

ACCESSORY PUBLICATION

**Three Novel Polymeric Co(II)/Cu(II) Complexes Assembled from
5-nitro-1,2,3-benzenetricarboxylate and 4,4'-bipyridine: Syntheses, Crystal
Structures, and Magnetic Properties**

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Table S1. Bond Distances (Å) and Angles(°) for compound **1**.

Co(1)-O(9)	2.068(3)	Co(2)-O(1W)	2.056(4)
Co(1)-O(8) ⁱ	2.081(3)	Co(2)-O(1W) ^{iv}	2.056(4)
Co(1)-O(7) ⁱⁱ	2.083(4)	Co(2)-O(2) ^{iv}	2.087(3)
Co(1)-O(5)	2.126(3)	Co(2)-O(2)	2.087(3)
Co(1)-N(4)	2.153(4)	Co(2)-N(3) ⁱⁱⁱ	2.156(5)
Co(1)-N(1) ⁱⁱⁱ	2.186(4)	Co(2)-N(2)	2.170(5)
O(9)-Co(1)-O(8) ⁱ	159.24(13)	O(1W)-Co(2)-O(1W) ^{iv}	173.4(2)
O(9)-Co(1)-O(7) ⁱⁱ	85.76(13)	O(1W)-Co(2)-O(2) ^{iv}	92.54(14)
O(8) ⁱ -Co(1)-O(7) ⁱⁱ	110.14(13)	O(1W) ^{iv} -Co(2)-O(2) ^{iv}	88.12(14)
O(9)-Co(1)-O(5)	84.38(12)	O(1W)-Co(2)-O(2)	88.12(14)
O(8) ⁱ -Co(1)-O(5)	80.68(12)	O(1W) ^{iv} -Co(2)-O(2)	92.54(14)

O(7) ⁱⁱ -Co(1)-O(5)	168.87(12)	O(2) ^{iv} -Co(2)-O(2)	168.65(18)
O(9)-Co(1)-N(4)	103.20(12)	O(1W)-Co(2)-N(3) ⁱⁱⁱ	86.68(12)
O(8) ⁱ -Co(1)-N(4)	91.37(13)	O(1W) ^{iv} -Co(2)-N(3) ⁱⁱⁱ	86.68(12)
O(7) ⁱⁱ -Co(1)-N(4)	86.50(14)	O(2) ^{iv} -Co(2)-N(3) ⁱⁱⁱ	95.67(9)
O(5)-Co(1)-N(4)	90.72(13)	O(2)-Co(2)-N(3) ⁱⁱⁱ	95.67(9)
O(9)-Co(1)-N(1) ⁱⁱⁱ	83.73(13)	O(1W)-Co(2)-N(2)	93.32(12)
O(8) ⁱ -Co(1)-N(1) ⁱⁱⁱ	83.33(13)	O(1W) ^{iv} -Co(2)-N(2)	93.32(12)
O(7) ⁱⁱ -Co(1)-N(1) ⁱⁱⁱ	88.92(15)	O(2) ^{iv} -Co(2)-N(2)	84.33(9)
O(5)-Co(1)-N(1) ⁱⁱⁱ	95.12(14)	O(2)-Co(2)-N(2)	84.33(9)
N(4)-Co(1)-N(1) ⁱⁱⁱ	171.37(15)	N(3) ⁱⁱⁱ -Co(2)-N(2)	180.000(1)

Symmetry Code: i. $x, -y+1, z+1/2$; ii. $-x, -y+1, -z$; iii. $x, y-1, z$; iv. $-x+1, y, -z+1/2$.

Table S2. Bond Distances (Å) and Angles(°) for compound **2**.

Cu(1)-O(1)	1.931(3)	Cu(2)-O(4) ⁱⁱⁱ	1.923(3)
Cu(1)-O(7) ⁱ	1.950(3)	Cu(2)-O(3)	2.792(4)
Cu(1)-N(1)	2.006(4)	Cu(2)-O(3) ⁱⁱⁱ	2.792(4)
Cu(1)-O(1W)	2.022(3)	Cu(2)-N(2) ^{iv}	2.022(4)
Cu(1)-O(8) ⁱⁱ	2.215(3)	Cu(2)-N(2) ^v	2.022(4)
Cu(2)-O(4)	1.923(3)		
O(1)-Cu(1)-O(7) ⁱ	96.10(13)	N(1)-Cu(1)-O(8) ⁱⁱ	91.07(16)
O(1)-Cu(1)-N(1)	174.89(18)	O(1W)-Cu(1)-O(8) ⁱⁱ	94.89(13)
O(7) ⁱ -Cu(1)-N(1)	82.51(15)	O(4)-Cu(2)-O(4) ⁱⁱⁱ	180.00(15)
O(1)-Cu(1)-O(1W)	88.53(13)	O(4)-Cu(2)-N(2) ^{iv}	89.60(16)
O(7) ⁱ -Cu(1)-O(1W)	163.91(15)	O(4) ⁱⁱⁱ -Cu(2)-N(2) ^{iv}	90.40(16)
N(1)-Cu(1)-O(1W)	91.53(14)	O(4)-Cu(2)-N(2) ^v	90.40(16)
O(1)-Cu(1)-O(8) ⁱⁱ	94.01(14)	O(4) ⁱⁱⁱ -Cu(2)-N(2) ^v	89.60(16)
O(7) ⁱ -Cu(1)-O(8) ⁱⁱ	100.13(13)	N(2) ^{iv} -Cu(2)-N(2) ^v	180.0(2)

Symmetry Code: i. $-x+2,-y+1,-z+1$; ii. $x,y+1,z$; iii. $-x+3/2,-y+3/2,-z+1$; iv. $x-1/2,-y+5/2,z-1/2$; v. $-x+2,y-1,-z+3/2$.

Table S3. Bond Distances (Å) and Angles(°) for compound **3**.

Cu(1)-O(4W) ⁱ	1.946(2)	Cu(2)-O(1W) ⁱ	2.751(4)
Cu(1)-O(4W)	1.946(2)	Cu(2)-N(4)	2.016(3)
Cu(1)-O(1)	1.950(2)	Cu(2)-O(13)	2.609(2)
Cu(1)-O(1) ⁱ	1.950(2)	Cu(3)-O(7) ⁱⁱ	1.935(2)
Cu(1)-O(1W) ⁱ	2.631(3)	Cu(3)-O(3)	1.962(2)
Cu(1)-O(1W)	2.631(3)	Cu(3)-O(4)	2.703(3)
Cu(2)-O(15)	1.922(2)	Cu(3)-O(3W)	1.966(2)
Cu(2)-O(14)	1.955(2)	Cu(3)-N(3)	1.983(3)
Cu(2)-O(2W)	2.014(2)	Cu(3)-O(5W)	2.407(4)
O(4W) ⁱ -Cu(1)-O(4W)	180.00(15)	O(15)-Cu(2)-N(4)	90.76(10)
O(4W) ⁱ -Cu(1)-O(1)	86.03(9)	O(14)-Cu(2)-N(4)	92.82(10)
O(4W)-Cu(1)-O(1)	93.97(9)	O(2W)-Cu(2)-N(4)	174.65(10)
O(4W) ⁱ -Cu(1)-O(1) ⁱ	93.97(9)	O(15)-Cu(2)-O(13)	125.12(8)
O(4W)-Cu(1)-O(1) ⁱ	86.03(9)	O(14)-Cu(2)-O(13)	55.88(8)
O(1)-Cu(1)-O(1) ⁱ	180.000(1)	O(2W)-Cu(2)-O(13)	86.08(9)
O(4W) ⁱ -Cu(1)-O(1W) ⁱ	88.80(10)	N(4)-Cu(2)-O(13)	89.61(9)
O(4W)-Cu(1)-O(1W) ⁱ	91.20(10)	O(7) ⁱⁱ -Cu(3)-O(3)	175.12(10)
O(1)-Cu(1)-O(1W) ⁱ	94.45(9)	O(7) ⁱⁱ -Cu(3)-O(3W)	92.29(9)
O(1) ⁱ -Cu(1)-O(1W) ⁱ	85.55(9)	O(3)-Cu(3)-O(3W)	89.15(9)
O(4W) ⁱ -Cu(1)-O(1W)	91.20(10)	O(7) ⁱⁱ -Cu(3)-N(3)	88.72(10)
O(4W)-Cu(1)-O(1W)	88.80(10)	O(3)-Cu(3)-N(3)	89.60(10)
O(1)-Cu(1)-O(1W)	85.55(9)	O(3W)-Cu(3)-N(3)	176.88(11)
O(1) ⁱ -Cu(1)-O(1W)	94.45(9)	O(7) ⁱⁱ -Cu(3)-O(5W)	84.97(11)
O(1W) ⁱ -Cu(1)-O(1W)	180.00(8)	O(3)-Cu(3)-O(5W)	99.73(10)
O(15)-Cu(2)-O(14)	176.30(10)	O(3W)-Cu(3)-O(5W)	88.32(11)
O(15)-Cu(2)-O(2W)	89.14(10)	N(3)-Cu(3)-O(5W)	94.70(12)
O(14)-Cu(2)-O(2W)	87.38(9)		

Symmetry Code: i. -x+2,-y+1,-z; ii. x+1,y,z-1.

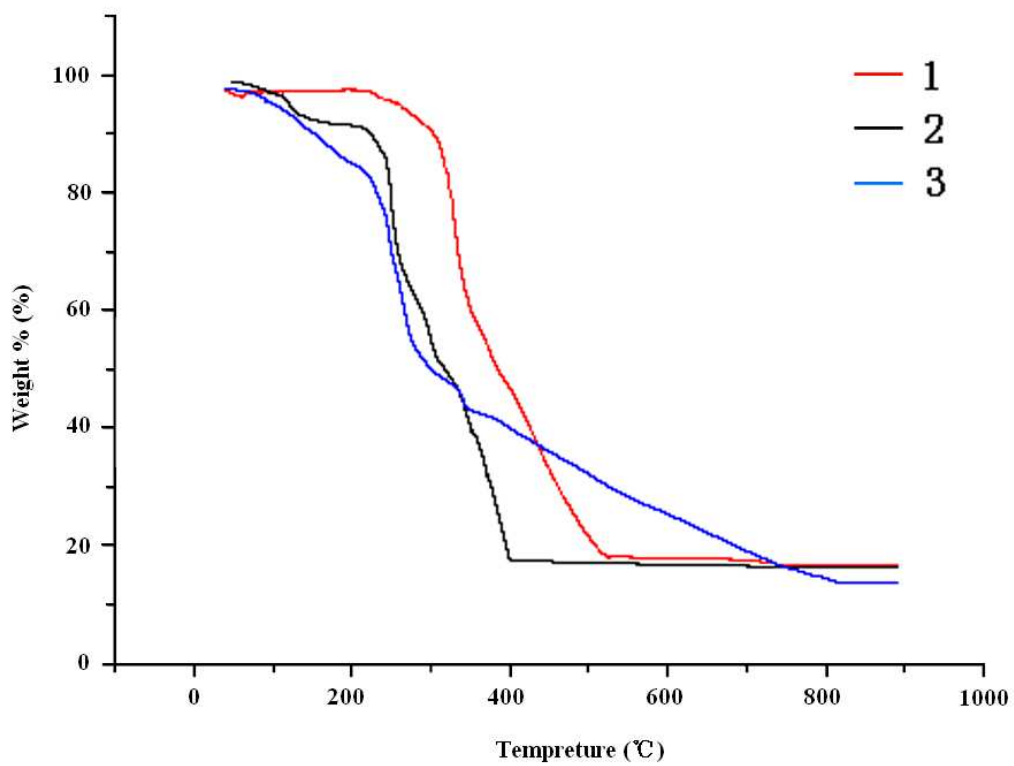


Fig. S1. The TGA curves for compound 1, 2 and 3.

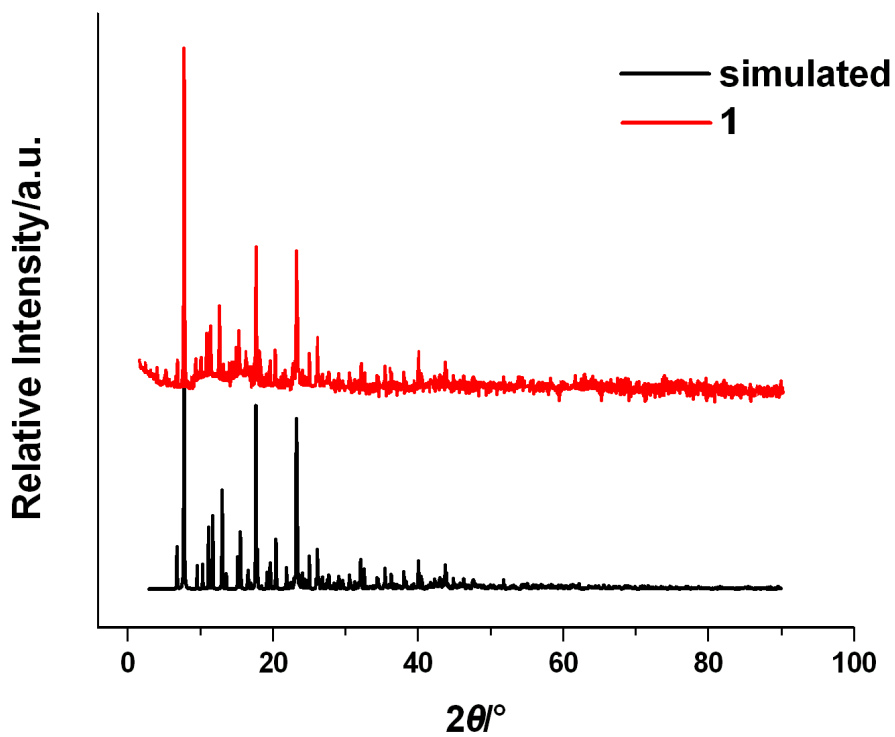


Fig. S2. X-ray powder diffraction pattern of compound 1.

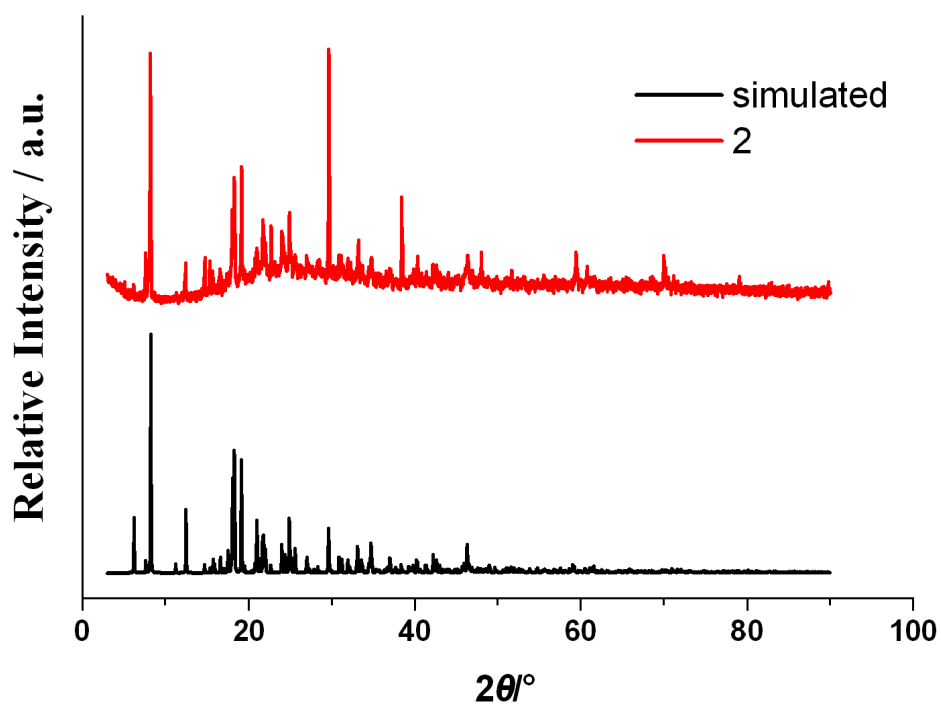


Fig. S3. X-ray powder diffraction pattern of compound 2.

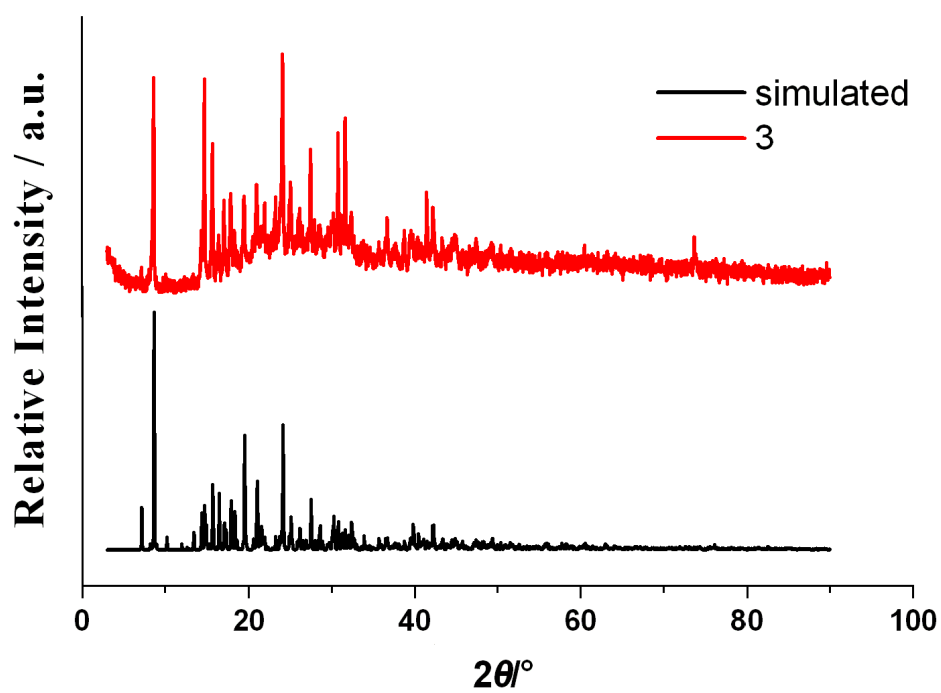


Fig. S4. X-ray powder diffraction pattern of compound 3.