O(9)-Gd(1)-N(1)	74.75(8)	O(17)-Sr(2)-O(2)#1	74.80(7)
N(2)-Gd(1)-N(1)	116.87(8)	O(13)-Sr(2)-O(2)#1	75.23(10)
O(7)-Gd(1)-N(3)	135.30(8)	O(14)-Sr(2)-O(2)#1	135.12(8)
O(1)-Gd(1)-N(3)	133.58(8)	O(8)#2-Sr(2)-O(2)#1	141.09(7)
O(11)-Gd(1)-N(3)	63.97(8)	O(16)-Sr(2)-O(2)#1	71.44(8)
O(5)-Gd(1)-N(3)	75.20(8)	O(15)-Sr(2)-O(2)#1	132.94(8)

Symmetry transformations used to generate equivalent atoms:
#1 -x+1,-y+1,-z+1 #2 -x+1,-y+2,-z+1

Table S16 Hydrogen bond lengths [Å] and angles [°] for complex **8**.

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
N(4)-H(4A)...O(10)#3	0.86	1.86	2.712(4)	168.4
O(13)-H(13A)...O(20)#1	0.85	2.19	2.951(7)	149.1
O(13)-H(13B)...O(6)#4	0.85	2.22	3.022(4)	157.9
O(14)-H(14A)...O(19)#5	0.85	2.11	2.903(5)	155.1
O(14)-H(14B)...O(11)#2	0.85	1.98	2.824(3)	173.9
O(15)-H(15A)...O(7)#2	0.82(5)	1.98(5)	2.762(4)	161(5)
O(15)-H(15B)...O(21)	0.81(5)	2.09(5)	2.772(8)	142(5)
O(16)-H(16A)...O(6)#6	0.85	1.97	2.785(4)	160.6
O(16)-H(16B)...O(1)#1	0.85	2.09	2.860(3)	150.3
O(18)-H(18D)...O(17)#1	0.85	2.15	2.769(5)	129.3
O(19)-H(19A)...O(10)#6	0.85	2.06	2.902(5)	170.6
O(19)-H(19C)...O(12)#7	0.85	1.86	2.700(4)	168.0
O(20)-H(20A)...O(5)#6	0.85	2.07	2.902(5)	166.2
O(20)-H(20A)...O(6)#6	0.85	2.48	3.102(5)	130.9
O(20)-H(20B)...O(18)	0.85	2.09	2.793(6)	139.6
N(23)-H(23)...O(4)	0.86	1.85	2.703(4)	173.4
O(21)-H(21B)...O(19)#1	0.85	2.19	2.905(9)	141.4
O(21)-H(21B)...O(20)#1	0.85	2.40	3.127(9)	144.3

Symmetry transformations used to generate equivalent atoms:
#1 -x+1,-y+1,-z+1 #2 -x+1,-y+2,-z+1 #3 x,y+1,z
#4 -x+2,-y+1,-z+1 #5 -x,-y+1,-z+1 #6 x-1,y,z #7 x-1,y-1,z

Part 2. IR spectra of **1-8**.

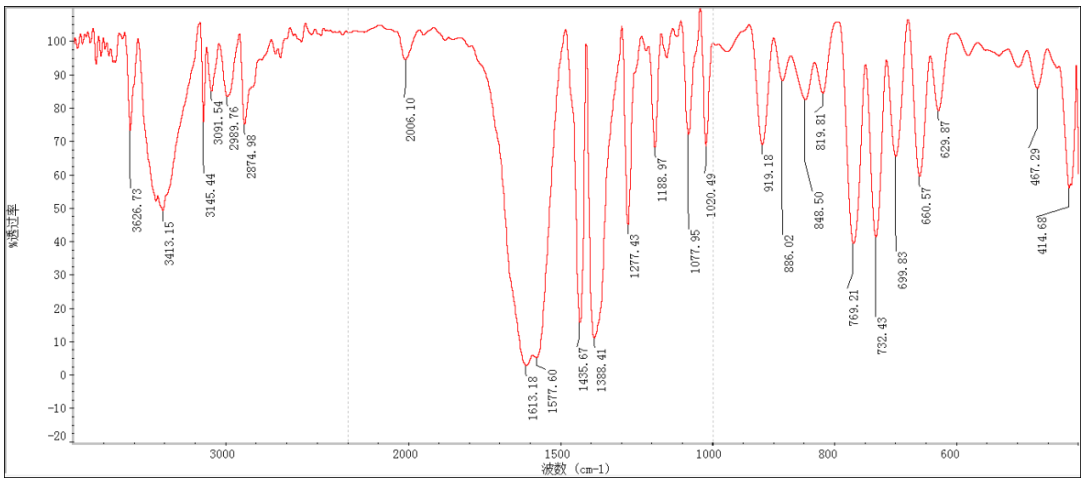

Fig. S1 IR spectrum of complex **1**.

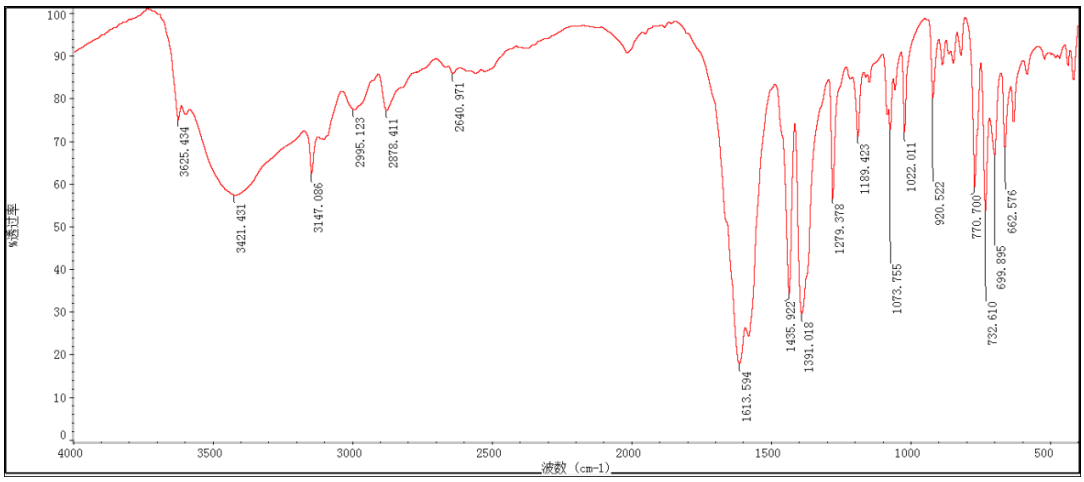

Fig. S2 IR spectrum of complex **2**.

Fig. S3 IR spectrum of complex **3**.

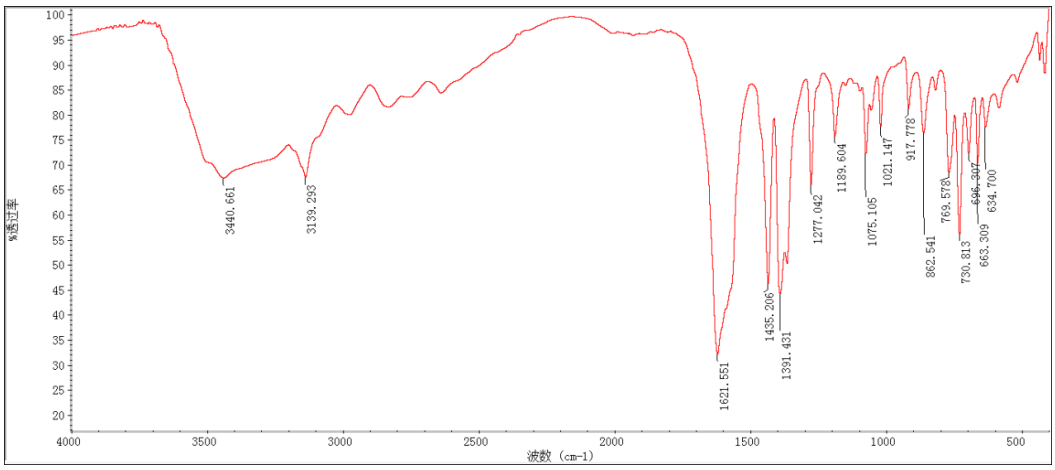

Fig. S4 IR spectrum of complex **4**.

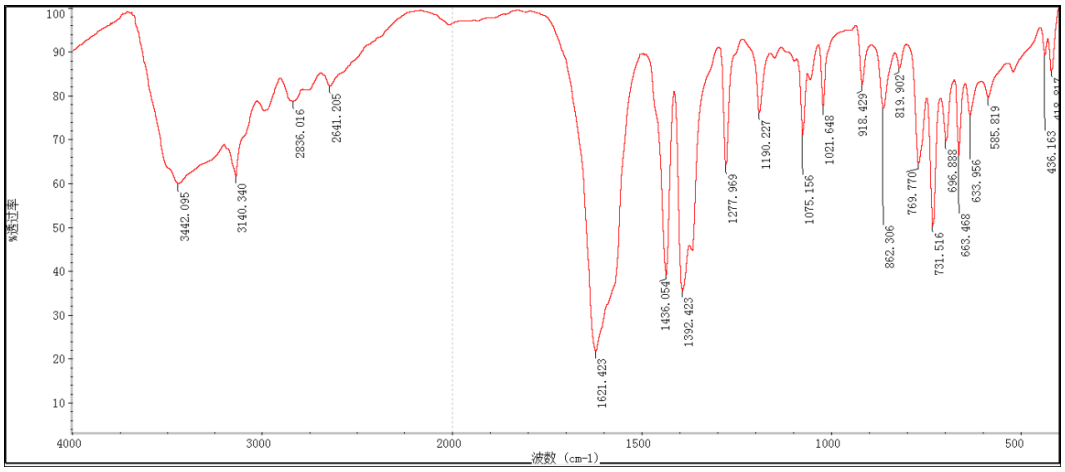

Fig. S5 IR spectrum of complex **5**.

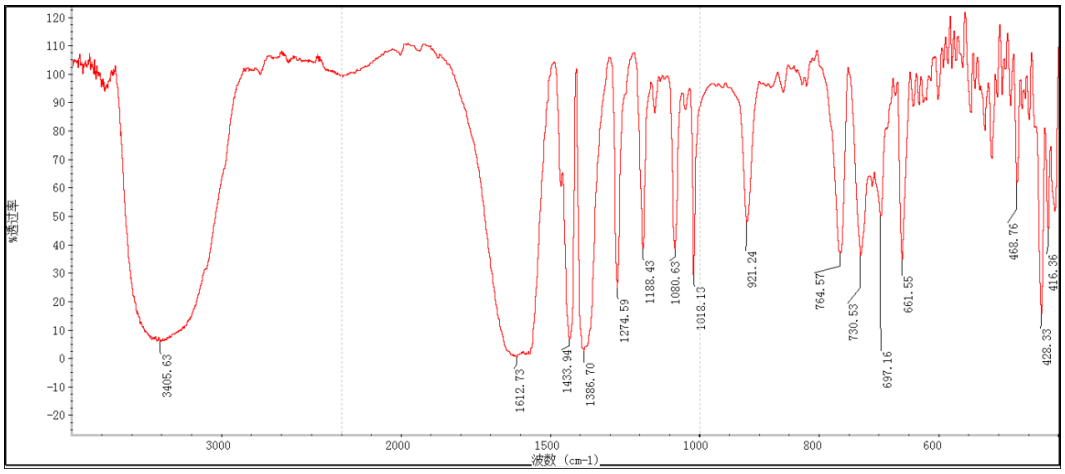

Fig. S6 IR spectrum of complex **6**.

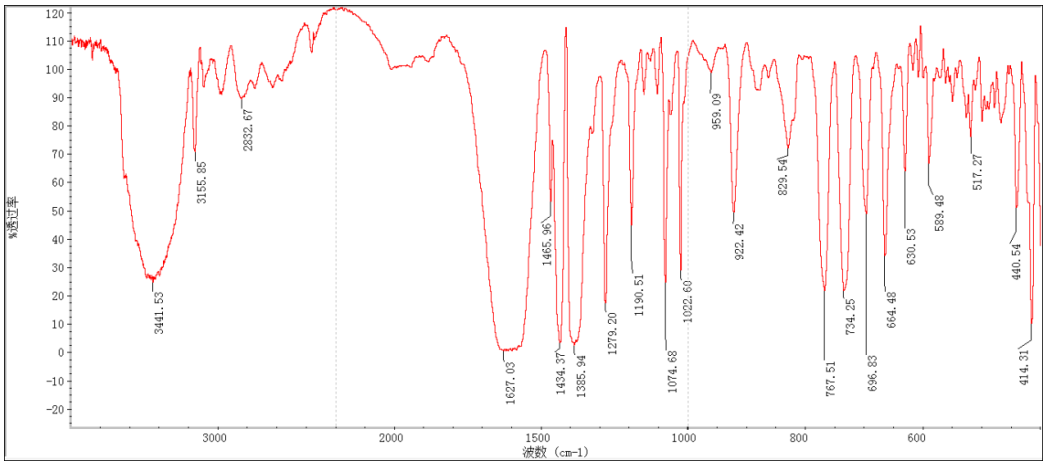

Fig. S7 IR spectrum of complex **7**.

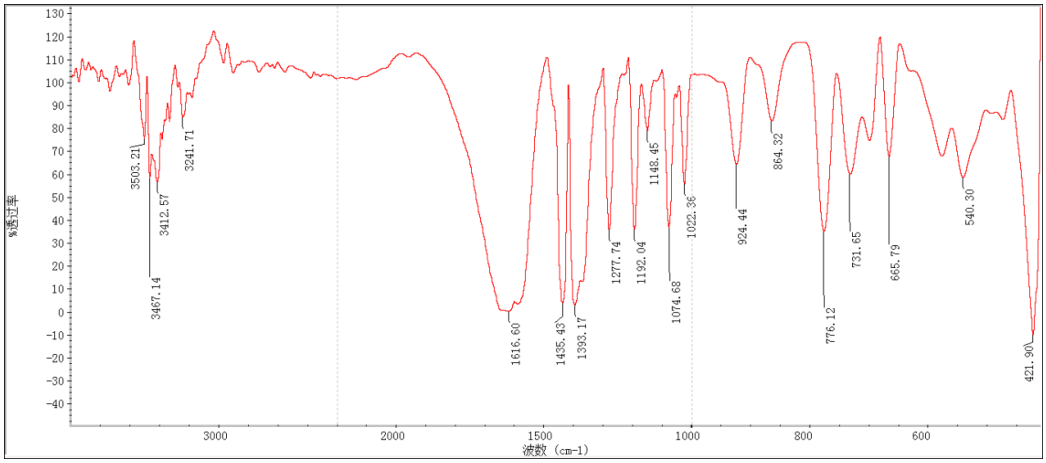

Fig. S8 IR spectrum of complex **8**.

Part 3. Low-temperature phosphorescence spectra of the complexes **2**, **5**, **6**, **8**.

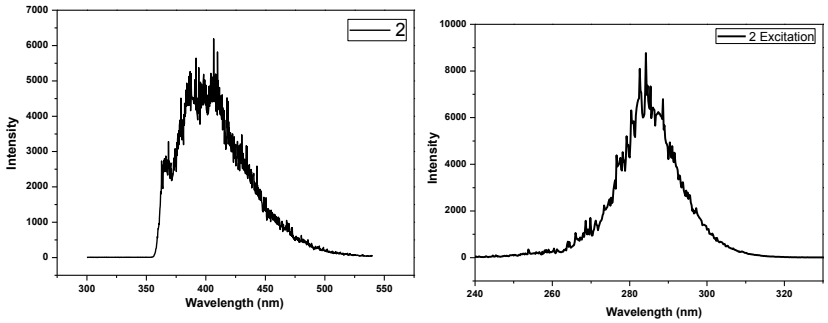

Fig. S9 Low-temperature phosphorescence spectra of the complex **2**.

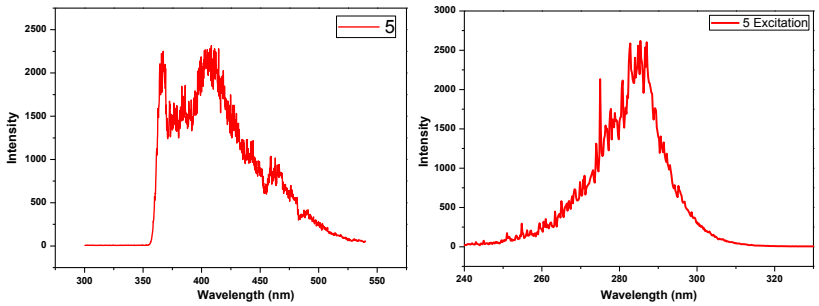

Fig. S10 Low-temperature phosphorescence spectra of the complex **5**.

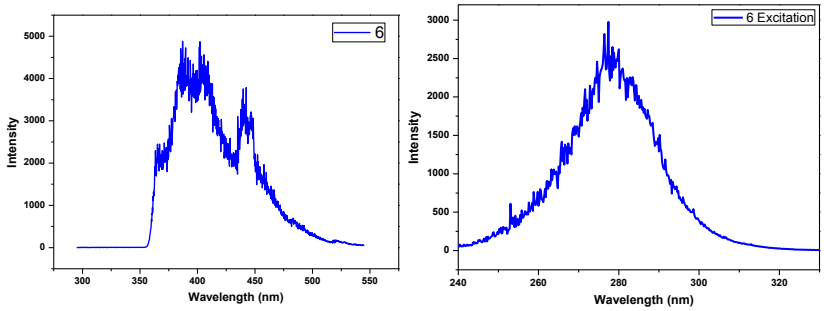

Fig. S11 Low-temperature phosphorescence spectra of the complex **6**.

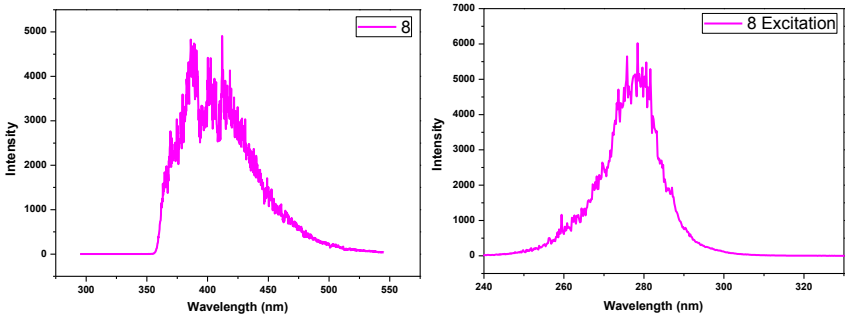

Fig. S12 Low-temperature phosphorescence spectra of the complex **8**.

Fig. S13 PXRD spectra of the complex **1-8**.