Supporting information

Two $[Au(CN)_2]^-$-bridged Heterometallic Coordination Polymers Directed by Different 2,2'-bipyridyl-like ligands

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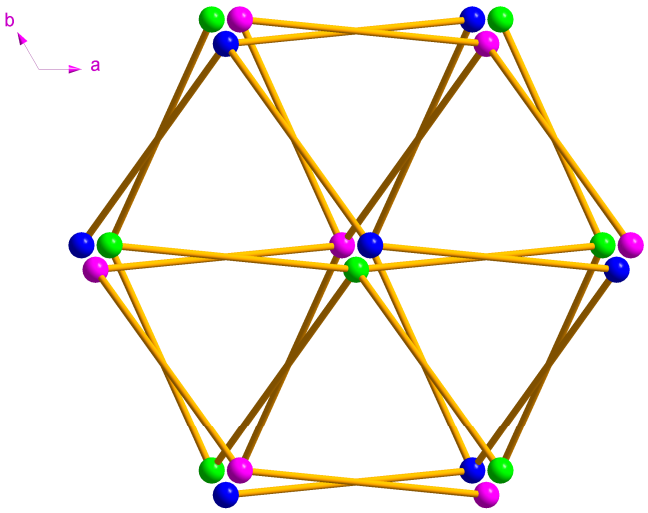

Fig. S1(a). Perspective view of the pseudo-hexagonal channel in **1** along the c axis (the Cd atoms are represented by green, blue and pink spheres, respectively; The $[Au(CN)_2]^-$ groups are represented by Cd···Cd links (light orange lines)).

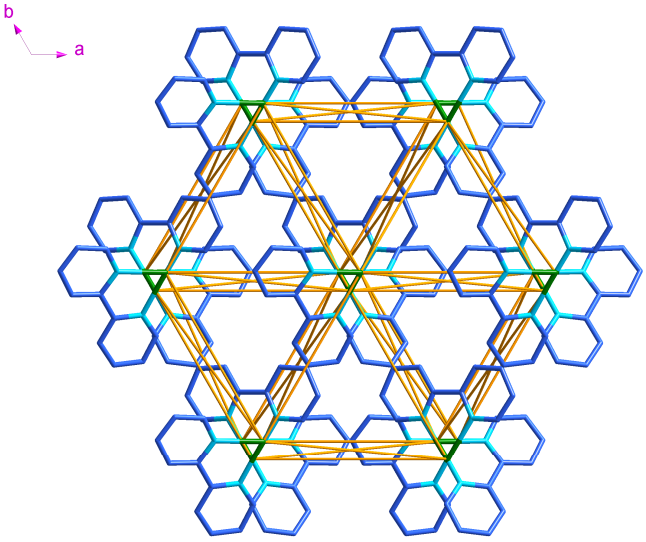

Fig. S2(b). Perspective view of the phen ligands in the network of **1** along the c axis (the Cd, C and N atoms are represented by green, light blue and sky blue spheres, respectively; The $[Au(CN)_2]^-$ groups are represented by Cd···Cd links (light orange lines)).

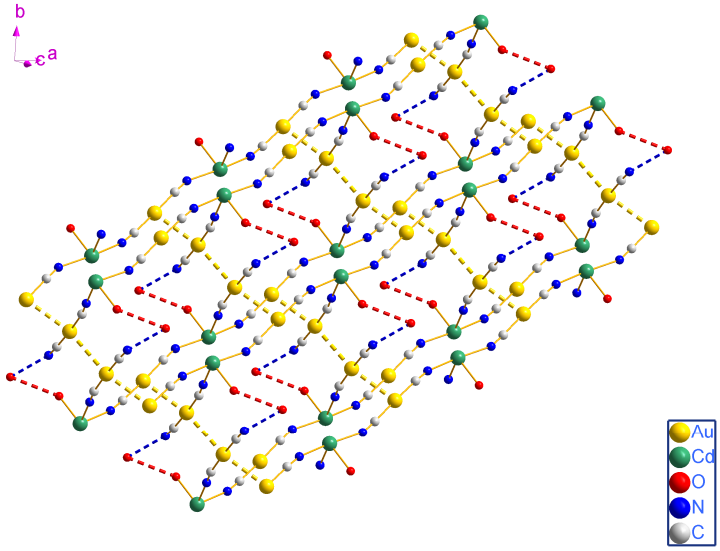

Fig. S2. View of the supramolecular structure of **2** showing Au···Au (in gold dotted lines) and two kinds of hydrogen bonds (in red and blue dotted lines).

Table S1 Distances (Å) and angles (deg) of hydrogen bonds for complexes **2**

D-H···A	Bond Length (D-H)	Distance (H···A)	Distance (D···A)	Angle (D-H···A)
O2-H2···N4	0.820	2.298	2.789	118.53
O2-H2···O1#1	0.820	2.447	3.224	158.64

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

The codes that respented the symmetry transformations used to generate equivalent atoms of Fig. 1-2:

Fig. 1a: zero: -y, x-y; A: -1+x, x-y, 2-z;

Fig. 2a: zero: -1+x, -1+y, z; A: -0.5+x, -0.5+y, z;

Fig. 2b: A: -0.5+x, -0.5+y, z; B: -x, -y, 1-z;

Fig. 2c: A: -0.5+x, -0.5+y, z; B: -x, -y, 1-z; C: x, -1+y, z; D: -0.5-x, 0.5-y, 1-z; E: 0.5-x, -0.5-y, 1-z; F: -1+x, y, z.