Supporting Information

Eight homodinuclear lanthanide complexes prepared from a quinoline based ligand: structural diversity and single-molecule magnetism behaviour

Yangdan Pan,[a] Haifeng Zhang,[a] Yaru Qin,[a] Yu Ge,[a] Yanfeng Cui,[a] Yahong Li,*[a] Wei Liu,*[a] and Yaping Dong[b]

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

[b] *Key Laboratory of Salt Lake Resources and Chemistry, Qinghai Institute of Salt Lakes, Chinese Academy of Sciences, Xining 810008, P. R. China*

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1. ^{1}H and ^{13}C NMR spectra of the HL ligand

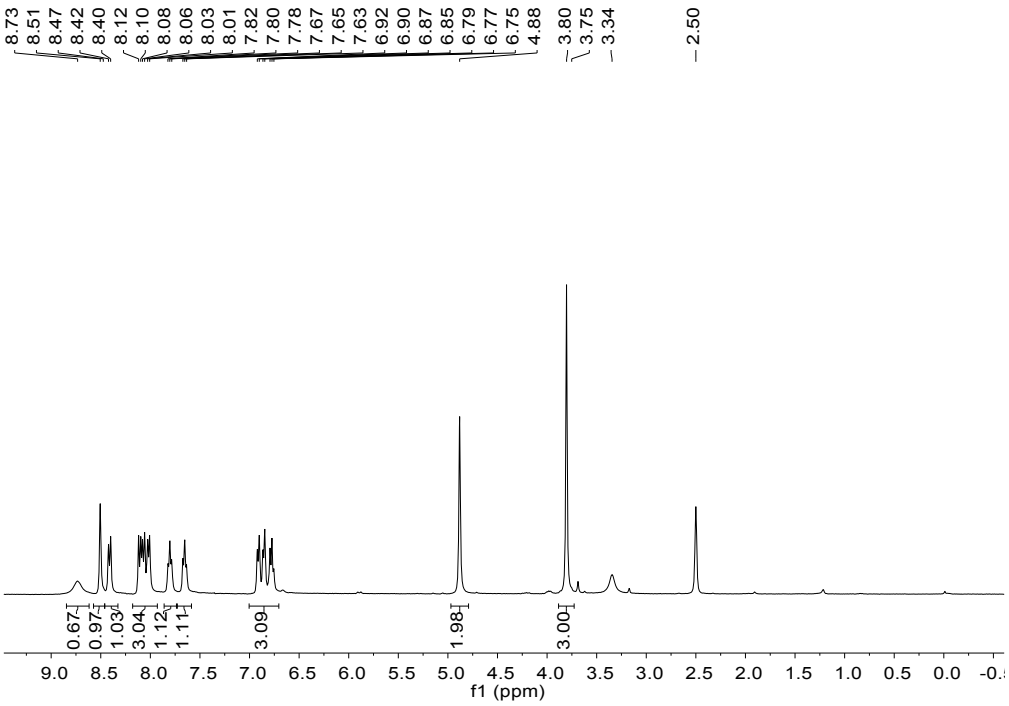


Fig. S1 ^{1}H NMR (300 MHz) spectrum of HL in DMSO.

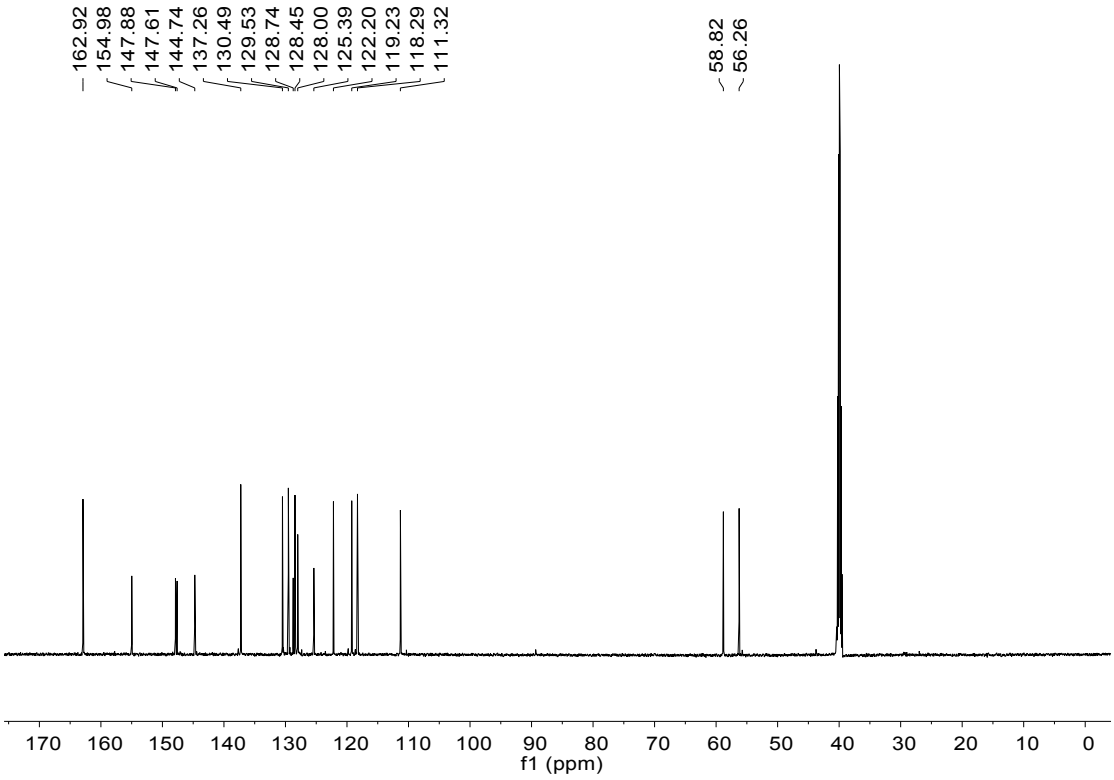


Fig. S2 ^{13}C NMR (300 MHz) spectrum of HL in DMSO.

2. Selected bond lengths and angles of 1-8

Table S1 Selected Bond distances and bond angles for **1**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Pr1	N1	2.785(3)	O4	Pr1	O7	68.39(9)
Pr1	N2	2.602(3)	O4	Pr1	O10	136.70(9)
Pr2	N3	2.785(3)	O4	Pr1	Pr2	113.72(7)
Pr2	N4	2.620(3)	O6	Pr1	N1	92.70(10)
Pr2	N5	2.976(4)	O6	Pr1	N7	152.85(10)
Pr1	N7	2.984(3)	O7	Pr1	O6	105.00(9)
Pr1	O1	2.552(3)	O7	Pr1	O10	73.30(9)
Pr1	O2	2.593(3)	O7	Pr1	Pr2	89.34(6)
Pr1	O4	2.518(3)	O8	Pr1	N1	151.61(8)
Pr1	O6	2.695(3)	O8	Pr1	N2	125.59(9)
Pr1	O7	2.667(2)	O8	Pr1	O10	64.41(8)
Pr1	O8	2.406(2)	O8	Pr1	Pr2	36.65(5)
Pr2	O8	2.359(2)	O10	Pr1	N1	137.92(9)
Pr1	O10	2.723(3)	O10	Pr1	N7	74.31(9)
Pr2	O10	2.722(3)	O12	Pr1	O10	64.83(8)
Pr2	O11	2.548(3)	O12	Pr1	Pr2	37.23(5)
Pr1	O12	2.384(2)	N3	Pr2	N5	69.62(9)
Pr2	O12	2.388(2)	N3	Pr2	Pr1	167.37(6)
Pr2	O13	2.745(2)	N4	Pr2	N3	61.16(9)
Pr2	O15	2.562(3)	O10	Pr2	Pr1	45.74(6)
Pr2	O16	2.621(3)	O11	Pr2	N3	74.29(9)
Pr2	O18	2.606(3)	O12	Pr2	Pr1	37.15(5)
Pr1	Pr2	3.8017(4)	O13	Pr2	N3	103.95(8)
			O16	Pr2	N3	83.39(9)

Table S2 Selected Bond distances and bond angles for **2**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Nd01	O4	2.424(4)	O4	Nd01	O6	151.41(15)
Nd01	O5	2.421(4)	O4	Nd01	O7	106.35(15)
Nd01	O6	2.600(5)	O4	Nd01	O9	138.98(14)
Nd01	O7	2.587(4)	O4	Nd01	O11	121.52(14)
Nd01	O9	2.527(4)	O4	Nd01	O12	62.79(13)
Nd01	O11	2.544(4)	O5	Nd01	O4	67.79(13)
Nd01	O12	2.611(4)	O5	Nd01	O6	90.13(14)
Nd01	O14	2.552(4)	O5	Nd01	O7	77.22(14)

Nd01	O15	2.540(4)	O5	Nd01	O9	137.10(14)
Nd01	O16	2.557(4)	O6	Nd01	O12	108.27(15)
Nd01	N3	2.953(5)	O6	Nd01	N3	70.84(15)
Nd01	N4	2.961(5)	O6	Nd01	N4	140.44(16)
Nd02	O1	2.547(4)	O7	Nd01	N3	97.54(15)
Nd02	O2	2.513(4)	O7	Nd01	N4	166.56(16)
Nd02	O4	2.398(4)	O9	Nd01	O6	69.62(15)
Nd02	O5	2.404(4)	O9	Nd01	O7	110.78(15)
Nd02	N5	2.965(5)	O9	Nd01	N3	25.08(15)
Nd02	N6	2.575(5)	O9	Nd01	N4	73.00(14)
Nd02	N7	2.820(5)	O11	Nd01	O6	73.78(15)
Nd02	N8	2.869(5)	O11	Nd01	O7	81.32(15)
Nd02	N9	2572(5)	O4	Nd02	N10	74.88(15)
Nd02	N10	2.574(5)	O5	Nd02	Nd01	35.02(9)
			O5	Nd02	O1	70.71(13)

Table S3 Selected Bond distances and bond angles for **3**

Atom	Atom	length	Atom	Atom	Atom	Angle/°
Sm01	O2	2.504(4)	N1	Sm1	N3	61.52(14)
Sm01	O3	2.513(3)	N1	Sm1	N10	75.04(14)
Sm01	O4	2.524(4)	N1	Sm1	Sm2	150.04(10)
Sm01	O6	2.505(3)	N2	Sm1	N1	62.54(16)
Sm01	O7	2.572(4)	N2	Sm1	N3	83.38(16)
Sm01	O8	2.558(4)	N2	Sm1	N4	142.85(17)
Sm01	O10	2.547(3)	N2	Sm1	N5	80.47(18)
Sm01	O11	2.384(3)	N2	Sm1	N10	103.90(16)
Sm01	O12	2.394(3)	N2	Sm1	Sm2	107.57(12)
Sm01	O13	2.605(3)	N3	Sm1	N10	126.39(14)
Sm01	N2	2.924(4)	N3	Sm1	Sm2	148.26(10)
Sm01	N4	2.931(4)	N4	Sm1	N1	92.43(16)
Sm02	O11	2.382(3)	N4	Sm1	N3	59.92(16)
Sm02	O12	2.365(3)	N4	Sm1	N10	94.43(16)
Sm02	O14	2.520(3)	N4	Sm1	Sm2	107.07(11)
Sm02	O16	2.476(3)	N5	Sm1	N1	120.73(16)
Sm02	N5	2.939(4)	N5	Sm1	N3	70.13(16)
Sm02	N6	2.548(4)	N5	Sm1	N4	91.35(18)
Sm02	N7	2.867(4)	N5	Sm1	N10	162.99(16)
Sm02	N8	2.530(4)	N5	Sm1	Sm2	82.17(12)
Sm02	N9	2.798(4)	N10	Sm1	Sm2	80.84(10)
Sm02	N10	2.537(4)	O3	Sm1	N4	69.10(15)

		O14	Sm2	O7	107.55(16)
		O15	Sm2	N6	166.99(17)
		O15	Sm2	N7	98.41(16)
		O15	Sm2	O7	65.85(17)

Table S4 Selected Bond distances and bond angles for **4**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Eu1	O1	2.500(7)	O1	Eu1	O3	50.6(2)
Eu1	O3	2.521(7)	O1	Eu1	O4	80.3(2)
Eu1	O4	2.531(7)	O1	Eu1	O7	75.1(2)
Eu1	O6	2.499(7)	O1	Eu1	O10	67.2(2)
Eu1	O7	2.529(7)	O1	Eu1	O17	115.5(2)
Eu1	O8	2.493(7)	O3	Eu1	O4	115.8(2)
Eu1	O10	2.557(6)	O3	Eu1	O7	72.6(2)
Eu1	O11	2.350(5)	O3	Eu1	O10	114.4(2)
Eu1	O16	2.349(6)	O3	Eu1	O17	69.3(2)
Eu1	O17	2.635(6)	O4	Eu1	O10	64.9(2)
Eu2	O11	2.425(6)	O4	Eu1	O17	111.7(2)
Eu2	O12	2.406(6)	O6	Eu1	O7	143.6(2)
Eu2	O13	2.453(6)	O6	Eu1	O10	107.7(2)
Eu2	O14	2.570(6)	O11	Eu2	O14	110.3(2)
Eu2	O16	2.333(5)	O11	Eu2	N5	136.8(2)
Eu2	N5	2.503(7)	O11	Eu2	N6	158.9(2)
Eu2	N6	2.747(7)	O11	Eu2	N7	73.0(2)
Eu2	N7	2.540(6)	O12	Eu2	O13	152.5(2)
Eu1	Eu2	3.856(13)	O12	Eu2	O14	147.0(2)
			O13	Eu2	N5	125.1(2)
			O13	Eu2	N6	84.4(2)
			O16	Eu2	N6	126.5(2)
			O16	Eu2	N7	141.3(2)

Table S5 Selected Bond distances and bond angles for **5**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Tb1	Tb1^{1}	3.7393(10)	O1	Tb1	Tb1^{1}	89.98(10)
Tb1	O1	2.456(4)	O1	Tb1	O3	52.22(14)
Tb1	O3	2.461(4)	O1	Tb1	O4	152.39(15)
Tb1	O4	2.532(4)	O3	Tb1	N4	148.99(14)
Tb1	O6	2.466(4)	O4	Tb1	Tb1^{1}	73.76(10)
Tb1	O7^{1}	2.344(3)	O4	Tb1	N1	122.54(14)
Tb1	O7	2.317(3)	O6	Tb1	N4	25.97(14)

Tb1	O8[1]	2.469(4)	O7	Tb1	Tb1[1]	36.91(8)
Tb1	N1	2.655(5)	O7[1]	Tb1	Tb1[1]	36.41(8)
Tb1	N2	2.445(4)	N2	Tb1	N1	65.77(16)
Tb1	N3	2.885(5)	N2	Tb1	N3	97.02(15)
Tb1	N4	2.915(5)	N2	Tb1	N4	81.64(15)
Tb1[1]	O7	2.344(3)	N3	Tb1	Tb1[1]	90.71(9)
Tb1[1]	O8	2.469(4)	N3	Tb1	N4	169.58(14)
			N4	Tb1	Tb1[1]	99.29(11)

[1]1-X,1-Y,1-Z

Table S6 Selected Bond distances and bond angles for **6**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Dy1	Dy1[1]	3.7142(3)	O1	Dy1	Dy1[1]	36.86(4)
Dy1	O1[1]	2.3270(15)	O1[1]	Dy1	Dy1[1]	36.37(4)
Dy1	O1	2.3004(15)	O1	Dy1	O1[1]	73.23(6)
Dy1	O2[1]	2.4503(16)	O1	Dy1	O2[1]	134.33(6)
Dy1	O3	2.4386(17)	O2[1]	Dy1	Dy1[1]	101.26(4)
Dy1	O4	2.4416(19)	O2[1]	Dy1	O7	73.29(6)
Dy1	O6	2.4461(18)	O2[1]	Dy1	N1	87.10(6)
Dy1	O7	2.5148(19)	O2[1]	Dy1	N3	107.16(7)
Dy1	N1	2.646(2)	O3	Dy1	O6	135.78(6)
Dy1	N2	2.428(2)	O3	Dy1	O7	152.52(6)
Dy1	N3	2.867(2)	O4	Dy1	O6	137.48(6)
Dy1	N4	2.898(2)	O4	Dy1	O7	147.36(6)
O1	Dy1[1]	2.3270(15)	N1	Dy1	Dy1[1]	163.07(4)
O2	Dy1[1]	2.4502(16)	N2	Dy1	O2[1]	136.56(6)
			N2	Dy1	Dy1[1]	114.18(5)

[1]1-X,1-Y,1-Z

Table S7 Selected Bond distances and bond angles for **7**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Ho1	Ho1[1]	3.7026(4)	O1[1]	Ho1	Ho1[1]	101.50(5)
Ho1	O1[1]	2.438(2)	O1[1]	Ho1	O3	73.52(8)
Ho1	O2[1]	2.3203(19)	O1[1]	Ho1	O4	71.55(8)
Ho1	O2	2.2866(19)	O1[1]	Ho1	N1	86.49(8)
Ho1	O3	2.507(2)	O2	Ho1	O1[1]	134.62(7)
Ho1	O4	2.440(2)	O2	Ho1	O4	112.85(8)
Ho1	O6	2.427(2)	O2[1]	Ho1	O4	121.75(8)
Ho1	O7	2.436(2)	O3	Ho1	N1	123.33(8)

Ho1	N1	2.634(3)	O3	Ho1	N4	163.83(7)
Ho1	N2	2.415(3)	O4	Ho1	Ho1[1]	124.72(6)
Ho1	N3	2.896(3)	O6	Ho1	N3	154.87(8)
Ho1	N4	2.854(3)	O7	Ho1	O4	137.42(8)
O1	Ho1[1]	2.438(2)	N1	Ho1	Ho1[1]	162.93(6)
O2	Ho1[1]	2.3204(19)	N2	Ho1	O7	120.31(8)

[1]1-X,1-Y,1-Z

Table S8 Selected Bond distances and bond angles for **8**

Atom	Atom	Length/Å	Atom	Atom	Atom	Angle/°
Er1	Er1[1]	3.6911(6)	O1	Er1	Er1[1]	124.98(12)
Er1	O1	2.432(4)	O1	Er1	O3	51.36(15)
Er1	O3	2.492(4)	O1	Er1	N1	72.02(16)
Er1	O4	2.413(4)	O3	Er1	Er1[1]	73.94(11)
Er1	O6	2.412(4)	O3	Er1	N1	123.28(15)
Er1	O7	2.266(3)	O3	Er1	N3	26.02(14)
Er1	O7[1]	2.311(3)	O4	Er1	O1	137.37(15)
Er1	O8[1]	2.426(3)	O4	Er1	O3	147.26(13)
Er1	N1	2.615(5)	O4	Er1	O8[1]	80.38(14)
Er1	N2	2.404(4)	O6	Er1	N3	154.00(13)
Er1	N3	2.896(6)	O6	Er1	N4	26.57(12)
Er1	N4	2.838(6)	O7	Er1	Er1[1]	36.66(8)
Er1	Er1[1]	3.6911(6)	O8[1]	Er1	N4	106.48(15)
			N1	Er1	Er1[1]	162.67(11)

[1]1-X,1-Y,1-Z

3. IR spectra of the HL ligand and Complexes 1-8

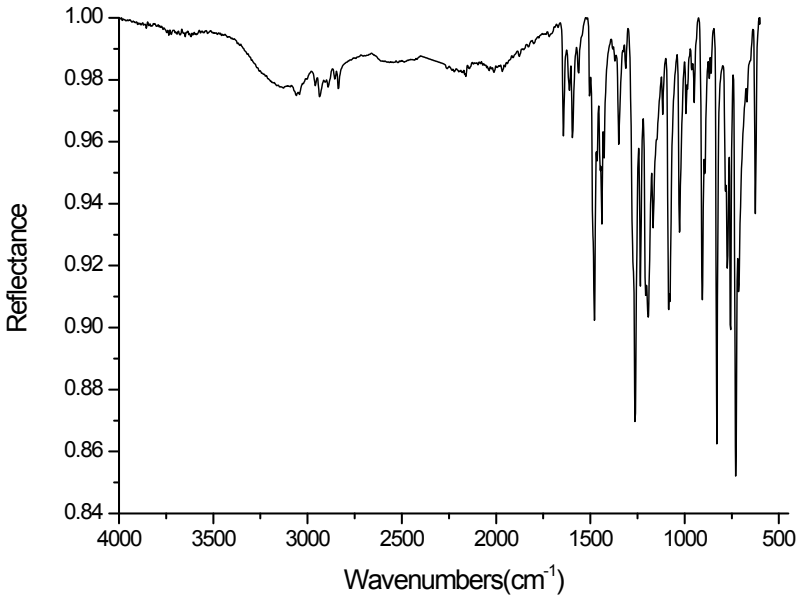


Fig. S3 The IR spectrum of HL.

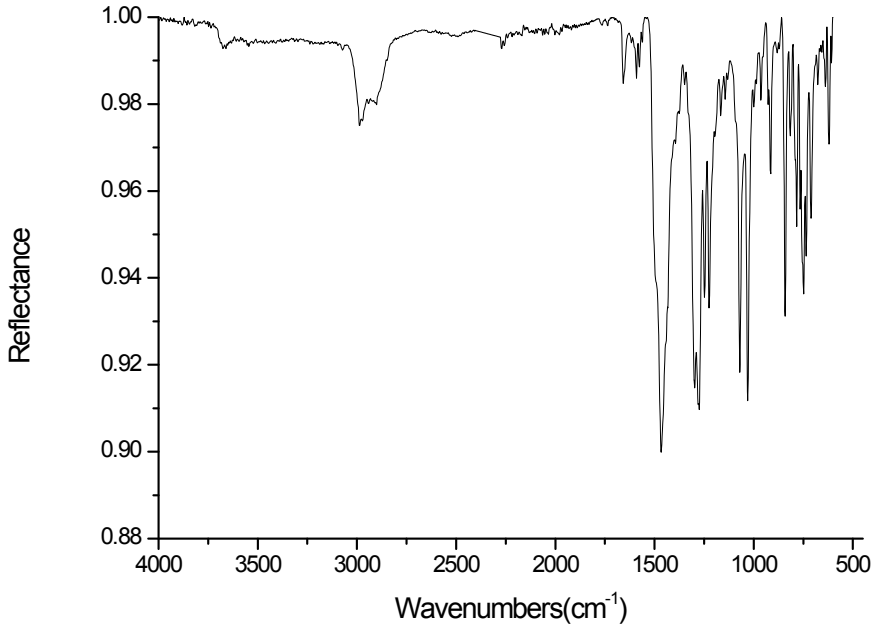


Fig. S4 The IR spectrum of complex **1**.

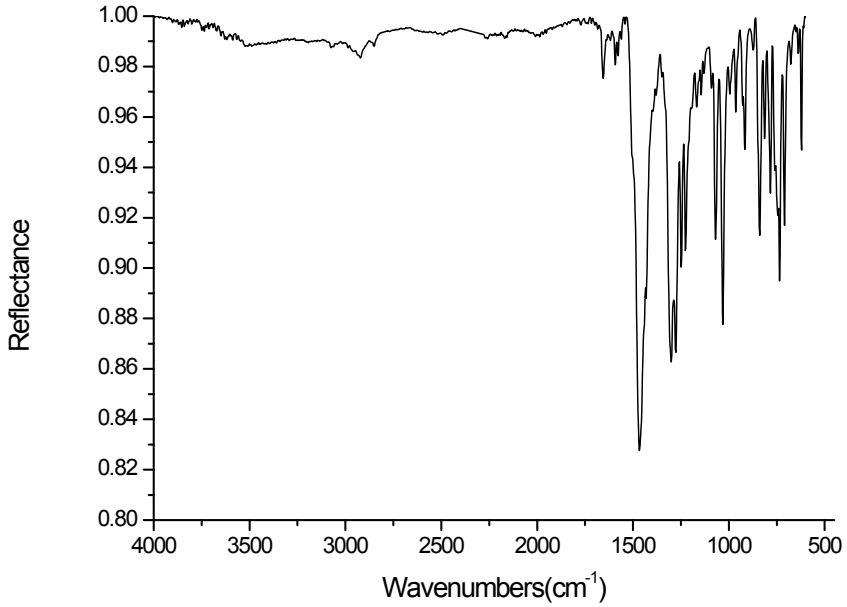


Fig. S5 The IR spectrum of complex **2**.

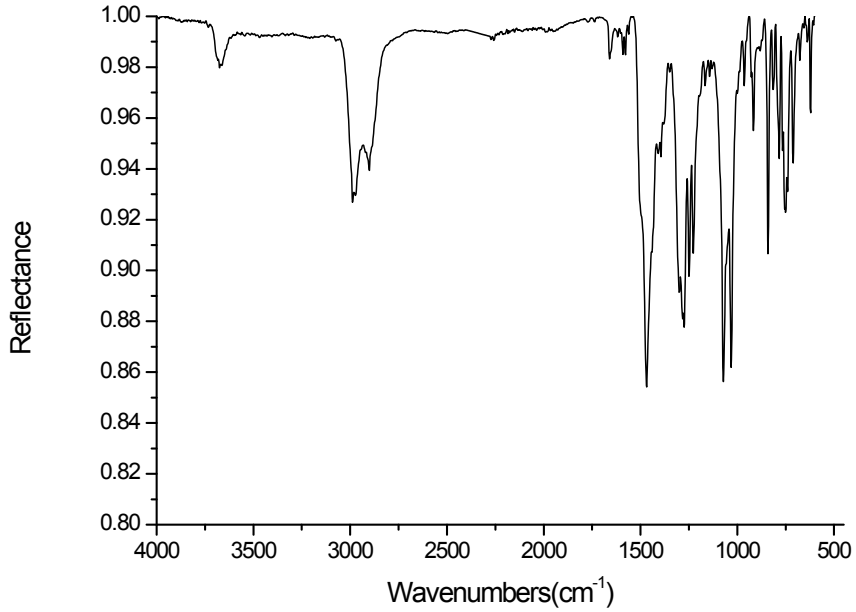


Fig. S6 The IR spectrum of complex **3**.

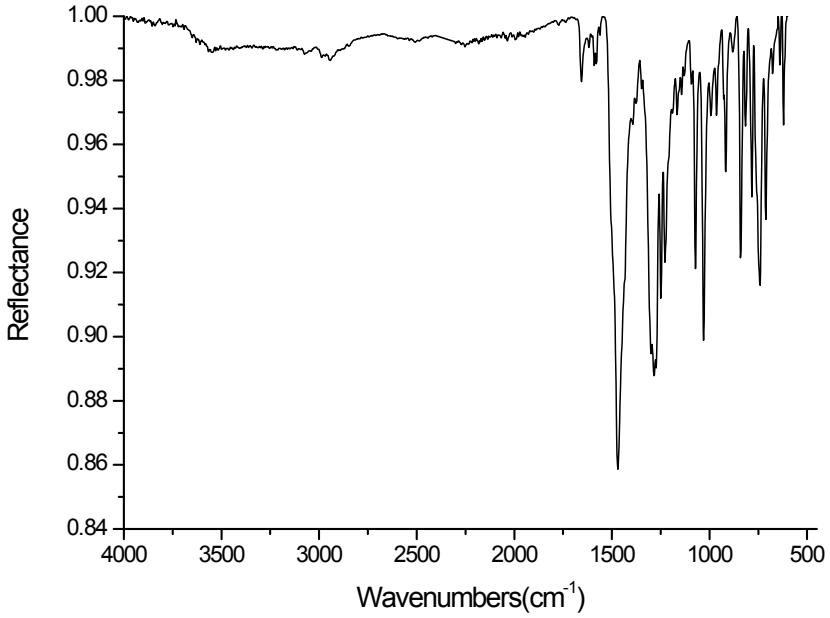


Fig. S7 The IR spectrum of complex **4**.

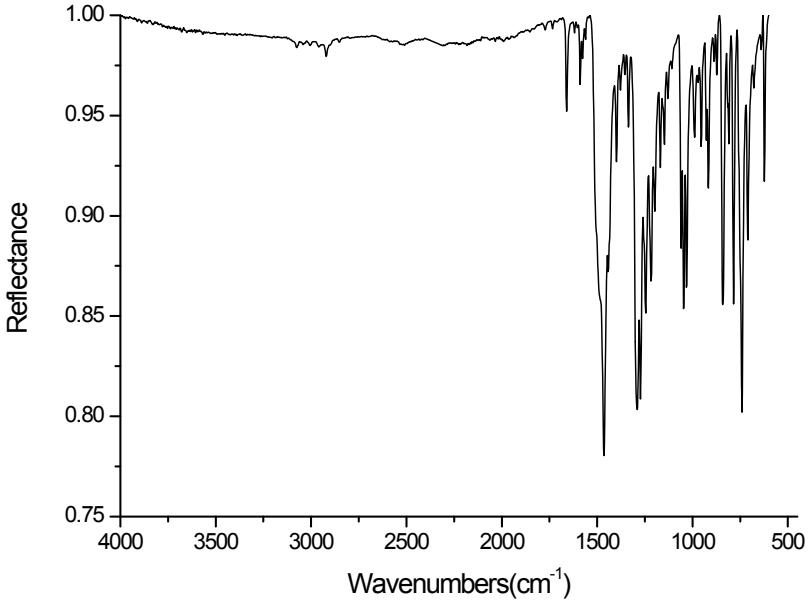


Fig. S8 The IR spectrum of complex **5**.

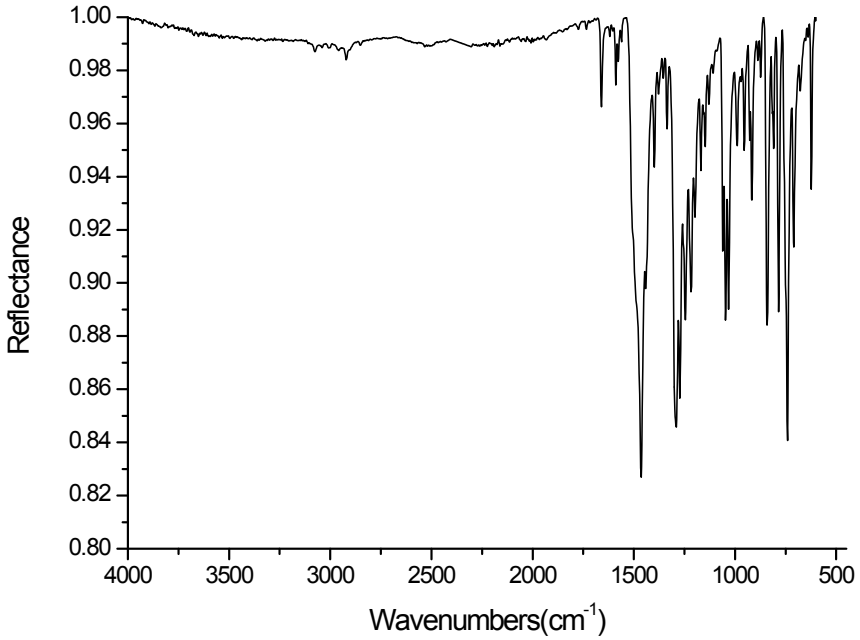


Fig. S9 The IR spectrum of complex **6**.

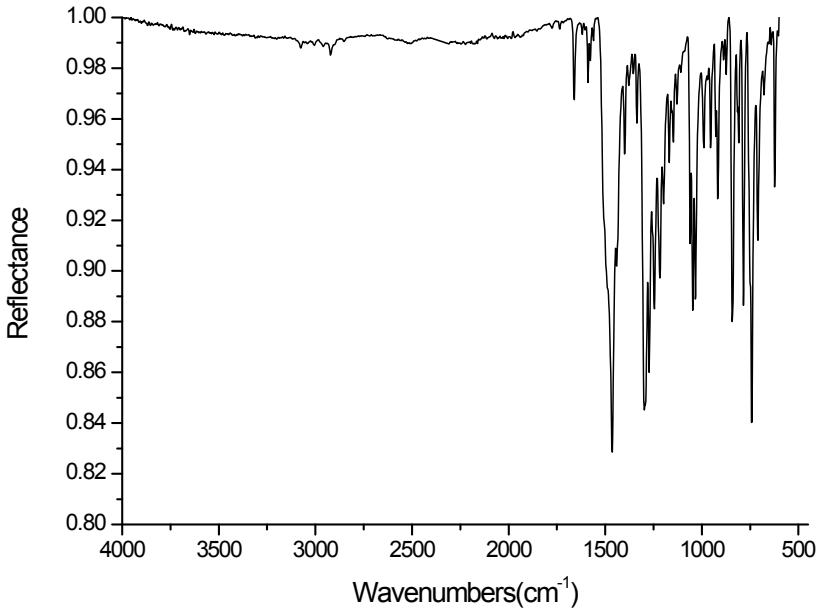


Fig. S10 The IR spectrum of complex **7**.

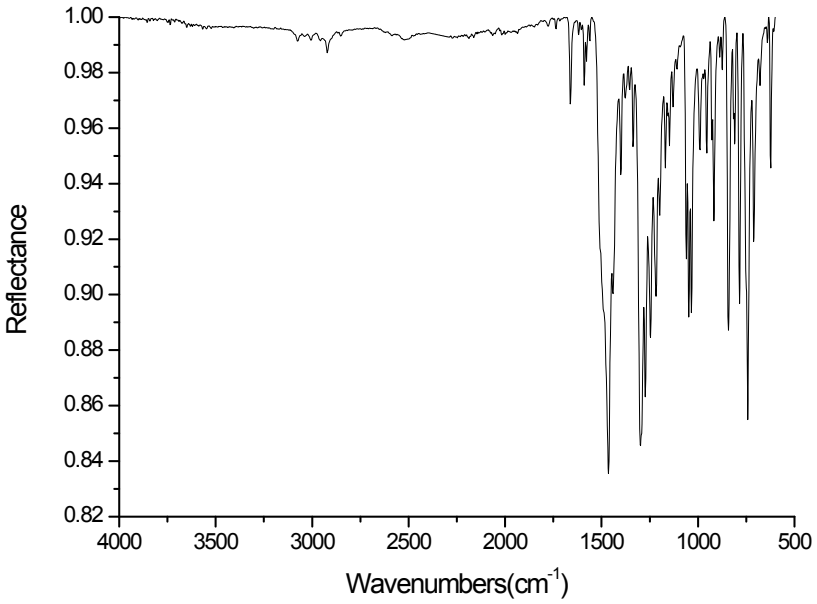


Fig. S11 The IR spectrum of complex **8**.

4. XRD patterns of complexes 1-8

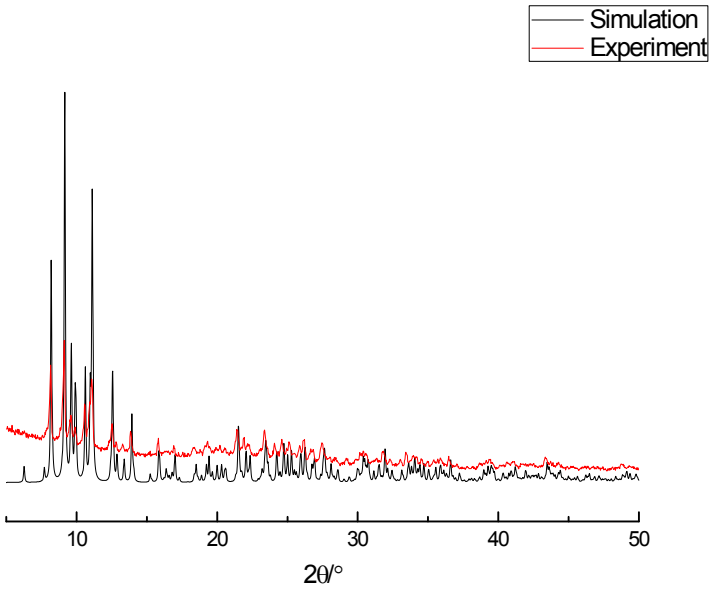


Fig. S12 XRD patterns of **1**.

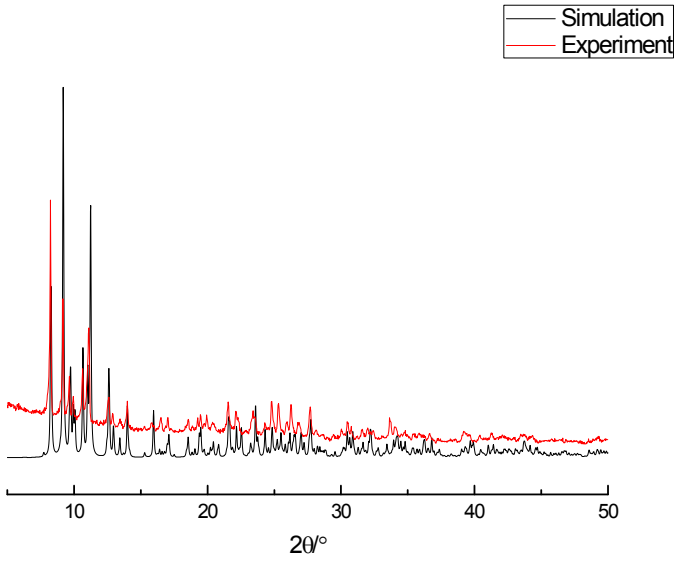


Fig. S13 XRD patterns of **2**.

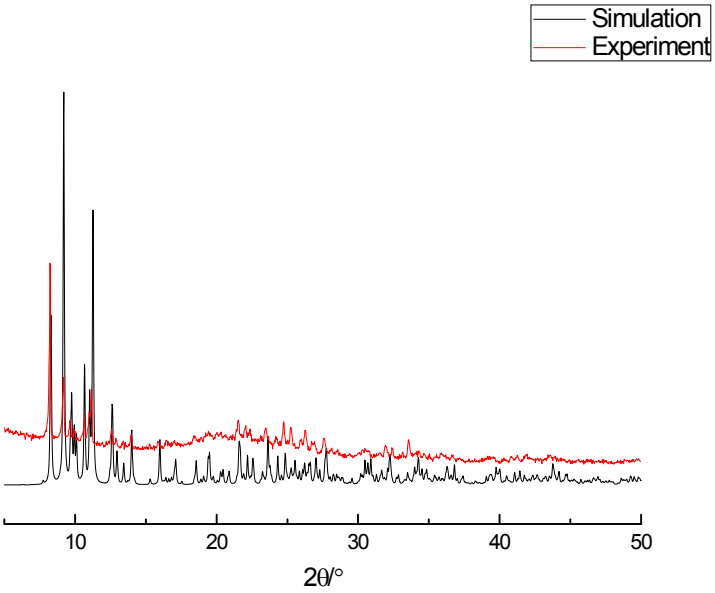


Fig. S14 XRD patterns of **3**.

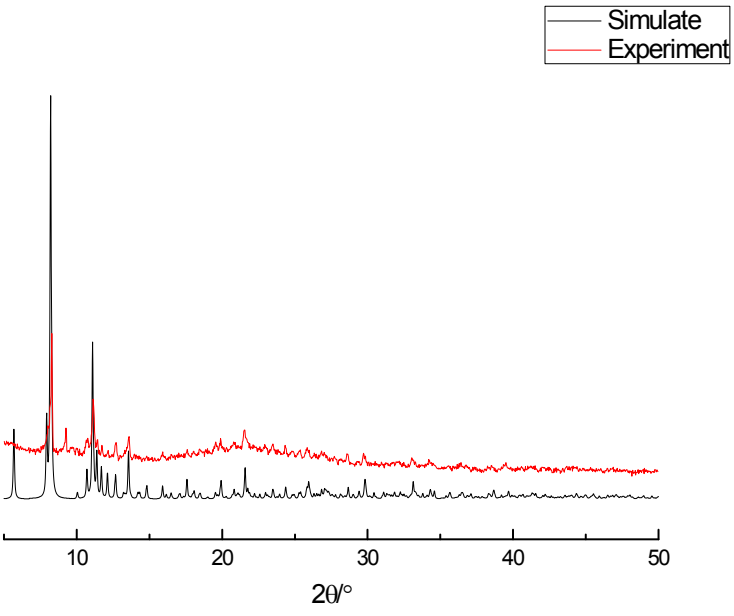


Fig. S15 XRD patterns of **4**.

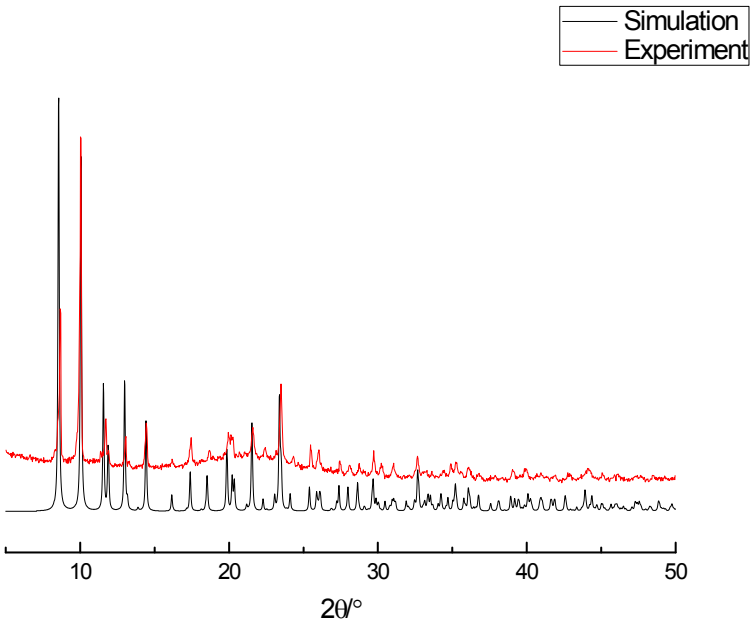


Fig. S16 XRD patterns of **5**.

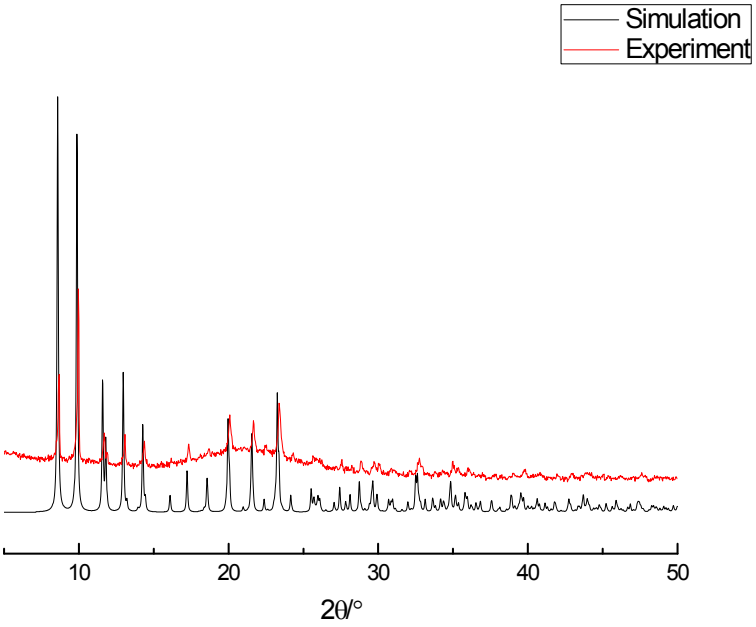


Fig. S17 XRD patterns of **6**.

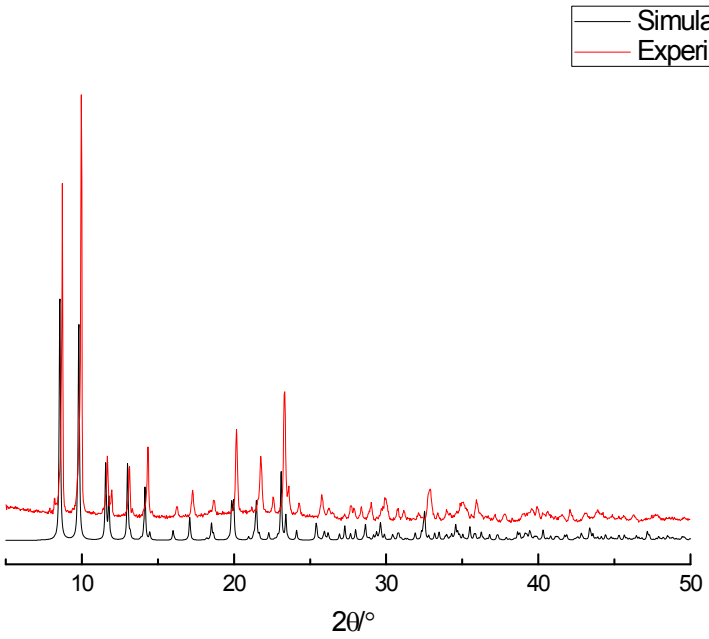


Fig. S18 XRD patterns of **7**.

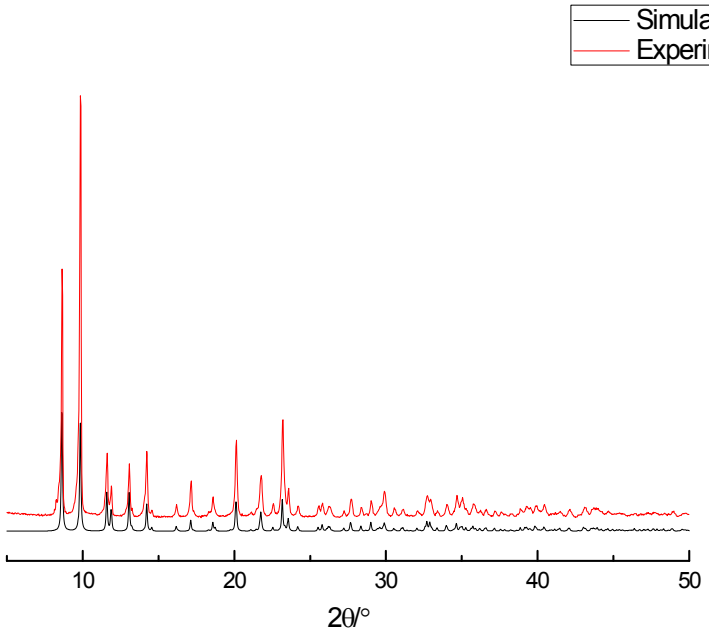


Fig. S19 XRD patterns of **8**.

5. The structure of the other four complexes 3, 5, 7 and 8

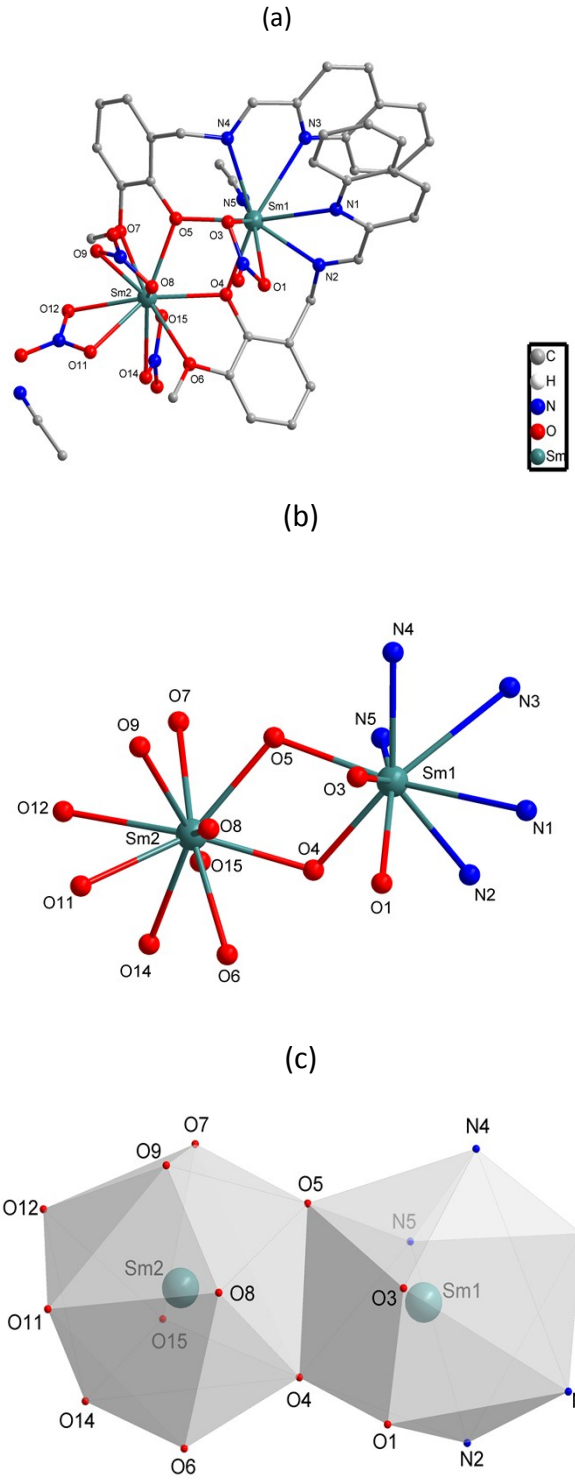
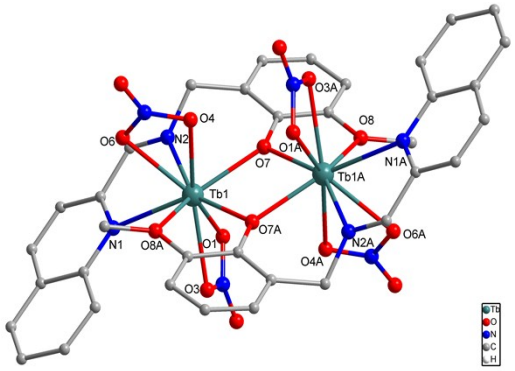
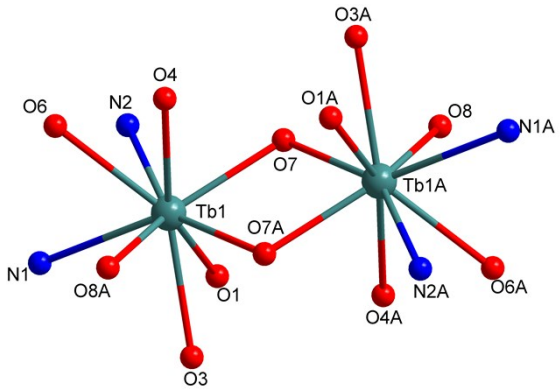


Fig. S20 (a) Molecular structure of $[Sm_2L_2(NO_3)_4(CH_3CN)]\cdot CH_3CN$ (**3**). Hydrogen atoms have been omitted for clarity. (b) Dinuclear core structure of **3**. (c) Coordination polyhedrons of the Sm^{III} ions in **3**.

(a)



(b)



(c)

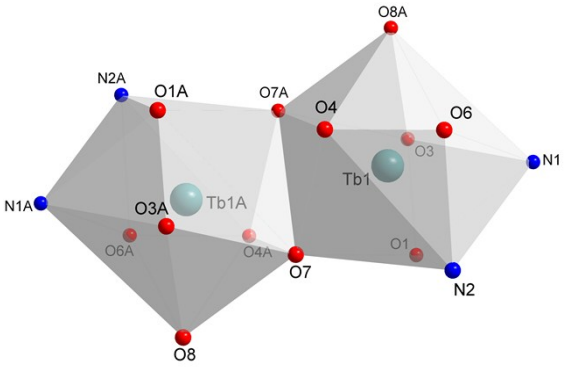
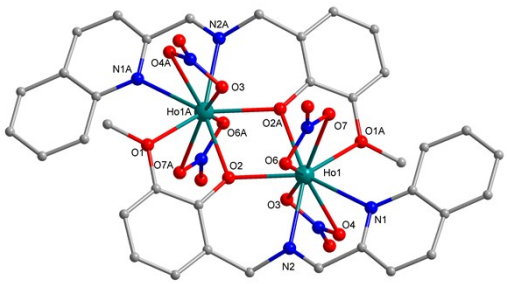
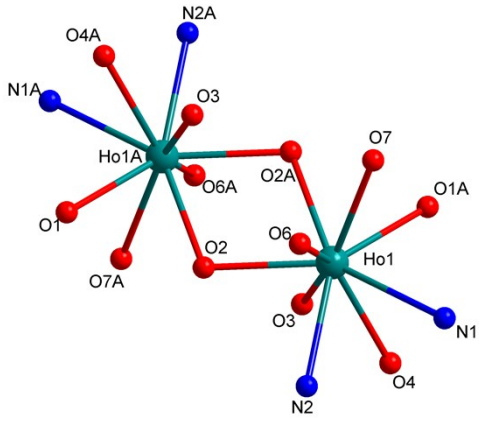


Fig. S21 (a) Molecular structure of $[Tb_2L_2(NO_3)_4]$ (**5**). Hydrogen atoms have been omitted for clarity. (b) Dinuclear core structure of **5**. (c) Coordination polyhedrons of the Tb^{III} ions in **5**.

(a)



(b)



(c)

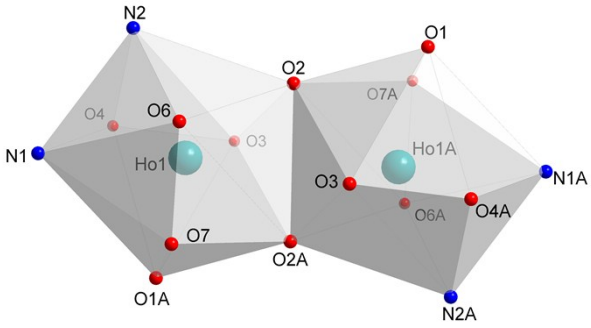
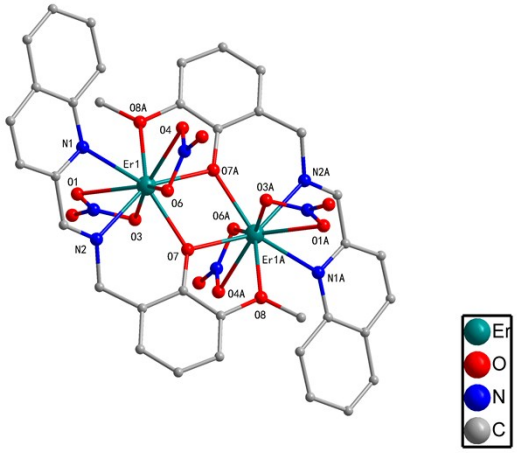
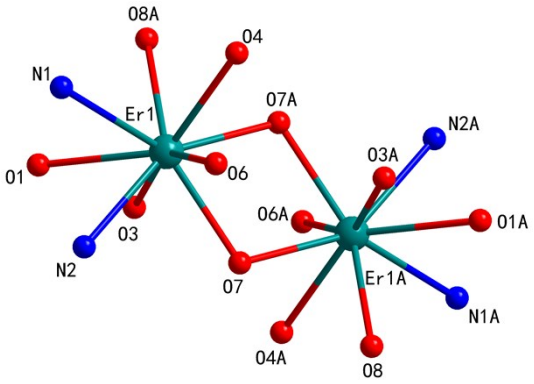


Fig. S22 (a) Molecular structure of $[Ho_2L_2(NO_3)_4]$ (**7**). Hydrogen atoms have been omitted for clarity. (b) Dinuclear core structure of **7**. (c) Coordination polyhedrons of the Ho^{III} ions in **7**.

(a)



(b)



(c)

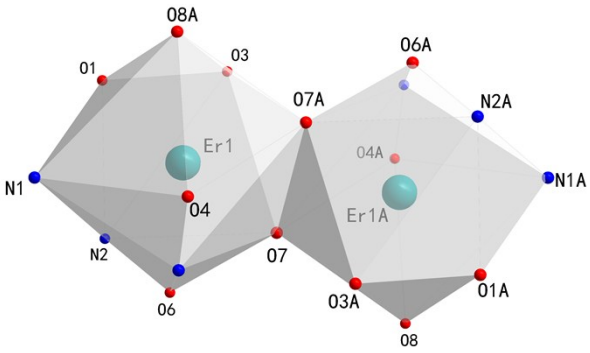


Fig. S23 (a) Molecular structure of $[Er_2L_2(NO_3)_3]$ (**8**). Hydrogen atoms have been omitted for clarity. (b) Dinuclear core structure of **8**. (c) Coordination polyhedrons of the Er^{III} ions in **8**.

6. M-X bond lengths of complexes 1-8

Table S9 Bond lengths between metal centers and the coordinated atoms of HL ligands of complexes **1-8**

	M-N(py)	M-N=C	M-Oph	M-OCH_3	M-N(py)	M-N=C	M-Oph	M-OCH_3
1-Pr	2.785(3)	2.602(3)	2.384(2)/2.388(2) Å	2.745(2)	2.785(3)	2.620(3)	2.406(2)/2.539(2) Å	2.667(2)
2-Nd	2.820(5)	2.572(5)	2.404(4)/2.421(4) Å	2.557(4)	2.869(5)	2.575(5)	2.398(4)/2.424(4) Å	2.611(4)
3-Sm	2.871(5)	2.550(5)	2.365(4)/2.396(4) Å	2.604(5)	2.796(5)	2.535(5)	2.385(4)/2.385(4) Å	2.548(4)
4-Eu	2.914(8)	2.540(6)	2.425(6)/2.350(5) Å	2.557(6)	2.747(7)	2.503(7)	2.333(5)/2.349(6) Å	2.635(6)
5-Tb	2.655(5)	2.445(4)	2.317(3)/2.344(3) Å	2.469(4)	2.655(5)	2.445(4)	2.317(3)/2.344(3) Å	2.469(4)
6-Dy	2.6646(2)	2.428(2)	2.3004(15)/2.327(15)	2.450(16)	2.6646(2)	2.428(2)	2.3004(15)/2.327(15)	2.450(16)
7-Ho	2.634(3)	2.415(3)	2.2866(19)/2.320(19)	2.438(2)	2.634(3)	2.415(3)	2.2866(19)/2.320(19)	2.438(2)
8-Er	2.615(5)	2.404(4)	2.266(3)/2.311(3) Å	2.426(3)	2.615(5)	2.404(4)	2.266(3)/2.311(3) Å	2.426(3)

7. Magnetic properties of complexes 6 and 7

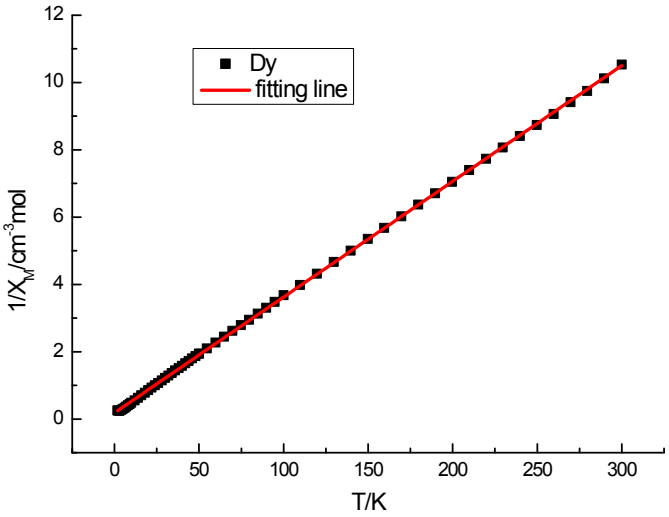


Fig. S24 The plot of $1/\chi_m$ versus *T* for **6** and the linear fit of Curie-Weiss law at 1000 Oe field.

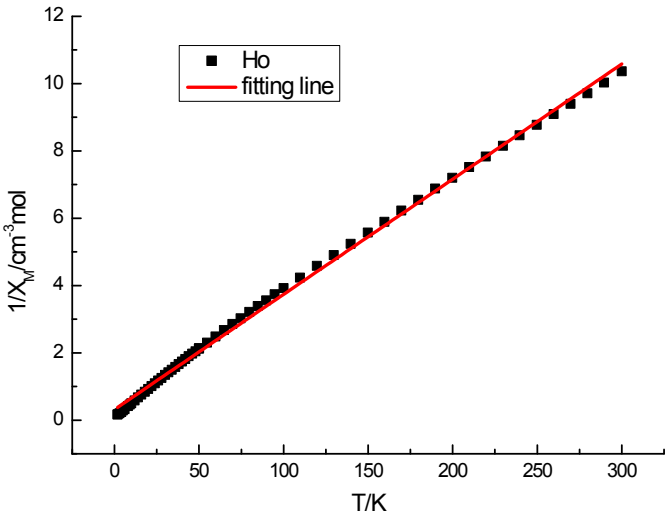
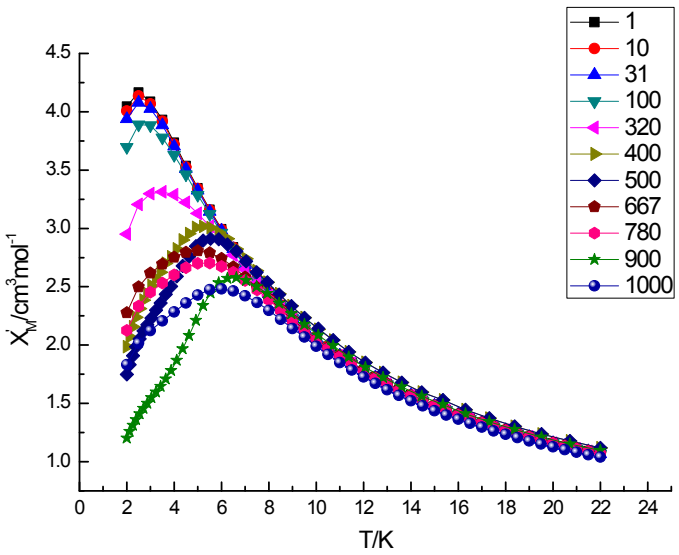


Fig. S25 The plot of $1/\chi_m$ versus *T* for **7** and the linear fit of Curie-Weiss law at 1000 Oe field.

8. Frequency dependence of in-phase(a) and out-of-phase(b) ac susceptibility of complex 6

(a)



(b)

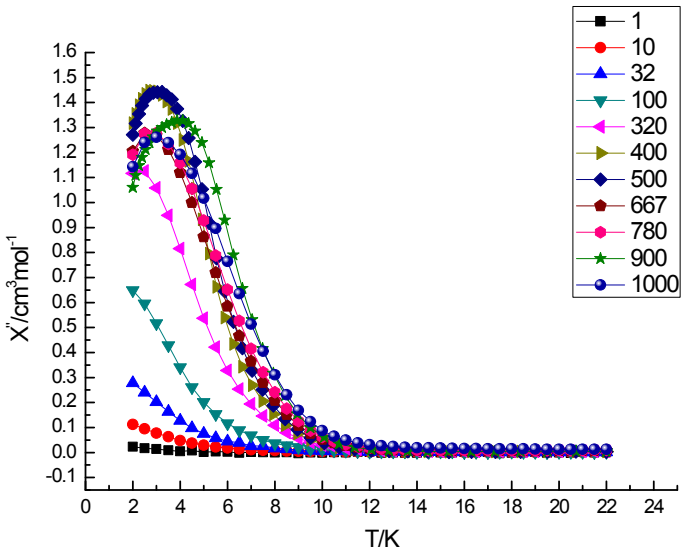


Fig. S26 Frequency dependence of out-of-phase and in-phase ac susceptibility of complex **6**.

9. Parameters obtained from fitting the Cole-Cole plots of complex 6

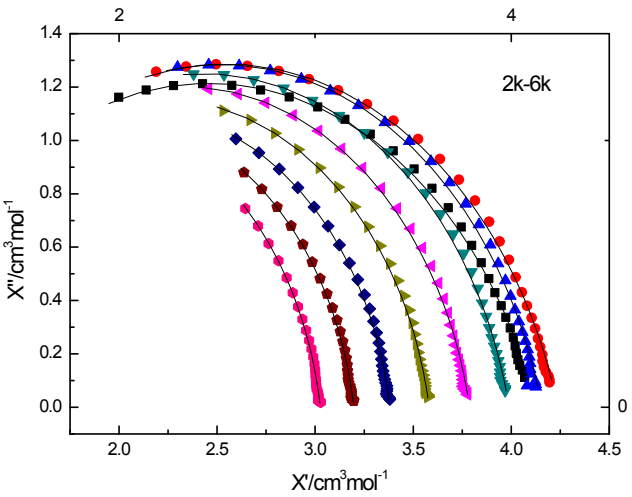


Fig. S27 Cole-Cole plots measured at 2.0-6.0 K for **6** under a zero-dc field; the solid lines are the best fits to the experimental data.

Table S10 Parameters from the fitting of the Cole-Cole plots of **6**.

Temperature / K	X_S / $cm^3mol^{-1}K$	X_T / $cm^3mol^{-1}K$	τ / s	α
2	0.794528E+00	0.412323E+01	0.267376E-03	0.197246E+00
2.5	0.848915E+00	0.423759E+01	0.233009E-03	0.173218E+00
3	0.880567E+00	0.415511E+01	0.204413E-03	0.152869E+00
3.5	0.877305E+00	0.398921E+01	0.175215E-03	0.138299E+00
4	0.870698E+00	0.378721E+01	0.147250E-03	0.121929E+00
4.5	0.835641E+00	0.358134E+01	0.120012E-03	0.108843E+00
5	0.757818E+00	0.338197E+01	0.945000E-04	0.996718E-01
5.5	0.625953E+00	0.319693E+01	0.717889E-04	0.951888E-01
6	0.412082E+00	0.302635E+01	0.520990E-04	0.941584E-01

10. Plot of lnτ vs 1/T of 6

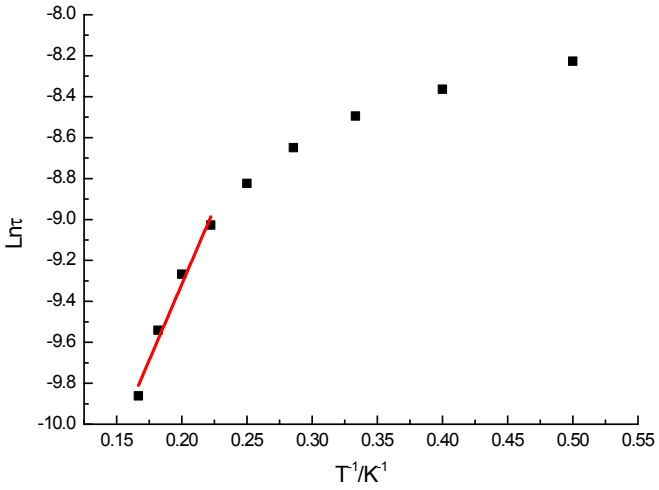
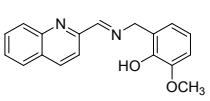
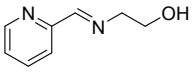
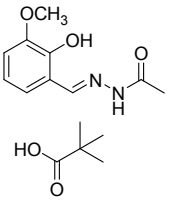
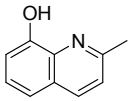
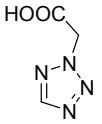
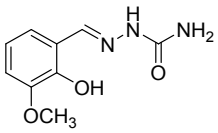
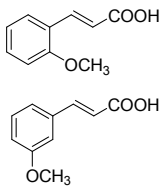
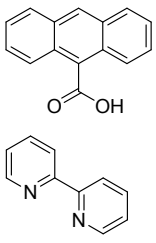
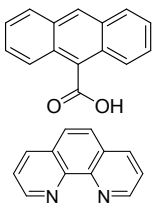
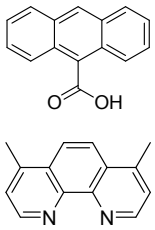
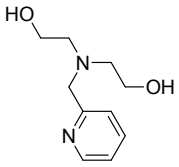
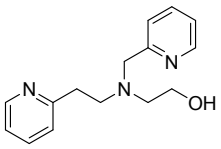
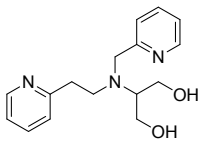
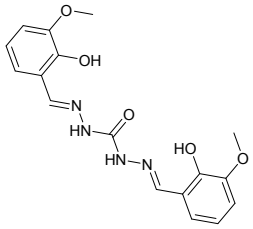
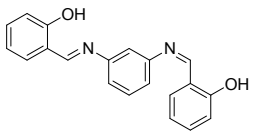
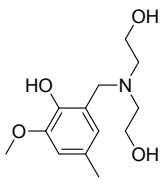


Fig. S28 lnτ versus T^{-1} plots for **6**. The red line represents the fit to the Arrhenius law.

11.Dy_2 SMMs reported in the literature

Table. S11 Some examples of nine-coordinated Dy_2 SMMs bearing $[Dy_2O_2]$ units

Complexes	Ligand	configurations	dDy…Dy (Å)	Dy–O–Dy bond angle (°)	Magnetic properties Ueff (K), τ_0 (s),	Ref.
$[Dy_2L_2(NO_3)_4]$		9, bicapped dodecahedron geometry	3.7226(8)	106.6(3)	U_{eff} = 14.8 $\tau_0 = 4.64 \times 10^{-6}$ antiferromagnetic	This work
$[Dy_2L_2(NO_3)_2(OAc)_4]$ ·$2CH_3CN$		9, monocapped square antiprism	3.8454(9)	104.95(11)	--- antiferromagnetic	1(*a*)
$[Dy_2(LH)_2(\mu_2$-Piv-$\kappa^2O,O')_2(NO_3$-$\kappa^2O,O')_2]$		9, distorted monocapped square antiprism	3.671(7)	100.39(7)	U_{eff} = 40 $\tau_0 = 6.5\times10^{-5}$ antiferromagnetic	1(*b*)
$[Dy_2(Mq)_4(NO_3)_6]$		9, distorted trigonal prism	3.914(5)	112.26(1)	U_{eff} = 40.01 $\tau_0 = 5.44 \times 10^{-6}$ antiferromagnetic	1 (*c*)
$[Dy_2(1\text{-tza})_4(NO_3)_2$ $(bipy)_2]$		9, monocapped square antiprism	4.0054(2)	105.573(63)	U_{eff} = 41.8 $\tau_0 = 2.0\times10^{-9}$ ferromagnetic	1(*d*)
$[Ln_2(Hhms)_2$ $(NO_3)_4]\cdot MeCN$		9, hula-hoop -like geometry	3.6685(3)	103.877(15)	Ueff=50.12 , $\tau_0 = 1.15 \times 10^{-8}$ antiferromagnetic	1(*e*)
$[Ln(L1)_3(DMSO)$ $(H_2O)]_2[Ln(L_2)_3$ $(DMSO)]_n$		9, ---	3.930(4) 4.085(5) Å	105.5(1) 114.3(1)	-- antiferromagnetic	1(*f*)
$[Dy_2(\mu_2$-anthc$)_4$ $(anthc)_2(L)_2]$		9, distorted monocapped square antiprism	3.9490(2)	105.18(6)	U_{eff} = 51.2(3) $\tau_0 = 3.2(1) \times 10^{-8}$ ferromagnetic	1 (*g*)
$[Dy_2(\mu_2$-anthc$)_4$ $(anthc)_2(L_)_2]$		9, distorted monocapped square antiprism	3.9176(4)	106.20(10)	U_{eff} = 49.4 $\tau_0 = 4.6(2) \times 10^{-8}$ ferromagnetic	1(*g*)

$[Dy_2(\mu_2\text{-anthc})_4(anthc)_2(L)_2]$		9, distorted monocapped square antiprism	3.9224(6)	105.18(6)	U_{eff} = 31.6 $\tau_0 = 3.4(2) \times 10^{-8}$ ferromagnetic	1 (*g*)
$[Dy_2(HL1)_2(NO_3)_4]$		9, distorted monocapped square antiprism	3.709	109.83	U_{eff} = 72.48 $\tau_0 = 8.504 \times 10^{-8}$ antiferromagnetic	1 (*h*)
$[Dy_2(L2)_2(NO_3)_4]$		9, distorted monocapped square antiprism	3.706	109.71	U_{eff} = 41.55 $\tau_0 = 8.5 \times 10^{-7}$ antiferromagnetic	1 (*h*)
$[Dy_2(HL3)_2(NO_3)_4]$		9, distorted monocapped square antiprism	3.719	110.65	U_{eff} = 6.77 $\tau_0 = 9.12 \times 10^{-6}$ ferromagnetic	1 (*h*)
$[Dy_2(H_3L)_2(PhCOO)_4]\cdot 4H_2O$		9, tricapped trigonal prism	3.695	101.78	U_{eff} = 42.7 $\tau_0 = 1.37 \times 10^{-7}$ antiferromagnetic	1 (*i*)
$[Dy_2(L)_2(acac)_2(H_2O)]\cdot 2CH_2Cl_2$		9, distorted square antiprism	3.84	110.8	$U_{eff\,1}$ = 37 $\tau_{01} = 4.2 \times 10^{-7}$ $U_{eff\,2}$ = 80 $\tau_{02} = 8.3 \times 10^{-8}$ ferromagnetic	1 (*j*)
$[Dy_2(H_2L)_2(\mu\text{-piv})_2(piv)_2]\cdot {}_2CHCl_3$		9, distorted monocapped square-antiprism	3.633	103.02	U_{eff1} = 8.96 $\tau_{01} = 8.81 \times 10^{-5}$ U_{eff2} = 35.51 $\tau_{02} = 1.48 \times 10^{-6}$ antiferromagnetic	1(*k*)

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