Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Information

Four d^{10} metal coordination polymers based on bis(2-methyl imidazole) spacers: syntheses, interpenetrating structures and photoluminescence properties

Tables S1 Selected Bond Distances (Å) and Angles (deg) for Complexes **1**−**4**

Compound **1**[a]

Cu(1)-N(1)	1.992(4)	Cu(1)-Br(2)	2.4903(11)	Cu(1)-Br(1)	2.4939(12)
Cu(1)-Br(2)#1	2.7097(11)	Cu(2)-N(4)#2	1.992(4)	Cu(2)-Br(2)	2.4251(11)
Cu(2)-Br(1)#1	2.5991(11)	Cu(2)-Br(1)	2.7192(10)		
N(1)-Cu(1)-Br(2)	119.26(12)	N(1)-Cu(1)-Br(1)	108.55(12)	Br(2)-Cu(1)-Br(1)	113.92(3)
N(1)-Cu(1)-Br(2)#1	99.22(11)	Br(2)-Cu(1)-Br(2)#1	107.00(3)	Br(1)-Cu(1)-Br(2)#1	107.25(3)
N(4)#2-Cu(2)-Br(2)	125.26(11)	N(4)#2-Cu(2)-Br(1)#1	105.27(11)	Br(2)-Cu(2)-Br(1)#1	113.04(3)
N(4)#2-Cu(2)-Br(1)	102.47(11)	Br(2)-Cu(2)-Br(1)	108.49(3)	Br(1)#1-Cu(2)-Br(1)	98.67(3)

[a]Symmetry codes: #1 −x+2, −y+2, z #2 x+1, y, z−1

Compound **2**[b]

Cd(1)-N(1)	2.239(5)	Cd(1)-O(2)#1	2.255(4)	Cd(1)-N(4)#2	2.267(4)
Cd(1)-O(4)	2.305(4)	Cd(1)-O(3)	2.495(4)	Cd(1)-O(1)#1	2.504(5)
N(1)-Cd(1)-O(2)#1	148.53(18)	N(1)-Cd(1)-N(4)#2	93.05(16)	O(2)#1-Cd(1)-N(4)#2	98.29(16)
N(1)-Cd(1)-O(4)	97.09(18)	O(2)#1-Cd(1)-O(4)	94.81(19)	N(4)#2-Cd(1)-O(4)	136.18(15)
N(1)-Cd(1)-O(3)	104.66(18)	O(2)#1-Cd(1)-O(3)	105.86(18)	N(4)#2-Cd(1)-O(3)	82.60(15)
O(4)-Cd(1)-O(3)	53.58(14)	N(1)-Cd(1)-O(1)#1	97.79(16)	O(2)#1-Cd(1)-O(1)#1	53.73(15)
N(4)#2-Cd(1)-O(1)#1	133.19(16)	O(4)-Cd(1)-O(1)#1	87.43(16)	O(3)-Cd(1)-O(1)#1	136.56(15)

[b]Symmetry codes: #1 −x+1, −y+1, z+1/2 #2 −x−1/2, y+1/2, z+1/2

Compound **3**[c]

Cd(1)-N(4)#1	2.253(3)	Cd(1)-N(1)	2.254(3)	Cd(1)-O(4)#2	2.309(4)
Cd(1)-O(2)	2.325(3)	Cd(1)-O(1)	2.429(4)	Cd(1)-O(3)#2	2.491(3)
N(4)#1-Cd(1)-N(1)	93.95(12)	N(4)#1-Cd(1)-O(4)#2	139.19(12)	N(1)-Cd(1)-O(4)#2	96.50(13)
N(4)#1-Cd(1)-O(2)	103.39(12)	N(1)-Cd(1)-O(2)	141.22(12)	O(4)#2-Cd(1)-O(2)	92.56(13)
N(4)#1-Cd(1)-O(1)	126.76(13)	N(1)-Cd(1)-O(1)	86.66(11)	O(4)#2-Cd(1)-O(1)	93.23(13)
O(2)-Cd(1)-O(1)	55.16(12)	N(4)#1-Cd(1)-O(3)#2	85.17(11)	N(1)-Cd(1)-O(3)#2	110.09(12)
O(4)#2-Cd(1)-O(3)#2	54.20(11)	O(2)-Cd(1)-O(3)#2	105.78(12)	O(1)-Cd(1)-O(3)#2	143.79(12)

[c]Symmetry codes: #1−x−1/2, y−1/2, z+1/2 #2 −x+1, −y+1, z−1/2

Compound **4**[d]

Zn(1)-O(2)	1.9375(18)	Zn(1)-O(4)#1	1.9805(19)	Zn(1)-N(4)#2	1.987(2)
Zn(1)-N(1)	2.030(2)				
O(2)-Zn(1)-O(4)#1	103.21(9)	O(2)-Zn(1)-N(4)#2	126.78(9)	O(4)#1-Zn(1)-N(4)#2	113.75(8)
O(2)-Zn(1)-N(1)	99.42(9)	O(4)#1-Zn(1)-N(1)	103.19(9)	N(4)#2-Zn(1)-N(1)	107.40(9)

[d]Symmetry codes: #1 x+1/2, −y+3/2, z+1/2 #2 x+1/2, −y+1/2, z−1/2

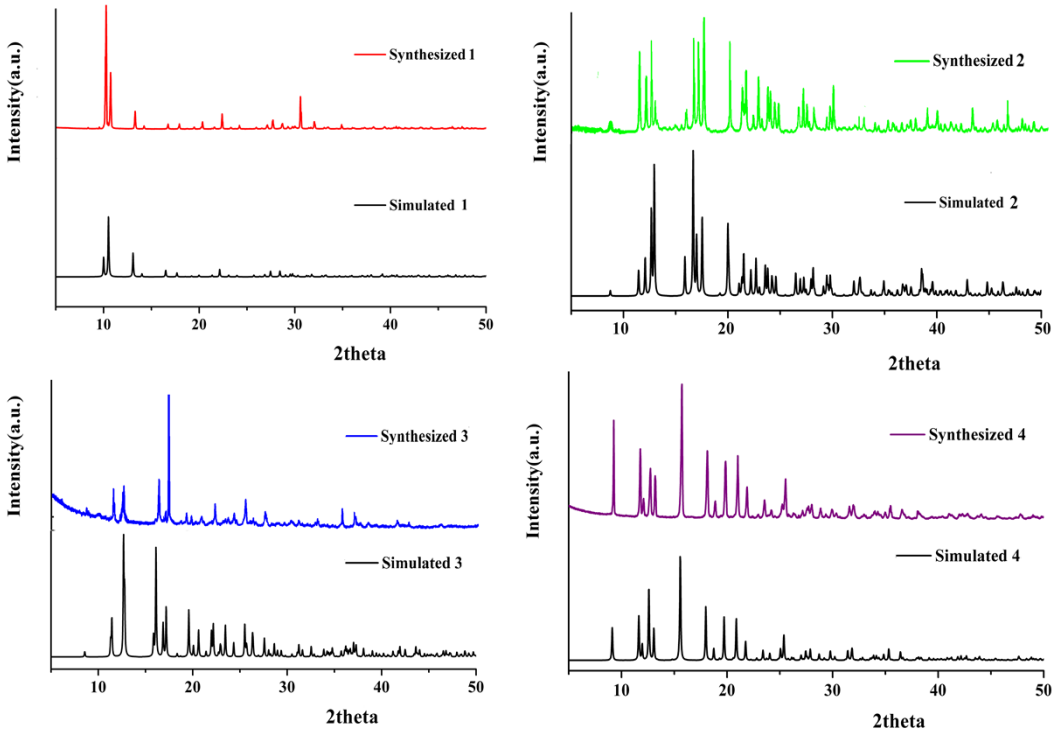

Fig. S1 PXRD patterns of **1**−**4**.

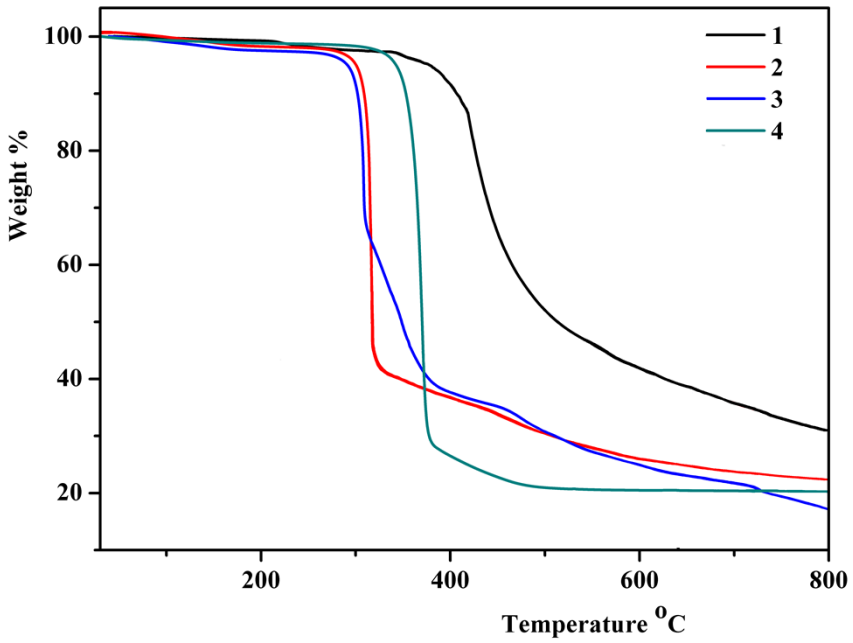

Fig. S2 The TG curves of complexes **1**−**4**.

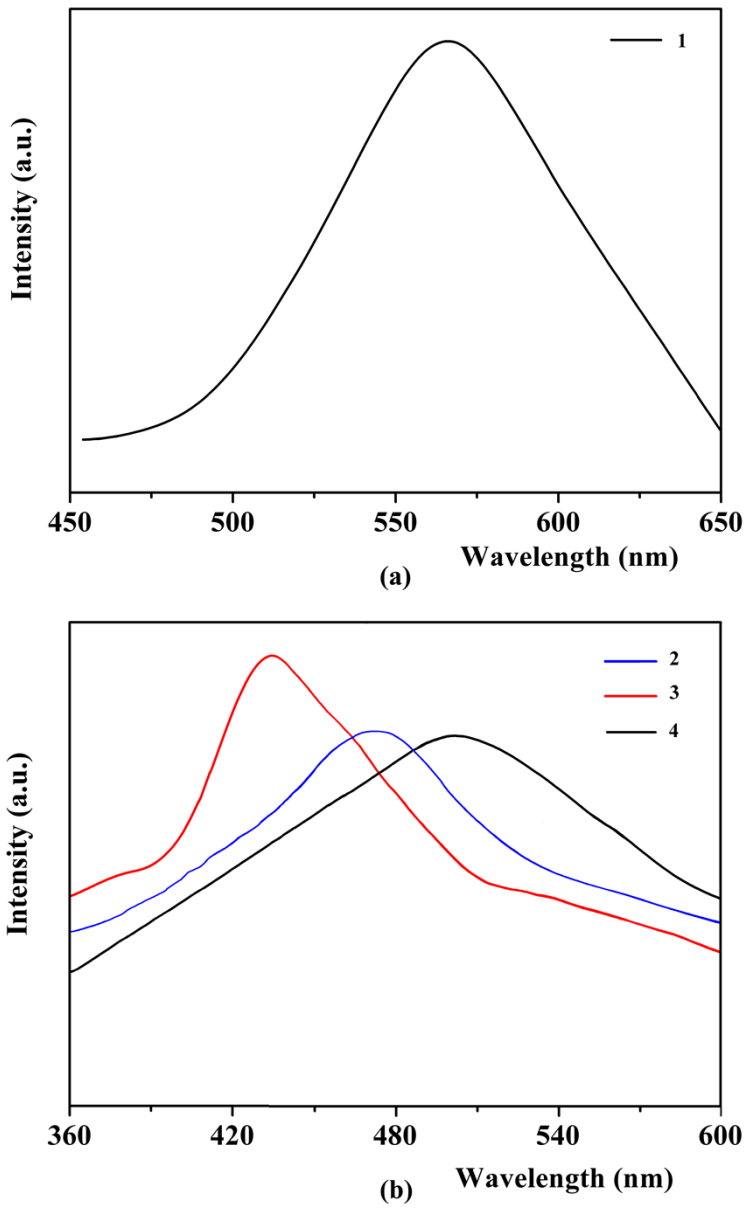

Fig. S3 Solid-state emission spectra (a) **1**. (b) **2**−**4**.