Syntheses, characterizations, and properties of five coordination compounds based on ligand tetrakis (4-pyridyloxymethylene)methane

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Table S1. Selected bond lengths (Å) and angles (deg) for compounds **1-5**.

Compound 1			
Cu1 – O2	1.943(4)	Cu1 – O2	2.709(5)
Cu1 – N1	2.014(4)	Cu1 – O2_e	1.943(4)
O2 –Cu1 – O2_e	180.00(1)	O2_e–Cu1 – N1_e	89.59(18)
O2 –Cu1 –N1_e	90.41(18)	O2 –Cu1 – N1	89.59(18)
O2_e –Cu1 – N1	90.41(18)	N1 –Cu1 – N1_e	180.00
Symmetry code: e = 1 - *x*, 1 - *y*, -*z*.			
Compound 2			
Zn1 – O2	1.993(4)	Zn1 – O4	2.030(3)
Zn1 –N1	2.057(3)	Zn1 – N2	2.062(3)
O2- Zn1 -O4	142.97(15)	O2- Zn1- N1	103.24(16)
O4- Zn1- N1	100.02(13)	O2- Zn1- N2	104.22(15)
O4 -Zn1- N2	101.01(13)	N1 -Zn1- N2	97.11(13)
C10- N2- Zn1	120.7(3)	C6 -N2 -Zn1	123.7(3)
C14- O2- Zn1	104.9(3)	C18- O4- Zn1	98.3(3)
C1- N1- Zn1	121.0(3)	C5- N1- Zn1	123.0(3)
Compound 3			
Cd1-O4	2.317(4)	Cd1 – O7	2.272(3)
Cd1 – N1	2.321(4)	Cd1 – O4_b	2.317(4)
Cd1 –O7_b	2.272(3)	Cd1 – N1_b	2.321(4)
Cd2-O2	2.269(2)	Cd2-O3	2.279(4)

Cd2-N2	2.361(4)	Cd2-O2_c	2.269(2)
Cd2-O3_c	2.279(4)	Cd2-N2_c	2.361(4)
O4-Cd1-O7	87.23(12)	O4-Cd1-N1	87.67(13)
O4-Cd1-O4_b	97.59(13)	O4-Cd1-O7_b	86.94(12)
O4-Cd1-N1_b	174.69(13)	O7-Cd1-N1	92.54(12)
O4_b-Cd1-O7	86.94(12)	O7-Cd1-O7_b	171.15(14)
O7-Cd1-N1_b	93.88(12)	O4_b-Cd1-N1	174.69(13)
O7_b-Cd1-N1	93.88(12)	N1-Cd1-N1_b	87.09(13)
O4_b-Cd1-O7_b	87.23(12)	O4_b-Cd1-N1_b	87.67(13)
O7_b-Cd1-N1_b	92.54(12)	O2-Cd2-O3	89.83(12)
O2-Cd2-N2	90.91(11)	O2-Cd2-O2_c	180.00
O2-Cd2-O3_c	90.17(12)	O2-Cd2-N2_c	89.10(11)
O3-Cd2-N2	94.92(13)	O2_c-Cd2- -O3	90.17(12)
O3-Cd2- -O3_c	180.00	O3-Cd2- -N2_c	85.08(13)
O2_c-Cd2- N2	89.10(11)	O3_c-Cd2- N2	85.08(13)
N2-Cd2- N2_c	180.00	O2_c-Cd2-O3_c	89.83(12)
O2_c -Cd2-N2_c	90.91(11)	O3_c-Cd2-N2_c	94.92(13)

Symmetry codes: b = 1-*x*, *y*, 0.5-*z*; c = -*x*, -*y,* 1-*z*.

Compound 4			
Ni1–O1	2.0690(16)	Ni1–O3	2.0988(15)
Ni1 – N1	2.1075(19)	Ni1 – O1_f	2.0690(16)
Ni1 –O3_f	2.0988(15)	Ni1 – N1_f	2.1075(19)
O1 –Ni1 – O3	89.14(7)	O1 –Ni1 – N1	89.69(8)
O1 –Ni1 – O1_f	180.00	O1 –Ni1 – O3_f	90.86(7)
O1 –Ni1 –N1_f	90.31(8)	O3 –Ni1 – N1	87.83(7)
O1_f –Ni1 – O3	90.86(7)	O3 –Ni1 – O3_f	180.00
O3 –Ni1 – N1_f	92.17(7)	O1_f –Ni1 –N1	90.31(8)
O3_f –Ni1– N1	92.17(7)	N1 –Ni1 –N1_f	180.00
O1_f –Ni1 –O3_f	89.14(7)	O1_f –Ni1 –N1_f	89.69(8)
O3_f–Ni1 –N1_f	87.83(7)		

Symmetry code: f = 0.5 - *x*, 2.5 - *y*, 1 – *z*.

Compound 5			
N(1)-Zn(1)#3	2.035(4)	C(11)-N(3)-Zn(1	123.7(2)
N(2)-Zn(2)	2.048(3)	C(11)#1-N(3)-Zn(1)	123.7(2)
N(3)-Zn(1)	2.045(4)	C(12)-O(4)-Zn(1)	129.3(2)
O(4)-Zn(1)	1.916(2)	N(4)-O(6)-Zn(2)	129.7(3)
O(6)-Zn(2)	2.046(3)	O(4)-Zn(1)-O(4)#1	121.06(16)
C(19)-N(1)-C(19)#1	117.1(4)	O(4)-Zn(1)-N(1)#3	114.19(8)
C(19)#1-N(1)-Zn(1)#3	121.2(2)	O(4)#1-Zn(1)-N(1)#3	114.19(8)

C(5)-N(2)-Zn(2)	119.3(2)	O(4)-Zn(1)-N(3)	100.41(10)
C(6)-N(2)-Zn(2)	124.0(2)	O(4)#1-Zn(1)-N(3)	100.41(10)
N(1)#3-Zn(1)-N(3)	102.08(16)	O(6)-Zn(2)-N(2)	117.34(12)
O(6)-Zn(2)-O(6)#2	108.79(17)	O(6)#2-Zn(2)-N(2)	107.96(12)
O(6)-Zn(2)-N(2)#2	107.96(12)	N(2)#2-Zn(2)-N(2)	97.51(16)
O(6)#2-Zn(2)-N(2)#2	117.34(12)		

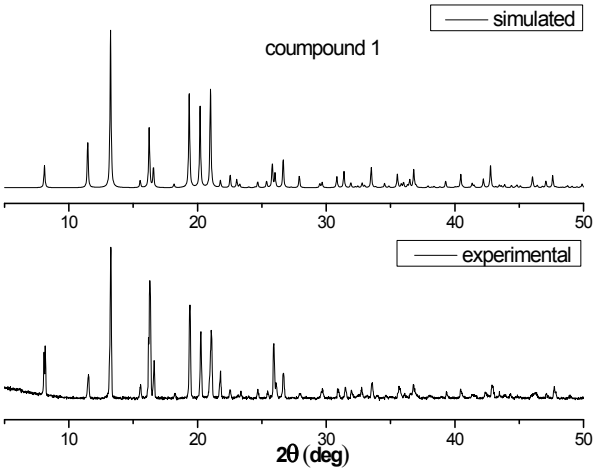

Figure S1. Powder x-ray diffraction patterns of compound **1**

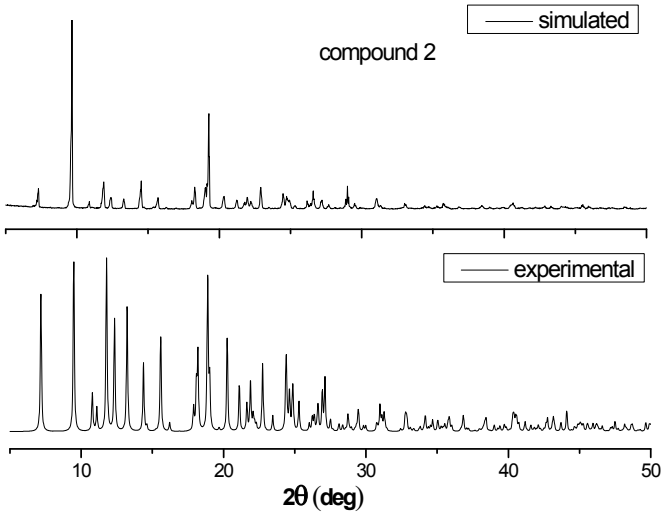

Figure S2. Powder x-ray diffraction patterns of compound **2**

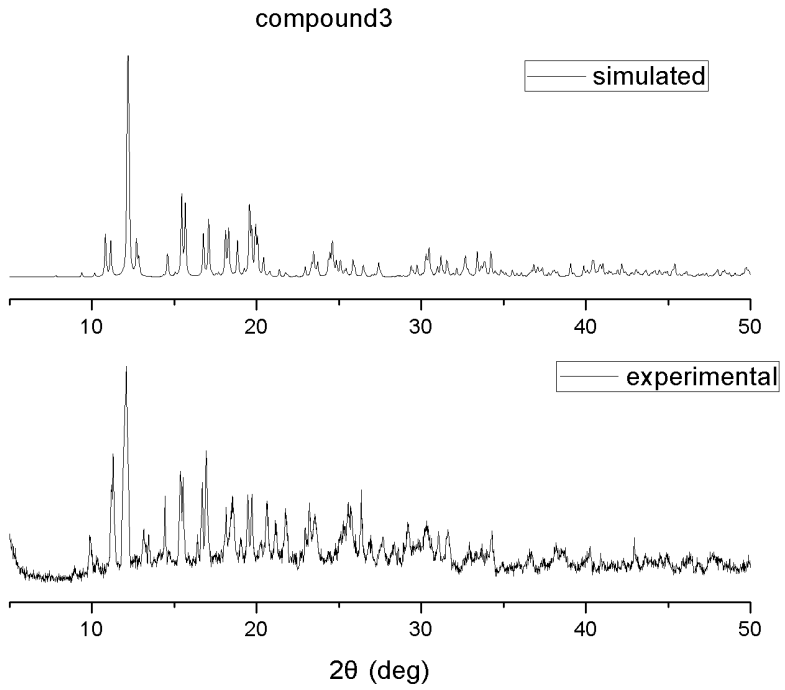

Figure S3. Powder x-ray diffraction patterns of compound **3**

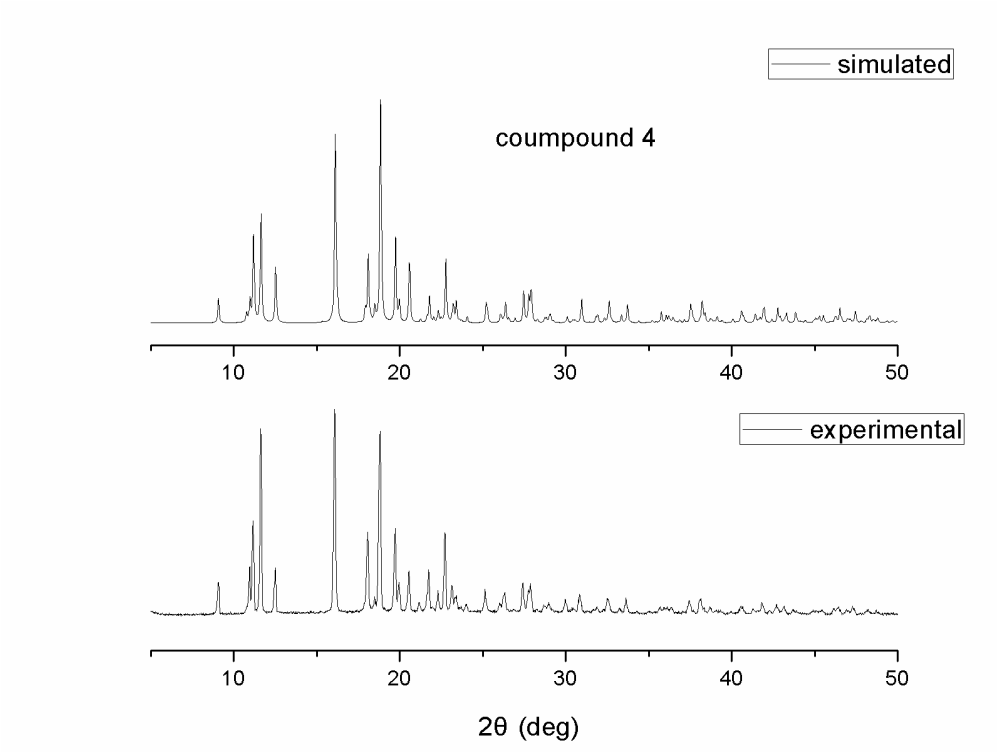

Figure S4. Powder x-ray diffraction patterns of compound**4**

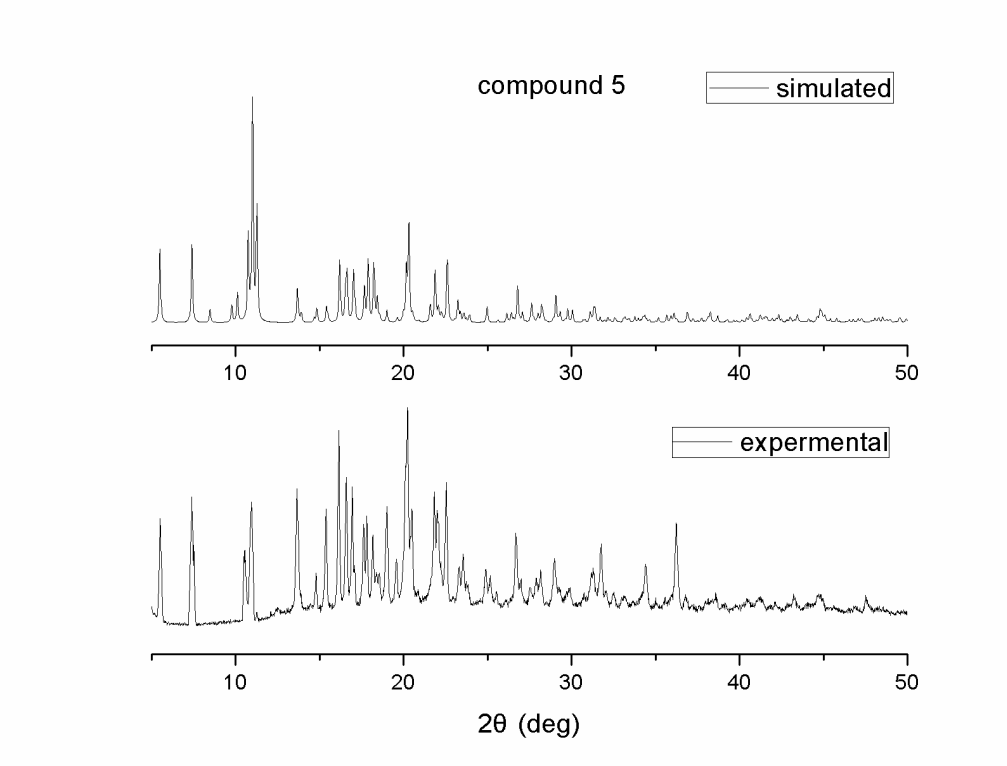

Figure S5. Powder x-ray diffraction patterns of compound **5**