Electronic Supplementary Information (ESI) for

Syntheses, Structures, Topologies, and Luminescence Properties of Four Coordination Polymers Based on Bifunctional 6-(4-pyridyl)-terephthalic Acid and Bis(imidazole) Bridging Linkers

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ESI

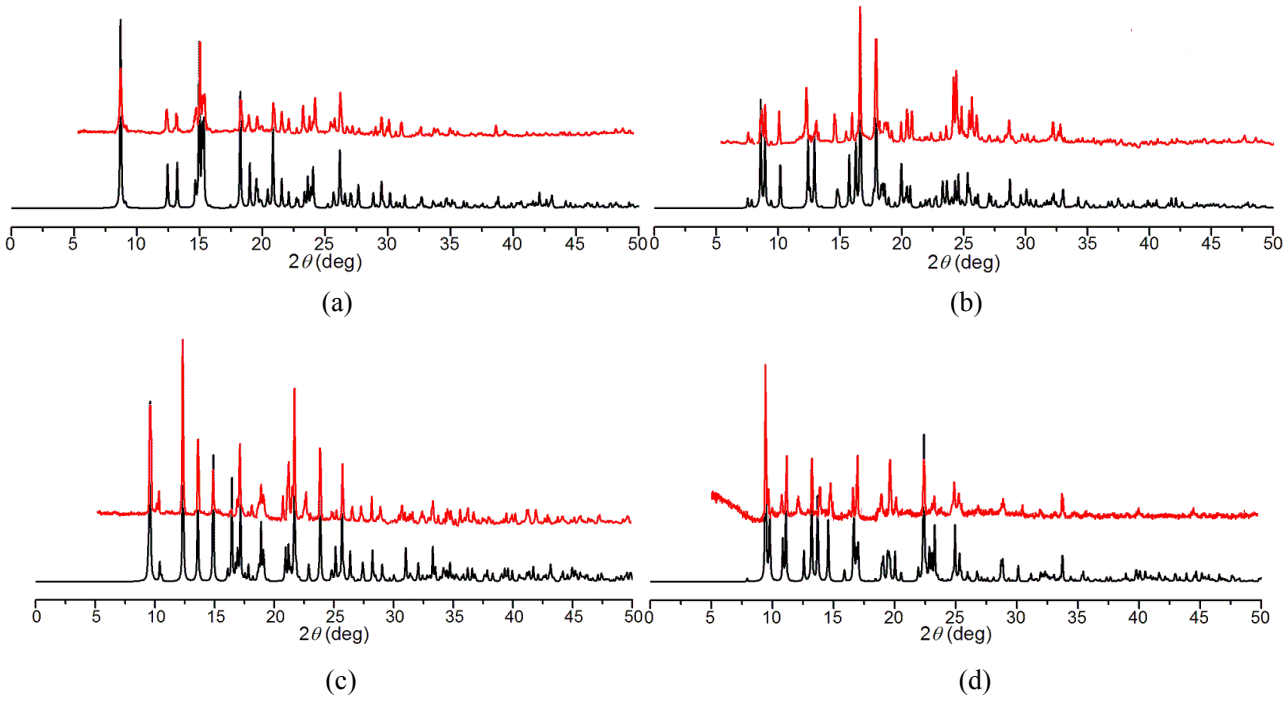
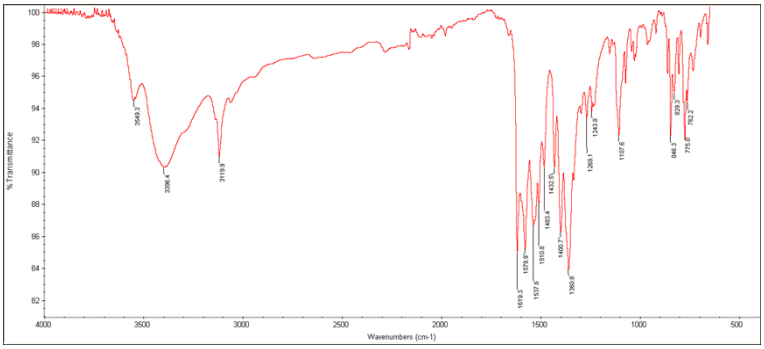
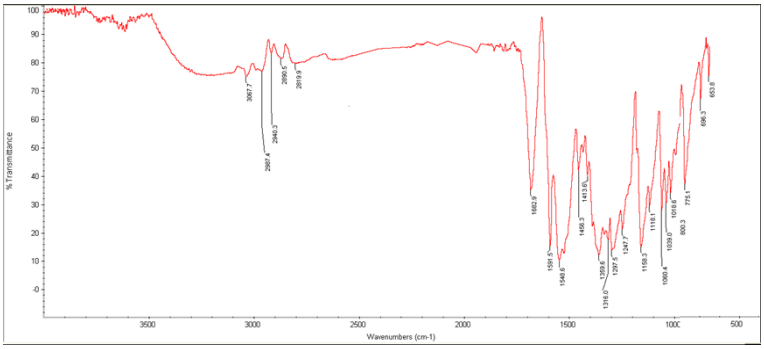


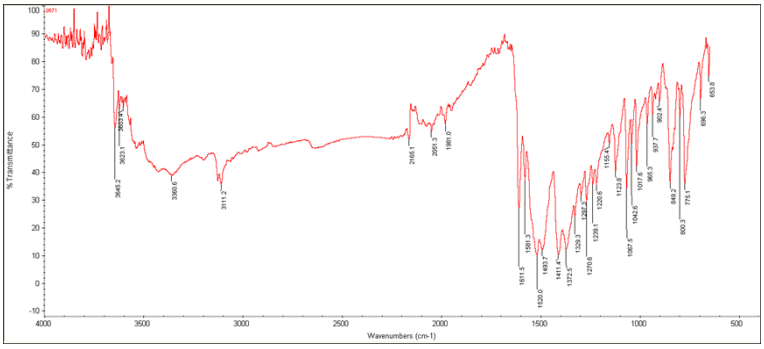
Figure S1. PXRD patterns of **1** (a), **2** (b), **3** (c) and **4** (d). Dark: calculated from the X-ray single-crystal data; Red: observed for the as-synthesized solids.



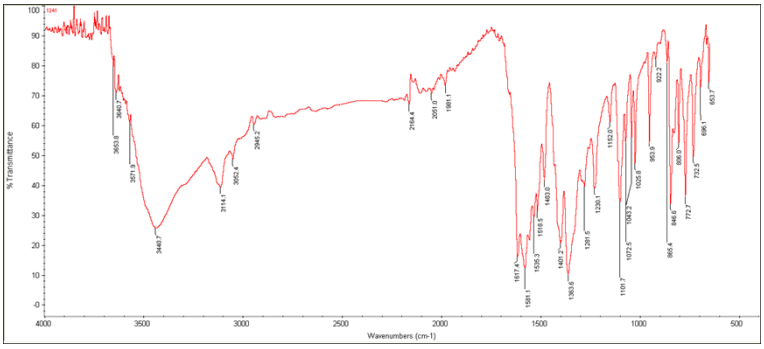
(a)



(b)



(c)



(d)

Figure S2. IR spectra of **1** (a), **2** (b), **3** (c), and **4** (d).

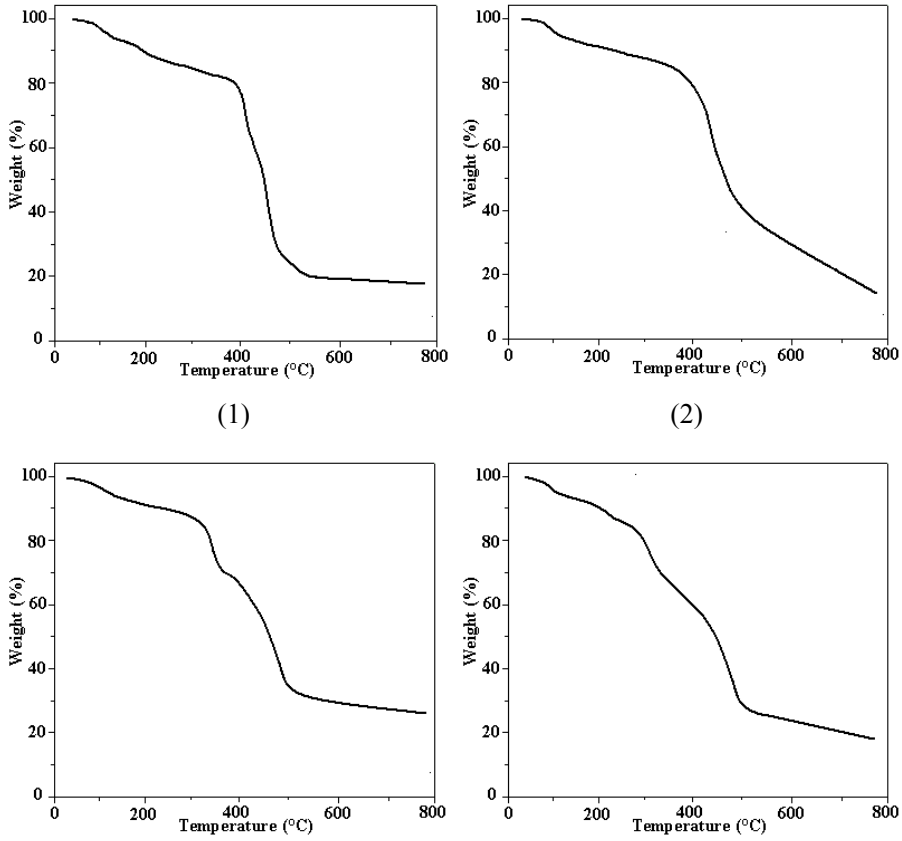


Figure S3. TG curves for **1** (a), **2** (b), **3** (c), and **4** (d).

Table S1 Selected bond lengths (Å) and angles (º) for **1 – 4**.

Complex **1**							
Cu(1)-O(1)$^{\#2}$	2.010(2)	Cu(1)-N(1)$^{\#4}$	2.034(3)	Cu(2)-N(2)$^{\#5}$	1.961(3)	Cu(2)-N(2)	1.961(3)
Cu(1)-O(1)	2.010(2)	Cu(1)-O(1W)	2.187(4)	Cu(2)-O(4)	2.024(2)	Cu(2)-O(4)$^{\#5}$	2.024(2)
Cu(1)-N(1)$^{\#3}$	2.034(3)	O(1)-Cu(1)-N(1)$^{\#4}$	94.12(10)	N(1)$^{\#3}$-Cu(1)-O(1W)	100.73(8)	N(2)$^{\#5}$-Cu(2)-O(4)	88.27(11)
O(1)$^{\#2}$-Cu(1)-O(1)	178.91(13)	N(1)$^{\#3}$-Cu(1)-N(1)$^{\#4}$	158.54(15)	N(1)$^{\#4}$-Cu(1)-O(1W)	100.73(8)	N(2)-Cu(2)-O(4)$^{\#5}$	88.27(11)
O(1)$^{\#2}$-Cu(1)-N(1)$^{\#3}$	94.12(10)	O(1)$^{\#2}$-Cu(1)-O(1W)	90.55(7)	N(2)-Cu(2)-N(2)$^{\#5}$	180.00(18)	N(2)$^{\#5}$-Cu(2)-O(4)$^{\#5}$	91.73(11)
O(1)-Cu(1)-N(1)$^{\#3}$	85.68(10)	O(1)-Cu(1)-O(1W)	90.55(7)	N(2)-Cu(2)-O(4)	91.73(11)	O(4)-Cu(2)-O(4)$^{\#5}$	180.00(9)
O(1)$^{\#2}$-Cu(1)-N(1)$^{\#4}$	85.68(10)						
Symmetry codes: #2 -*x*+2, *y*, -*z*+3/2; #3 *x*, -*y*, *z*+1/2; #4 -*x*+2, -*y*, -*z*+1; #5 -*x*+1, -*y*, -*z*.							
Complex **2**							
Co(1)-O(1)$^{\#1}$	2.080(2)	Co(1)-N(5)$^{\#2}$	2.135(3)	Co(1)-N(2)	2.158(3)	Co(1)-N(1)$^{\#3}$	2.202(3)
Co(1)-O(4)	2.109(2)	Co(1)-O(5)	2.155(2)	O(4)-Co(1)-N(2)	88.58(11)	O(4)-Co(1)-N(1)$^{\#3}$	85.87(9)
O(1)$^{\#1}$-Co(1)-O(4)	173.71(11)	O(4)-Co(1)-O(5)	88.57(9)	N(5)$^{\#2}$-Co(1)-N(2)	175.73(11)	N(5)$^{\#2}$-Co(1)-N(1)$^{\#3}$	89.07(12)
O(1)$^{\#1}$-Co(1)-N(5)$^{\#2}$	98.66(11)	N(5)$^{\#2}$-Co(1)-O(5)	89.68(11)	O(5)-Co(1)-N(2)	90.22(11)	O(5)-Co(1)-N(1)$^{\#3}$	174.35(9)
O(4)-Co(1)-N(5)$^{\#2}$	87.15(11)	O(1)$^{\#1}$-Co(1)-N(2)	85.60(11)	O(1)$^{\#1}$-Co(1)-N(1)$^{\#3}$	96.59(10)	N(2)-Co(1)-N(1)$^{\#3}$	90.62(12)
O(1)$^{\#1}$-Co(1)-O(5)	89.05(10)						
Symmetry codes: #1 *x*-1/2, -*y*+1/2, *z*-1/2; #2 *x*-1/2, -*y*+1/2, *z*+1/2; #3 -*x*, *y*, -*z*+3/2.							
Complex **3**							
Cd(1)-N(3)	2.243(3)	Cd(1)-N(1)$^{\#3}$	2.288(3)	Cd(1)-O(1)$^{\#4}$	2.364(3)	Cd(1)-O(3)	2.488(3)
Cd(1)-O(4)	2.244(3)	Cd(1)-O(2)$^{\#4}$	2.324(3)	O(4)-Cd(1)-O(2)$^{\#4}$	144.24(12)	N(1)$^{\#3}$-Cd(1)-O(1)$^{\#4}$	90.37(11)
N(3)-Cd(1)-O(4)	107.65(13)	N(1)$^{\#3}$-Cd(1)-O(3)	147.96(11)	N(1)$^{\#3}$-Cd(1)-O(2)$^{\#4}$	115.30(12)	O(2)$^{\#4}$-Cd(1)-O(1)$^{\#4}$	55.13(10)
N(3)-Cd(1)-N(1)$^{\#3}$	98.30(12)	O(2)$^{\#4}$-Cd(1)-O(3)	93.44(12)	N(3)-Cd(1)-O(1)$^{\#4}$	143.27(11)	N(3)-Cd(1)-O(3)	95.76(13)
O(4)-Cd(1)-N(1)$^{\#3}$	93.65(11)	O(1)$^{\#4}$-Cd(1)-O(3)	95.34(12)	O(4)-Cd(1)-O(1)$^{\#4}$	107.31(12)	O(4)-Cd(1)-O(3)	54.57(11)
N(3)-Cd(1)-O(2)$^{\#4}$	89.31(11)						
Symmetry codes: #3 *x*-1/2, -*y*+1/2, *z*-1/2; #4 -*x*+1/2, *y*+1/2, -*z*+1/2.							
Complex **4**							
N(3)-Zn(1)	1.998(5)	O(2)-Zn(1)	1.972(4)	Zn(1)-O(4)$^{\#4}$	1.980(4)	Zn(1)-N(1)$^{\#5}$	2.070(4)
O(2)-Zn(1)-O(4)$^{\#4}$	107.23(18)	O(4)$^{\#4}$-Zn(1)-N(3)	116.66(19)	O(4)$^{\#4}$-Zn(1)-N(1)$^{\#5}$	112.19(18)	N(3)-Zn(1)-N(1)$^{\#5}$	106.99(19)
O(2)-Zn(1)-N(3)	115.54(19)	O(2)-Zn(1)-N(1)$^{\#5}$	96.49(17)				
Symmetry codes: #4 -*x*+3/2, *y*-1/2, -*z*+1/2; #5 *x*-1/2, -*y*+1/2, *z*-1/2.							