Supporting Information

Seven novel Sr^{II}-Sm^{III} and Sr^{II}-Dy^{III} coordination polymers: construction of five classes of structural topologies using different amount of imidazole

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

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

[c]*State Key Laboratory of Applied Organic Chemistry, Lanzhou University, Lanzhou, 730000, China*

1. Selected bond lengths [Å] and angles [°] for complexes **1-7**

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

Dy(1)-O(9)	2.396(17)	Sr(1)-O(24)#1	2.485(12)
Dy(1)-O(11)	2.398(14)	Sr(1)-O(33)	2.515(12)
Dy(1)-O(1)	2.402(12)	Sr(1)-O(8)#2	2.533(13)
Dy(1)-O(7)	2.410(12)	Sr(1)-O(14)	2.616(14)
Dy(1)-O(5)	2.467(14)	Sr(1)-O(34)	2.629(17)
Dy(1)-O(3)	2.468(16)	Sr(1)-O(26)	2.666(16)
Dy(1)-N(2)	2.490(17)	Sr(1)-O(25)	2.753(12)
Dy(1)-N(1)	2.511(16)	Sr(1)-O(13)	2.907(15)
Dy(1)-N(3)	2.514(13)	Sr(2)-O(35)	2.555(14)
Dy(2)-O(4)	2.275(15)	Sr(2)-O(20)#3	2.574(14)
Dy(2)-O(22)	2.297(13)	Sr(2)-O(36)	2.580(14)
Dy(2)-O(17)	2.319(13)	Sr(2)-O(37)	2.591(14)
Dy(2)-O(15)	2.346(13)	Sr(2)-O(39)	2.636(7)
Dy(2)-O(13)	2.432(14)	Sr(2)-O(38)	2.677(15)
Dy(2)-O(19)	2.442(12)	Sr(2)-O(28)	2.686(16)
Dy(2)-N(5)	2.469(18)	Sr(2)-O(40)	2.826(9)
Dy(2)-N(4)	2.482(14)	Sr(2)-O(27)	3.138(13)
Dy(3)-O(31)	2.361(14)	Sr(3)-O(32)	2.473(13)
Dy(3)-O(25)	2.394(12)	Sr(3)-O(2)#4	2.484(12)
Dy(3)-O(23)	2.407(13)	Sr(3)-O(41)	2.563(14)
Dy(3)-O(21)	2.420(14)	Sr(3)-O(12)#3	2.616(16)
Dy(3)-O(27)	2.421(15)	Sr(3)-O(40)	2.696(9)
Dy(3)-N(7)	2.433(18)	Sr(3)-O(20)#3	2.733(17)
Dy(3)-N(8)	2.484(14)	Sr(3)-O(19)#3	2.815(13)
Dy(3)-N(6)	2.484(19)	Sr(3)-O(11)#3	2.867(15)
Dy(3)-O(29)	2.510(14)		
O(9)-Dy(1)-O(11)	128.7(5)	O(21)-Dy(3)-N(8)	72.3(5)
O(9)-Dy(1)-O(1)	74.8(5)	O(27)-Dy(3)-N(8)	75.2(5)
O(11)-Dy(1)-O(1)	90.0(5)	N(7)-Dy(3)-N(8)	116.3(6)
O(9)-Dy(1)-O(7)	84.9(5)	O(31)-Dy(3)-N(6)	74.1(5)
O(11)-Dy(1)-O(7)	141.0(5)	O(25)-Dy(3)-N(6)	74.5(5)
O(1)-Dy(1)-O(7)	79.9(4)	O(23)-Dy(3)-N(6)	62.5(5)
O(9)-Dy(1)-O(5)	88.0(5)	O(21)-Dy(3)-N(6)	64.8(5)
O(11)-Dy(1)-O(5)	78.4(5)	O(27)-Dy(3)-N(6)	132.6(5)
O(1)-Dy(1)-O(5)	146.3(5)	N(7)-Dy(3)-N(6)	121.1(5)
O(7)-Dy(1)-O(5)	128.0(4)	N(8)-Dy(3)-N(6)	122.4(6)
O(9)-Dy(1)-O(3)	150.3(5)	O(31)-Dy(3)-O(29)	128.4(4)
O(11)-Dy(1)-O(3)	74.3(5)	O(25)-Dy(3)-O(29)	71.7(4)
O(1)-Dy(1)-O(3)	129.2(5)	O(23)-Dy(3)-O(29)	150.6(5)
O(7)-Dy(1)-O(3)	83.3(5)	O(21)-Dy(3)-O(29)	72.1(5)
O(5)-Dy(1)-O(3)	78.1(5)	O(27)-Dy(3)-O(29)	98.4(5)
O(9)-Dy(1)-N(2)	78.0(6)	N(7)-Dy(3)-O(29)	74.1(5)
O(11)-Dy(1)-N(2)	132.6(5)	N(8)-Dy(3)-O(29)	63.8(5)
O(1)-Dy(1)-N(2)	137.4(5)	N(6)-Dy(3)-O(29)	128.9(5)
O(7)-Dy(1)-N(2)	65.5(5)	O(24)#1-Sr(1)-O(33)	136.9(5)
O(5)-Dy(1)-N(2)	62.6(5)	O(24)#1-Sr(1)-O(8)#2	144.8(4)
O(3)-Dy(1)-N(2)	72.4(6)	O(33)-Sr(1)-O(8)#2	77.2(4)
O(9)-Dy(1)-N(1)	135.4(5)	O(24)#1-Sr(1)-O(14)	84.4(5)
O(11)-Dy(1)-N(1)	71.2(5)	O(33)-Sr(1)-O(14)	116.1(5)
O(1)-Dy(1)-N(1)	64.9(5)	O(8)#2-Sr(1)-O(14)	68.8(5)

O(7)-Dy(1)-N(1)	70.4(5)	O(24)#1-Sr(1)-O(34)	79.5(5)
O(5)-Dy(1)-N(1)	136.5(5)	O(33)-Sr(1)-O(34)	137.6(6)
O(3)-Dy(1)-N(1)	64.3(5)	O(8)#2-Sr(1)-O(34)	74.6(5)
N(2)-Dy(1)-N(1)	120.3(6)	O(14)-Sr(1)-O(34)	81.8(5)
O(9)-Dy(1)-N(3)	65.8(5)	O(24)#1-Sr(1)-O(26)	90.3(5)
O(11)-Dy(1)-N(3)	62.8(5)	O(33)-Sr(1)-O(26)	78.1(5)
O(1)-Dy(1)-N(3)	73.1(4)	O(8)#2-Sr(1)-O(26)	108.8(5)
O(7)-Dy(1)-N(3)	144.3(4)	O(14)-Sr(1)-O(26)	163.5(4)
O(5)-Dy(1)-N(3)	73.4(4)	O(34)-Sr(1)-O(26)	81.9(5)
O(3)-Dy(1)-N(3)	132.1(4)	O(24)#1-Sr(1)-O(25)	76.3(4)
N(2)-Dy(1)-N(3)	123.1(6)	O(33)-Sr(1)-O(25)	64.9(4)
N(1)-Dy(1)-N(3)	116.3(5)	O(8)#2-Sr(1)-O(25)	138.3(4)
O(4)-Dy(2)-O(22)	101.0(5)	O(14)-Sr(1)-O(25)	143.4(5)
O(4)-Dy(2)-O(17)	154.7(5)	O(34)-Sr(1)-O(25)	123.6(5)
O(22)-Dy(2)-O(17)	87.6(5)	O(26)-Sr(1)-O(25)	48.6(4)
O(4)-Dy(2)-O(15)	87.3(5)	O(24)#1-Sr(1)-O(13)	102.1(5)
O(22)-Dy(2)-O(15)	155.7(4)	O(33)-Sr(1)-O(13)	73.4(5)
O(17)-Dy(2)-O(15)	94.5(5)	O(8)#2-Sr(1)-O(13)	76.8(5)
O(4)-Dy(2)-O(13)	79.4(5)	O(14)-Sr(1)-O(13)	47.5(4)
O(22)-Dy(2)-O(13)	74.2(4)	O(34)-Sr(1)-O(13)	128.1(5)
O(17)-Dy(2)-O(13)	80.2(5)	O(26)-Sr(1)-O(13)	148.9(4)
O(15)-Dy(2)-O(13)	130.0(4)	O(25)-Sr(1)-O(13)	106.5(4)
O(4)-Dy(2)-O(19)	77.7(5)	O(35)-Sr(2)-O(20)#3	134.4(5)
O(22)-Dy(2)-O(19)	81.9(4)	O(35)-Sr(2)-O(36)	78.8(5)
O(17)-Dy(2)-O(19)	127.4(5)	O(20)#3-Sr(2)-O(36)	146.2(5)
O(15)-Dy(2)-O(19)	77.6(4)	O(35)-Sr(2)-O(37)	70.3(5)
O(13)-Dy(2)-O(19)	142.8(5)	O(20)#3-Sr(2)-O(37)	119.3(5)
O(4)-Dy(2)-N(5)	141.2(5)	O(36)-Sr(2)-O(37)	72.4(5)
O(22)-Dy(2)-N(5)	77.9(5)	O(35)-Sr(2)-O(39)	137.5(5)
O(17)-Dy(2)-N(5)	63.8(4)	O(20)#3-Sr(2)-O(39)	68.4(6)
O(15)-Dy(2)-N(5)	81.4(5)	O(36)-Sr(2)-O(39)	91.2(6)
O(13)-Dy(2)-N(5)	134.9(4)	O(37)-Sr(2)-O(39)	67.3(5)
O(19)-Dy(2)-N(5)	63.7(4)	O(35)-Sr(2)-O(38)	139.0(6)
O(4)-Dy(2)-N(4)	82.7(5)	O(20)#3-Sr(2)-O(38)	75.1(5)
O(22)-Dy(2)-N(4)	137.7(5)	O(36)-Sr(2)-O(38)	73.2(6)
O(17)-Dy(2)-N(4)	75.1(5)	O(37)-Sr(2)-O(38)	126.0(5)
O(15)-Dy(2)-N(4)	65.7(5)	O(39)-Sr(2)-O(38)	73.1(6)
O(13)-Dy(2)-N(4)	65.0(5)	O(35)-Sr(2)-O(28)	70.8(4)
O(19)-Dy(2)-N(4)	138.9(4)	O(20)#3-Sr(2)-O(28)	97.6(5)
N(5)-Dy(2)-N(4)	124.4(5)	O(36)-Sr(2)-O(28)	87.4(5)
O(31)-Dy(3)-O(25)	148.5(5)	O(37)-Sr(2)-O(28)	138.8(5)
O(31)-Dy(3)-O(23)	79.1(4)	O(39)-Sr(2)-O(28)	150.7(5)
O(25)-Dy(3)-O(23)	89.2(4)	O(38)-Sr(2)-O(28)	78.5(5)
O(31)-Dy(3)-O(21)	84.8(5)	O(35)-Sr(2)-O(40)	82.7(4)
O(25)-Dy(3)-O(21)	79.3(5)	O(20)#3-Sr(2)-O(40)	66.0(4)
O(23)-Dy(3)-O(21)	127.2(5)	O(36)-Sr(2)-O(40)	137.6(5)
O(31)-Dy(3)-O(27)	76.7(5)	O(37)-Sr(2)-O(40)	65.5(4)
O(25)-Dy(3)-O(27)	128.8(5)	O(39)-Sr(2)-O(40)	77.4(5)
O(23)-Dy(3)-O(27)	76.0(5)	O(38)-Sr(2)-O(40)	137.6(5)
O(21)-Dy(3)-O(27)	147.0(5)	O(28)-Sr(2)-O(40)	121.6(4)
O(31)-Dy(3)-N(7)	139.5(5)	O(35)-Sr(2)-O(27)	66.3(4)
O(25)-Dy(3)-N(7)	63.1(5)	O(20)#3-Sr(2)-O(27)	75.1(4)
O(23)-Dy(3)-N(7)	77.4(5)	O(36)-Sr(2)-O(27)	126.2(5)
O(21)-Dy(3)-N(7)	135.6(5)	O(37)-Sr(2)-O(27)	125.9(4)
O(27)-Dy(3)-N(7)	65.9(6)	O(39)-Sr(2)-O(27)	141.9(5)

O(31)-Dy(3)-N(8)	65.3(5)	O(38)-Sr(2)-O(27)	108.0(4)
O(25)-Dy(3)-N(8)	132.6(4)	O(28)-Sr(2)-O(27)	43.7(4)
O(23)-Dy(3)-N(8)	138.2(5)	O(40)-Sr(2)-O(27)	78.2(4)
O(41)-Sr(3)-O(20)#3	107.2(5)	O(32)-Sr(3)-O(2)#4	147.9(5)
O(12)#3-Sr(3)-O(20)#3	150.0(4)	O(32)-Sr(3)-O(41)	69.6(5)
O(40)-Sr(3)-O(20)#3	65.8(4)	O(2)#4-Sr(3)-O(41)	131.2(5)
O(32)-Sr(3)-O(19)#3	85.9(5)	O(32)-Sr(3)-O(12)#3	84.4(5)
O(2)#4-Sr(3)-O(19)#3	121.6(5)	O(2)#4-Sr(3)-O(12)#3	78.0(5)
O(41)-Sr(3)-O(19)#3	71.7(5)	O(41)-Sr(3)-O(12)#3	78.9(5)
O(12)#3-Sr(3)-O(19)#3	150.6(4)	O(32)-Sr(3)-O(40)	73.9(4)
O(40)-Sr(3)-O(19)#3	112.4(4)	O(2)#4-Sr(3)-O(40)	79.8(4)
O(20)#3-Sr(3)-O(19)#3	46.7(4)	O(41)-Sr(3)-O(40)	142.9(4)
O(32)-Sr(3)-O(11)#3	114.5(5)	O(12)#3-Sr(3)-O(40)	91.4(4)
O(2)#4-Sr(3)-O(11)#3	71.8(5)	O(32)-Sr(3)-O(20)#3	71.0(5)
O(41)-Sr(3)-O(11)#3	60.9(4)	O(2)#4-Sr(3)-O(20)#3	114.3(5)
O(12)#3-Sr(3)-O(11)#3	47.6(4)	O(20)#3-Sr(3)-O(11)#3	160.3(4)
O(40)-Sr(3)-O(11)#3	133.5(4)	O(19)#3-Sr(3)-O(11)#3	113.8(4)
Symmetry transformations used to generate equivalent atoms: #1 -x+1,-y+1,-z #2 -x+1,-y+1,-z+1 #3 -x+1,-y,-z #4 x,y,z-1 #5 x,y,z+1			

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

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
O(30)-H(30A)...O(5)	0.82	1.82	2.50(2)	138.8
O(30)-H(30A)...O(6)	0.82	2.42	3.19(3)	156.7
O(33)-H(33A)...O(29)	0.85	2.43	3.255(19)	164.7
O(33)-H(33B)...O(3)	0.85	1.96	2.805(16)	170.0
O(34)-H(34A)...O(7)#2	0.84	2.46	2.94(2)	117.1
O(34)-H(34B)...O(24)#1	0.84	2.50	3.27(2)	154.6
O(35)-H(35A)...O(23)	0.85	1.97	2.813(19)	174.1
O(35)-H(35B)...O(14)#1	0.85	2.54	3.02(2)	116.8
O(36)-H(36A)...O(16)#6	0.85	2.05	2.88(2)	164.2
O(36)-H(36B)...O(10)#4	0.85	1.99	2.80(2)	158.5
O(37)-H(37A)...O(9)#4	0.85	2.39	3.10(2)	141.7
O(37)-H(37A)...O(1)#4	0.85	2.49	3.16(2)	136.9
O(37)-H(37B)...O(14)#1	0.85	1.96	2.808(19)	175.5
O(38)-H(38A)...O(10)#7	0.85	2.19	2.85(2)	134.6
O(38)-H(38B)...O(36)	0.85	2.47	3.14(2)	135.4
O(39)-H(39A)...O(1)#4	0.82	2.22	2.885(18)	137.8
O(39)-H(39B)...O(2)#4	0.82	2.28	3.03(2)	151.8
O(40)-H(40A)...O(31)	0.82	2.20	2.835(16)	135.0
O(40)-H(40B)...O(34)#1	0.82	2.46	3.28(2)	175.0
O(41)-H(41A)...O(11)#3	0.85	2.15	2.762(19)	129.1
O(41)-H(41B)...O(21)#3	0.85	2.02	2.855(17)	168.8
Symmetry transformations used to generate equivalent atoms: #1 -x+1,-y+1,-z #2 -x+1,-y+1,-z+1 #3 -x+1,-y,-z #4 x,y,z-1 #5 x,y,z+1 #6 x-1,y,z-1 #7 -x,-y,-z				

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

Sm(1)-O(7)	2.447(5)	Sr(2)-O(14)	2.529(7)
Sm(1)-O(9)	2.454(6)	Sr(2)-O(4)#1	2.575(6)
Sm(1)-O(1)	2.463(5)	Sr(2)-O(15)	2.624(6)
Sm(1)-O(3)	2.466(5)	Sr(2)-O(6)#2	2.625(6)
Sm(1)-O(11)	2.469(5)	Sr(2)-O(17)	2.629(7)
Sm(1)-O(5)	2.484(6)	Sr(2)-O(2)	2.652(6)
Sm(1)-N(2)	2.537(6)	Sr(2)-O(13)	2.658(6)
Sm(1)-N(3)	2.552(7)	Sr(2)-O(16)	2.663(6)
Sm(1)-N(1)	2.562(6)		

O(7)-Sm(1)-O(9)	90.9(2)	O(11)-Sm(1)-N(1)	73.80(19)
O(7)-Sm(1)-O(1)	152.72(19)	O(5)-Sm(1)-N(1)	75.7(2)
O(9)-Sm(1)-O(1)	76.36(19)	N(2)-Sm(1)-N(1)	119.0(2)
O(7)-Sm(1)-O(3)	75.00(19)	N(3)-Sm(1)-N(1)	122.6(2)
O(9)-Sm(1)-O(3)	151.94(19)	O(14)-Sr(2)-O(4)#1	140.4(2)
O(1)-Sm(1)-O(3)	125.89(18)	O(14)-Sr(2)-O(15)	81.4(2)
O(7)-Sm(1)-O(11)	76.99(19)	O(4)#1-Sr(2)-O(15)	73.3(2)
O(9)-Sm(1)-O(11)	126.07(18)	O(14)-Sr(2)-O(6)#2	144.0(2)
O(1)-Sm(1)-O(11)	91.06(19)	O(4)#1-Sr(2)-O(6)#2	74.61(19)
O(3)-Sm(1)-O(11)	74.91(18)	O(15)-Sr(2)-O(6)#2	109.9(2)
O(7)-Sm(1)-O(5)	127.21(18)	O(14)-Sr(2)-O(17)	101.6(3)
O(9)-Sm(1)-O(5)	76.70(19)	O(4)#1-Sr(2)-O(17)	83.2(3)
O(1)-Sm(1)-O(5)	73.73(18)	O(15)-Sr(2)-O(17)	144.2(2)
O(3)-Sm(1)-O(5)	92.51(19)	O(6)#2-Sr(2)-O(17)	88.7(2)
O(11)-Sm(1)-O(5)	149.48(19)	O(14)-Sr(2)-O(2)	77.2(2)
O(7)-Sm(1)-N(2)	63.7(2)	O(4)#1-Sr(2)-O(2)	139.72(18)
O(9)-Sm(1)-N(2)	76.93(19)	O(15)-Sr(2)-O(2)	141.23(19)
O(1)-Sm(1)-N(2)	133.5(2)	O(6)#2-Sr(2)-O(2)	73.25(19)
O(3)-Sm(1)-N(2)	75.08(19)	O(17)-Sr(2)-O(2)	72.4(2)
O(11)-Sm(1)-N(2)	135.3(2)	O(14)-Sr(2)-O(13)	81.4(2)
O(5)-Sm(1)-N(2)	63.48(19)	O(4)#1-Sr(2)-O(13)	114.3(2)
O(7)-Sm(1)-N(3)	71.31(19)	O(15)-Sr(2)-O(13)	66.8(2)
O(9)-Sm(1)-N(3)	63.34(19)	O(6)#2-Sr(2)-O(13)	72.9(2)
O(1)-Sm(1)-N(3)	81.41(19)	O(17)-Sr(2)-O(13)	148.9(2)
O(3)-Sm(1)-N(3)	130.48(19)	O(2)-Sr(2)-O(13)	78.24(19)
O(11)-Sm(1)-N(3)	62.98(19)	O(14)-Sr(2)-O(16)	70.8(2)
O(5)-Sm(1)-N(3)	136.87(19)	O(4)#1-Sr(2)-O(16)	73.6(2)
N(2)-Sm(1)-N(3)	118.2(2)	O(15)-Sr(2)-O(16)	75.6(2)
O(7)-Sm(1)-N(1)	133.52(19)	O(6)#2-Sr(2)-O(16)	144.4(2)
O(9)-Sm(1)-N(1)	135.6(2)	O(17)-Sr(2)-O(16)	72.1(2)
O(1)-Sm(1)-N(1)	62.89(18)	O(2)-Sr(2)-O(16)	125.3(2)
O(3)-Sm(1)-N(1)	63.00(19)	O(13)-Sr(2)-O(16)	135.9(2)
Symmetry transformations used to generate equivalent atoms: #1 x+1/2,-y+3/2,z+1/2 #2 -x+1/2,y-1/2,-z+1/2 #3 x-1/2,-y+3/2,z-1/2 #4 -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)
N(4)-H(4A)...O(8)#1	0.86	1.90	2.755(9)	173.3
O(13)-H(13A)...O(5)	0.85	2.06	2.827(9)	150.6
O(13)-H(13B)...O(2)#4	0.85	2.26	3.106(9)	175.3
O(14)-H(14A)...O(1)	0.85	1.97	2.761(9)	155.2
O(14)-H(14B)...O(18)	0.85	2.01	2.796(10)	152.5
O(15)-H(15A)...O(11)#1	0.85	2.05	2.812(8)	149.5
O(15)-H(15B)...O(12)#1	0.85	2.51	3.075(10)	125.0
O(16)-H(16A)...O(14)	0.85	2.47	3.010(10)	122.2
O(16)-H(16A)...O(18)	0.85	2.55	3.275(11)	143.6
O(16)-H(16B)...O(3)#1	0.85	2.38	2.790(9)	110.4
O(16)-H(16B)...O(7)#1	0.85	2.49	3.281(9)	155.0
O(17)-H(17A)...O(6)#5	0.85	2.54	3.210(10)	136.4
O(17)-H(17B)...O(13)#2	0.85	2.58	3.049(10)	116.1
O(18)-H(18B)...O(8)#6	0.85	2.07	2.842(9)	150.7
O(18)-H(18A)...O(12)#1	0.85	2.09	2.889(10)	155.2
C(9)-H(9)...O(2)#7	0.93	2.55	3.418(10)	155.9
C(22)-H(22)...O(7)#8	0.93	2.57	3.261(11)	131.3
Symmetry transformations used to generate equivalent atoms: #1 x+1/2,-y+3/2,z+1/2 #2 -x+1/2,y-1/2,-z+1/2 #3 x-1/2,-y+3/2,z-1/2 #4 -x+1/2,y+1/2,-z+1/2				

#5 x,y-1,z	#6 -x+1,-y+2,-z	#7 x,y+1,z	#8 -x+1,-y+1,-z

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

Dy(1)-O(3)	2.3926(15)	Sr(2)-O(15)	2.526(2)
Dy(1)-O(11)	2.3978(16)	Sr(2)-O(6)#1	2.5711(16)
Dy(1)-O(7)	2.4090(16)	Sr(2)-O(2)	2.5969(17)
Dy(1)-O(9)	2.4106(16)	Sr(2)-O(16)	2.608(2)
Dy(1)-O(5)	2.4173(16)	Sr(2)-O(13)	2.621(2)
Dy(1)-O(1)	2.4325(15)	Sr(2)-O(8)#2	2.6421(16)
Dy(1)-N(1)	2.4692(19)	Sr(2)-O(14)	2.6424(19)
Dy(1)-N(3)	2.4847(18)	Sr(2)-O(17)	2.6490(19)
Dy(1)-N(2)	2.4953(19)		
O(3)-Dy(1)-O(11)	90.56(6)	O(5)-Dy(1)-N(2)	64.25(6)
O(3)-Dy(1)-O(7)	150.29(6)	O(1)-Dy(1)-N(2)	74.46(6)
O(11)-Dy(1)-O(7)	76.44(6)	N(1)-Dy(1)-N(2)	118.82(6)
O(3)-Dy(1)-O(9)	77.10(6)	N(3)-Dy(1)-N(2)	122.31(6)
O(11)-Dy(1)-O(9)	128.69(6)	O(15)-Sr(2)-O(6)#1	140.23(6)
O(7)-Dy(1)-O(9)	90.23(6)	O(15)-Sr(2)-O(2)	144.03(6)
O(3)-Dy(1)-O(5)	74.75(6)	O(6)#1-Sr(2)-O(2)	75.01(5)
O(11)-Dy(1)-O(5)	149.14(6)	O(15)-Sr(2)-O(16)	81.94(8)
O(7)-Dy(1)-O(5)	128.19(6)	O(6)#1-Sr(2)-O(16)	73.49(6)
O(9)-Dy(1)-O(5)	75.05(6)	O(2)-Sr(2)-O(16)	110.21(6)
O(3)-Dy(1)-O(1)	129.29(6)	O(15)-Sr(2)-O(13)	104.03(9)
O(11)-Dy(1)-O(1)	76.38(6)	O(6)#1-Sr(2)-O(13)	80.83(8)
O(7)-Dy(1)-O(1)	74.00(5)	O(2)-Sr(2)-O(13)	85.67(7)
O(9)-Dy(1)-O(1)	146.98(6)	O(16)-Sr(2)-O(13)	144.46(8)
O(5)-Dy(1)-O(1)	91.92(6)	O(15)-Sr(2)-O(8)#2	75.77(6)
O(3)-Dy(1)-N(1)	64.97(6)	O(6)#1-Sr(2)-O(8)#2	140.78(5)
O(11)-Dy(1)-N(1)	75.41(6)	O(2)-Sr(2)-O(8)#2	74.12(5)
O(7)-Dy(1)-N(1)	133.87(6)	O(16)-Sr(2)-O(8)#2	140.72(6)
O(9)-Dy(1)-N(1)	135.77(6)	O(13)-Sr(2)-O(8)#2	73.29(7)
O(5)-Dy(1)-N(1)	73.78(6)	O(15)-Sr(2)-O(14)	70.31(7)
O(1)-Dy(1)-N(1)	64.32(6)	O(6)#1-Sr(2)-O(14)	73.57(6)
O(3)-Dy(1)-N(3)	70.84(6)	O(2)-Sr(2)-O(14)	144.61(6)
O(11)-Dy(1)-N(3)	64.61(6)	O(16)-Sr(2)-O(14)	75.72(6)
O(7)-Dy(1)-N(3)	79.45(6)	O(13)-Sr(2)-O(14)	73.69(7)
O(9)-Dy(1)-N(3)	64.28(6)	O(8)#2-Sr(2)-O(14)	124.18(6)
O(5)-Dy(1)-N(3)	131.11(6)	O(15)-Sr(2)-O(17)	81.36(8)
O(1)-Dy(1)-N(3)	136.87(6)	O(6)#1-Sr(2)-O(17)	115.33(6)
N(1)-Dy(1)-N(3)	118.73(6)	O(2)-Sr(2)-O(17)	73.49(6)
O(3)-Dy(1)-N(2)	133.72(6)	O(16)-Sr(2)-O(17)	67.02(7)
O(11)-Dy(1)-N(2)	135.72(6)	O(13)-Sr(2)-O(17)	148.11(7)
O(7)-Dy(1)-N(2)	63.94(6)	O(8)#2-Sr(2)-O(17)	77.86(6)
O(9)-Dy(1)-N(2)	72.55(6)	O(14)-Sr(2)-O(17)	135.75(7)

Symmetry transformations used to generate equivalent atoms:
#1 -x+2,-y+1,-z+1 #2 -x+3/2,y-1/2,-z+1/2
#3 -x+3/2,y+1/2,-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(5)-H(5)...O(12)#4	0.86	1.82	2.677(3)	174.5
N(6)-H(6)...O(4)#5	0.86	1.89	2.748(3)	173.1
O(13)-H(13A)...O(1)	0.85	2.59	3.294(3)	141.6
O(13)-H(13A)...O(17)#3	0.85	2.59	3.019(3)	112.2
O(13)-H(13B)...O(2)#3	0.85	2.58	3.308(3)	145.0
O(14)-H(14A)...O(5)#1	0.85	1.97	2.807(2)	165.6
O(14)-H(14B)...O(18)#6	0.85	2.45	3.192(3)	147.0

O(15)-H(15A)...O(7)#2	0.85	2.02	2.748(3)	142.9
O(15)-H(15B)...O(18)#6	0.85	1.99	2.786(3)	155.0
O(16)-H(16A)...O(10)#1	0.85	2.28	3.050(3)	149.9
O(16)-H(16B)...O(9)#1	0.85	2.24	2.805(3)	124.4
O(17)-H(17A)...O(1)#2	0.85	2.28	2.823(2)	121.8
O(17)-H(17B)...O(13)#2	0.85	2.29	3.019(3)	144.3
O(17)-H(17B)...O(8)#7	0.85	2.53	3.147(3)	130.6
O(18)-H(18A)...O(4)#1	0.85	2.03	2.810(3)	152.4
O(18)-H(18B)...O(10)#5	0.85	2.30	2.888(3)	126.6
C(2)-H(2)...O(8)#7	0.93	2.52	3.377(3)	153.7
C(22)-H(22)...O(3)#8	0.93	2.56	3.242(3)	130.4
C(23)-H(23)...O(13)#9	0.93	2.54	3.409(4)	154.8
Symmetry transformations used to generate equivalent atoms: #1 -x+2,-y+1,-z+1 #2 -x+3/2,y-1/2,-z+1/2 #3 -x+3/2,y+1/2,-z+1/2 #4 x+1,y+1,z #5 x+1/2,-y+3/2,z-1/2 #6 -x+5/2,y-1/2,-z+1/2 #7 x,y-1,z #8 -x+2,-y+2,-z+1 #9 -x+5/2,y+1/2,-z+1/2				

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

Sm(1)-O(9)	2.421(3)	Sm(2)-O(19)	2.477(3)
Sm(1)-O(5)	2.438(3)	Sm(2)-O(17)	2.491(3)
Sm(1)-O(11)	2.460(3)	Sm(2)-N(6)	2.508(3)
Sm(1)-O(1)	2.463(3)	Sm(2)-N(4)	2.528(3)
Sm(1)-O(3)	2.469(3)	Sm(2)-N(5)	2.549(3)
Sm(1)-O(7)	2.481(3)	Sr(3)-O(24)#1	2.529(3)
Sm(1)-N(1)	2.538(3)	Sr(3)-O(25)	2.572(3)
Sm(1)-N(3)	2.543(3)	Sr(3)-O(29)	2.606(3)
Sm(1)-N(2)	2.550(3)	Sr(3)-O(26)	2.607(3)
Sm(2)-O(21)	2.427(3)	Sr(3)-O(14)	2.610(3)
Sm(2)-O(15)	2.437(3)	Sr(3)-O(28)	2.615(3)
Sm(2)-O(13)	2.448(3)	Sr(3)-O(27)	2.669(3)
Sm(2)-O(23)	2.453(3)		
O(9)-Sm(1)-O(5)	149.31(10)	O(19)-Sm(2)-O(17)	126.18(9)
O(9)-Sm(1)-O(11)	126.05(9)	O(21)-Sm(2)-N(6)	64.22(11)
O(5)-Sm(1)-O(11)	78.17(10)	O(15)-Sm(2)-N(6)	136.40(10)
O(9)-Sm(1)-O(1)	85.33(9)	O(13)-Sm(2)-N(6)	75.19(10)
O(5)-Sm(1)-O(1)	80.19(9)	O(23)-Sm(2)-N(6)	63.33(10)
O(11)-Sm(1)-O(1)	80.80(9)	O(19)-Sm(2)-N(6)	74.53(10)
O(9)-Sm(1)-O(3)	76.78(9)	O(17)-Sm(2)-N(6)	135.45(10)
O(5)-Sm(1)-O(3)	90.18(9)	O(21)-Sm(2)-N(4)	133.27(10)
O(11)-Sm(1)-O(3)	148.64(9)	O(15)-Sm(2)-N(4)	63.68(9)
O(1)-Sm(1)-O(3)	126.20(9)	O(13)-Sm(2)-N(4)	63.22(9)
O(9)-Sm(1)-O(7)	77.79(9)	O(23)-Sm(2)-N(4)	75.33(10)
O(5)-Sm(1)-O(7)	126.41(9)	O(19)-Sm(2)-N(4)	134.68(10)
O(11)-Sm(1)-O(7)	87.37(9)	O(17)-Sm(2)-N(4)	76.68(10)
O(1)-Sm(1)-O(7)	147.95(9)	N(6)-Sm(2)-N(4)	118.99(10)
O(3)-Sm(1)-O(7)	76.24(9)	O(21)-Sm(2)-N(5)	72.29(10)
O(9)-Sm(1)-N(1)	74.44(10)	O(15)-Sm(2)-N(5)	77.48(10)
O(5)-Sm(1)-N(1)	74.88(10)	O(13)-Sm(2)-N(5)	133.41(9)
O(11)-Sm(1)-N(1)	137.70(9)	O(23)-Sm(2)-N(5)	134.15(9)
O(1)-Sm(1)-N(1)	63.02(9)	O(19)-Sm(2)-N(5)	63.10(9)
O(3)-Sm(1)-N(1)	63.35(9)	O(17)-Sm(2)-N(5)	63.20(10)
O(7)-Sm(1)-N(1)	134.92(9)	N(6)-Sm(2)-N(5)	116.65(10)
O(9)-Sm(1)-N(3)	63.58(9)	N(4)-Sm(2)-N(5)	124.35(10)
O(5)-Sm(1)-N(3)	134.02(9)	O(24)#1-Sr(3)-O(25)	138.42(9)
O(11)-Sm(1)-N(3)	62.57(10)	O(24)#1-Sr(3)-O(2)	72.76(9)
O(1)-Sm(1)-N(3)	71.18(9)	O(25)-Sr(3)-O(2)	148.75(9)
O(3)-Sm(1)-N(3)	135.77(9)	O(24)#1-Sr(3)-O(29)	112.77(11)
O(7)-Sm(1)-N(3)	76.91(9)	O(25)-Sr(3)-O(29)	83.13(11)
N(1)-Sm(1)-N(3)	119.08(10)	O(2)-Sr(3)-O(29)	84.69(10)
O(9)-Sm(1)-N(2)	134.13(9)	O(24)#1-Sr(3)-O(26)	73.43(10)

O(5)-Sm(1)-N(2)	63.69(9)	O(25)-Sr(3)-O(26)	77.26(10)
O(11)-Sm(1)-N(2)	76.70(10)	O(2)-Sr(3)-O(26)	124.64(10)
O(1)-Sm(1)-N(2)	140.45(9)	O(29)-Sr(3)-O(26)	69.93(10)
O(3)-Sm(1)-N(2)	72.05(9)	O(24)#1-Sr(3)-O(14)	144.64(9)
O(7)-Sm(1)-N(2)	62.79(9)	O(25)-Sr(3)-O(14)	74.93(9)
N(1)-Sm(1)-N(2)	117.65(10)	O(2)-Sr(3)-O(14)	74.25(9)
N(3)-Sm(1)-N(2)	123.26(10)	O(29)-Sr(3)-O(14)	76.13(10)
O(21)-Sm(2)-O(15)	149.54(10)	O(26)-Sr(3)-O(14)	138.10(9)
O(21)-Sm(2)-O(13)	74.65(10)	O(24)#1-Sr(3)-O(28)	83.04(11)
O(15)-Sm(2)-O(13)	126.81(9)	O(25)-Sr(3)-O(28)	106.53(11)
O(21)-Sm(2)-O(23)	127.55(10)	O(2)-Sr(3)-O(28)	69.25(10)
O(15)-Sm(2)-O(23)	77.41(9)	O(29)-Sr(3)-O(28)	144.33(10)
O(13)-Sm(2)-O(23)	92.18(9)	O(26)-Sr(3)-O(28)	145.23(10)
O(21)-Sm(2)-O(19)	92.02(10)	O(14)-Sr(3)-O(28)	73.67(10)
O(15)-Sm(2)-O(19)	77.38(9)	O(24)#1-Sr(3)-O(27)	72.04(10)
O(13)-Sm(2)-O(19)	149.72(9)	O(25)-Sr(3)-O(27)	72.89(10)
O(23)-Sm(2)-O(19)	74.32(9)	O(2)-Sr(3)-O(27)	129.88(9)
O(21)-Sm(2)-O(17)	75.14(10)	O(29)-Sr(3)-O(27)	142.19(11)
O(15)-Sm(2)-O(17)	88.13(9)	O(26)-Sr(3)-O(27)	76.44(11)
O(13)-Sm(2)-O(17)	77.26(9)	O(14)-Sr(3)-O(27)	122.87(10)
O(23)-Sm(2)-O(17)	151.90(10)	O(28)-Sr(3)-O(27)	72.08(11)
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)
N(7)-H(7)...O(18)	0.86	1.89	2.736(5)	166.6
N(8)-H(8)...O(16)#1	0.86	1.86	2.715(5)	172.9
N(9)-H(9A)...O(7)#2	0.86	1.95	2.802(4)	168.3
N(10)-H(10A)...O(28)	0.86	2.21	2.979(5)	148.0
N(10)-H(10A)...O(14)	0.86	2.45	3.014(5)	124.3
N(11)-H(11A)...O(33)#3	0.86	2.14	2.820(6)	135.2
N(11)-H(11A)...O(12)#3	0.86	2.43	3.087(6)	133.8
N(12)-H(12)...O(10)#2	0.86	1.85	2.698(5)	168.3
N(13)-H(13)...O(3)#2	0.86	1.93	2.788(5)	172.9
N(14)-H(14)...O(6)	0.86	1.77	2.625(5)	172.5
O(25)-H(25A)...O(17)	0.85	2.07	2.812(4)	145.4
O(25)-H(25B)...O(30)	0.85	1.91	2.757(6)	176.2
O(26)-H(26A)...O(32)#3	0.85	2.05	2.882(5)	164.6
O(26)-H(26B)...O(19)#1	0.85	1.98	2.828(4)	177.3
O(27)-H(27A)...O(30)	0.85	2.44	3.238(5)	157.8
O(27)-H(27B)...O(23)#1	0.85	2.29	2.769(4)	115.6
O(28)-H(28A)...O(31)	0.85	2.03	2.873(5)	172.6
O(29)-H(29A)...O(12)#3	0.85	2.17	2.973(5)	158.6
O(29)-H(29B)...O(13)	0.85	2.32	2.922(4)	127.6
O(31)-H(31A)...O(32)	0.85	2.10	2.853(5)	147.1
O(29)-H(29A)...O(12)#3	0.85	2.17	2.973(5)	158.6
O(29)-H(29B)...O(13)	0.85	2.32	2.922(4)	127.6
O(31)-H(31A)...O(32)	0.85	2.10	2.853(5)	147.1
O(31)-H(31B)...O(22)#4	0.85	2.07	2.716(6)	132.1
O(32)-H(32A)...O(18)#4	0.85	2.08	2.923(5)	172.0
O(32)-H(32B)...O(20)#5	0.85	1.93	2.763(4)	165.6
O(33)-H(33A)...O(11)	0.85	1.98	2.771(4)	155.2
O(33)-H(33B)...O(34)	0.85	2.11	2.872(5)	149.4
O(34)-H(34A)...O(8)#2	0.85	2.03	2.872(5)	169.4
O(34)-H(34B)...O(4)#6	0.85	2.00	2.825(5)	163.7
O(30)-H(30)...O(31)	0.82	2.03	2.848(6)	171.5
C(2)-H(2)...O(12)#3	0.93	2.52	3.352(5)	149.2

C(10)-H(10)...O(33)#7	0.93	2.44	3.323(6)	159.4
C(44)-H(44)...O(20)#8	0.93	2.27	3.196(6)	171.2
C(54)-H(54)...O(4)#6	0.93	2.40	3.148(6)	137.2
C(49)-H(49)...O(29)	0.93	2.45	3.296(6)	150.8
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-1,z #6 -x+1,-y+1,-z+1 #7 -x,-y+1,-z+1 #8 -x+2,-y+2,-z				

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

Dy(1)-O(9)	2.372(3)	Dy(2)-O(17)	2.441(3)
Dy(1)-O(5)	2.388(3)	Dy(2)-O(19)	2.453(4)
Dy(1)-O(11)	2.397(3)	Dy(2)-N(6)	2.462(4)
Dy(1)-O(3)	2.408(3)	Dy(2)-N(4)	2.483(4)
Dy(1)-O(1)	2.429(3)	Dy(2)-N(5)	2.511(4)
Dy(1)-O(7)	2.454(4)	O(2)-Sr(3)	2.598(3)
Dy(1)-N(3)	2.485(4)	Sr(3)-O(24)#1	2.520(4)
Dy(1)-N(1)	2.500(4)	Sr(3)-O(25)	2.571(4)
Dy(1)-N(2)	2.507(4)	Sr(3)-O(14)	2.602(3)
Dy(2)-O(21)	2.356(4)	Sr(3)-O(28)	2.602(4)
Dy(2)-O(15)	2.381(3)	Sr(3)-O(26)	2.596(4)
Dy(2)-O(23)	2.401(3)	Sr(3)-O(29)	2.637(4)
Dy(2)-O(13)	2.406(3)	Sr(3)-O(27)	2.667(4)
O(9)-Dy(1)-O(5)	146.69(13)	O(17)-Dy(2)-O(19)	127.85(12)
O(9)-Dy(1)-O(11)	128.25(12)	O(21)-Dy(2)-N(6)	65.33(14)
O(5)-Dy(1)-O(11)	78.16(13)	O(15)-Dy(2)-N(6)	137.06(13)
O(9)-Dy(1)-O(3)	76.95(12)	O(23)-Dy(2)-N(6)	64.06(13)
O(5)-Dy(1)-O(3)	89.67(12)	O(13)-Dy(2)-N(6)	74.72(13)
O(11)-Dy(1)-O(3)	146.39(12)	O(17)-Dy(2)-N(6)	136.59(13)
O(9)-Dy(1)-O(1)	85.05(12)	O(19)-Dy(2)-N(6)	73.55(13)
O(5)-Dy(1)-O(1)	79.51(12)	O(21)-Dy(2)-N(4)	133.91(13)
O(11)-Dy(1)-O(1)	80.69(12)	O(15)-Dy(2)-N(4)	65.12(13)
O(3)-Dy(1)-O(1)	128.13(12)	O(23)-Dy(2)-N(4)	74.69(12)
O(9)-Dy(1)-O(7)	78.28(12)	O(13)-Dy(2)-N(4)	63.68(12)
O(5)-Dy(1)-O(7)	128.44(12)	O(17)-Dy(2)-N(4)	74.50(13)
O(11)-Dy(1)-O(7)	86.88(12)	O(19)-Dy(2)-N(4)	135.59(12)
O(3)-Dy(1)-O(7)	76.35(12)	N(6)-Dy(2)-N(4)	119.14(13)
O(1)-Dy(1)-O(7)	146.25(12)	O(21)-Dy(2)-N(5)	72.10(13)
O(9)-Dy(1)-N(3)	64.33(12)	O(15)-Dy(2)-N(5)	74.26(12)
O(5)-Dy(1)-N(3)	134.71(12)	O(23)-Dy(2)-N(5)	133.90(12)
O(11)-Dy(1)-N(3)	63.97(12)	O(13)-Dy(2)-N(5)	134.08(12)
O(3)-Dy(1)-N(3)	135.60(12)	O(17)-Dy(2)-N(5)	64.35(13)
O(1)-Dy(1)-N(3)	71.02(12)	O(19)-Dy(2)-N(5)	63.57(12)
O(7)-Dy(1)-N(3)	75.31(12)	N(6)-Dy(2)-N(5)	117.86(14)
O(9)-Dy(1)-N(1)	73.47(13)	N(4)-Dy(2)-N(5)	122.99(13)
O(5)-Dy(1)-N(1)	73.23(13)	O(24)#1-Sr(3)-O(25)	137.42(12)
O(11)-Dy(1)-N(1)	137.36(13)	O(24)#1-Sr(3)-O(2)	73.51(11)
O(3)-Dy(1)-N(1)	64.63(12)	O(25)-Sr(3)-O(2)	148.96(11)
O(1)-Dy(1)-N(1)	63.66(12)	O(24)#1-Sr(3)-O(14)	145.50(11)
O(7)-Dy(1)-N(1)	135.75(12)	O(25)-Sr(3)-O(14)	75.02(11)
N(3)-Dy(1)-N(1)	119.38(13)	O(2)-Sr(3)-O(14)	74.27(11)
O(9)-Dy(1)-N(2)	134.52(13)	O(24)#1-Sr(3)-O(28)	81.88(13)
O(5)-Dy(1)-N(2)	64.98(13)	O(25)-Sr(3)-O(28)	107.36(14)
O(11)-Dy(1)-N(2)	75.43(13)	O(2)-Sr(3)-O(28)	68.71(13)
O(3)-Dy(1)-N(2)	71.04(12)	O(14)-Sr(3)-O(28)	75.23(12)
O(1)-Dy(1)-N(2)	140.33(12)	O(24)#1-Sr(3)-O(26)	73.96(13)
O(7)-Dy(1)-N(2)	63.52(12)	O(25)-Sr(3)-O(26)	77.19(13)
N(3)-Dy(1)-N(2)	122.81(13)	O(2)-Sr(3)-O(26)	124.07(13)
N(1)-Dy(1)-N(2)	117.79(13)	O(14)-Sr(3)-O(26)	136.29(12)

O(21)-Dy(2)-O(15)	146.18(13)	O(28)-Sr(3)-O(26)	146.14(13)
O(21)-Dy(2)-O(23)	129.38(13)	O(24)#1-Sr(3)-O(29)	114.40(14)
O(15)-Dy(2)-O(23)	78.25(12)	O(25)-Sr(3)-O(29)	82.67(15)
O(21)-Dy(2)-O(13)	75.58(13)	O(2)-Sr(3)-O(29)	84.92(13)
O(15)-Dy(2)-O(13)	128.66(12)	O(14)-Sr(3)-O(29)	74.39(13)
O(23)-Dy(2)-O(13)	91.92(12)	O(28)-Sr(3)-O(29)	144.09(13)
O(21)-Dy(2)-O(17)	76.21(13)	O(26)-Sr(3)-O(29)	69.13(13)
O(15)-Dy(2)-O(17)	86.33(12)	O(24)#1-Sr(3)-O(27)	70.26(13)
O(23)-Dy(2)-O(17)	149.06(13)	O(25)-Sr(3)-O(27)	72.81(13)
O(13)-Dy(2)-O(17)	76.96(12)	O(2)-Sr(3)-O(27)	130.51(12)
O(21)-Dy(2)-O(19)	90.49(13)	O(14)-Sr(3)-O(27)	125.25(12)
O(15)-Dy(2)-O(19)	77.56(13)	O(28)-Sr(3)-O(27)	73.75(13)
O(23)-Dy(2)-O(19)	74.90(12)	O(26)-Sr(3)-O(27)	75.92(13)
O(13)-Dy(2)-O(19)	148.26(12)	O(29)-Sr(3)-O(27)	140.89(14)
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(7)-H(7)...O(18)	0.86	1.89	2.726(7)	165.3
N(8)-H(8)...O(16)#1	0.86	1.91	2.770(7)	173.2
N(9)-H(9A)...O(7)#2	0.86	1.95	2.799(6)	168.4
N(10)-H(10A)...O(28)	0.86	2.16	2.931(6)	149.7
N(10)-H(10A)...O(14)	0.86	2.52	3.062(6)	122.0
N(11)-H(11A)...O(33)#3	0.86	2.14	2.812(7)	135.3
N(11)-H(11A)...O(12)#3	0.86	2.46	3.128(8)	135.2
N(12)-H(12)...O(10)#2	0.86	1.83	2.672(6)	167.7
N(13)-H(13)...O(3)#2	0.86	1.95	2.805(7)	171.7
N(14)-H(14)...O(6)	0.86	1.76	2.611(6)	170.2
O(25)-H(25A)...O(17)	0.85	2.06	2.808(5)	146.8
O(25)-H(25B)...O(30)	0.85	1.89	2.733(8)	173.3
O(26)-H(26B)...O(19)#1	0.93	1.88	2.795(5)	169.8
O(27)-H(27B)...O(30)	0.85	2.49	3.273(8)	154.4
O(27)-H(27A)...O(23)#1	0.85	2.28	2.755(5)	115.7
O(28)-H(28A)...O(31)	0.85	1.93	2.780(7)	175.9
O(29)-H(29B)...O(13)	0.85	2.35	2.958(6)	129.3
O(31)-H(31A)...O(32)	0.85	2.14	2.910(7)	150.9
O(31)-H(31B)...O(22)#4	0.85	2.04	2.679(7)	131.5
O(32)-H(32A)...O(18)#4	0.85	2.14	2.911(7)	151.1
O(32)-H(32B)...O(20)#5	0.85	1.91	2.747(6)	169.2
O(33)-H(33A)...O(11)	0.85	1.97	2.767(5)	156.8
O(33)-H(33B)...O(34)	0.85	2.15	2.907(7)	148.8
O(34)-H(34A)...O(8)#2	0.85	2.04	2.882(6)	167.9
O(34)-H(34B)...O(4)#6	0.85	2.00	2.828(6)	163.6
O(30)-H(30)...O(31)	0.82	2.10	2.912(9)	168.1
C(10)-H(10)...O(33)#7	0.93	2.50	3.384(7)	158.0
C(44)-H(44)...O(20)#8	0.93	2.32	3.231(8)	166.0
C(49)-H(49)...O(29)	0.93	2.44	3.282(8)	151.4
O(35)-H(35A)...O(32)	0.85	2.15	2.956(10)	157.6
O(35)-H(35B)...O(16)#1	0.85	1.92	2.747(8)	165.0
C(37)-H(37)...N(9)#3	0.93	2.53	3.340(8)	145.5
C(43)-H(43)...O(27)	0.93	2.53	3.254(8)	134.9
C(46)-H(46)...O(10)#2	0.93	2.29	3.190(7)	161.7
C(54)-H(54)...O(4)#6	0.93	2.38	3.140(9)	139.4
C(51)-H(51)...O(34)#3	0.93	2.55	3.441(9)	160.6
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-1,z #6 -x+1,-y+1,-z+1 #7 -x,-y+1,-z+1				

#8 -x+2,-y+2,-z

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

Sm(1)-O(13)	2.373(3)	Sm(2)-N(3)#1	2.543(3)
Sm(1)-O(3)	2.449(3)	O(2)-Sr(3)	2.426(3)
Sm(1)-O(5)	2.453(3)	Sr(3)-O(18)#2	2.519(3)
Sm(1)-O(1)	2.469(3)	Sr(3)-O(6)#3	2.529(3)
Sm(1)-O(7)	2.475(3)	Sr(3)-O(23)	2.560(4)
Sm(1)-O(9)	2.481(3)	Sr(3)-O(22)	2.565(5)
Sm(1)-O(21)	2.525(3)	Sr(3)-O(25)	2.581(3)
Sm(1)-N(1)	2.541(3)	Sr(3)-O(24)	2.597(3)
Sm(1)-N(2)	2.547(3)	O(3)-Sr(4)	2.862(3)
Sm(2)-O(19)	2.425(3)	Sr(4)-O(26)	2.544(3)
Sm(2)-O(10)#1	2.435(3)	Sr(4)-O(28)	2.549(3)
Sm(2)-O(16)	2.441(3)	Sr(4)-O(4)	2.580(3)
Sm(2)-O(17)	2.457(3)	Sr(4)-O(20)#1	2.586(3)
Sm(2)-O(11)#1	2.482(3)	Sr(4)-O(15)#4	2.597(3)
Sm(2)-O(14)	2.488(3)	Sr(4)-O(29)	2.613(3)
Sm(2)-N(5)	2.524(3)	Sr(4)-O(27)	2.774(3)
Sm(2)-N(4)	2.542(3)		
O(13)-Sm(1)-O(3)	84.84(9)	O(19)-Sm(2)-O(16)	151.37(10)
O(13)-Sm(1)-O(5)	87.27(10)	O(10)#1-Sm(2)-O(16)	88.22(10)
O(3)-Sm(1)-O(5)	150.76(9)	O(19)-Sm(2)-O(17)	127.07(10)
O(13)-Sm(1)-O(1)	140.81(10)	O(10)#1-Sm(2)-O(17)	147.81(10)
O(3)-Sm(1)-O(1)	126.91(9)	O(16)-Sm(2)-O(17)	75.74(10)
O(5)-Sm(1)-O(1)	74.21(9)	O(19)-Sm(2)-O(11)#1	88.65(10)
O(13)-Sm(1)-O(7)	76.86(10)	O(10)#1-Sm(2)-O(11)#1	126.23(9)
O(3)-Sm(1)-O(7)	78.98(9)	O(16)-Sm(2)-O(11)#1	78.82(10)
O(5)-Sm(1)-O(7)	126.31(9)	O(17)-Sm(2)-O(11)#1	78.35(10)
O(1)-Sm(1)-O(7)	86.67(10)	O(19)-Sm(2)-O(14)	75.12(9)
O(13)-Sm(1)-O(9)	137.25(10)	O(10)#1-Sm(2)-O(14)	73.73(9)
O(3)-Sm(1)-O(9)	81.71(9)	O(16)-Sm(2)-O(14)	125.48(9)
O(5)-Sm(1)-O(9)	85.22(9)	O(17)-Sm(2)-O(14)	92.93(10)
O(1)-Sm(1)-O(9)	76.27(9)	O(11)#1-Sm(2)-O(14)	151.69(10)
O(7)-Sm(1)-O(9)	138.52(9)	O(19)-Sm(2)-N(5)	63.82(10)
O(13)-Sm(1)-O(21)	67.04(10)	O(10)#1-Sm(2)-N(5)	135.79(10)
O(3)-Sm(1)-O(21)	74.82(9)	O(16)-Sm(2)-N(5)	135.69(10)
O(5)-Sm(1)-O(21)	76.17(10)	O(17)-Sm(2)-N(5)	63.28(10)
O(1)-Sm(1)-O(21)	136.61(10)	O(11)#1-Sm(2)-N(5)	77.20(10)
O(7)-Sm(1)-O(21)	136.68(10)	O(14)-Sm(2)-N(5)	74.85(10)
O(9)-Sm(1)-O(21)	70.29(9)	O(19)-Sm(2)-N(4)	135.99(10)
O(13)-Sm(1)-N(1)	138.56(10)	O(10)#1-Sm(2)-N(4)	77.45(10)
O(3)-Sm(1)-N(1)	63.79(9)	O(16)-Sm(2)-N(4)	62.98(9)
O(5)-Sm(1)-N(1)	133.17(10)	O(17)-Sm(2)-N(4)	70.41(10)
O(1)-Sm(1)-N(1)	63.18(9)	O(11)#1-Sm(2)-N(4)	135.10(10)
O(7)-Sm(1)-N(1)	71.33(10)	O(14)-Sm(2)-N(4)	62.99(9)
O(9)-Sm(1)-N(1)	67.22(10)	N(5)-Sm(2)-N(4)	113.91(10)
O(21)-Sm(1)-N(1)	123.44(10)	O(19)-Sm(2)-N(3)#1	79.10(10)
O(13)-Sm(1)-N(2)	70.22(10)	O(10)#1-Sm(2)-N(3)#1	63.29(10)
O(3)-Sm(1)-N(2)	137.67(10)	O(16)-Sm(2)-N(3)#1	72.27(10)
O(5)-Sm(1)-N(2)	63.68(10)	O(17)-Sm(2)-N(3)#1	133.44(10)
O(1)-Sm(1)-N(2)	70.61(10)	O(11)#1-Sm(2)-N(3)#1	63.03(10)
O(7)-Sm(1)-N(2)	62.67(10)	O(14)-Sm(2)-N(3)#1	133.27(10)
O(9)-Sm(1)-N(2)	139.29(10)	N(5)-Sm(2)-N(3)#1	125.68(10)
O(21)-Sm(1)-N(2)	121.53(10)	N(4)-Sm(2)-N(3)#1	120.32(10)
N(1)-Sm(1)-N(2)	115.03(10)	O(2)-Sr(3)-O(18)#2	78.38(12)
O(19)-Sm(2)-O(10)#1	78.54(9)	O(2)-Sr(3)-O(6)#3	166.04(11)
O(6)#3-Sr(3)-O(24)	87.11(11)	O(18)#2-Sr(3)-O(6)#3	106.37(10)
O(23)-Sr(3)-O(24)	73.80(12)	O(2)-Sr(3)-O(23)	93.47(14)
O(22)-Sr(3)-O(24)	138.9(2)	O(18)#2-Sr(3)-O(23)	132.90(12)

O(25)-Sr(3)-O(24)	144.13(12)	O(6)#3-Sr(3)-O(23)	92.55(13)
Sm(1)-O(3)-Sr(4)	148.84(11)	O(2)-Sr(3)-O(22)	88.9(2)
O(26)-Sr(4)-O(28)	137.33(11)	O(18)#2-Sr(3)-O(22)	82.2(2)
O(26)-Sr(4)-O(4)	116.71(10)	O(6)#3-Sr(3)-O(22)	78.9(2)
O(28)-Sr(4)-O(4)	73.93(10)	O(23)-Sr(3)-O(22)	144.5(2)
O(26)-Sr(4)-O(20)#1	81.57(10)	O(2)-Sr(3)-O(25)	89.11(12)
O(28)-Sr(4)-O(20)#1	140.93(11)	O(18)#2-Sr(3)-O(25)	151.03(12)
O(4)-Sr(4)-O(20)#1	92.99(10)	O(6)#3-Sr(3)-O(25)	80.59(11)
O(26)-Sr(4)-O(15)#4	66.64(10)	O(23)-Sr(3)-O(25)	73.25(12)
O(28)-Sr(4)-O(15)#4	76.84(11)	O(22)-Sr(3)-O(25)	71.4(2)
O(4)-Sr(4)-O(15)#4	133.56(10)	O(2)-Sr(3)-O(24)	106.66(12)
O(20)#1-Sr(4)-O(15)#4	131.37(11)	O(18)#2-Sr(3)-O(24)	64.83(11)
O(26)-Sr(4)-O(29)	146.24(10)	O(15)#4-Sr(4)-O(27)	69.22(11)
O(28)-Sr(4)-O(29)	73.72(11)	O(29)-Sr(4)-O(27)	75.06(10)
O(4)-Sr(4)-O(29)	79.84(9)	O(26)-Sr(4)-O(3)	81.43(9)
O(20)#1-Sr(4)-O(29)	67.72(10)	O(28)-Sr(4)-O(3)	78.02(10)
O(15)#4-Sr(4)-O(29)	124.72(10)	O(4)-Sr(4)-O(3)	47.86(8)
O(26)-Sr(4)-O(27)	82.02(10)	O(20)#1-Sr(4)-O(3)	120.20(9)
O(28)-Sr(4)-O(27)	105.46(11)	O(15)#4-Sr(4)-O(3)	91.32(9)
O(4)-Sr(4)-O(27)	153.82(10)	O(29)-Sr(4)-O(3)	125.70(9)
O(20)#1-Sr(4)-O(27)	70.77(11)	O(27)-Sr(4)-O(3)	158.32(10)
O(28)-Sr(4)-C(7)	73.59(10)	O(26)-Sr(4)-C(7)	100.58(10)
O(4)-Sr(4)-C(7)	23.34(10)		

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

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

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
O(21)-H(21A)...O(10)	0.85	2.01	2.698(4)	137.6
O(21)-H(21A)...O(9)	0.85	2.43	2.883(4)	113.7
O(21)-H(21B)...O(26)	0.85	2.28	3.021(5)	145.9
O(21)-H(21B)...O(3)	0.85	2.52	3.022(4)	118.9
O(23)-H(23A)...O(8)#5	0.85	2.25	2.862(5)	128.4
O(25)-H(25B)...O(8)#5	0.85	1.91	2.754(5)	175.0
O(23)-H(23B)...O(12)#6	0.85	2.25	2.993(5)	145.8
O(24)-H(24A)...O(30)#7	0.85	1.89	2.730(5)	169.3
O(25)-H(25A)...O(1)#3	0.85	2.14	2.959(5)	161.9
O(26)-H(26A)...O(19)#1	0.85	2.45	3.159(4)	141.4
O(26)-H(26B)...O(5)#1	0.85	2.25	3.083(4)	167.4
O(27)-H(27B)...O(6)#1	0.85	2.09	2.822(4)	143.3
O(27)-H(27A)...O(17)#4	0.85	2.34	3.037(5)	139.2
O(28)-H(28A)...O(16)#4	0.85	2.06	2.751(4)	137.9
O(28)-H(28B)...O(31)#1	0.85	1.91	2.753(5)	172.5
O(29)-H(29A)...O(24)#8	0.85	2.31	3.064(5)	147.6
O(29)-H(29B)...O(12)#9	0.85	2.16	2.988(5)	166.4
O(30)-H(30A)...O(27)#4	0.85	1.96	2.805(5)	169.8
O(31)-H(31A)...O(7)#1	0.85	1.95	2.777(5)	164.5
O(31)-H(31A)...O(8)#1	0.85	2.55	3.240(5)	138.5
O(31)-H(31B)...O(12)#10	0.85	2.19	3.028(5)	170.6
C(17)-H(17)...O(29)#8	0.93	2.52	3.437(6)	169.3
C(18)-H(18)...O(31)#11	0.93	2.47	3.318(6)	150.8
C(32)-H(32)...O(30)#12	0.93	2.58	3.352(6)	141.1

Symmetry transformations used to generate equivalent atoms:
#1 -x+1,-y+1,-z+1 #2 -x+1,-y+1,-z #3 -x,-y+1,-z
#4 -x+2,-y+1,-z+1 #5 x-1,y,z #6 -x,-y+2,-z+1
#7 x-1,y+1,z #8 -x+1,-y+2,-z+1 #9 x+1,y,z
#10 x,y-1,z #11 x,y+1,z #12 -x+1,-y,-z

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

Dy(1)-O(9)	2.361(5)	Sr(2)-O(16)	2.520(8)
Dy(1)-O(5)	2.387(6)	Sr(2)-O(12)#2	2.538(6)
Dy(1)-O(3)	2.392(5)	Sr(2)-O(2)	2.554(5)
Dy(1)-O(1)	2.402(5)	Sr(2)-O(13)	2.585(9)
Dy(1)-O(11)	2.412(5)	Sr(2)-O(15)	2.616(12)
Dy(1)-O(7)	2.413(5)	Sr(2)-O(17)	2.640(12)
Dy(1)-N(2)	2.467(6)	Sr(2)-O(17')	2.745(13)
Dy(1)-N(1)	2.478(6)	Sr(2)-O(15')	2.771(15)
Dy(1)-N(3)	2.495(7)	Sr(2)-O(15)#3	2.832(15)
Sr(2)-O(4)#1	2.509(6)	Sr(2)-O(17)#3	2.950(14)
O(9)-Dy(1)-O(5)	78.8(2)	O(4)#1-Sr(2)-O(15)	81.3(3)
O(9)-Dy(1)-O(3)	147.3(2)	O(16)-Sr(2)-O(15)	101.7(4)
O(5)-Dy(1)-O(3)	90.4(2)	O(12)#2-Sr(2)-O(15)	132.2(3)
O(9)-Dy(1)-O(1)	79.62(19)	O(2)-Sr(2)-O(15)	155.4(3)
O(5)-Dy(1)-O(1)	78.55(19)	O(13)-Sr(2)-O(15)	103.2(4)
O(3)-Dy(1)-O(1)	128.68(18)	O(4)#1-Sr(2)-O(17)	132.5(3)
O(9)-Dy(1)-O(11)	128.4(2)	O(16)-Sr(2)-O(17)	90.1(4)
O(5)-Dy(1)-O(11)	146.1(2)	O(12)#2-Sr(2)-O(17)	78.1(3)
O(3)-Dy(1)-O(11)	75.4(2)	O(2)-Sr(2)-O(17)	148.2(3)
O(1)-Dy(1)-O(11)	86.63(18)	O(13)-Sr(2)-O(17)	114.9(4)
O(9)-Dy(1)-O(7)	87.5(2)	O(15)-Sr(2)-O(17)	55.9(4)
O(5)-Dy(1)-O(7)	129.71(19)	O(4)#1-Sr(2)-O(17')	122.3(3)
O(3)-Dy(1)-O(7)	75.9(2)	O(16)-Sr(2)-O(17')	62.7(4)
O(1)-Dy(1)-O(7)	146.00(19)	O(12)#2-Sr(2)-O(17')	77.2(3)
O(11)-Dy(1)-O(7)	77.03(19)	O(2)-Sr(2)-O(17')	130.3(4)
O(9)-Dy(1)-N(2)	75.9(2)	O(13)-Sr(2)-O(17')	140.4(4)
O(5)-Dy(1)-N(2)	65.4(2)	O(15)-Sr(2)-O(17')	68.0(5)
O(3)-Dy(1)-N(2)	71.5(2)	O(17)-Sr(2)-O(17')	27.4(4)
O(1)-Dy(1)-N(2)	139.5(2)	O(4)#1-Sr(2)-O(15')	71.1(4)
O(11)-Dy(1)-N(2)	133.81(19)	O(16)-Sr(2)-O(15')	84.6(4)
O(7)-Dy(1)-N(2)	64.4(2)	O(12)#2-Sr(2)-O(15')	139.5(4)
O(9)-Dy(1)-N(1)	137.8(2)	O(2)-Sr(2)-O(15')	144.3(4)
O(5)-Dy(1)-N(1)	73.5(2)	O(13)-Sr(2)-O(15')	117.9(4)
O(3)-Dy(1)-N(1)	64.55(18)	O(15)-Sr(2)-O(15')	18.4(4)
O(1)-Dy(1)-N(1)	64.24(19)	O(17)-Sr(2)-O(15')	61.9(4)
O(11)-Dy(1)-N(1)	72.6(2)	O(17')-Sr(2)-O(15')	64.6(5)
O(7)-Dy(1)-N(1)	134.74(19)	O(4)#1-Sr(2)-O(15)#3	140.6(3)
N(2)-Dy(1)-N(1)	118.2(2)	O(16)-Sr(2)-O(15)#3	132.3(4)
O(9)-Dy(1)-N(3)	64.5(2)	O(12)#2-Sr(2)-O(15)#3	68.6(3)
O(5)-Dy(1)-N(3)	136.1(2)	O(2)-Sr(2)-O(15)#3	128.1(3)
O(3)-Dy(1)-N(3)	133.5(2)	O(13)-Sr(2)-O(15)#3	69.9(3)
O(1)-Dy(1)-N(3)	72.03(19)	O(15)-Sr(2)-O(15)#3	69.7(5)
O(11)-Dy(1)-N(3)	64.0(2)	O(17)-Sr(2)-O(15)#3	45.2(4)
O(7)-Dy(1)-N(3)	74.0(2)	O(17')-Sr(2)-O(15)#3	71.0(5)
N(2)-Dy(1)-N(3)	122.9(2)	O(15')-Sr(2)-O(15)#3	86.1(6)
N(1)-Dy(1)-N(3)	118.8(2)	O(4)#1-Sr(2)-O(17)#3	90.2(3)
O(4)#1-Sr(2)-O(16)	78.4(2)	O(16)-Sr(2)-O(17)#3	145.5(3)
O(4)#1-Sr(2)-O(12)#2	146.4(2)	O(12)#2-Sr(2)-O(17)#3	115.4(3)
O(16)-Sr(2)-O(12)#2	89.8(2)	O(2)-Sr(2)-O(17)#3	129.7(3)
O(4)#1-Sr(2)-O(2)	74.64(18)	O(13)-Sr(2)-O(17)#3	59.7(3)
O(16)-Sr(2)-O(2)	78.8(2)	O(15)-Sr(2)-O(17)#3	44.1(4)
O(12)#2-Sr(2)-O(2)	72.23(19)	O(17)-Sr(2)-O(17)#3	73.8(5)
O(4)#1-Sr(2)-O(13)	92.5(3)	O(17')-Sr(2)-O(17)#3	98.6(5)
O(16)-Sr(2)-O(13)	151.8(3)	O(15')-Sr(2)-O(17)#3	61.0(5)
O(12)#2-Sr(2)-O(13)	83.3(3)	O(15)#3-Sr(2)-O(17)#3	50.4(3)
O(2)-Sr(2)-O(13)	73.1(2)		

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)
C(2)-H(2)...O(10)#5	0.93	2.54	3.258(11)	134.2
O(19)-H(19B)...O(6)#6	0.85	2.57	3.261(18)	139.0
O(19)-H(19A)...O(4)#7	0.85	2.31	2.918(12)	128.6
O(19)-H(19A)...O(2)#8	0.85	2.39	3.153(13)	149.5
O(18)-H(18B)...O(19)#1	0.85	2.38	3.08(3)	139.8
O(18)-H(18A)...O(10)	0.85	2.42	2.950(15)	121.4
O(18)-H(18A)...O(9)	0.85	2.50	3.34(2)	170.8
O(16)-H(16B)...O(10)#5	0.85	1.87	2.715(10)	174.8
O(16)-H(16A)...O(8)#9	0.85	1.93	2.769(9)	168.1
O(13)-H(13A)...O(1)	0.85	2.03	2.804(10)	152.1
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,y-1,z #6 -x+1,-y+1,-z+1 #7 x,y+1,z #8 x+1,y+1,z #9 x-1,y-1,z				

2. IR spectra of complexes **1-7**

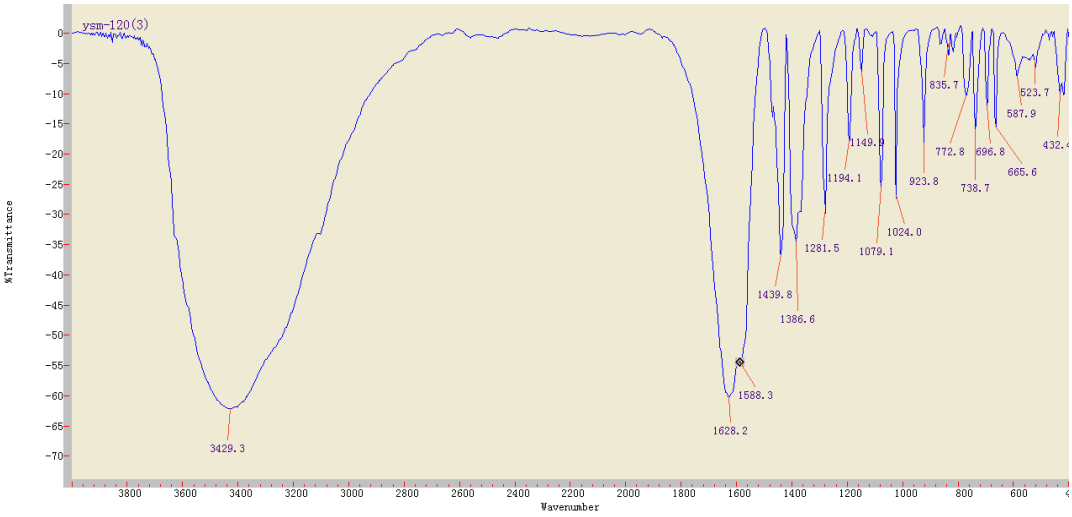


Figure S1 IR spectrum of complex **1.**

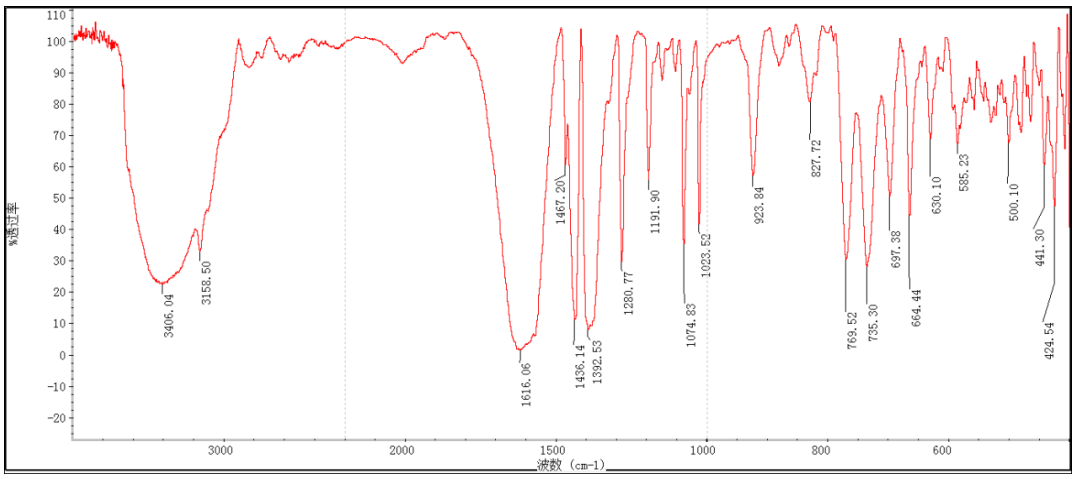


Figure S2 IR spectrum of complex **2.**

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

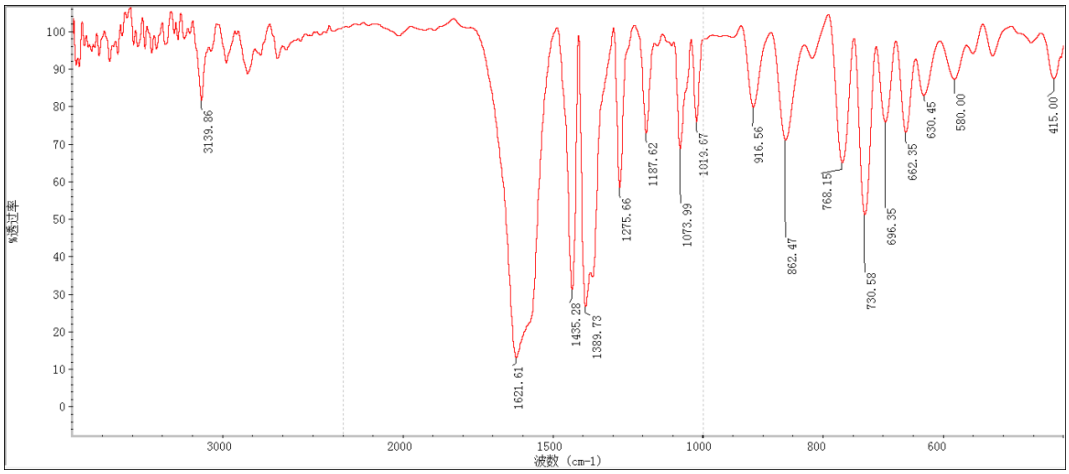


Figure S4 IR spectrum of complex **4.**

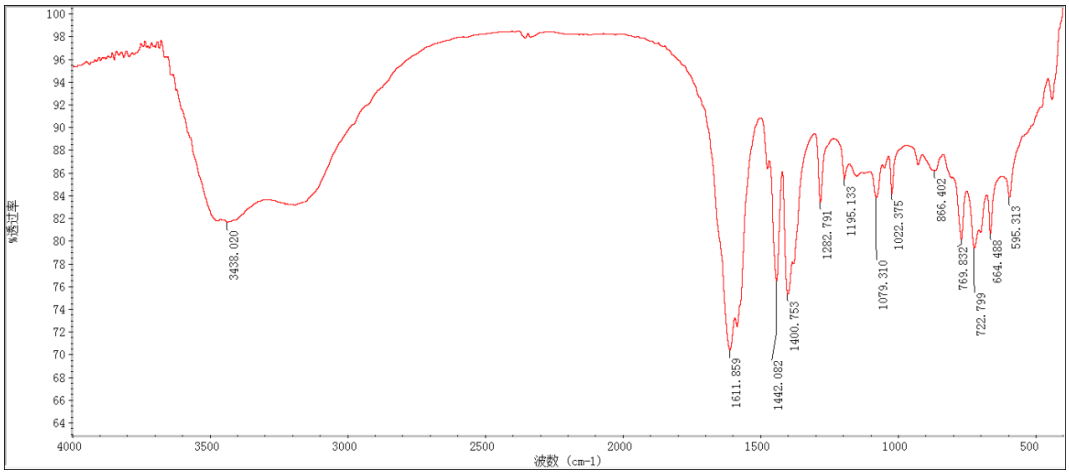


Figure S5 IR spectrum of complex **5.**

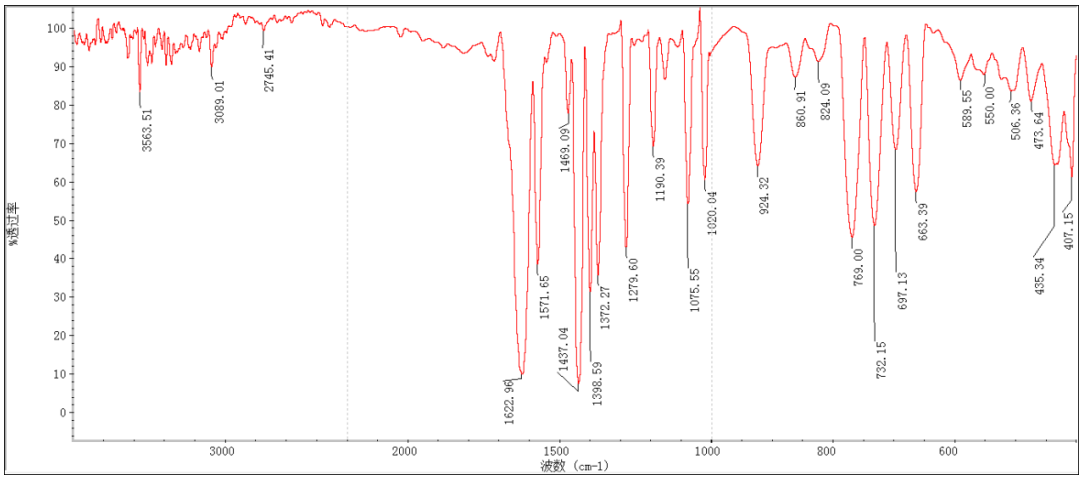


Figure S6 IR spectrum of complex **6.**

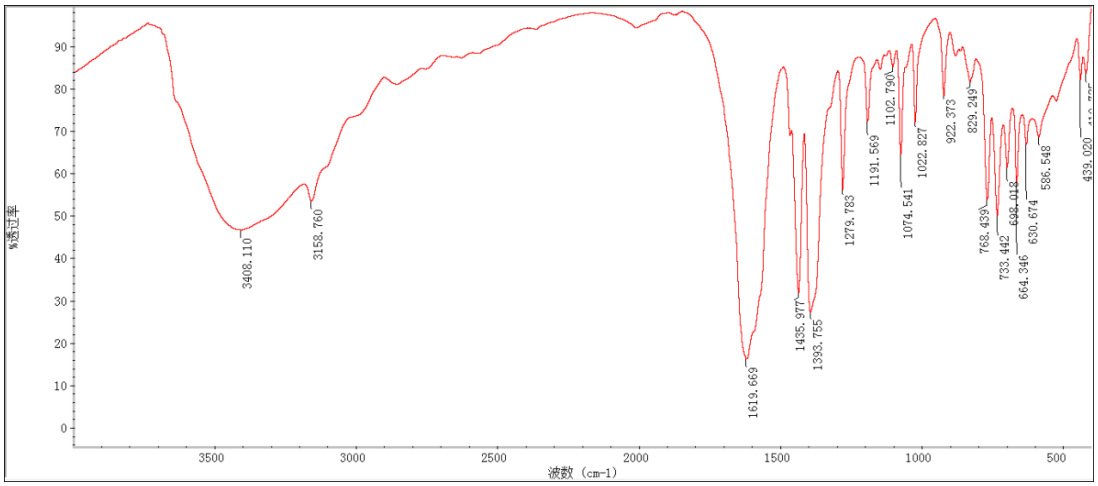
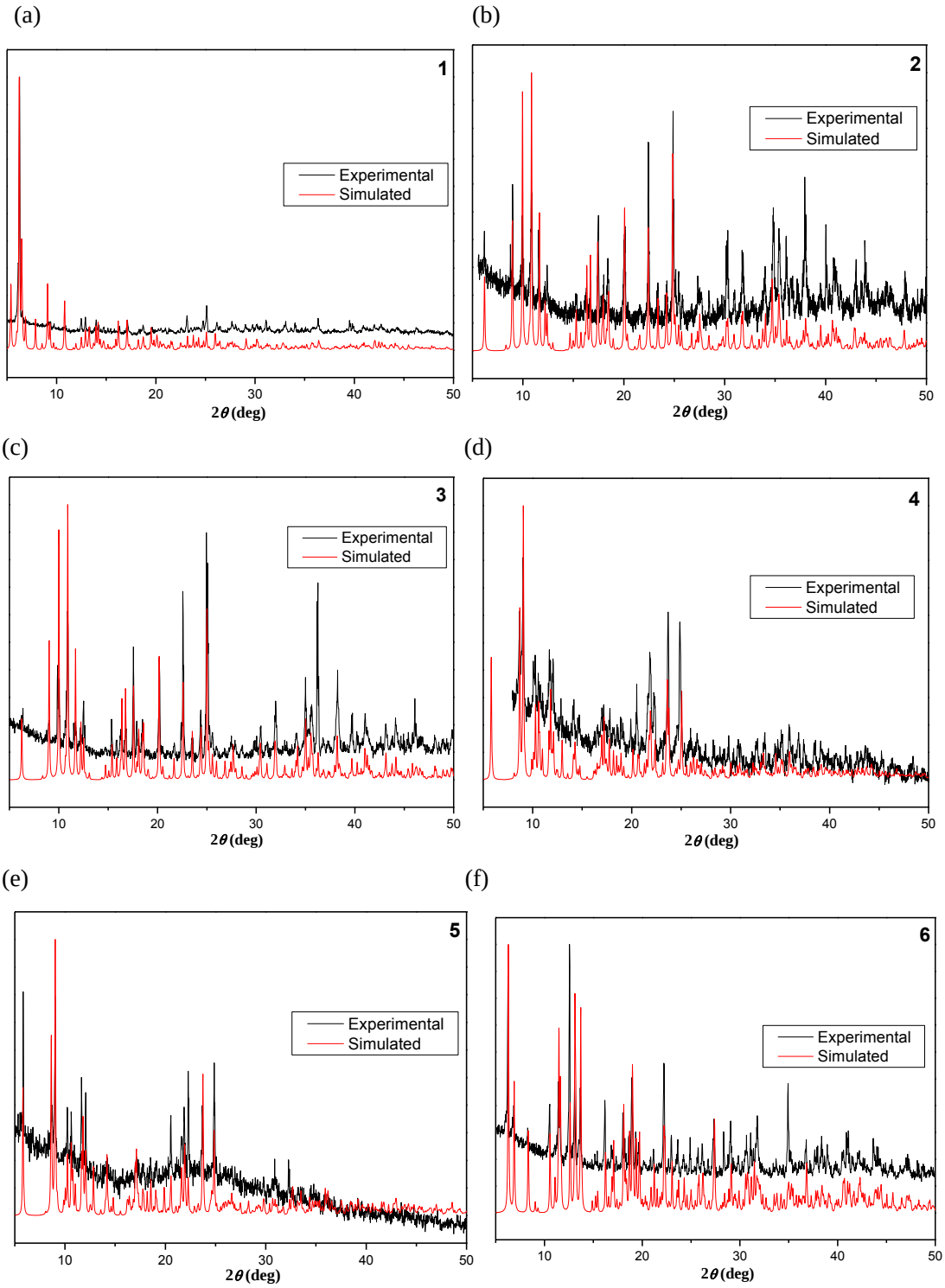


Figure S7 IR spectrum of complex **7.**

3. XRD spectra of complexes **1**-**7**



(g)

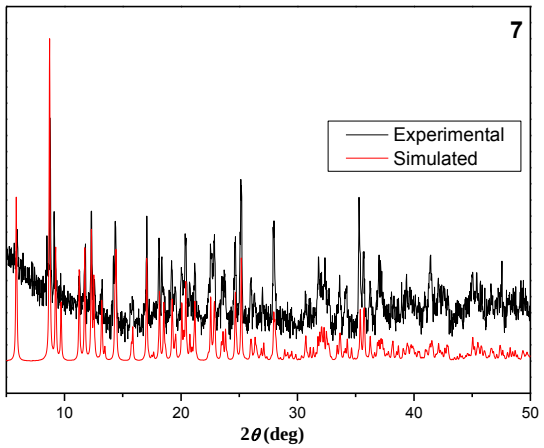


Figure S8 XRD spectra of complexes **1**(a), **2**(b), **3(c), 4**(d), **5**(e), **6**(f) and **7**(g).

4. TG-DTA spectra of complexes **1**-**7**

The TG-DTA analyses were performed under nitrogen atmosphere in the temperature range 30-1050 ^{o}C. The results reveal that the first weight loss of complexes **1**, **2**, **3** and **6** are about 11.06%, 11.01%, 10.76% and 12.93% respectively, corresponding to the loss of all coordinated and solvent water molecules (Calcd. 11.53%, 11.86%, 11.70% and 13.20%, respectively); while the weight losses of complexes **4** and **5** are about 11.02% and 11.08% respectively, corresponding to the loss of all coordinated and lattice water molecules and ethanol molecules (Calcd. 11.16% and 11.86, respectively). One lattice water molecule was found being lost in complex **7** before the analyses, and the loss of 11.09% is corresponding to the loss of two lattice water molecules and four coordinated water molecules. Above 200 ^{o}C, the frameworks of all complexes begin to collapse, and those compounds are gradually decomposed to complicated oxides.

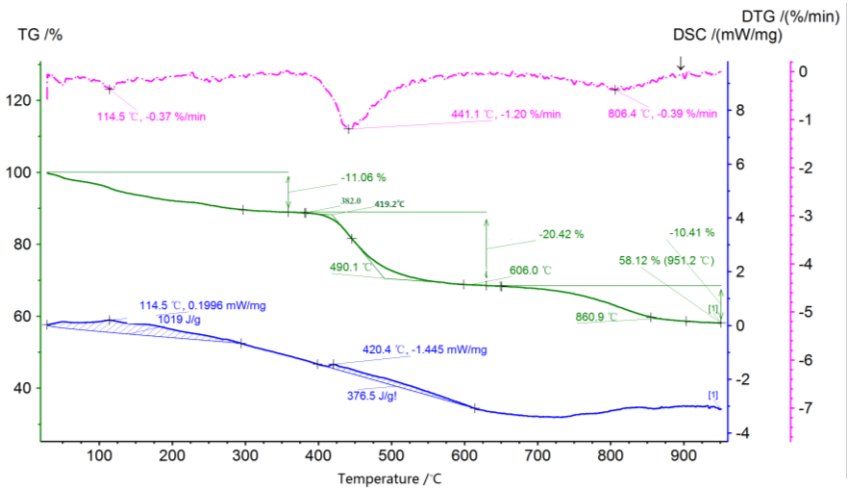


Figure S9 TG-DTA spectrum of complex **1.**

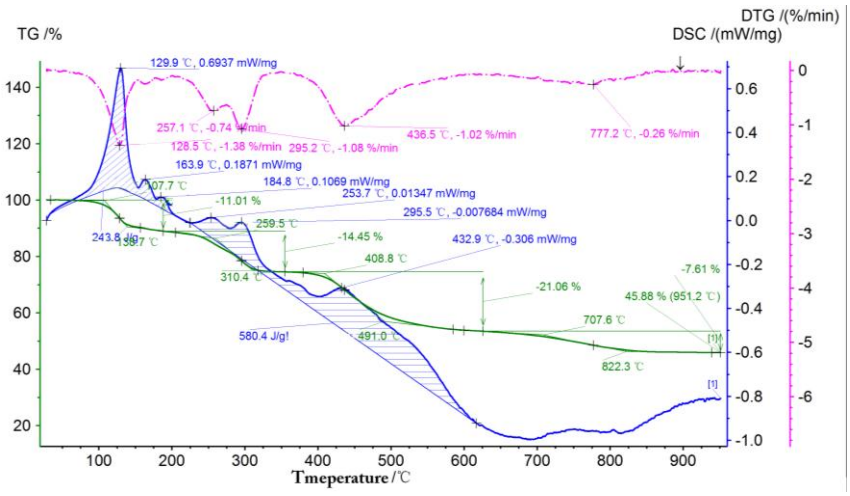


Figure S10 TG-DTA spectrum of complex **2**.

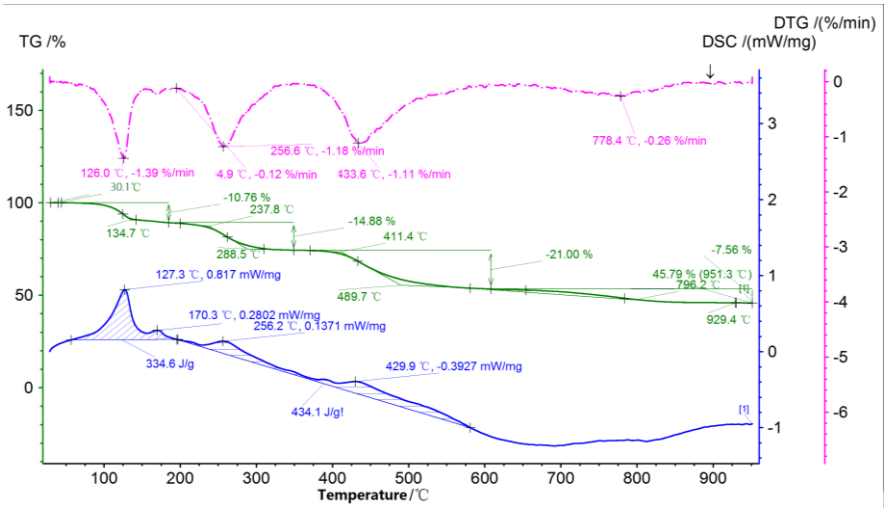


Figure S11 TG-DTA spectrum of complex **3**.

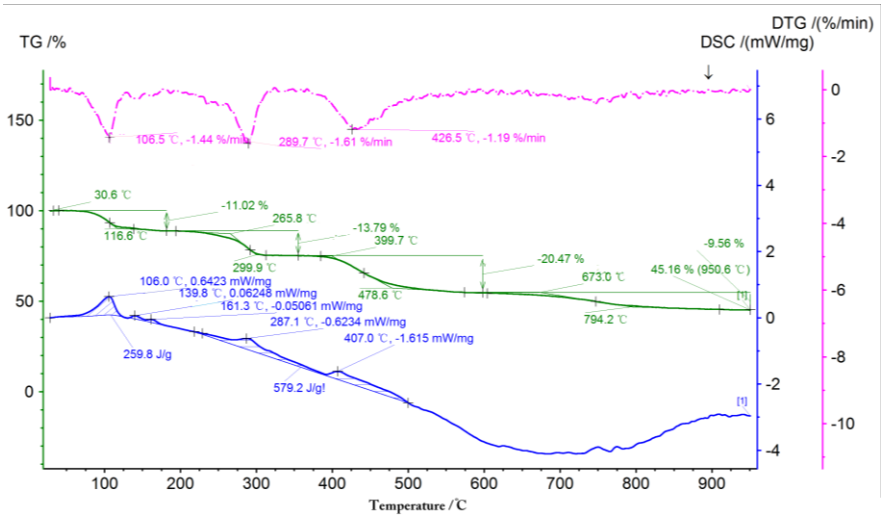


Figure S12 TG-DTA spectrum of complex **4**.

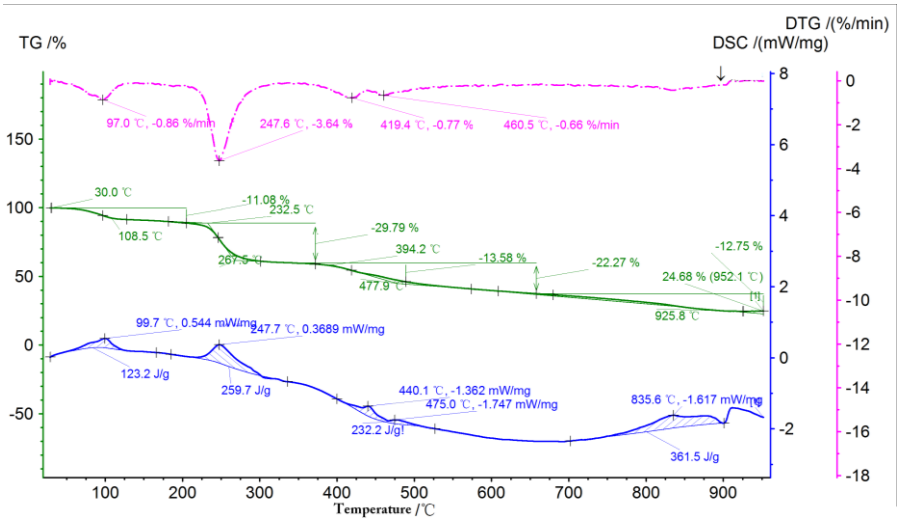


Figure S13 TG-DTA spectrum of complex **5**.

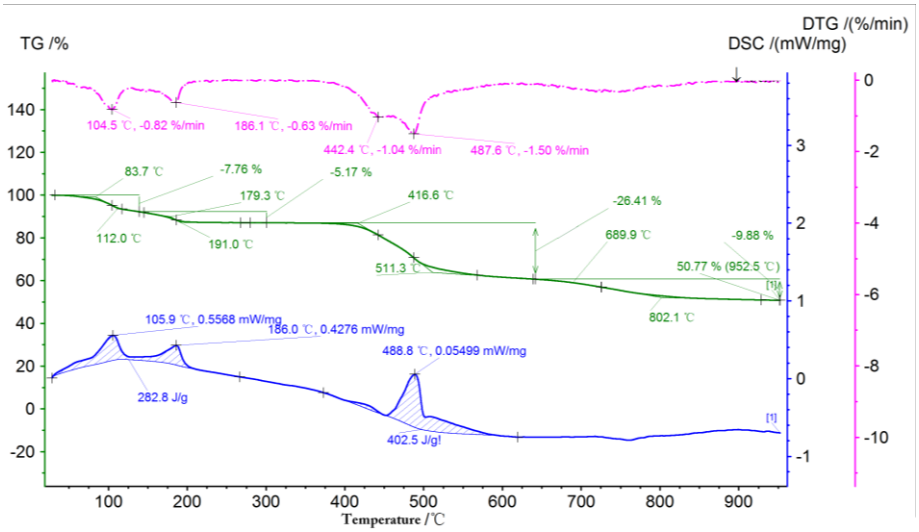


Figure S14 TG-DTA spectrum of complex **6**.

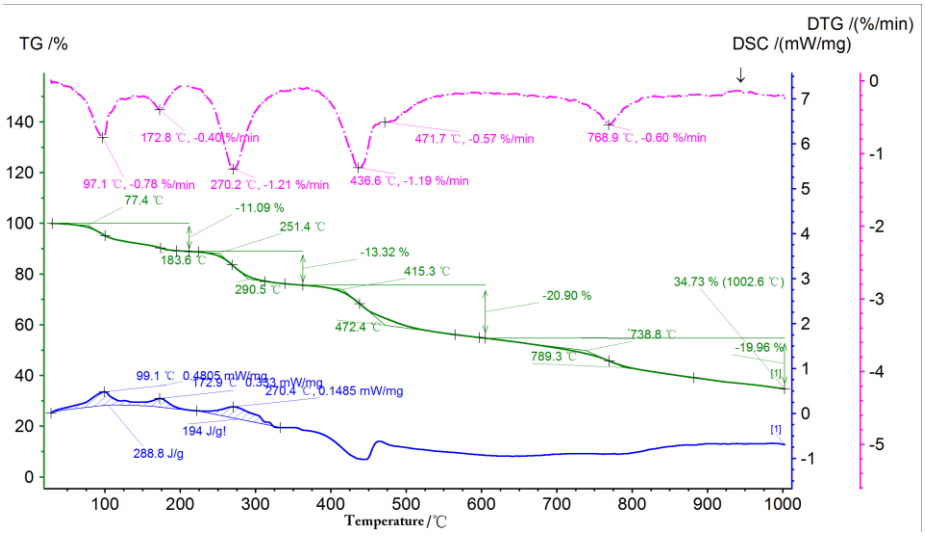


Figure S15 TG-DTA spectrum of complex **7**.