Supplementary Material

Synthesis, structures and luminescence of two 2-D microporous metal-organic frameworks in the zinc (cadmium)-dicarboxylate-imidazolate system

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Table S1. Selected bond lengths (Å) and angles (°) of **1** and **2**.

Compound 1					
Zn(1)-O(1)	2.0303(18)	Zn(1)-O(3)	2.0528(16)	Zn(1)-O(4)	2.0532(16)
Zn(1)-N(2)	2.0053(19)	Zn(1)-O(2)#1	2.0328(16)		
O(1)-Zn(1)-O(3)	87.20(8)	O(1)-Zn(1)-O(4)	89.09(8)	O(1)-Zn(1)-N(2)	100.58(8)
O(1)-Zn(1)-O(2)#1	157.32(9)	O(3)-Zn(1)-O(4)	157.40(8)	O(3)-Zn(1)-N(2)	98.61(7)
O(3)-Zn(1)-O(2)#1	86.72(8)	O(4)-Zn(1)-N(2)	103.99(7)	O(4)-Zn(1)-O(2)#1	88.18(8)
N(2)-Zn(1)-O(2)#1	101.93(8)				
Compound 2					
Cd(1)-O(1)	2.230(6)	Cd(1)-O(3)	2.235(4)	Cd(1)-O(4)	2.321(4)
Cd(1)-O(5)	2.455(5)	Cd(1)-O(6)	2.402(6)	Cd(1)-N(1)	2.252(5)
Cd(2)-O(2)	2.210(6)	Cd(2)-O(4)	2.297(4)	Cd(2)-O(7)	2.255(5)
Cd(2)-O(2)#1	2.210(6)	Cd(2)-O(4)#1	2.297(4)	Cd(2)-O(7)#1	2.255(5)
O(1)-Cd(1)-O(3)	100.9(2)	O(1)-Cd(1)-O(4)	97.84(17)	O(1)-Cd(1)-O(5)	152.10(19)
O(1)-Cd(1)-O(6)	81.9(2)	O(1)-Cd(1)-N(1)	101.6(2)	O(3)-Cd(1)-O(4)	101.18(16)
O(3)-Cd(1)-O(5)	91.01(19)	O(3)-Cd(1)-O(6)	174.7(2)	O(3)-Cd(1)-N(1)	89.19(19)
O(4)-Cd(1)-O(5)	54.82(16)	O(4)-Cd(1)-O(6)	82.80(19)	O(4)-Cd(1)-N(1)	155.85(18)
O(5)-Cd(1)-O(6)	88.5(2)	O(5)-Cd(1)-N(1)	103.77(19)	O(6)-Cd(1)-N(1)	85.8(2)
O(2)-Cd(2)-O(4)	86.78(17)	O(2)-Cd(2)-O(7)	84.3(2)	O(2)-Cd(2)-O(2)#1	180.00
O(2)-Cd(2)-O(4)#1	93.22(17)	O(2)-Cd(2)-O(7)#1	95.7(2)	O(4)-Cd(2)-O(7)	90.35(17)
O(4)-Cd(2)-O(2)#1	93.22(17)	O(4)-Cd(2)-O(4)#1	180.00	O(4)-Cd(2)-O(7)#1	89.65(17)
O(7)-Cd(2)-O(2)#1	95.7(2)	O(7)-Cd(2)-O(4)#1	89.65(17)	O(7)-Cd(2)-O(7)#1	180.00
O(2)#1-Cd(2)-O(4)#1	86.78(17)	O(2)#1-Cd(2)-O(7)#1	84.3(2)	O(4)#1-Cd(2)-O(7)#1	90.35(17)

Symmetry transformation used to generate equivalent atoms for **1**: #1 = -x, y, 1/2-z; **2**: #1 = -x, 2-y, -z.

Figure S1. IR spectra of 2-methylbenzimidazole (mbIM).

Figure S2. IR spectra of the as-synthesized complexes **1** and **2**.

Figure S3. Experimental and calculated powder X-ray diffraction patterns of **1** and **2** indicate the purity of the as-synthesized complexes.

Figure S4. Thermogravimetric analysis (TGA) in **1** and **2**.