Supporting information

Histidine-Controlled Homochiral and Ferroelectric Metal-Organic Frameworks

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Table S1. Selected bond lengths [Å] and angles [°].

	1		
Zn(1)-N(4)#1	1.967(5)	Zn(1)-O(5)	1.969(4)
Zn(1)-N(1)	1.988(6)	Zn(1)-O(1)	2.016(4)
N(4)#1-Zn(1)-O(5)	115.19(19)	N(4)#1-Zn(1)-N(1)	120.6(2)
O(5)-Zn(1)-N(1)	114.3(2)	N(4)#1-Zn(1)-O(1)	102.1(2)
O(5)-Zn(1)-O(1)	95.14(17)	N(1)-Zn(1)-O(1)	104.00(19)
	2		
Co(1)-N(4) #1	1.987(4)	Co(1)-O(5)	1.963(3)
Co(1)-N(1)	1.986(4)	Co(1)-O(1)	1.985(3)
N(4)#1-Co(1)-O(5)	117.28(14)	N(4)#1-Co(1)-N(1)	119.35(17)

O(5)-Co(1)-N(1)	114.18(15)	N(4)#1-Co(1)-O(1)	99.69(13)
O(5)-Co(1)-O(1)	96.17(12)	N(1)-Co(1)-O(1)	104.56(13)
	3		
Cu(1)-O(1)	1.932(5)	Cu(1)-O(1) #1	1.932(5)
Cu(1)-N(3) #2	1.988(6)	Cu(1)-N(3) #3	1.988(6)
N(3)-Cu(1) #4	1.988(6)	O(1)-Cu(1)-O(1) #1	165.4(3)
O(1)-Cu(1)-N(3) #2	90.1 (2)	O(1)#1-Cu(1)-N(3)#2	93.5(2)
O(1)-Cu(1)-N(3)#3	93.5(2)	O(1)#1-Cu(1)-N(3)#3	90.1(2)
N(3)#2-Cu(1)-N(3)#3	151.6(4)		

Symmetry transformations used to generate equivalent atoms for complex **1** and complex **2**: #1 x+1, y, z. Symmetry transformations used to generate equivalent atoms for complex **3**: #1 -x+1, y, -z+1/2; #2 x+1/2, -y+1/2, -z; #3 -x+1/2, -y+1/2, z+1/2; #4 -x+1/2, -y+1/2, z-1/2.

Table S2. Hydrogen bonds for **1** at 293 K [Å and ^{o}].

D-H…A	d(D-H)	d(H…A)	d(D…A)	< (DHA)
N2-H(2A)…O(1)#1	0.86	2.19	2.994(8)	155.0
N2-H(2A)…O(2)#1	0.86	2.49	3.198(9)	140.0
N5-H(5A)…O(2)#1	0.86	2.48	3.165(8)	137.0
N5-H(5A)…O(5)#1	0.86	2.37	2.811(7)	112.0

Symmetry transformations used to generate equivalent atoms:#1 2-x, 1/2+y, 1-z.

Table S3. Hydrogen bonds for **2** at 293 K [Å and ^{o}].

D-H…A	d(D-H)	d(H…A)	d(D…A)	< (DHA)
N2-H(2A)…O(1)#1	0.88	2.27	3.053(6)	148.0
N2-H(2A)…O(2)#1	0.88	2.35	3.107(7)	145.0
N5-H(5A)…O(5)#1	0.88	2.25	2.756(5)	116.0

Symmetry transformations used to generate equivalent atoms:#1 1-x, 1/2+y, 2-z.

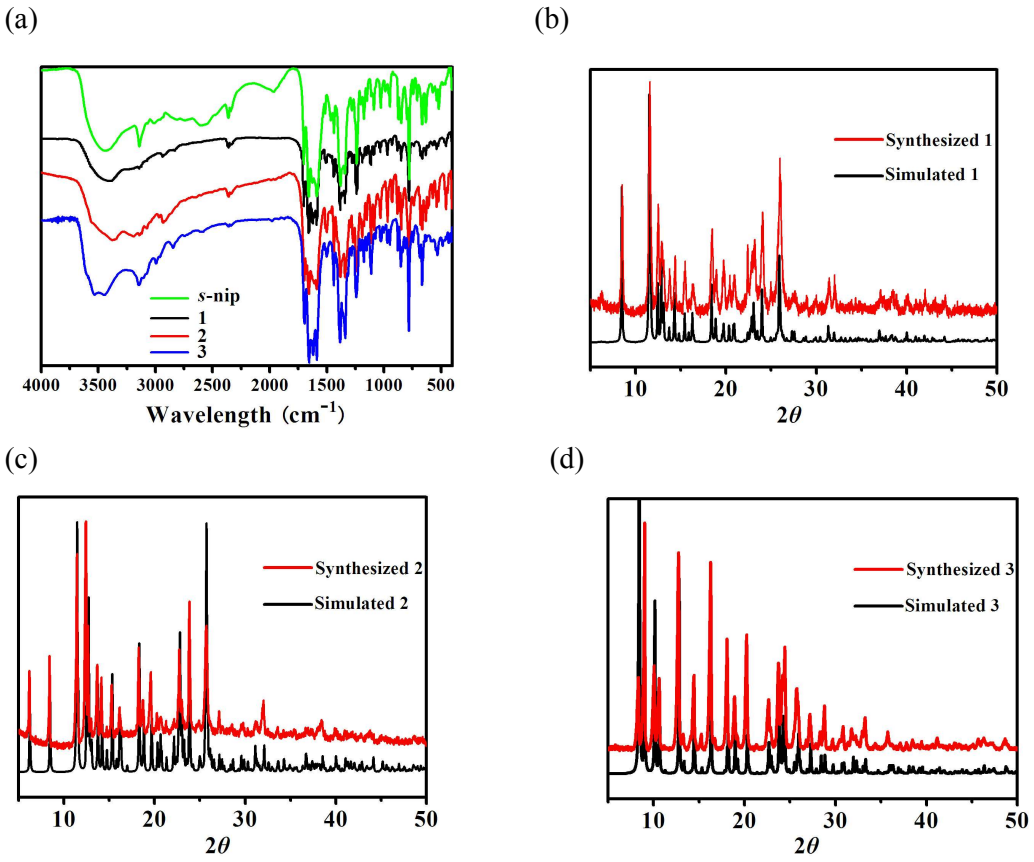

Figure S1. IR spectrum of *s*-nip, complexes **1-3** (a), and powder X-ray diffraction pattern of compounds **1-3** (b), (c) (d).