Supporting information

Self-Assembly of Discrete and Polymeric Metal-Organic Frameworks via a Semirigid Glycoluril-Based Molecular Clip

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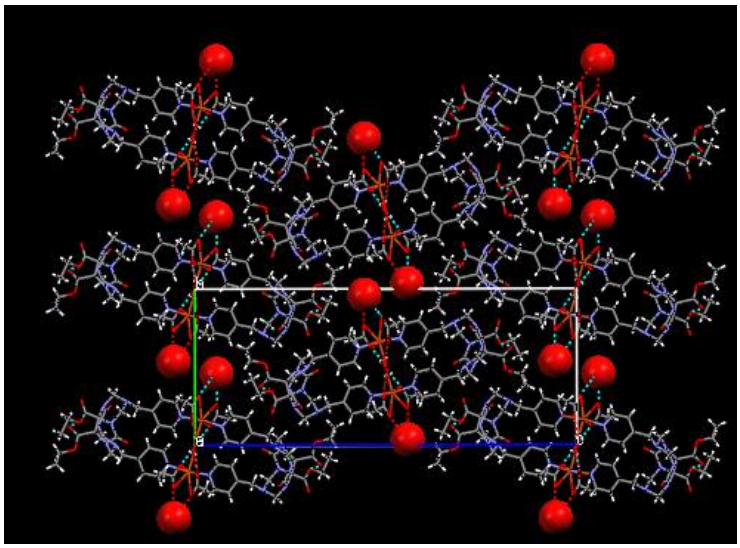
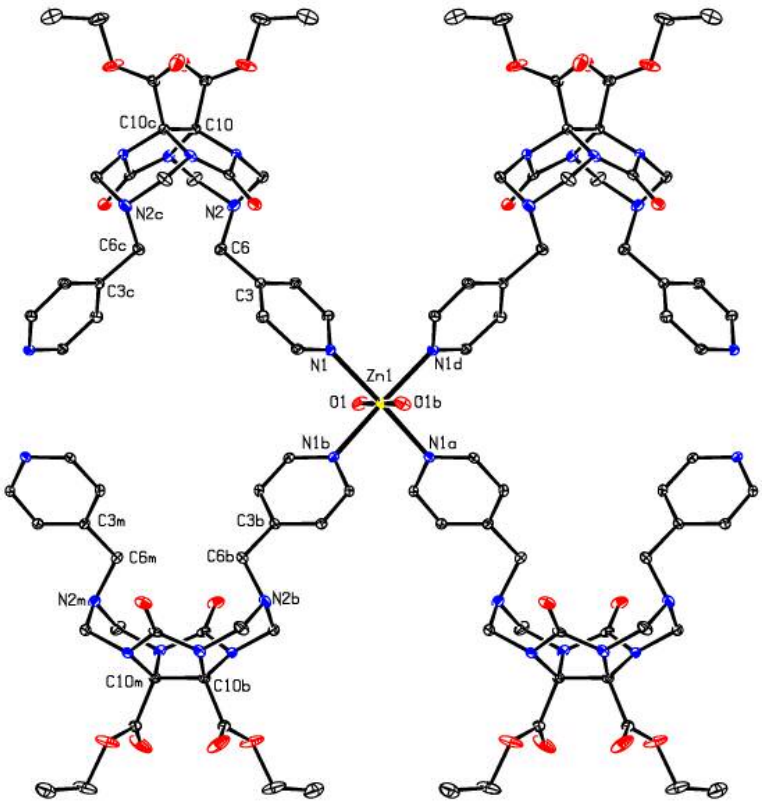


Figure S1. Packing diagram of **1** along the crystallographic *bc* axis. The oxygen atoms of water molecules are shown in space-filling model (red).



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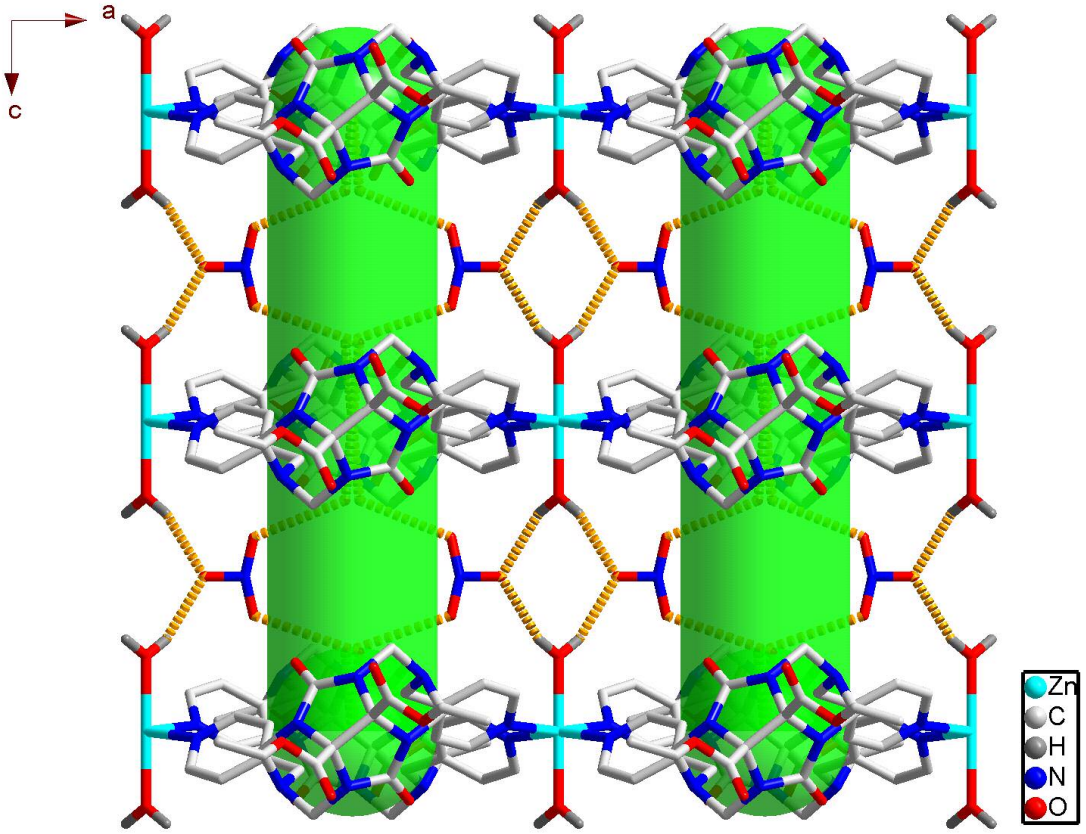

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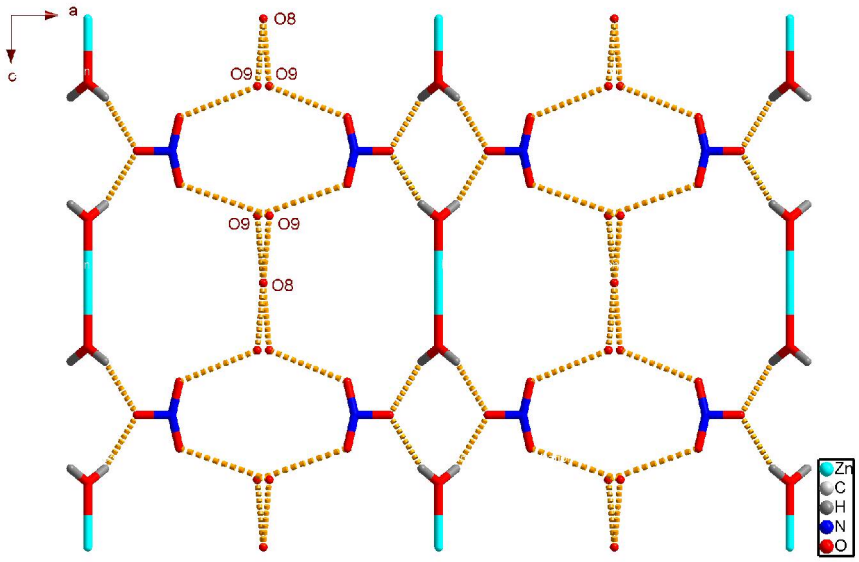
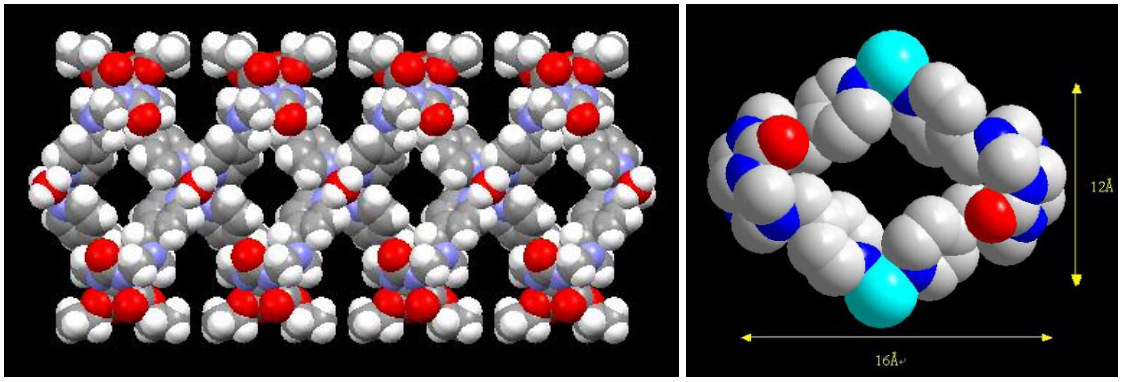
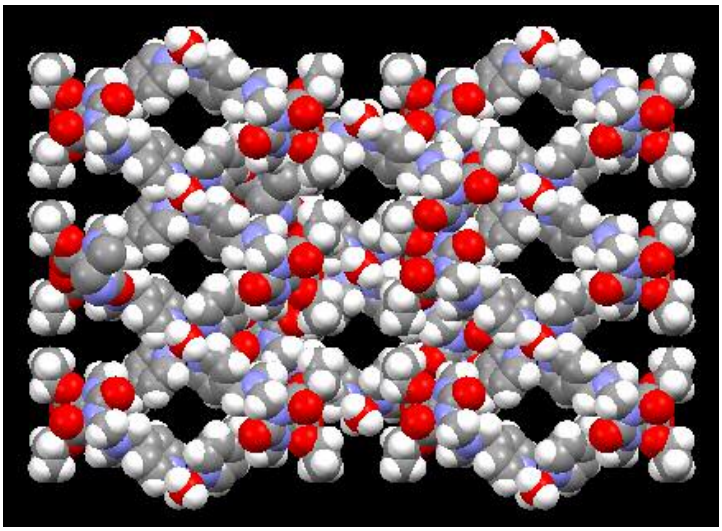


(c)



(d)



(e)

Figure S2. (a) ORTEP view of **3** showing four ligands surrounding one Co(II) octahedra (30% probability ellipsoids). (b) View of **3** showing the 1D wavelike chain (left) and individual rhombus-like unit (right). (c) The 2D sheet driven by hydrogen bond interactions and its 1D channels. (d) The 2D hydrogen bond network in the framework **3**. Metal atoms and ligands **L** have been omitted for clarity. (e) Space-filling model for topview of **3**. Hydrogen atoms and free water molecules have been omitted for clarity.

TG

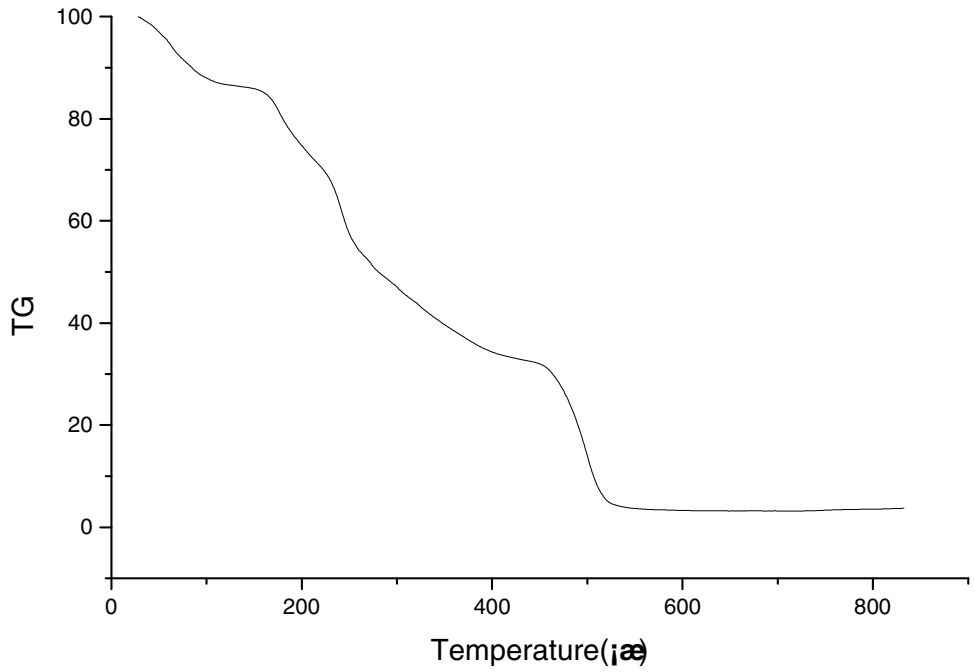


Figure S3. TGA curve of **1**.

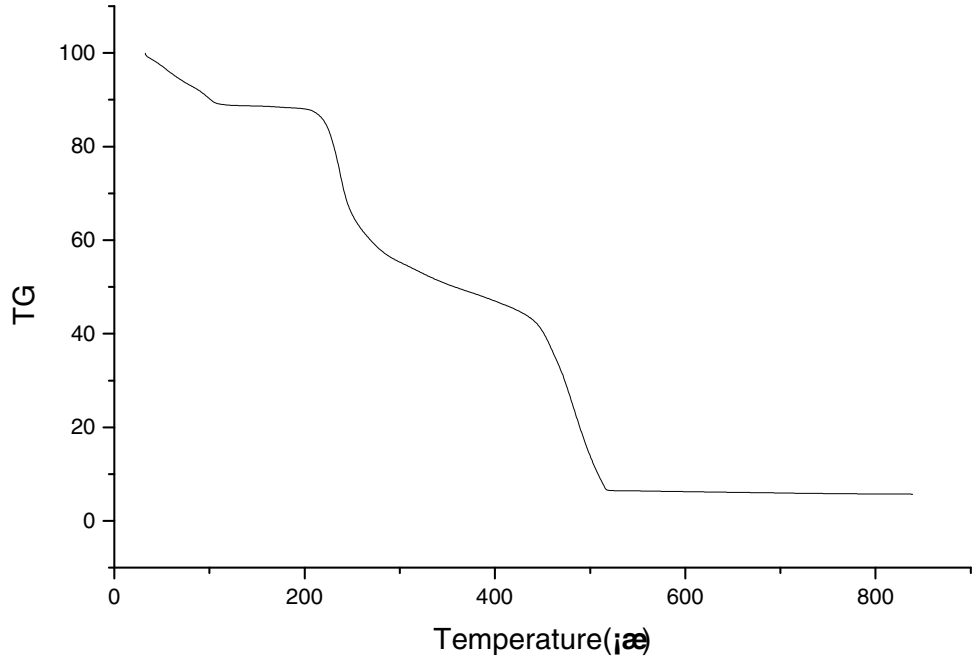


Figure S4. TGA curve of **2**.

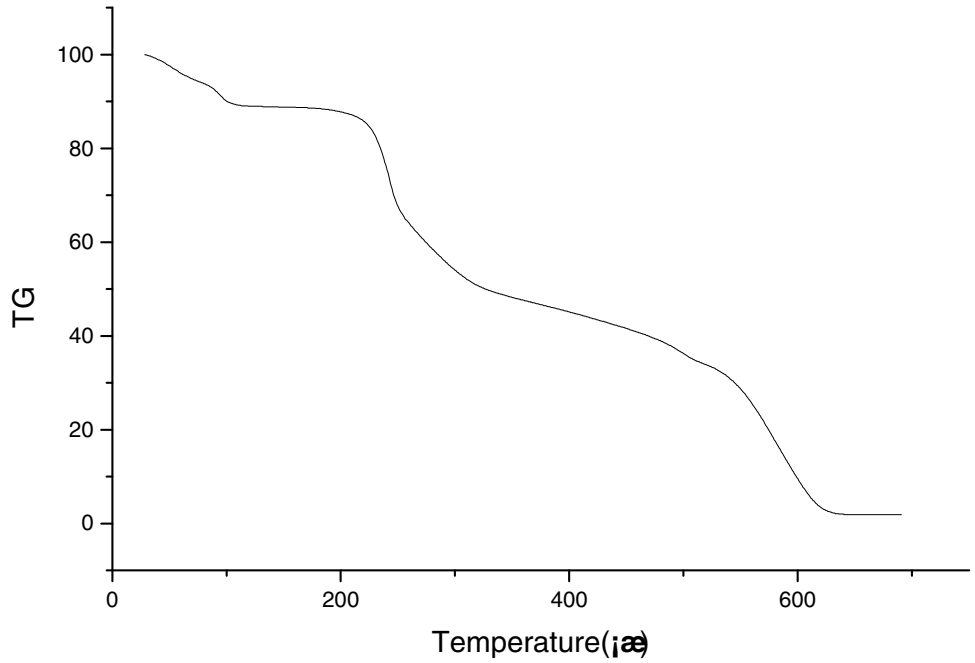


Figure S5. TGA curve of **3**.

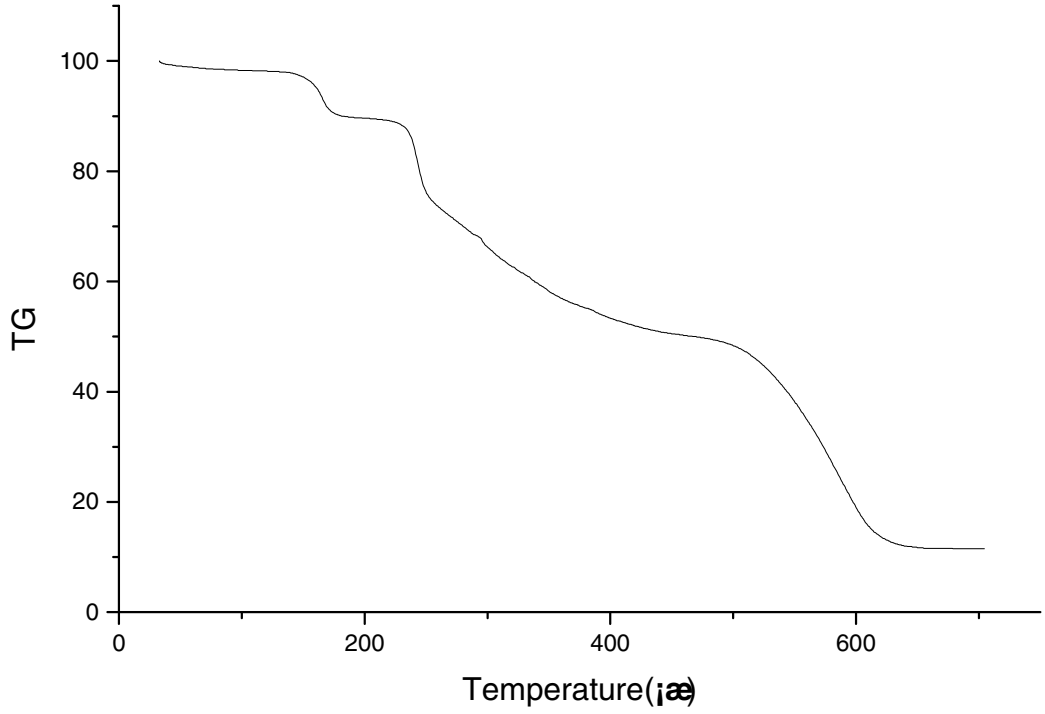


Figure S6. TGA curve of **4**.

Photoluminescence

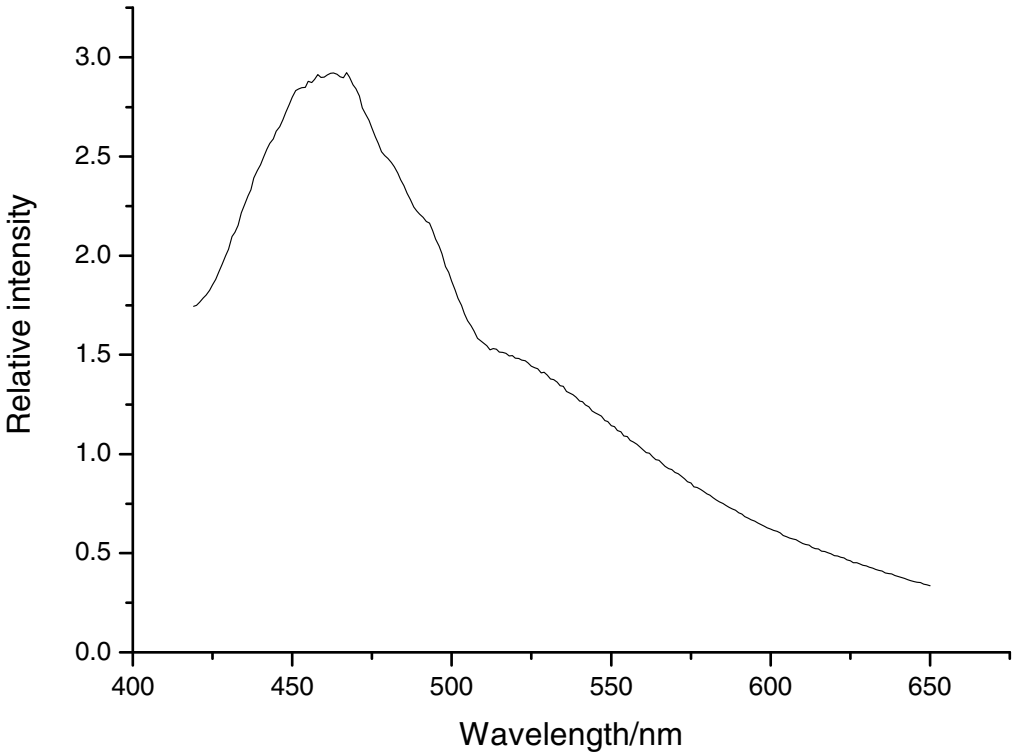


Figure S7. Fluorescent emission spectrum of complex **L** in solid state at room temperature.

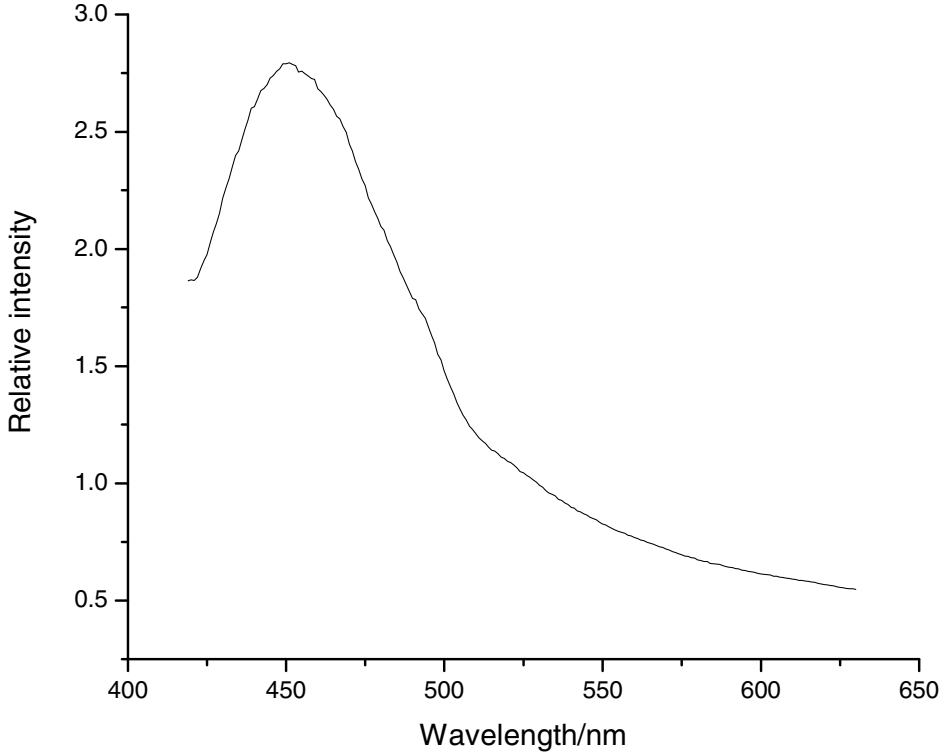


Figure S8. Fluorescent emission spectrum of complex **3** in solid state at room temperature.

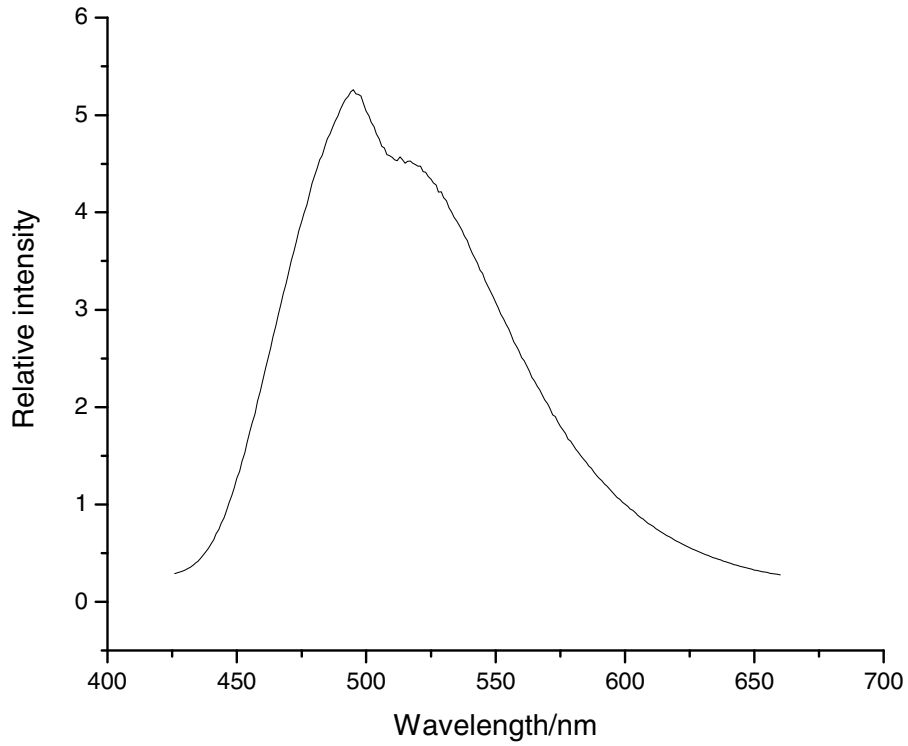
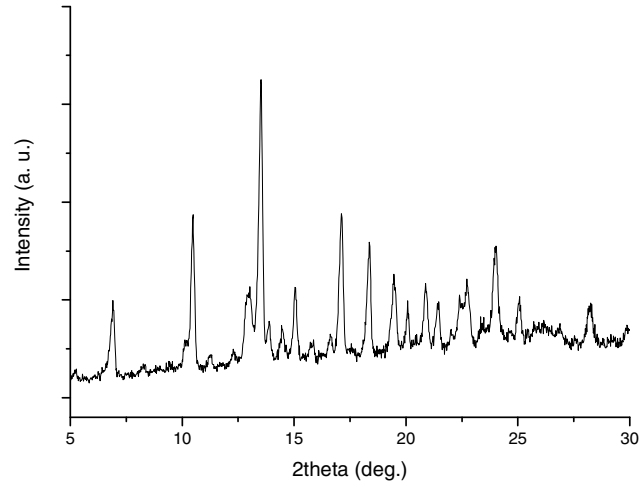
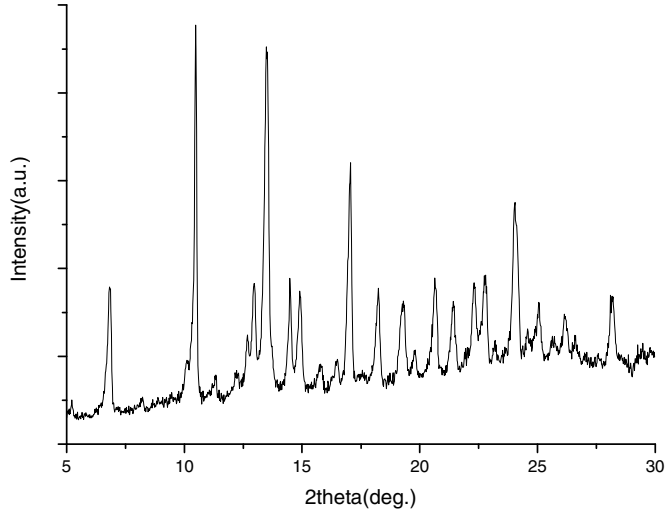


Figure S9. Fluorescent emission spectrum of complex **4** in solid state at room temperature.

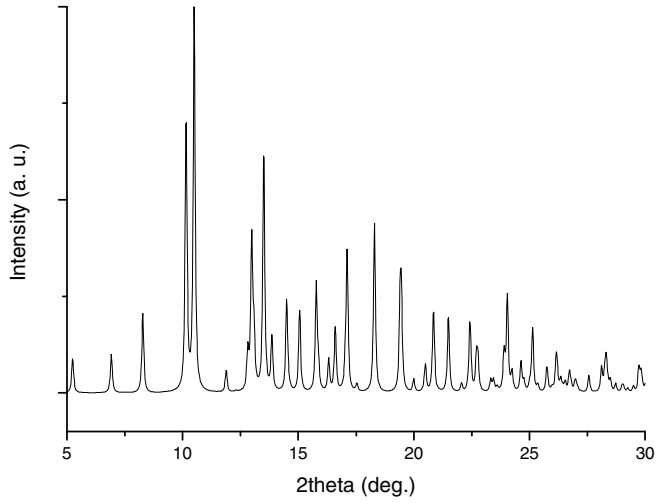
XRD



(a)

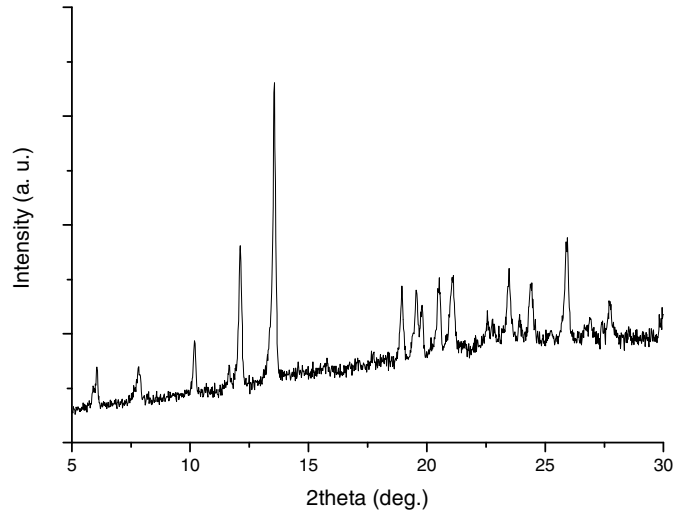


(b)

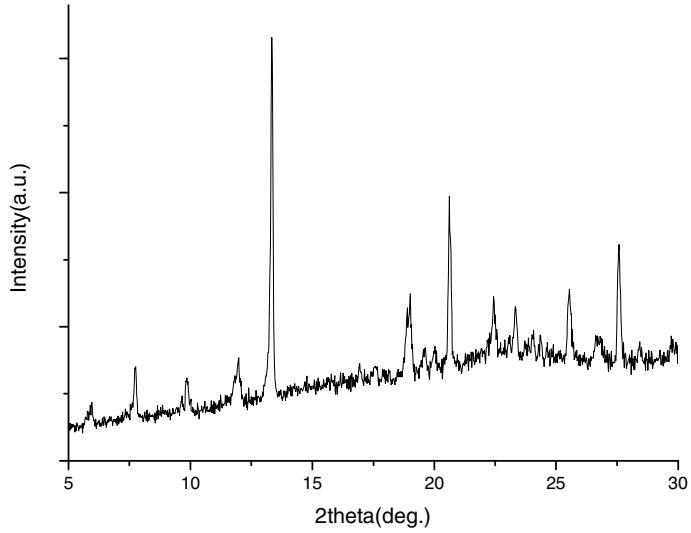


(c)

Figure S10. X-ray power diffraction diagram of (a) compound **1**, (b) **1** after removing the free water molecules and (c) the simulated spectra from single crystal data.



(a)



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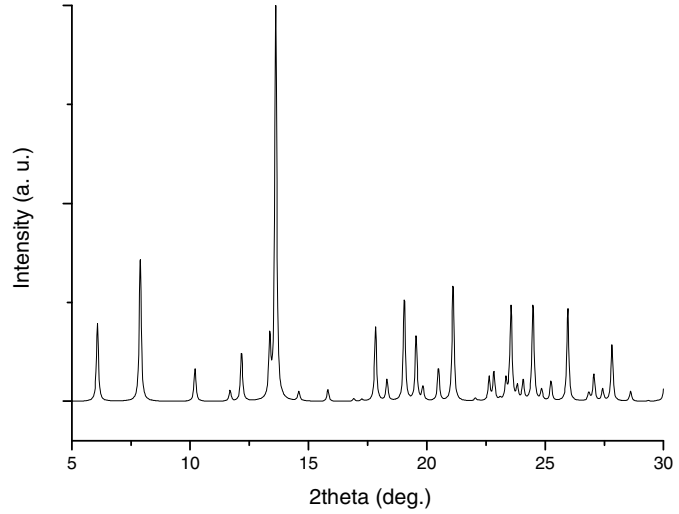
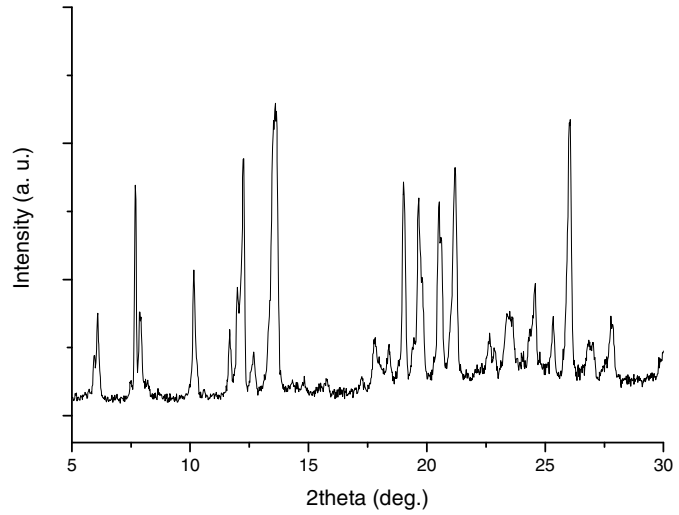
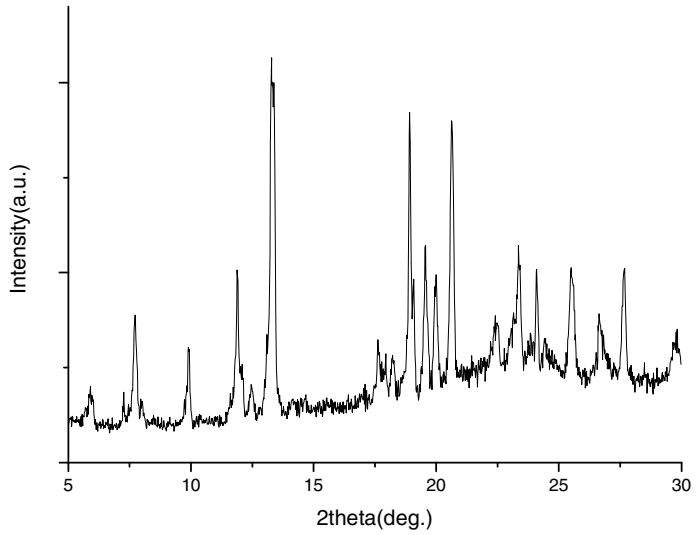


(c)

Figure S11. X-ray power diffraction diagram of (a) compound **2**, (b) **2** after removing the free water molecules and (c) the simulated spectra from single crystal data.



(a)



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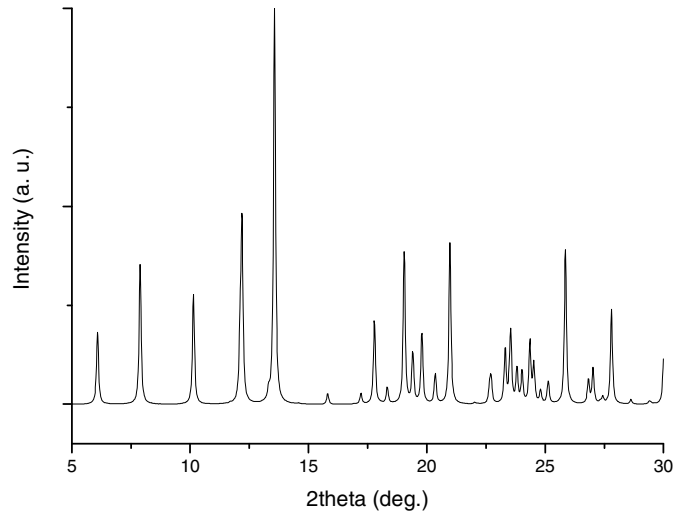
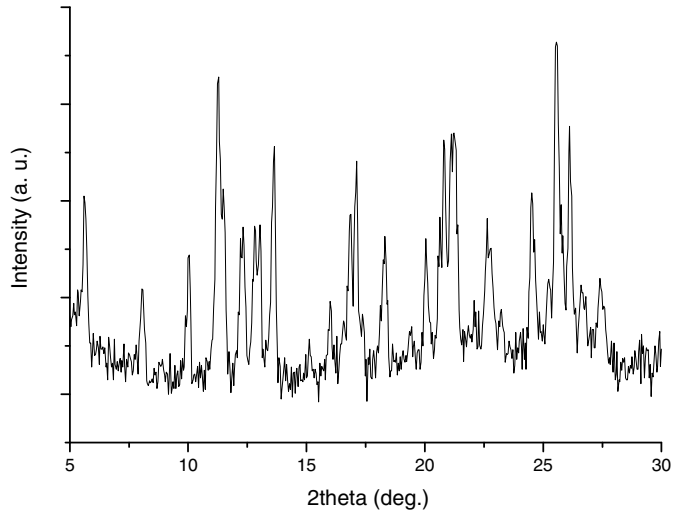
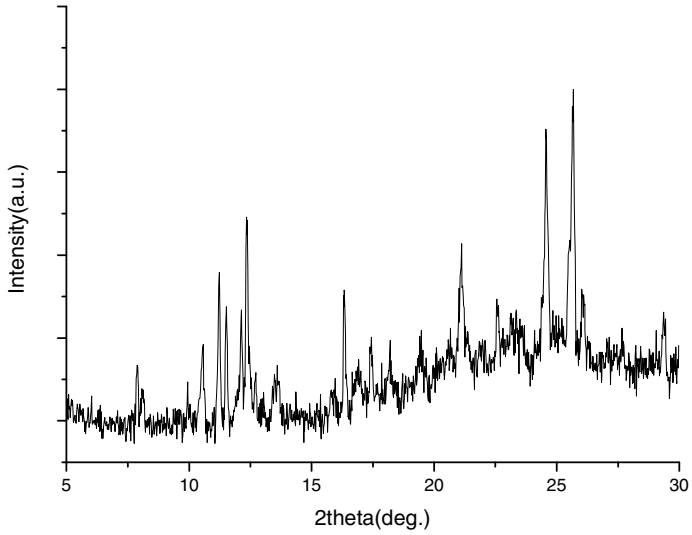


(c)

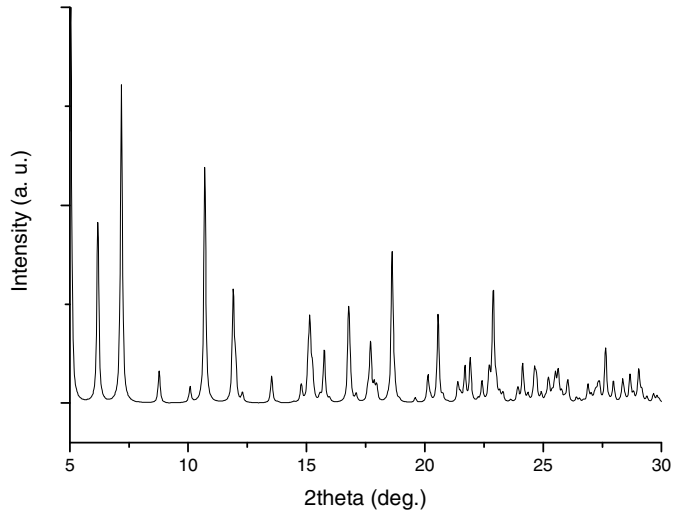
Figure S12. X-ray power diffraction diagram of (a) compound **3**, (b) **3** after removing the free water molecules and (c) the simulated spectra from single crystal data.



(a)



(b)



(b)

Figure S13. X-ray power diffraction diagram of (a) compound **4**, (b) **4** after removing the free DMF molecules and (c) the simulated spectra from single crystal data.