Electronic Supporting Information (ESI):

Unusual Secondary Ligands' Tuning to Construct Fluorescent Coordination Polymers of An Unsymmetrical Pyridylbenzoate Ligand from 1D Chain to Interdigital or Porous 2D Layers and Interpenetrated 3D Diamondoid Frameworks

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Figures S1-S12

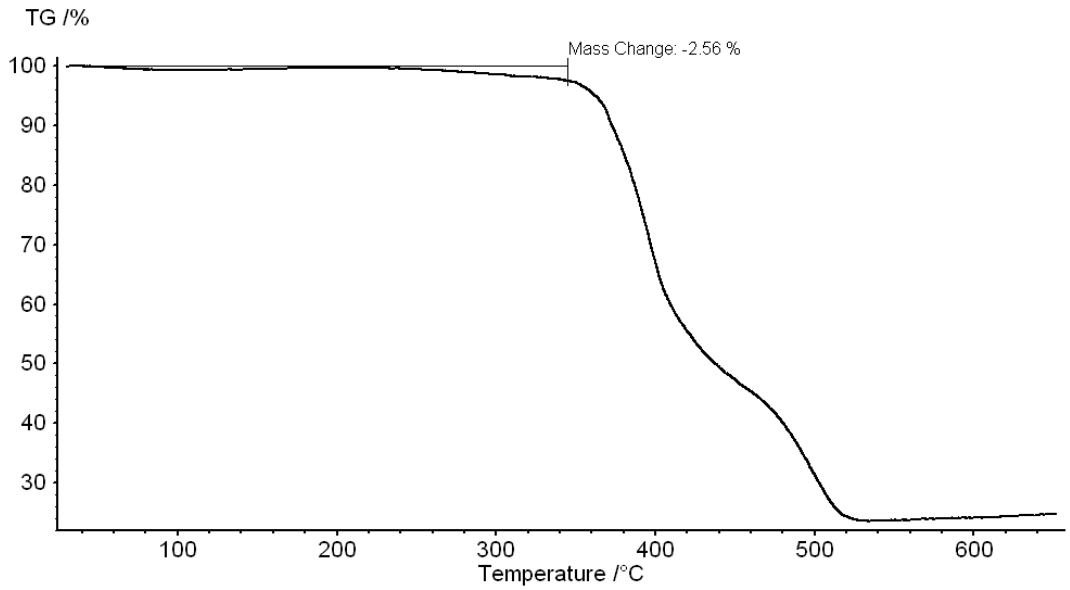

Figure S1. TG curve of compound **1**.

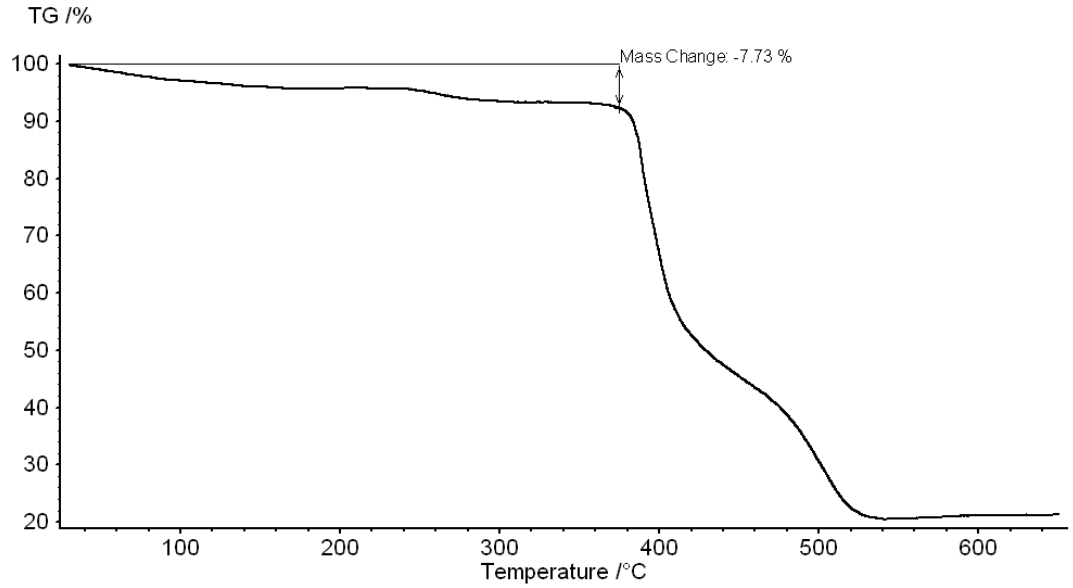

Figure S2. TG curve of compound **2**.

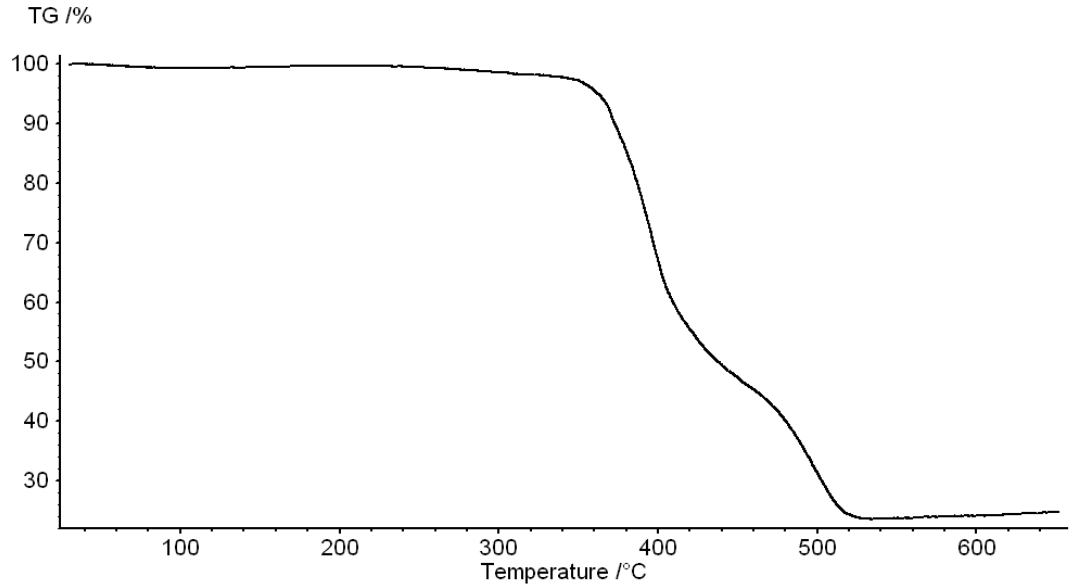

Figure S3. TG curve of compound **3**.

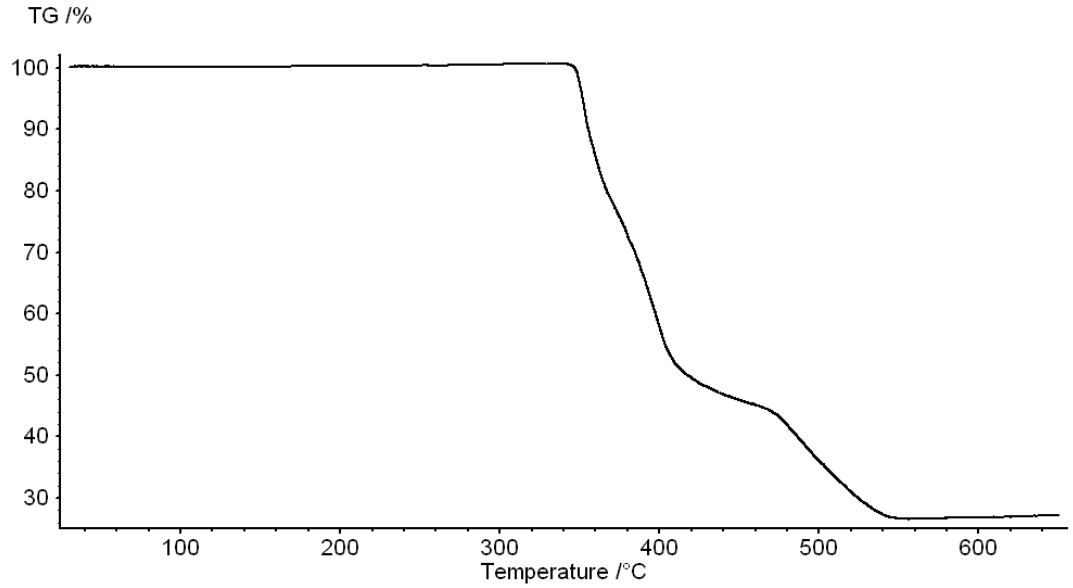

Figure S4. TG curve of compound **4**.

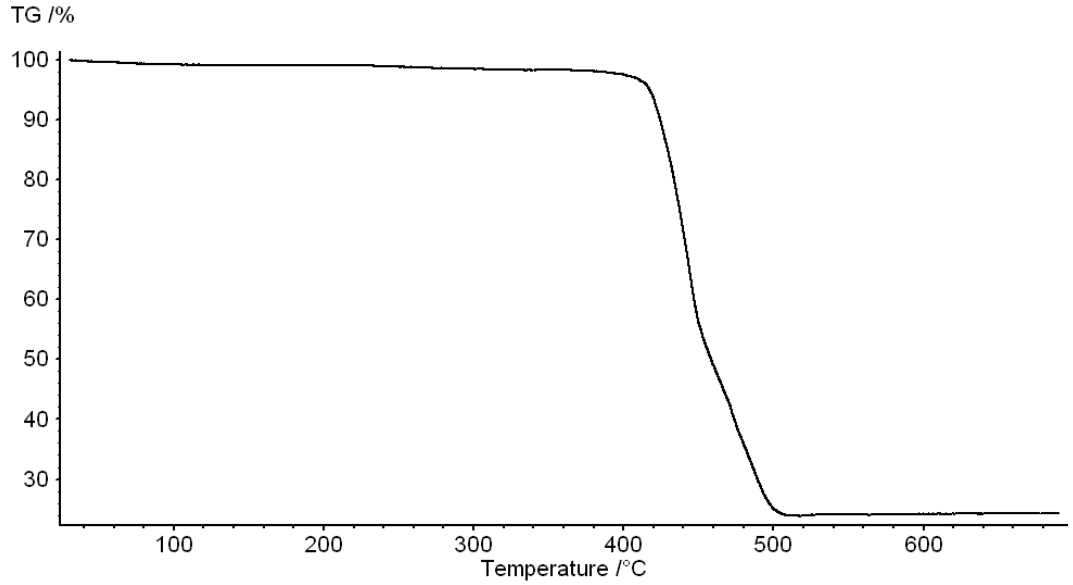

Figure S5. TG curve of compound **5**.

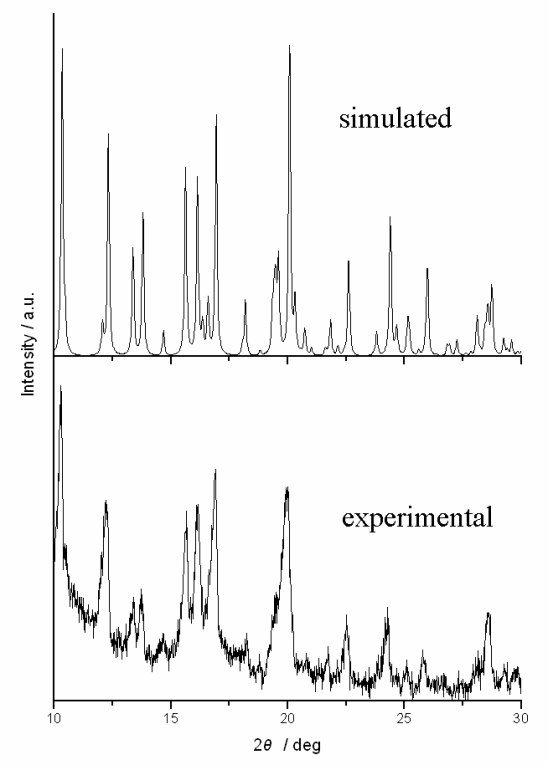

Figure S6. XPRD patterns for compound **3**: (a) powder diffraction pattern; (b) calculated pattern from single crystal X-ray data.

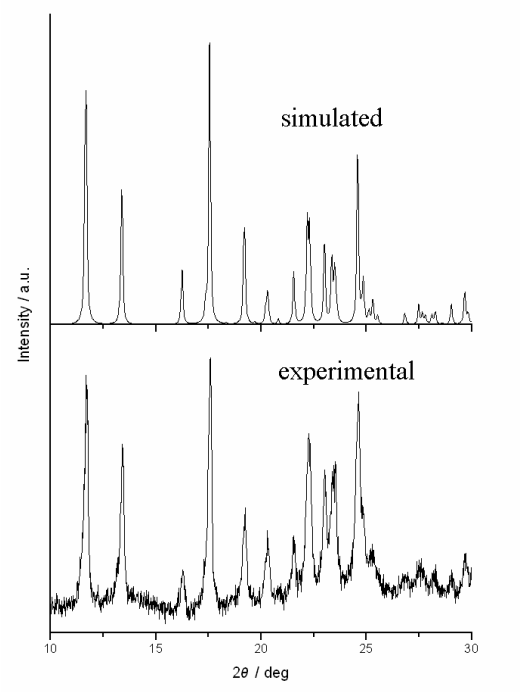

Figure S7. XPRD patterns for compound **4**: (a) powder diffraction pattern; (b) calculated pattern from single crystal X-ray data.

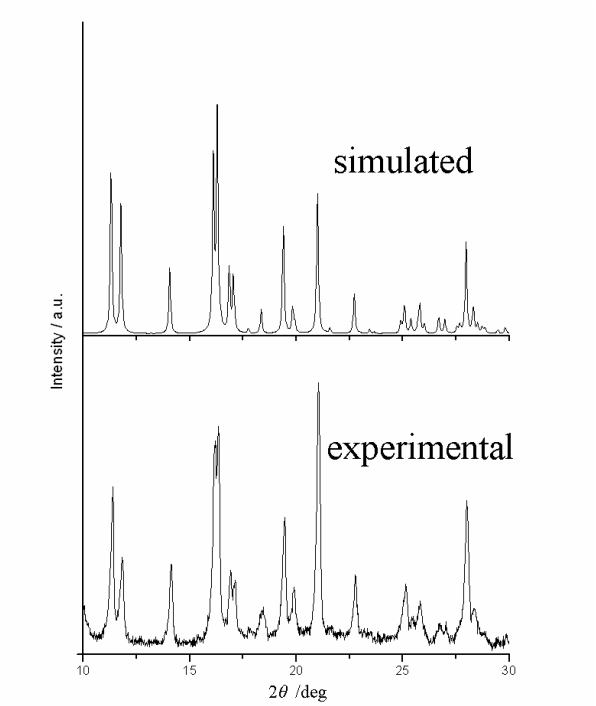

Figure S8. XPRD patterns for compound **5**: (a) powder diffraction pattern; (b) calculated pattern from single crystal X-ray data.

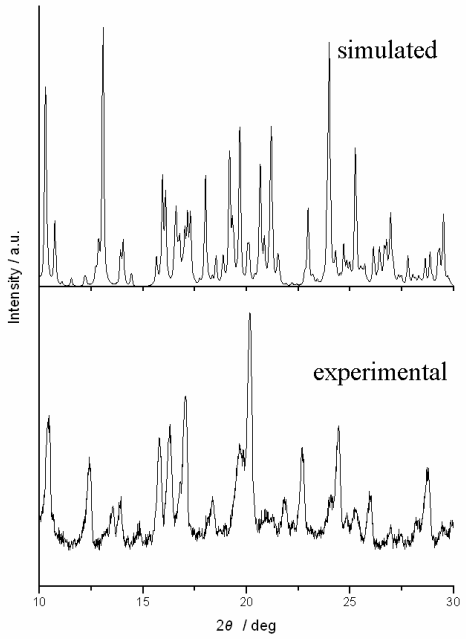

Figure S9. XPRD patterns for compound **1**: (a) powder diffraction pattern; (b) calculated pattern from single crystal X-ray data.

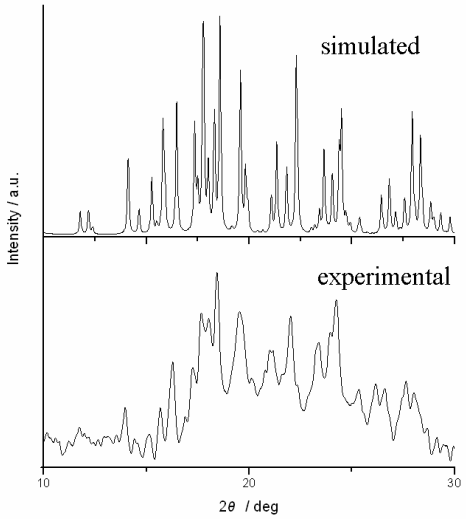

Figure S10. XPRD patterns for compound **2**: (a) powder diffraction pattern; (b) calculated pattern from single crystal X-ray data.

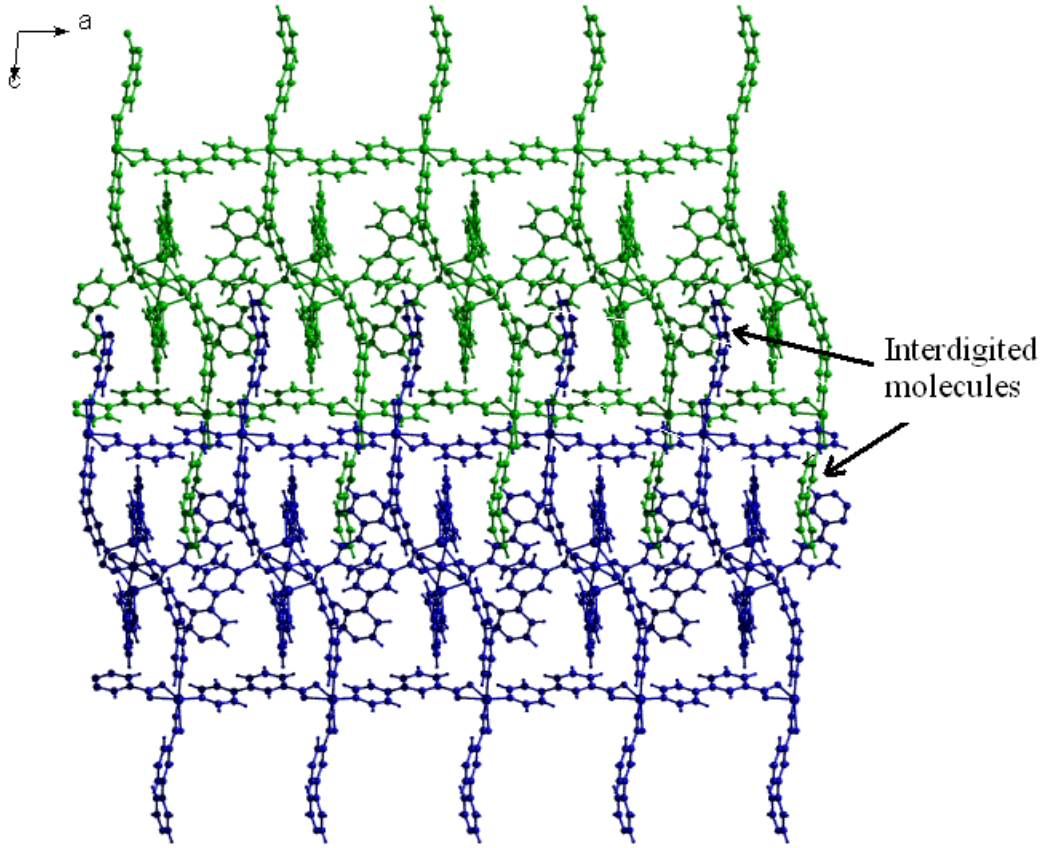

Figure S11. Diagram showing the two interdigited 2D layers in **1**.

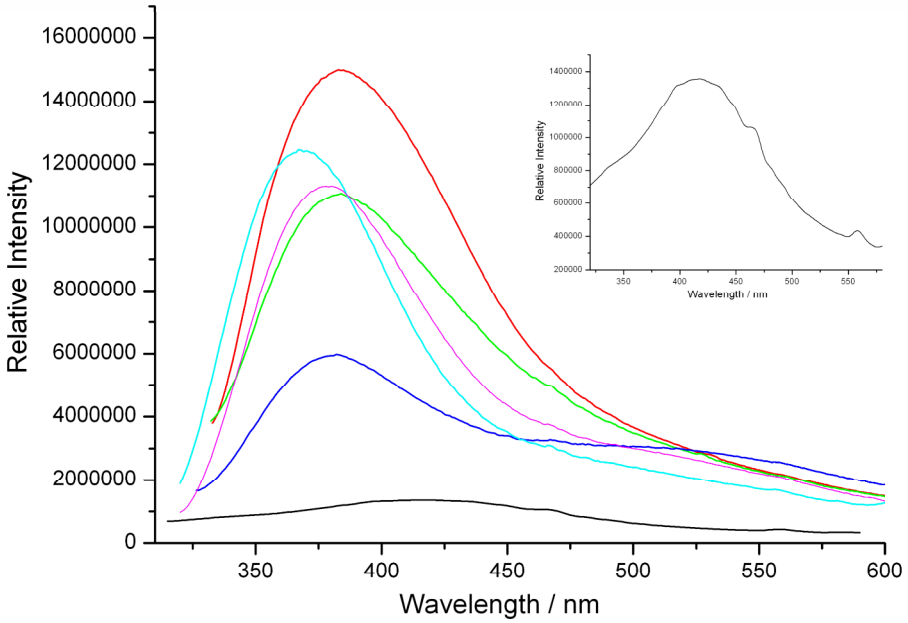

Figure S12. Emission spectra of H**L**[1] (the black line and the insert graph), compound **1** (the green line), **2** (the pink line), **3** (the blue line), **4** (the cyan line), and **5** (the red line) in the solid state at room temperature.

Tables S1-S2

Table S1. Selected Bond Lengths (Å) and Angles (deg) for 1-3

		1[a]	
Zn(1)-O(1)	1.963(3)	Zn(1)-O(5)	1.983(3)
Zn(1)-N(2)	2.051(3)	Zn(1)-O(4)#1O(4)#1	2.135(4)
Zn(1)-O(3)#1	2.208(3)□	Zn(2)-O(6)	2.039(3)
Zn(2)-O(2)	2.065(3)	Zn(2)-O(3)#1	2.174(3)
Zn(3)-N(5)	2.068(4)	Zn(3)-N(1)	2.069(4)
Zn(3)-O(9)#4	2.105(9)	Zn(3)-O(7)	2.140(7)
Zn(3)-O(8)	2.294(6)	Zn(3)-O(10)#4	2.437(19)
O(1)-Zn(1)-O(5)	107.76(13)	O(1)-Zn(1)-N(2)	96.30(13)
O(5)-Zn(1)-N(2)	105.56(13)	O(1)-Zn(1)-O(4)#1	142.88(17)
O(5)-Zn(1)-O(4)#1	105.61(18)	N(2)-Zn(1)-O(4)#1	89.97(13)
O(1)-Zn(1)-O(3)#1	96.41(12)	O(5)-Zn(1)-O(3)#1	105.24(13)
N(2)-Zn(1)-O(3)#1	141.06(12)	O(4)#1-Zn(1)-O(3)#1	59.02(12)
O(6)-Zn(2)-O(6)#2	180.00(18)	O(6)-Zn(2)-O(2)#2	90.60(13)
O(6)-Zn(2)-O(2)	89.40(13)	O(2)#2-Zn(2)-O(2)	180.0
O(6)-Zn(2)-O(3)#3	88.43(12)	O(6)-Zn(2)-O(3)#1	91.57(12)
O(2)-Zn(2)-O(3)#1	89.59(12)	O(2)-Zn(2)-O(3)#3	90.41(12)
O(3)#3-Zn(2)-O(3)#1	180.000(2)	N(5)-Zn(3)-N(1)	101.28(15)
N(5)-Zn(3)-O(9)#4	137.8(5)	N(1)-Zn(3)-O(9)#4	93.4(3)
N(5)-Zn(3)-O(7)	125.5(3)	N(1)-Zn(3)-O(7)	95.8(2)
O(9)#4-Zn(3)-O(7)	91.5(5)	N(5)-Zn(3)-O(8)	88.9(2)
N(1)-Zn(3)-O(8)	151.0(2)	O(9)#4-Zn(3)-O(8)	97.0(3)
O(7)-Zn(3)-O(8)	57.1(3)	N(5)-Zn(3)-O(10)#4	86.7(2)
N(1)-Zn(3)-O(10)#4	92.2(3)	O(9)#4-Zn(3)-O(10)#4	53.1(5)
O(7)-Zn(3)-O(10)#4	144.1(4)	O(8)-Zn(3)-O(10)#4	115.6(3)
		2[b]	
Zn(1)-O(1)	1.939(3)	Zn(1)-O(3)#1	1.962(3)
Zn(1)-N(2)#2	2.015(4)	Zn(1)-N(1)	2.056(4)
O(1)-Zn(1)-O(3)#1	108.37(14)	O(1)-Zn(1)-N(2)#2	125.73(14)
O(3)#1-Zn(1)-N(2)#2	112.70(14)	O(1)-Zn(1)-N(1)	99.94(14)
O(3)#1-Zn(1)-N(1)	98.34(13)	N(2)#2-Zn(1)-N(1)	107.37(14)
		3[c]	
Zn(1)-O(1)	1.959(2)	Zn(1)-O(3)	1.970(2)
Zn(1)-N(1)#1	2.011(2)	Zn(1)-N(2)#2	2.055(2)
O(1)-Zn(1)-O(3)	101.31(7)	O(1)-Zn(1)-N(1)#1	110.80(8)
O(3)-Zn(1)-N(1)#1	122.07(9)	O(1)-Zn(1)-N(2)#2	106.79(9)
O(3)-Zn(1)-N(2)#2	100.41(8)	N(1)#1-Zn(1)-N(2)#2	113.78(9)

[a] Symmetry code: #1, x, y + 1, z; #2, -x + 1, -y + 1, -z + 2; #3, -x + 1, -y, -z + 2; #4, x + 1, y, z.

[b] Symmetry code: #1, x + 1, y, z; #2, -x + 1, y + 1/2, -z + 3/2.

[c] Symmetry code: #1, x - 1/2, -y + 3/2, z + 1/2; #2, x - 1/2, -y + 1/2, z - 1/2.

Table S2. Selected Bond Lengths (Å) and Angles (deg) for 4, 5

		4[a]	
Zn(1)-O(3)	1.988(6)	Zn(1)-O(1)	1.924(7)
Zn(1)-O(7)	1.960(8)	Zn(2)-O(5)	1.915(7)
Zn(2)-O(2)	1.948(7)	Zn(1)-N(1)	2.057(7)
Zn(2)-O(4)	1.991(8)	Zn(2)-N(2)#1	2.013(8)
O(1)-Zn(1)-O(7)	132.0(4)	O(1)-Zn(1)-O(3)	111.8(3)
O(7)-Zn(1)-O(3)	99.0(3)	O(1)-Zn(1)-N(1)	93.7(3)
O(7)-Zn(1)-N(1)	115.9(4)	O(3)-Zn(1)-N(1)	101.4(3)
O(5)-Zn(2)-O(2)	100.6(3)	O(5)-Zn(2)-O(4)	129.5(4)
O(2)-Zn(2)-O(4)	109.6(3)	O(5)-Zn(2)-N(2)#1	116.6(4)
		5[b]	
Zn(1)-O(3)	2.0110(11)	Zn(1)-O(4)#1	2.0191(13)
Zn(1)-N(1)	2.0306(14)	Zn(1)-O(2)#2	2.0605(13)
Zn(1)-O(1)#3	2.1053(14)		
O(3)-Zn(1)-O(4)#1	157.67(6)	O(3)-Zn(1)-N(1)	98.63(5)
O(4)#1-Zn(1)-N(1)	102.19(6)	O(3)-Zn(1)-O(2)#2	94.74(5)
O(4)#1-Zn(1)-O(2)#2	86.29(6)	N(1)-Zn(1)-O(2)#2	108.39(6)
O(3)-Zn(1)-O(1)#3	85.63(5)	O(4)#1-Zn(1)-O(1)#3	84.78(6)
N(1)-Zn(1)-O(1)#3	94.61(6)	O(2)#2-Zn(1)-O(1)#3	156.63(5)

[a] Symmetry code: #1, x + 1/2, -y + 3/2, z + 1/2.

[b] Symmetry code: #1, x, y - 1, z; #2, x + 1/2, -y + 1/2, z + 1/2; #3, -x + 1/2, -y + 1/2, -z + 2.