Supplementary Material

Sonochemical synthesis of cadmium(II) coordination polymer nanospheres as precursor for cadmium oxide nanoparticles

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Table S1. Hydrogen bond parameters in **1**.

***D*—H…A**	***D*—H**	**H…*A***	***D*…*A***	***D*—H…A**
N2−H2B…O1W	0.79	1.93	2.869(7)	163
O1W−H1WA…N6^{iii}	0.91	1.97	2.687(7)	172
O12−H12C…O3^{iv}	0.97	1.75	2.712(7)	171
O1W−H1WB…O10^{i}	0.92	2.32	3.162(7)	152
C2−H2A…O10^{i}	0.95	2.44	3.322(8)	155
C14−H14A…O7	0.95	2.52	3.392(8)	153
C7−H7A…O1W^{ii}	0.95	2.67	3.239(8)	119

Symmetry codes: (i) -*x*-2, *y*-1/2, -*z*; (ii) *x*, *y*, *z*; (iii) -*x*-1, y+1/2, -*z*; (iv) -*x*-2, y-1/2, -z-1.

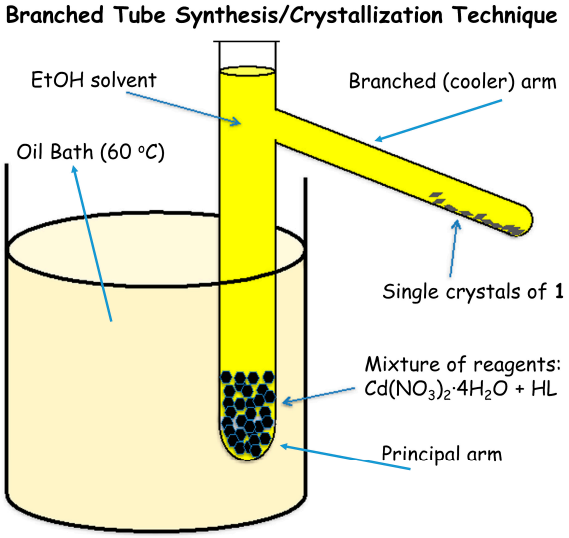

Fig. S1. Schematic representation of the branched tube synthetic method.

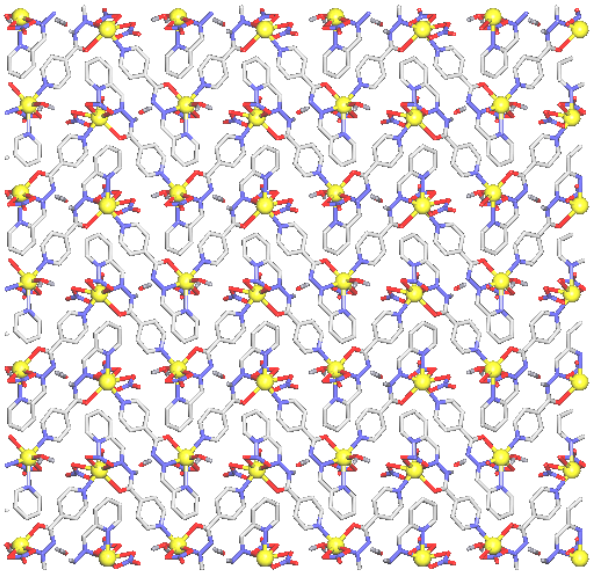

Fig. S2. Fragment of the crystal packing pattern of **1** (view along the *a* axis). CH hydrogen atoms are omitted for clarity. Cd (yellow balls), N (blue), O (red), C (gray), H (dark gray).

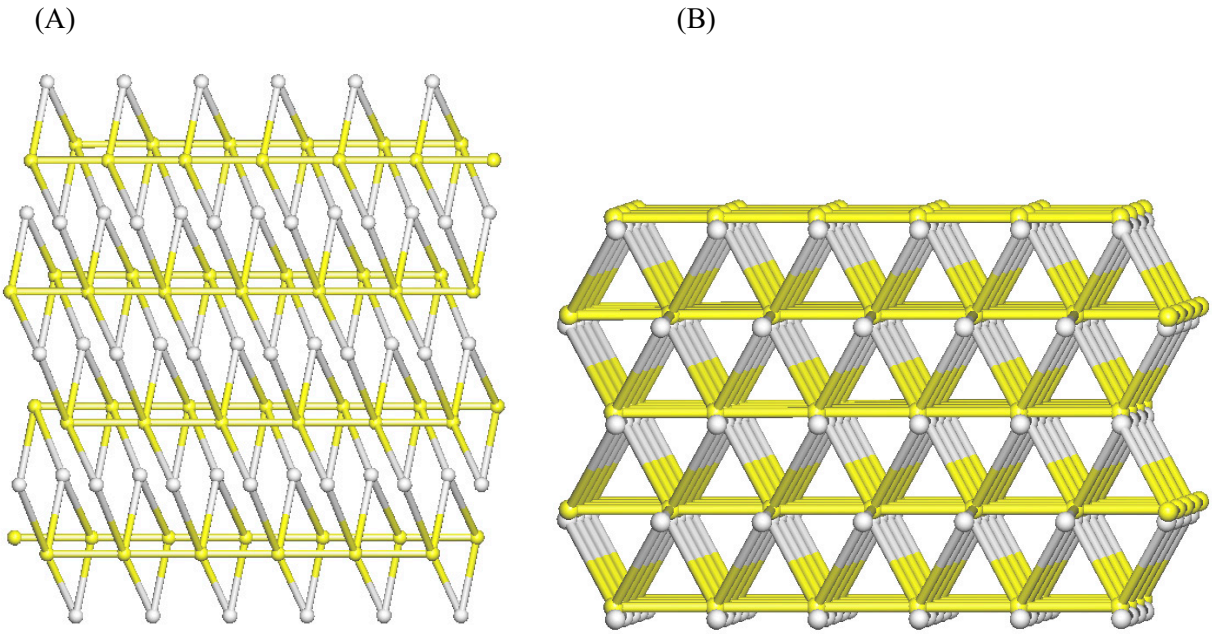

Fig. S3. Topological representation of a 3D H-bonded network in **1** showing a binodal 3,5-connected net with the **hms** (3,5-conn) topology and point symbol of $(6^3)(6^9.8)$. (A) View along the *b* axis. (B) View along the *c* axis. Cd2-based $[Cd(L)(NO_3)(H_2O)]$ nodes (gray balls), centroids of 5-connected Cd1-based $[Cd(HL)(NO_3)_2]$ nodes (yellow balls).

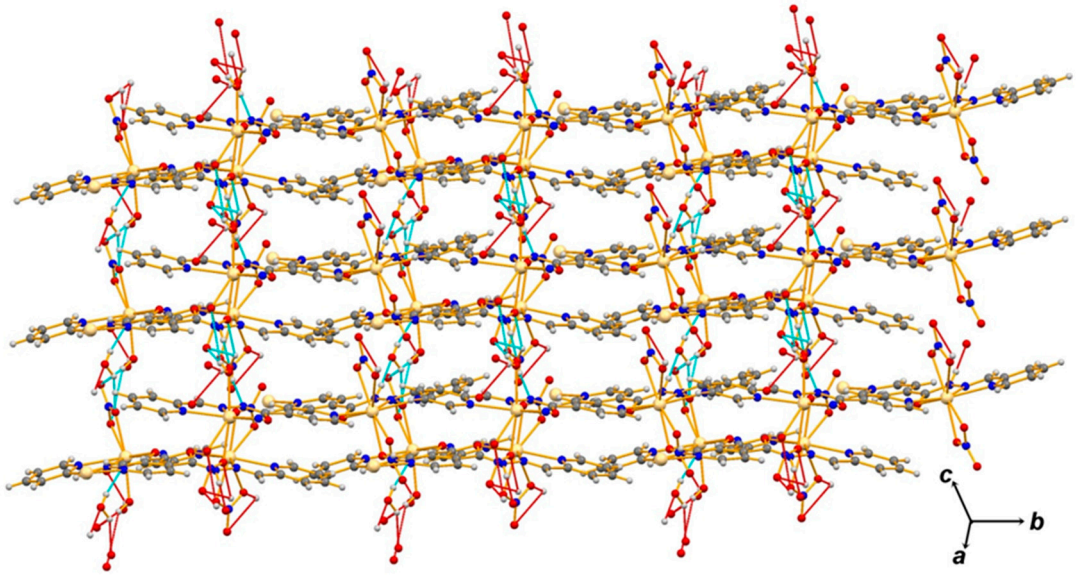

Fig. S4. Crystal packing diagram of **1** along the *b* axis (H bonds are shown as red and blue lines).

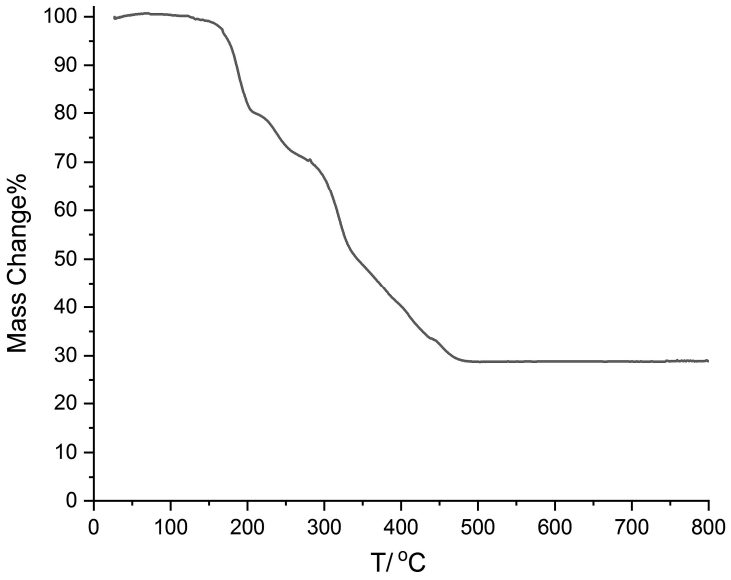

Fig. S5. TGA of compound **1**.

(A) (B)

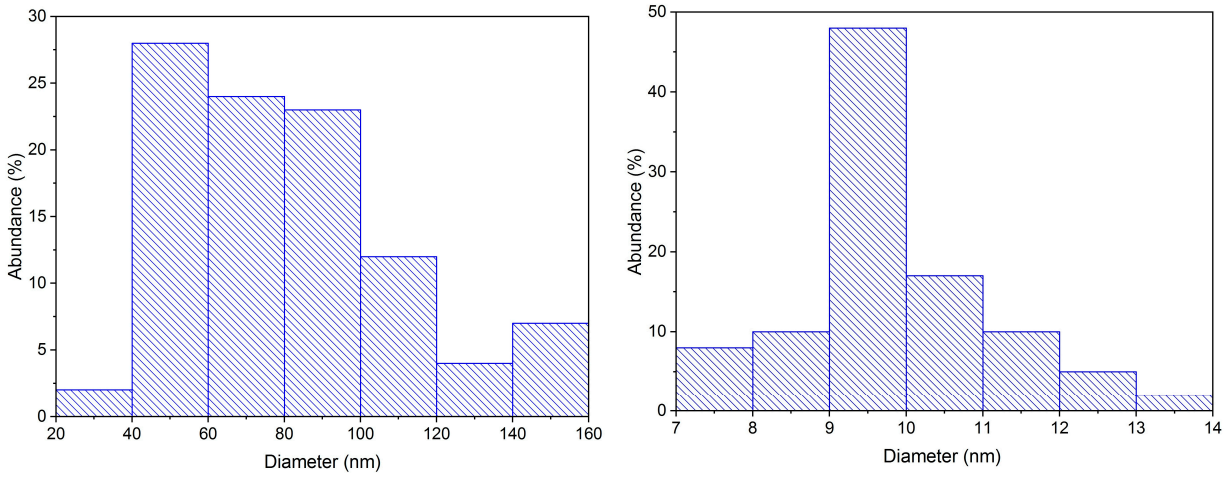

Fig. S6. Size distribution histograms for nanoparticles of **1** (A) and CdO (B).

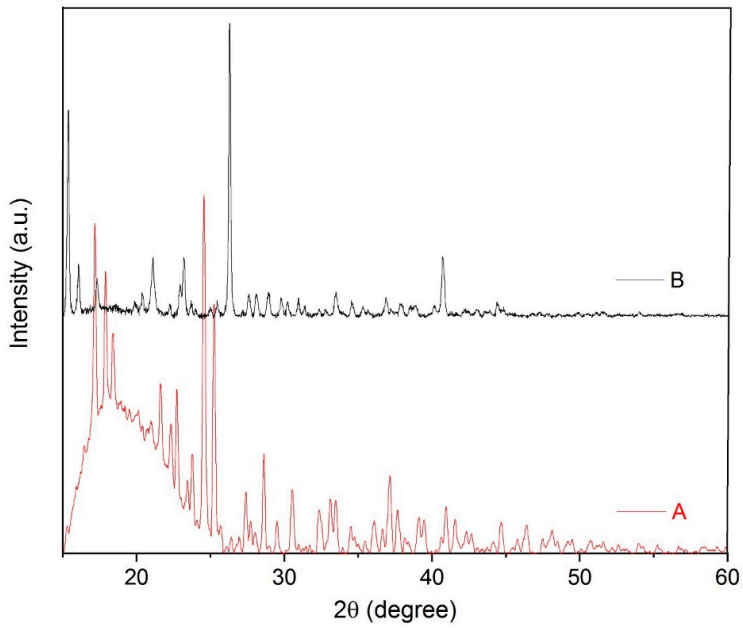

Fig. S7. Comparison between PXRD patterns of (A) nanoparticles **1** and (B) solid formed in methanol (synthesized using a procedure similar to **1** but in MeOH).

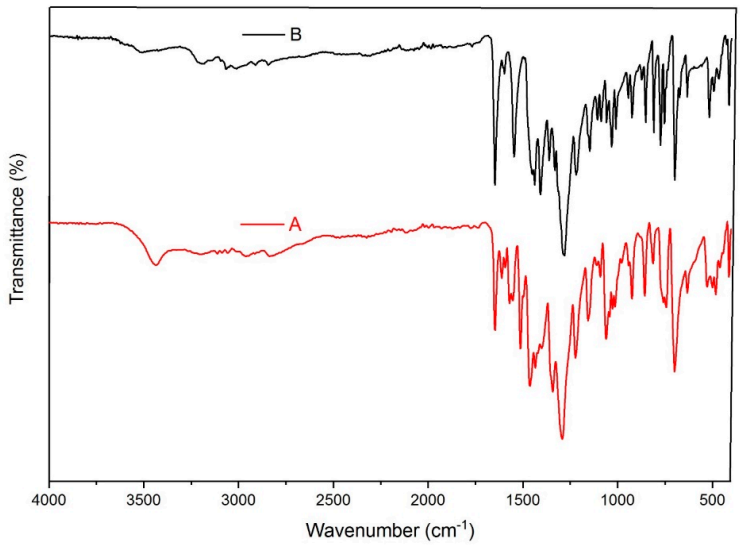

Fig. S8. FT-IR spectra of (A) compound **1** and (B) solid formed in methanol (synthesized using a procedure similar to **1** but in MeOH).