

Electronic Supplementary Information for (No:B907606A)

Structural Variability of Cd(II) and Co(II) Mixed-ligand Coordination Polymers: Effect of Ligand Isomerism and Metal-to-Ligand Ratio

Feng-Yun Cui^a, Kun-Lin Huang^{ab}, Yan-Qing Xu^a, Chang-Wen Hu^{a}, Ying-Nan Chi^{a*}*

^a *The Institute for Chemical Physics, and Department of Chemistry, Beijing Institute of Technology, Beijing 100081, China. Fax: ++86-10-68914780; Tel: +86-10-68912667; E-mail: cwhu@bit.edu.cn*

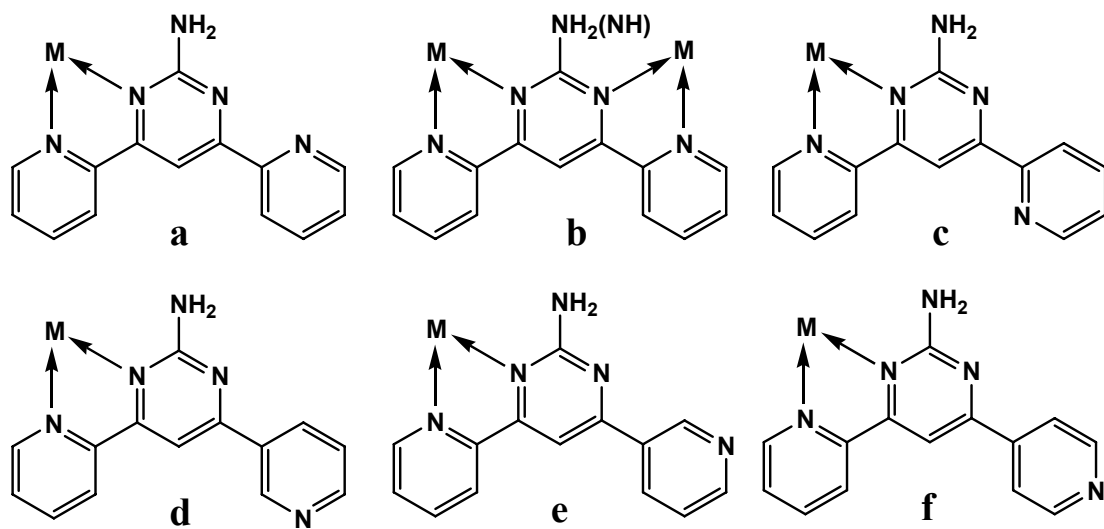
^b *College of Chemistry, Chongqing Normal University, Chongqing 400047, China.*

Caption to Schemes

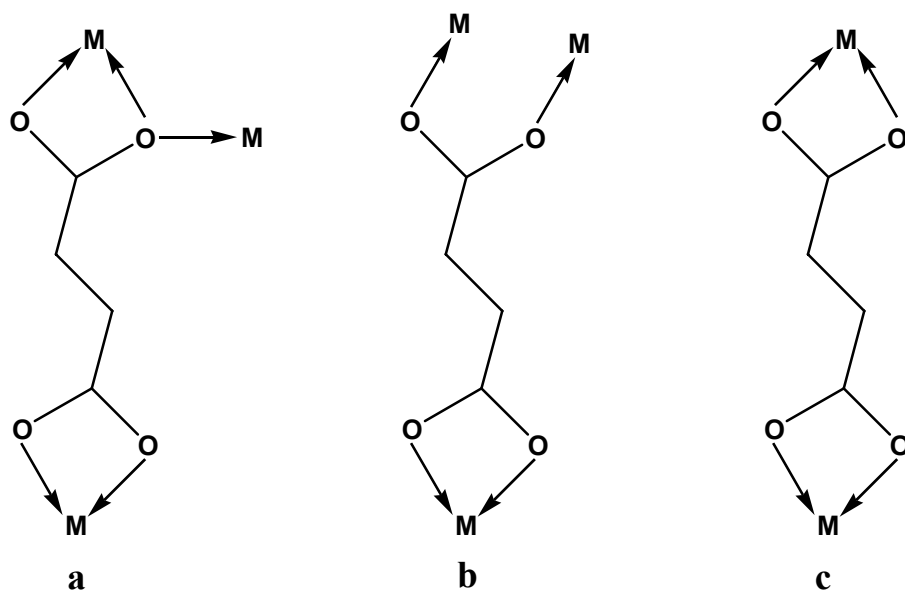
Scheme S1. Coordination modes of H₂L1, HL1⁻, H₂L2, H₂L3 ligands in complexes 1-7.

Scheme S2. Coordination modes of suc²⁻ ligands in complexes 1-5.

Scheme S1



Scheme S2



Caption to figures

Figure S1. View of a 2-D layer in **1** parallel to the *ac*-plan formed by hydrogen-bonding and π - π stacking interactions. The blue and yellow dashed lines represent the hydrogen-bonding and π - π interactions, respectively.

Figure S2. View of a 2-D layer in **2** along the *c*-axis formed by hydrogen-bonding interactions between amino groups from terminal ligands and carboxylate oxygen atoms from the adjacent chains. The blue dashed lines represent the hydrogen-bonding interactions.

Figure S3. View of the ABAB packing mode of **3**.

Figure S4. View of a 2-D sheet in **6** parallel to the *ac*-plan formed by hydrogen-bonding interactions between the carboxylate groups, coordination aqua molecules and lattice water molecules. The H₂L3 ligands are omitted for clarity. The green dashed lines represent the hydrogen-bonding interactions.

Figure S5. The view of alternation of right- and left-handed helices in **7** along the *a*-axis. The green dashed lines represent the hydrogen-bonding interactions.

Figure S6. TG curves for compounds **1-3**.

Figure S7. TG curves for compounds **4-5**.

Figure S8. TG curves for compounds **6-7**.

Figure S9. The XPRD patterns of compounds **1-7**.

Figure S10. Emission spectra of ligand H₂L1 and compounds **1-3** in the solid state at room temperature.

Figure S11. Emission spectra of ligands H₂L2, H₂L3 and compounds **4** and **5** in the solid state at room temperature.

Figure S1.

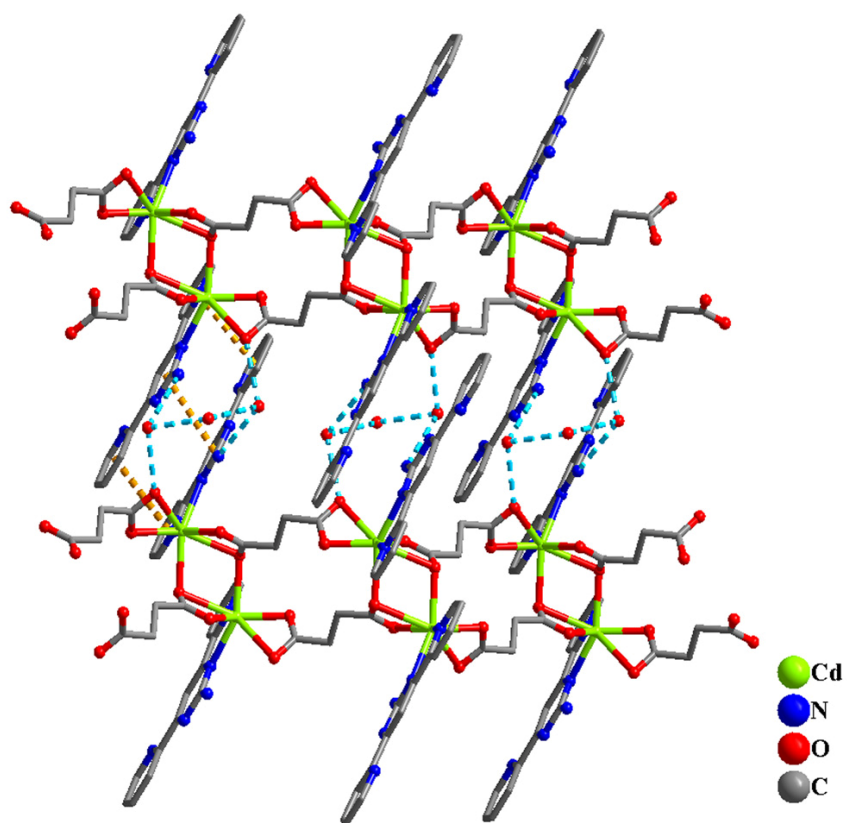


Figure S2.

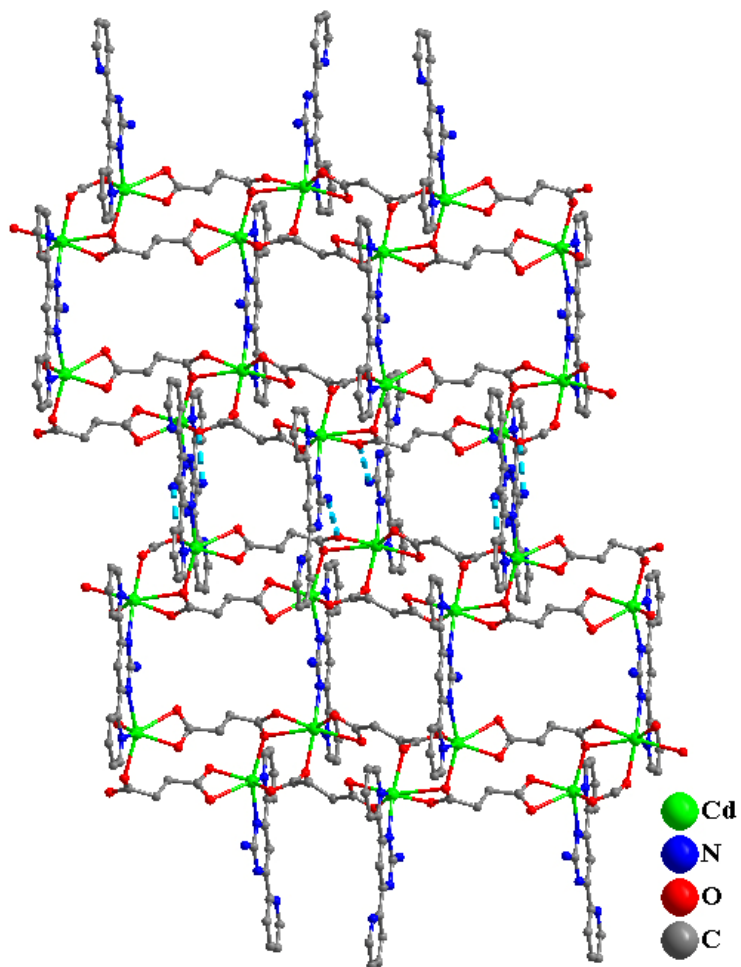


Figure S3.

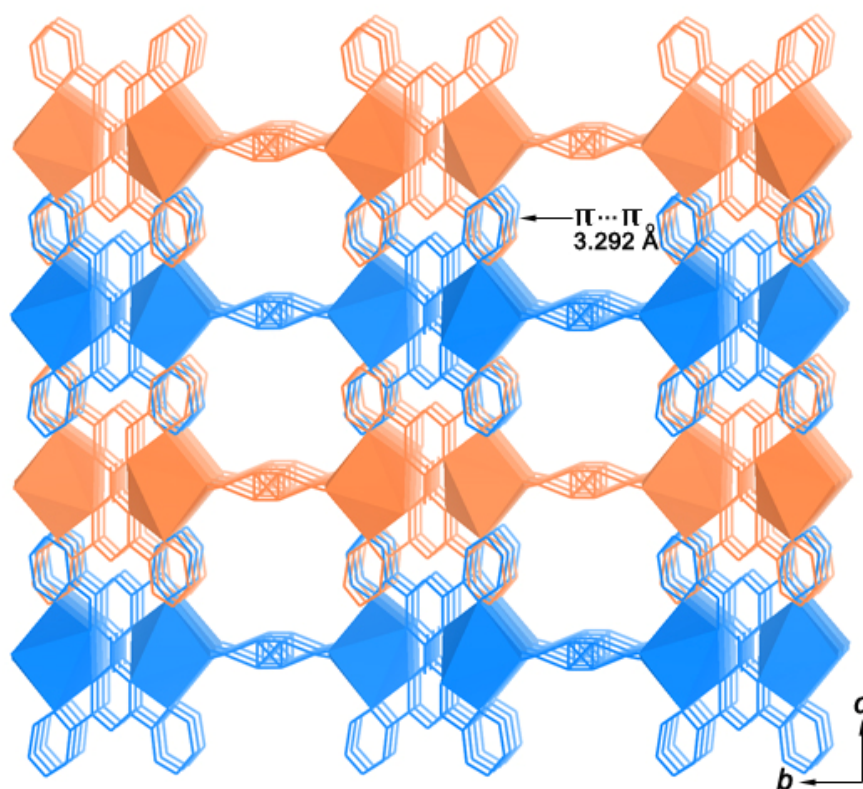


Figure S4.

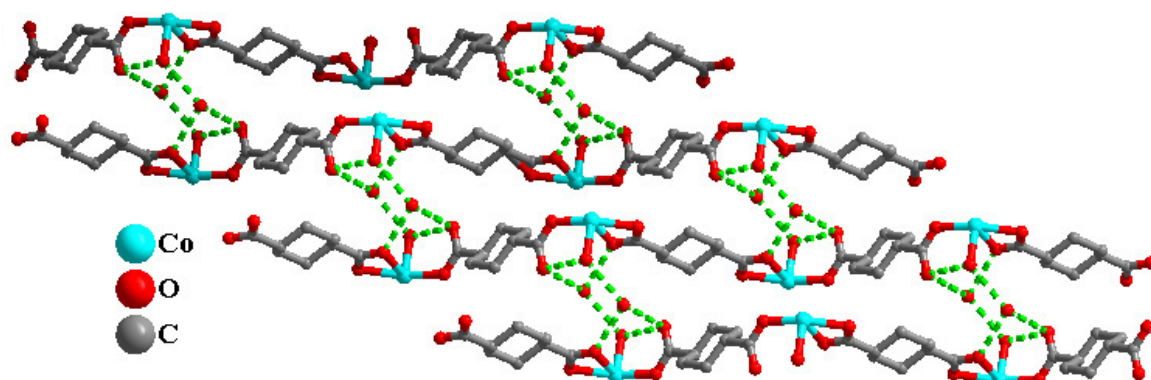


Figure S5.

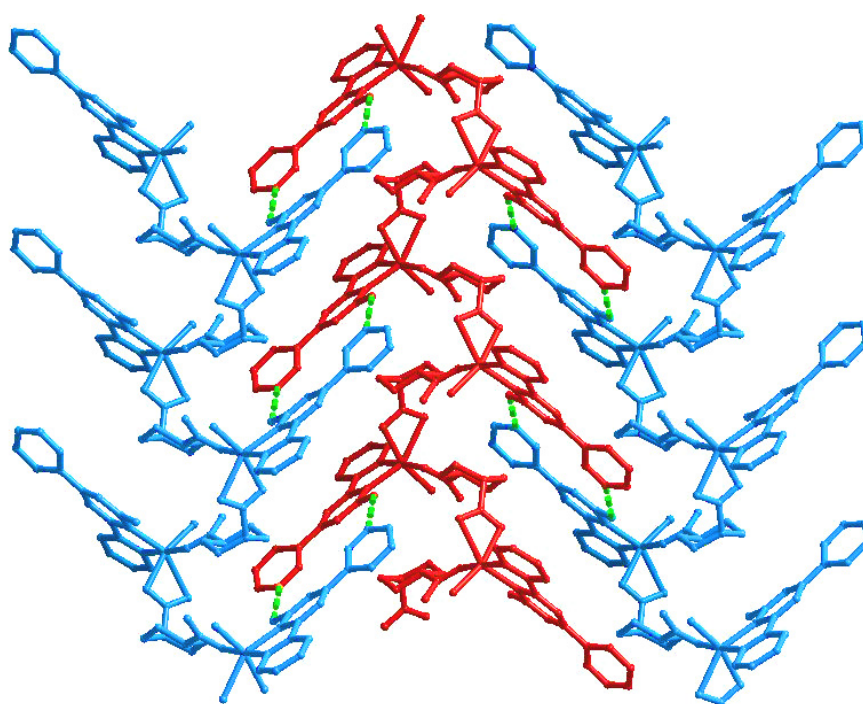


Figure S6.

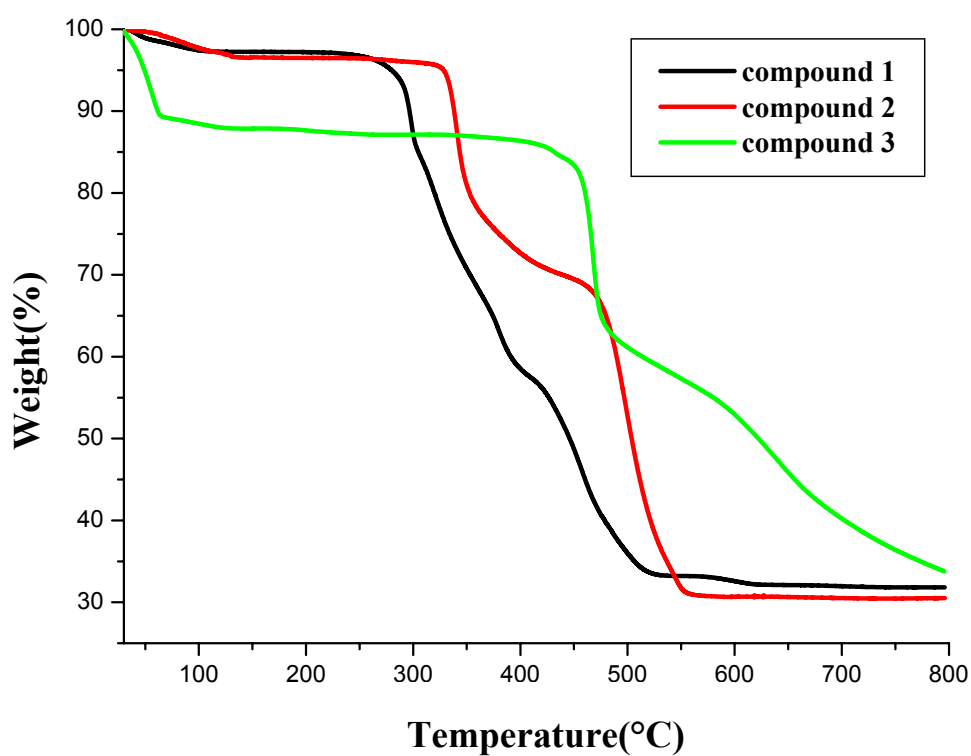


Figure S7.

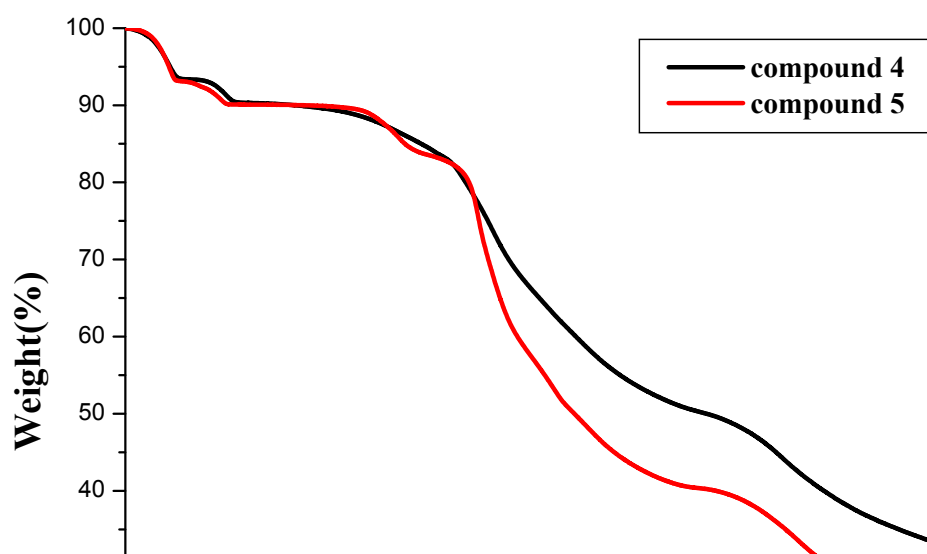


Figure S8.

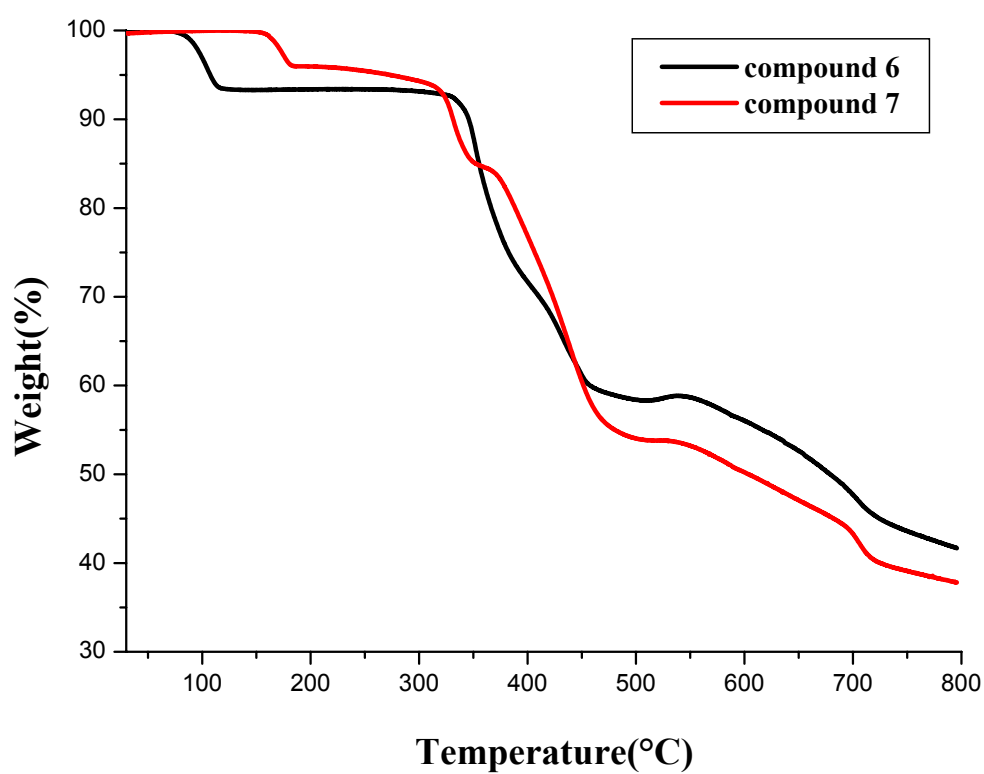
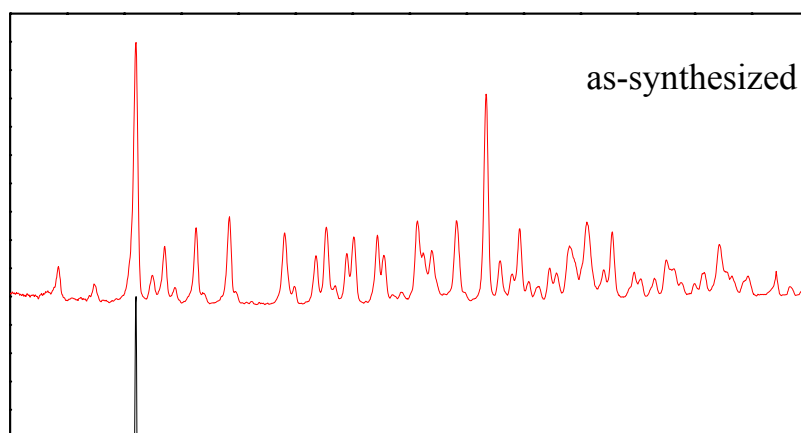


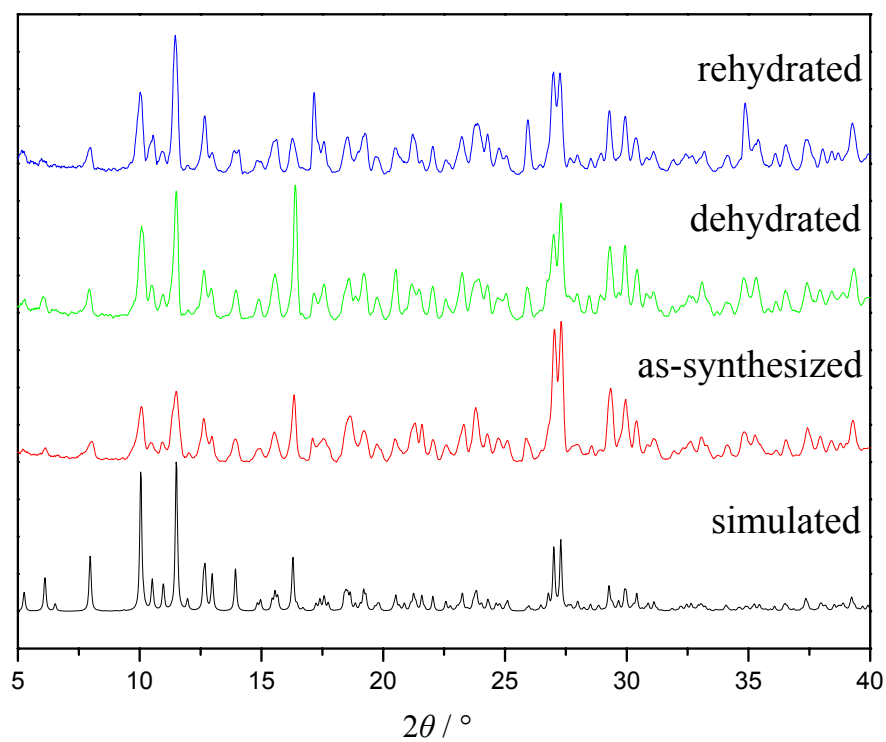
Figure S9.

Compound 1

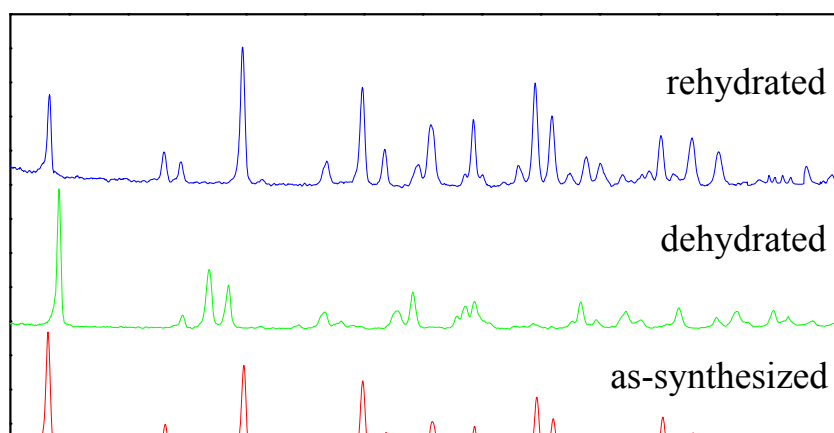


$2\theta / ^\circ$

Compound 2

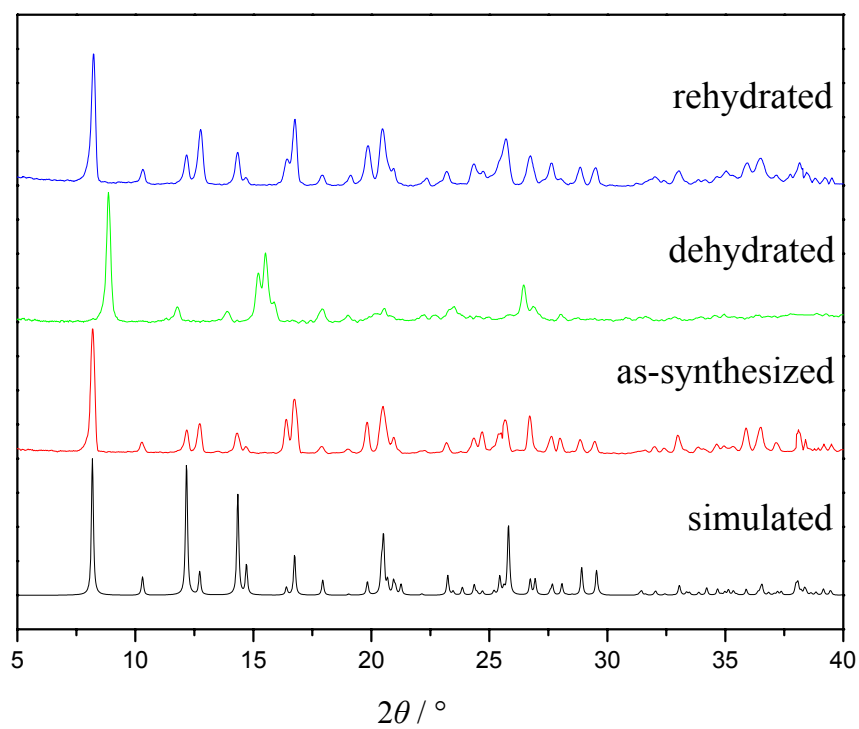


Compound 3

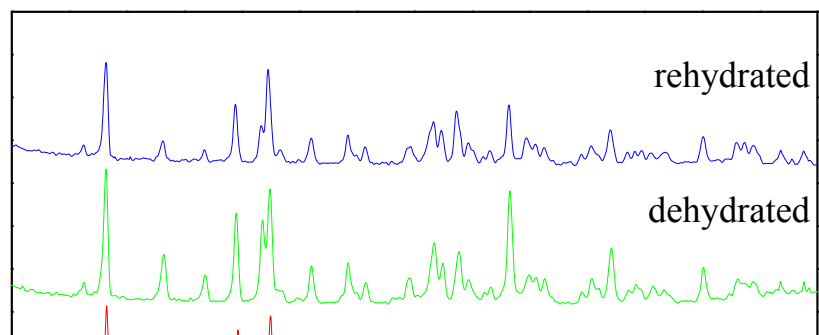


$2\theta / ^\circ$

Compound 4

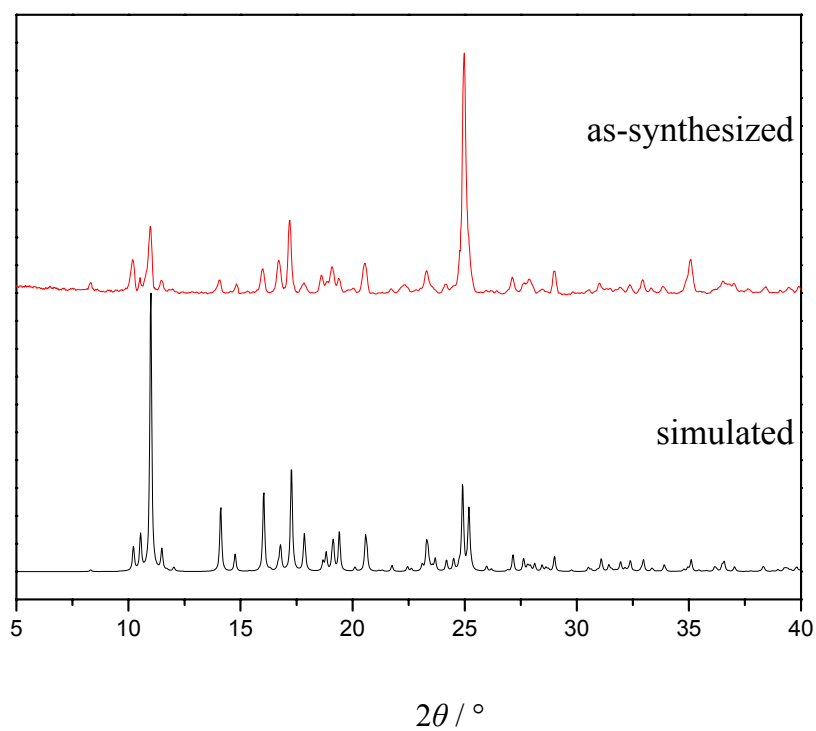


Compound 5

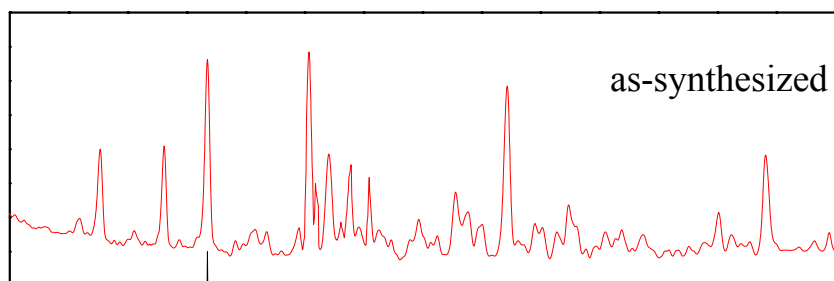


$2\theta / ^\circ$

Compound 6



Compound 7



$2\theta / ^\circ$

Figure S10.

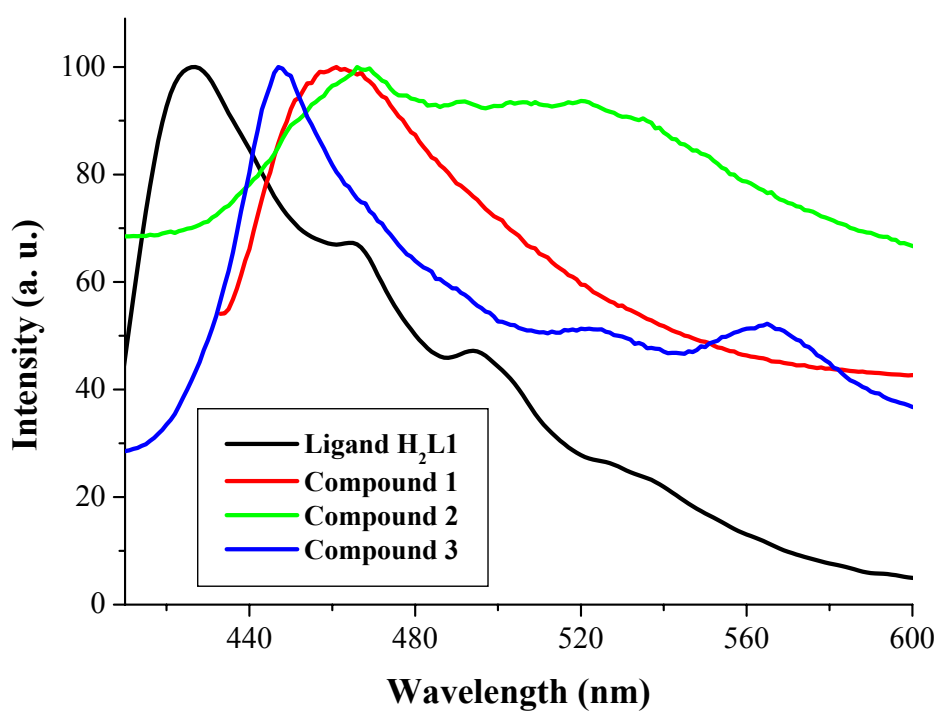


Figure S11.

