Table S1 Selected Bond Distances (Å) and Angles (deg) for Complexes **1-6**

		Complex **1**	
Ni(1)-O(1)	2.045(4)	Ni(1)-O(5)$^{\#1}$	2.264(4)
Ni(1)-O(2)	2.038(4)	Ni(1)-N(1)	2.077(5)
Ni(1)-O(4)$^{\#1}$	2.059(4)	Ni(1)-N(6)$^{\#2}$	2.080(5)
O(5)-Ni(1)$^{\#3}$	2.264(4)		
O(1)-Ni(1)-N(6)$^{\#2}$	94.15(17)	N(1)-Ni(1)-O(5)$^{\#1}$	86.54(16)
O(1)-Ni(1)-C(00R)$^{\#1}$	124.50(17)	O(1)-Ni(1)-O(4)$^{\#1}$	94.26(16)
O(2)-Ni(1)-O(1)	94.93(16)	N(1)-Ni(1)-C(00R)$^{\#1}$	91.18(18)
O(1)-Ni(1)-N(1)	91.61(17)	N(6)$^{\#2}$-Ni(1)-O(5)$^{\#1}$	90.76(16)
O(2)-Ni(1)-O(5)$^{\#1}$	109.95(15)	N(6)$^{\#2}$-Ni(1)-C(00R)$^{\#1}$	90.45(18)
O(2)-Ni(1)-N(1)	85.07(18)	C(7)-N(1)-Ni(1)	132.0(3)
O(2)-Ni(1)-N(6)$^{\#2}$	88.51(17)	C(1)-O(2)-Ni(1)	123.0(4)
O(2)-Ni(1)-C(00R)$^{\#1}$	140.51(17)	C(00R)-O(4)-Ni(1)$^{\#3}$	94.4(4)
O(4)$^{\#1}$-Ni(1)-O(5)$^{\#1}$	60.91(15)	C(00R)-O(5)-Ni(1)$^{\#3}$	84.9(3)
O(4)$^{\#1}$-Ni(1)-N(1)	95.05(18)	C(6)-N(1)-Ni(1)	121.6(4)
O(4)$^{\#1}$-Ni(1)-N(6)$^{\#2}$	90.46(17)		
		Complex **2**	
Ni(1)-O(2)	1.9934(12)	Ni(1)-O(5)$^{\#1}$	2.0823(13)
Ni(1)-O(1)	2.0719(12)	Ni(1)-N(1)$^{\#2}$	2.1053(15)
Ni(1)-O(4)$^{\#1}$	2.1362(12)	Ni(1)-N(6)	2.0879(15)
O(2)-Ni(1)-O(1)	94.47(5)	O(5)-C(25)-Ni(1)$^{\#3}$	59.01(9)
O(2)-Ni(1)-O(5)$^{\#1}$	105.41(5)	O(1)-Ni(1)-N(1)$^{\#2}$	92.64(6)
O(2)-Ni(1)-N(1)$^{\#2}$	90.17(6)	O(1)-Ni(1)-N(6)	89.16(5)
O(2)-Ni(1)-N(6)	87.19(6)	O(1)-Ni(1)-C(25)$^{\#1}$	128.81(6)
O(2)-Ni(1)-C(25)$^{\#1}$	136.69(5)	C(19)-O(2)-Ni(1)	127.05(12)
O(1)-Ni(1)-O(4)$^{\#1}$	97.25(5)	O(5)$^{\#1}$-Ni(1)-O(4)$^{\#1}$	62.86(5)
O(5)$^{\#1}$-Ni(1)-N(6)	91.05(6)	O(5)$^{\#1}$-Ni(1)-N(1)$^{\#2}$	88.11(6)
N(6)-Ni(1)-C(25)$^{\#1}$	94.10(6)	C(25)-O(4)-Ni(1)$^{\#3}$	86.95(10)
N(1)$^{\#2}$-Ni(1)-O(4)$^{\#1}$	89.69(5)	C(25)-O(5)-Ni(1)$^{\#3}$	89.63(10)
N(1)$^{\#2}$-Ni(1)-C(25)$^{\#1}$	86.73(6)	C(7)-N(1)-Ni(1)$^{\#4}$	121.84(13)
N(6)-Ni(1)-O(4)$^{\#1}$	92.57(5)	C(6)-N(1)-Ni(1)$^{\#4}$	132.54(12)
C(13)-N(6)-Ni(1)	130.24(12)	C(12)-N(6)-Ni(1)	123.37(12)
		Complex **3**	
Ni(1)-O(1)	2.026(2)	Ni(1)-O(4)$^{\#1}$	2.086(3)
Ni(1)-O(5)$^{\#1}$	2.158(2)	Ni(1)-N(1)$^{\#2}$	2.084(3)
Ni(1)-O(2)	2.030(3)	Ni(1)-N(6)	2.062(3)
O(1)-Ni(1)-O(2)	94.91(11)	N(1)$^{\#2}$-Ni(1)-C(26)$^{\#1}$	94.56(12)
O(1)-Ni(1)-O(4)$^{\#1}$	100.32(10)	N(6)-Ni(1)-O(5)$^{\#1}$	86.14(11)
O(1)-Ni(1)-N(1)$^{\#2}$	89.32(11)	N(6)-Ni(1)-O(4)$^{\#1}$	87.16(12)
O(1)-Ni(1)-N(6)	95.58(11)	O(4)-C(26)-Ni(1)$^{\#3}$	58.59(19)
O(1)-Ni(1)-C(26)$^{\#1}$	131.35(11)	N(6)-Ni(1)-C(26)$^{\#1}$	84.35(12)
N(1)$^{\#2}$-Ni(1)-O(4)$^{\#1}$	94.78(12)	C(26)-O(5)-Ni(1)$^{\#3}$	86.8(2)
O(2)-Ni(1)-O(5)$^{\#1}$	102.50(10)	C(19)-O(2)-Ni(1)	123.9(2)
O(2)-Ni(1)-O(4)$^{\#1}$	164.76(9)	C(26)-O(4)-Ni(1)$^{\#3}$	90.4(2)
O(2)-Ni(1)-N(1)$^{\#2}$	85.63(12)	C(7)-N(1)-Ni(1)$^{\#4}$	120.4(2)
O(2)-Ni(1)-N(6)	91.09(11)	O(5)-N(1)-Ni(1)$^{\#3}$	61.84(18)

O(2)-Ni(1)-C(26)$^{\#1}$	133.73(12)	N(1)$^{\#2}$-Ni(1)-O(5)$^{\#1}$	90.04(11)
O(4)$^{\#1}$-Ni(1)-O(5)$^{\#1}$	62.28(10)		

Complex **4**

Mn(1)-O(4)	2.087(3)	Mn(1)-N(1)	2.274(4)
Mn(1)-O(2)$^{\#1}$	2.249(3)	N(6)-Mn(1)$^{\#4}$	2.267(4)
Mn(1)-O(1)$^{\#1}$	2.290(3)	Mn(1)-O(5)	2.113(2)
O(4)-Mn(1)-O(2)$^{\#1}$	118.16(10)	N(6)$^{\#2}$-Mn(1)-O(1)$^{\#1}$	98.00(12)
O(4)-Mn(1)-O(5)	96.30(11)	O(5)-Mn(1)-C(1)$^{\#1}$	115.70(11)
O(4)-Mn(1)-N(6)$^{\#2}$	86.39(13)	N(6)$^{\#2}$-Mn(1)-C(1)$^{\#1}$	102.84(12)
O(4)-Mn(1)-N(1)	93.89(12)	N(1)-Mn(1)-O(1)$^{\#1}$	82.08(12)
O(4)-Mn(1)-C(1)$^{\#1}$	146.40(11)	N(1)-Mn(1)-C(1)$^{\#1}$	79.97(13)
O(2)$^{\#1}$-Mn(1)-O(1)$^{\#1}$	58.00(8)	C(6)-O(4)-Mn(1)	132.0(2)
O(2)$^{\#1}$-Mn(1)-N(6)$^{\#2}$	97.81(12)	C(1)-O(2)-Mn(1)$^{\#3}$	90.1(2)
O(2)$^{\#1}$-Mn(1)-N(1)	86.99(13)	C(1)-O(1)-Mn(1)$^{\#3}$	88.4(2)
O(5)-Mn(1)-N(1)	84.63(17)	C(25)-N(6)-Mn(1)$^{\#4}$	136.5(3)
C(7)-N(1)-Mn(1)	118.9(3)	C(18)-N(6)-Mn(1)$^{\#4}$	115.9(3)
O(5)-Mn(1)-O(2)$^{\#1}$	145.00(11)	O(1)-C(1)-Mn(1)$^{\#3}$	62.44(18)
O(5)-Mn(1)-O(1)$^{\#1}$	87.17(10)	C(13)-N(1)-Mn(1)	134.2(3)
O(5)-Mn(1)-N(6)$^{\#2}$	89.80(16)		

Complex **5**

Mn(1)-O(1)	2.2982(14)	Mn(1)-N(7)	2.2466(18)
Mn(1)-O(1)$^{\#1}$	2.4382(15)	Mn(1)-N(6)	2.2856(16)
Mn(1)-O(1S)	2.1503(15)	Mn(1)-N(1)$^{\#2}$	2.3306(17)
Mn(1)-O(4)	2.3921(15)		
O(1)-Mn(1)-O(1)$^{\#1}$	71.25(6)	N(7)-Mn(1)-N(1)$^{\#2}$	83.21(6)
O(1)-Mn(1)-O(4)	139.90(5)	N(6)-Mn(1)-O(1)	86.47(5)
O(1)-Mn(1)-N(1)$^{\#2}$	90.01(5)	N(6)-Mn(1)-O(1)$^{\#1}$	91.64(5)
O(1S)-Mn(1)-O(1)	147.26(6)	N(6)-Mn(1)-O(4)	90.19(5)
O(1S)-Mn(1)-O(1)$^{\#1}$	76.22(5)	C(2)-N(1)-Mn(1)$^{\#3}$	140.13(13)
O(1S)-Mn(1)-O(4)	72.73(5)	N(1)$^{\#2}$-Mn(1)-O(1)$^{\#1}$	96.53(5)
O(1S)-Mn(1)-N(7)	141.04(6)	N(1)$^{\#2}$-Mn(1)-O(4)	86.18(5)
O(1S)-Mn(1)-N(6)	98.23(6)	Mn(1)-O(1)-Mn(1)$^{\#1}$	108.75(6)
O(1S)-Mn(1)-N(1)$^{\#2}$	90.04(6)	C(19)-O(1)-Mn(1)	118.00(12)
O(4)-Mn(1)-O(1)$^{\#1}$	148.84(5)	C(19)-O(1)-Mn(1)$^{\#1}$	132.97(12)
N(7)-Mn(1)-O(1)	71.34(6)	Mn(1)-O(1S)-H(1SA)	110.2
N(7)-Mn(1)-O(1)$^{\#1}$	142.59(5)	C(24)-O(4)-Mn(1)	119.35(13)
N(7)-Mn(1)-O(4)	68.57(6)	C(21)-N(7)-Mn(1)	121.99(13)
N(7)-Mn(1)-N(6)	86.36(6)	C(20)-N(7)-Mn(1)	118.64(13)
C(17)-N(6)-Mn(1)	132.28(12)	C(1)-N(1)-Mn(1)$^{\#3}$	114.87(13)
C(18)-N(6)-Mn(1)	122.66(13)		

Complex **6**

Mn(1)-O(1)	2.152(2)	Mn(1)-O(4)	2.1521(18)
Mn(1)-O(2)	2.1380(19)	Mn(1)-N(1)	2.242(2)
Mn(1)-N(2)	2.263(2)		
O(1)-Mn(1)-O(3)$^{\#1}$	56.08(7)	N(1)-Mn(1)-O(3)$^{\#1}$	87.55(8)
O(1)-Mn(1)-N(1)	93.10(8)	C(18)$^{\#4}$-N(1)-Mn(1)	124.70(17)
O(1)-Mn(1)-N(2)	92.85(8)	N(2)-Mn(1)-O(3)$^{\#1}$	87.13(8)
O(2)-Mn(1)-O(1)	93.04(7)	C(1)-N(2)-Mn(1)	122.70(19)

O(2)-Mn(1)-O(3)$^{\#1}$	148.93(7)	C(19)-O(2)-Mn(1)	145.63(17)
O(2)-Mn(1)-O(4)	97.13(7)	C(30)-O(3)-Mn(1)$^{\#2}$	83.49(17)
O(2)-Mn(1)-N(1)	91.29(8)	C(19)$^{\#3}$-O(4)-Mn(1)	132.11(16)
O(2)-Mn(1)-N(2)	98.81(8)	C(12)$^{\#4}$-N(1)-Mn(1)	128.7(2)
C(7)-N(2)-Mn(1)	130.95(17)	O(4)-Mn(1)-N(1)	88.68(8)
O(4)-Mn(1)-O(3)$^{\#1}$	113.87(7)	O(4)-Mn(1)-N(2)	83.65(8)

Symmetry codes

for 1, $^{\#1}$ x+1/2,-y+3/2,z-1/2 $^{\#2}$ x-1/2,y+1/2,z-1 $^{\#3}$ x-1/2,-y+3/2,z+1/2

for 2, $^{\#1}$ 1/2+X,1/2+Y,+Z $^{\#2}$ 1-X,1+Y,3/2-Z $^{\#3}$ -1/2+X,-1/2+Y,+Z $^{\#4}$ 1-X,-1+Y,3/2-Z

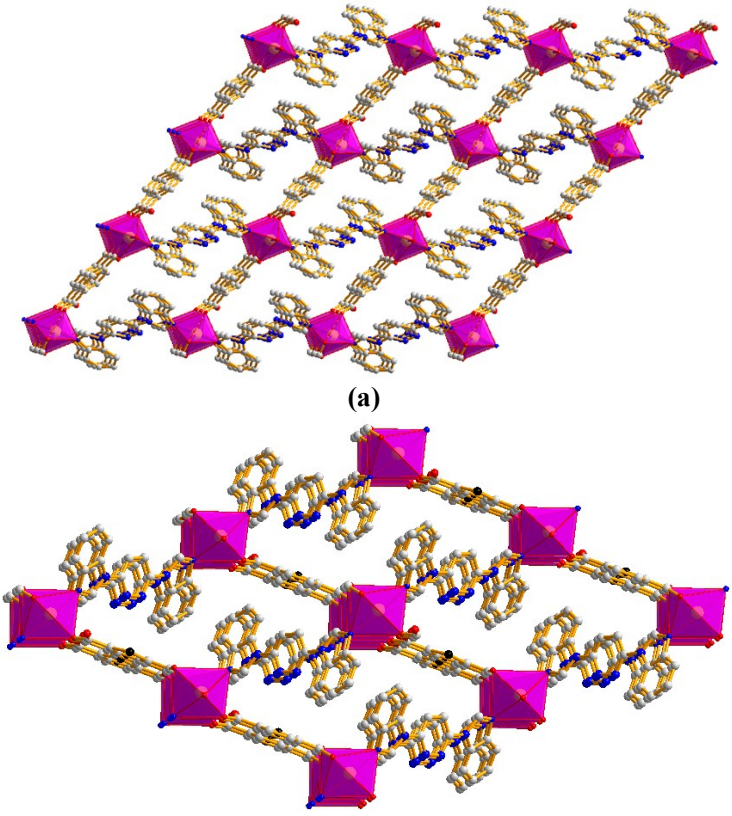
for 3, $^{\#1}$ -1/2+X,-Y,1/2+Z $^{\#2}$ 1+X,-1+Y,+Z $^{\#3}$ 1/2+X,-Y,-1/2+Z $^{\#4}$ -1+X,1+Y,+Z

for 4, $^{\#1}$ x,-y,z+1/2 $^{\#2}$ x-1/2,-y+3/2,z-1/2 $^{\#3}$ x,-y,z-1/2 $^{\#4}$ x+1/2,-y+3/2,z+1/2

for 5, $^{\#1}$ -x+2,-y+1,-z+1 $^{\#2}$ x+1,y-1,z $^{\#3}$ x-1,y+1,z

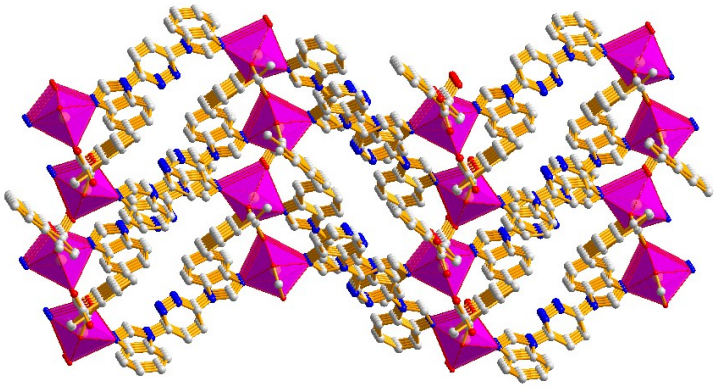
for 6, $^{\#1}$ -x+3/2,y-1/2,-z+1/2 $^{\#2}$ -x+3/2,y+1/2,-z+1/2 $^{\#3}$ -x+1/2,y-1/2,-z+1/2
$^{\#4}$ x+1/2,-y+1/2,z+1/2

Fig. S1.



(a)

(b)



(c)

Fig. S1. (a) The 3D framework structure of **3**; (b) the 3D framework structure of **4;** (c) the 3D framework structure of **6**.

Fig. S2. PXRD patterns of **1-6**.

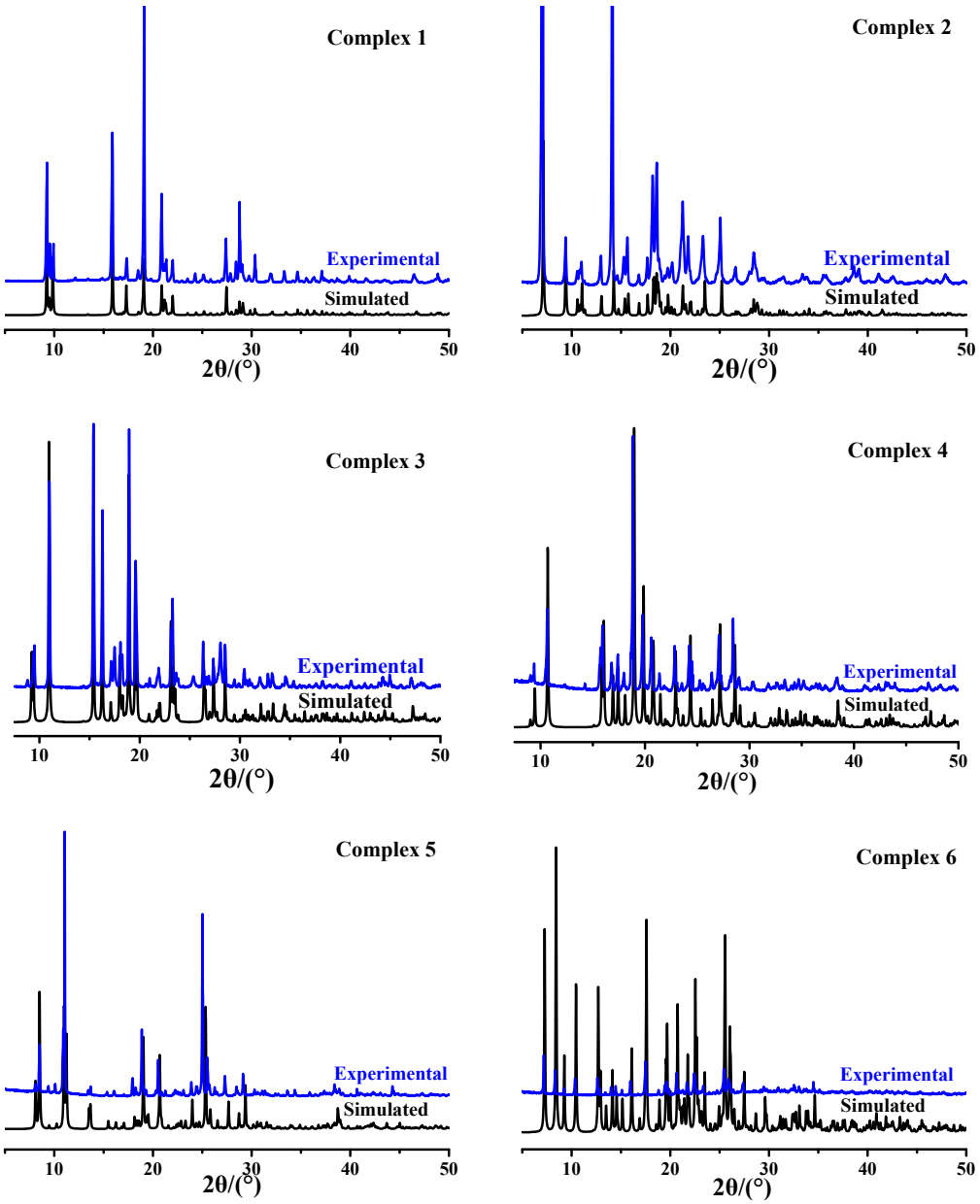


Fig. S3. TG curves for complexes **1-6.**