

Supporting Information

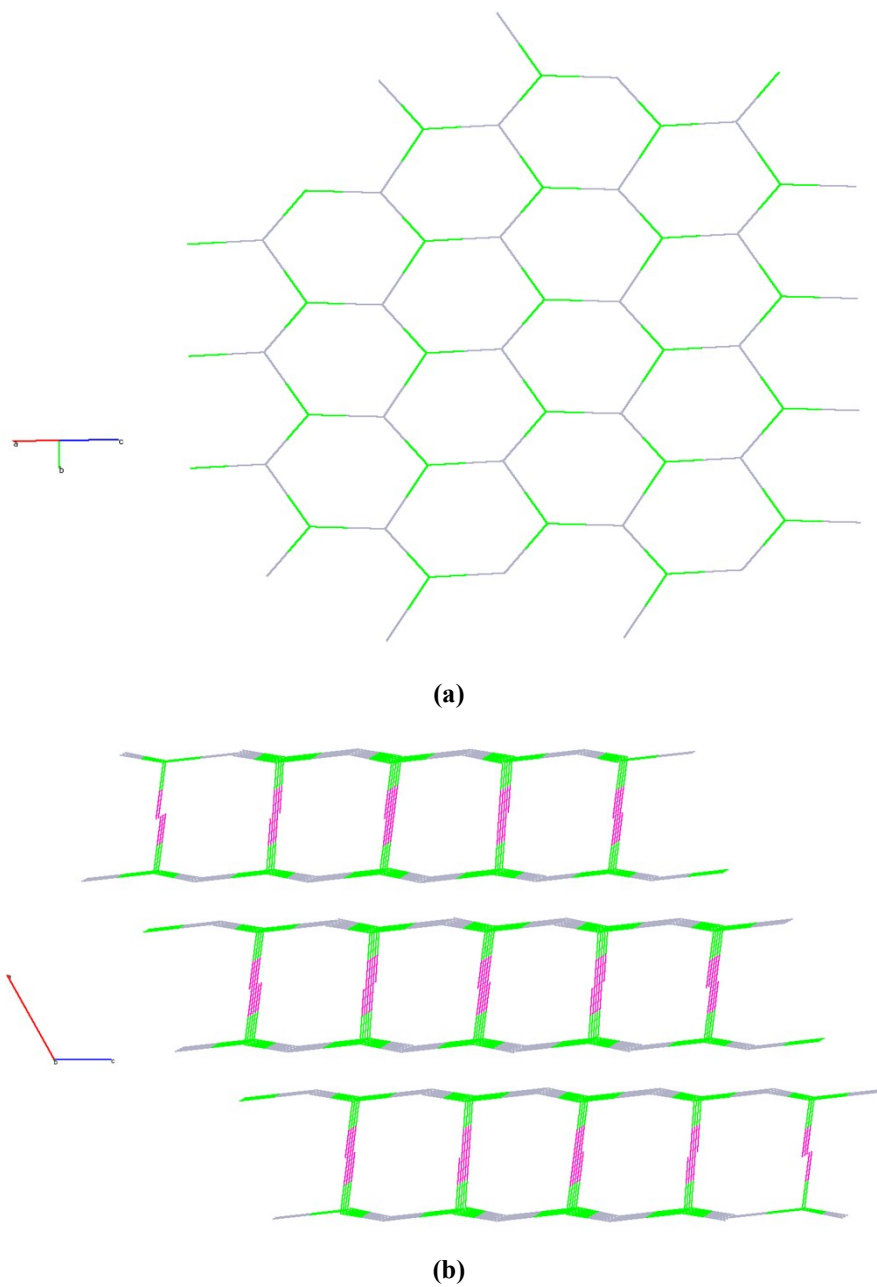


Fig. S1. Simplified net of **1** with (a) top view and (b) side view.

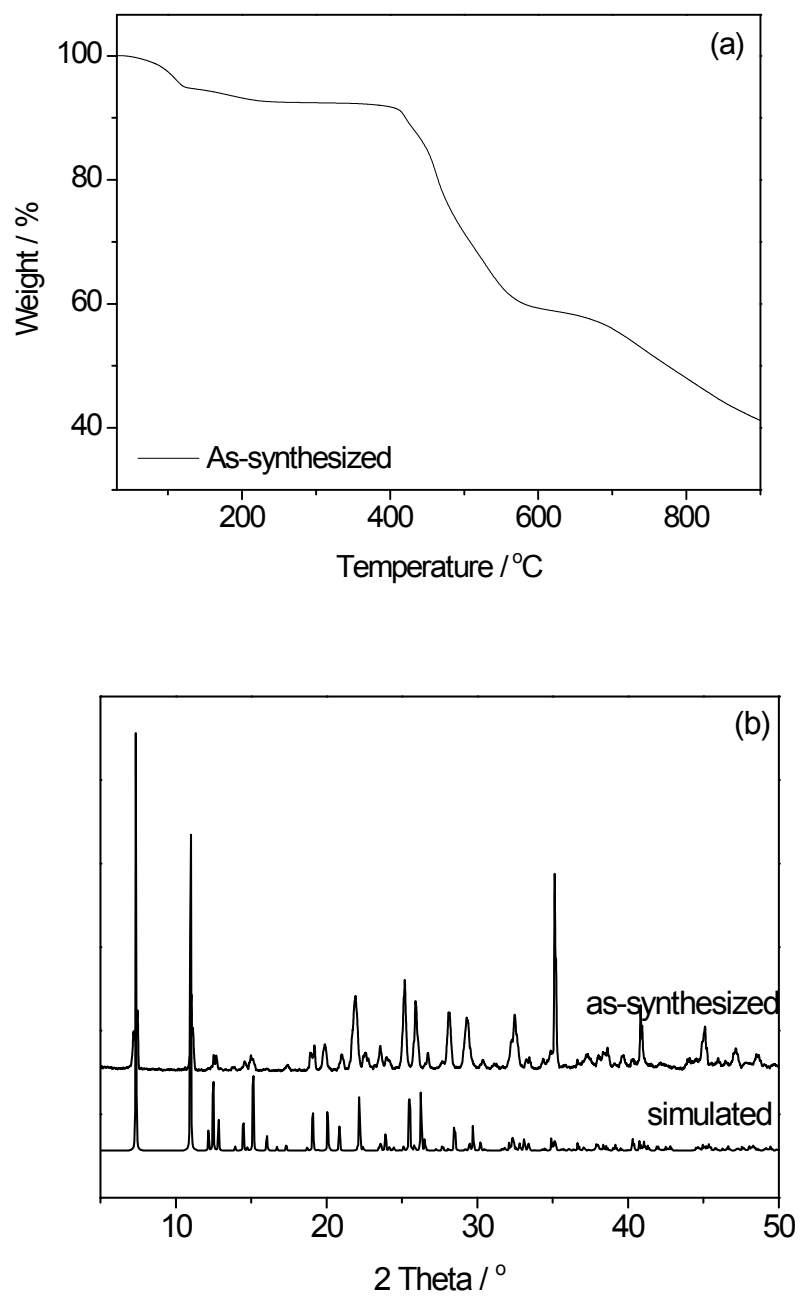
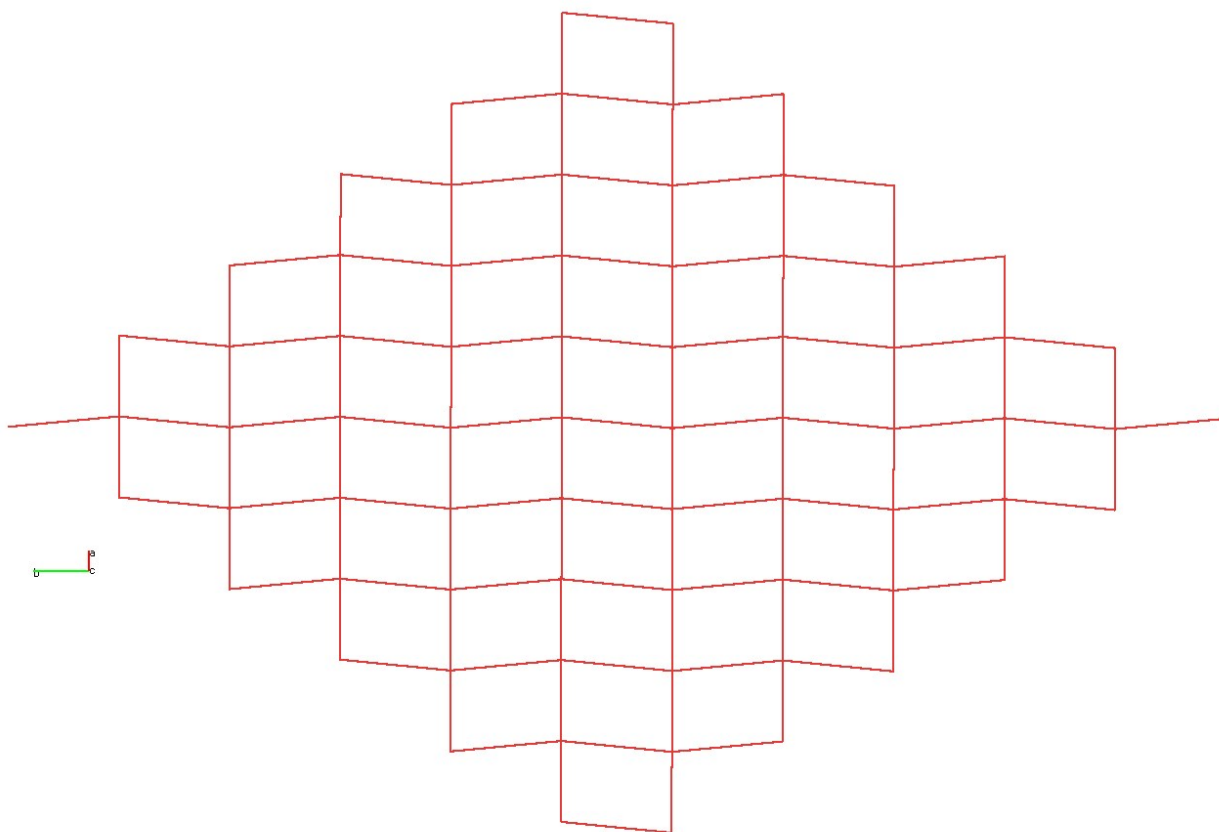


Fig. S2. (a) TG curves and (b) PXRD patterns of **1**.



(a)



(b)

Fig. S3. Simplified net of **2** with (a) top view and (b) side view.

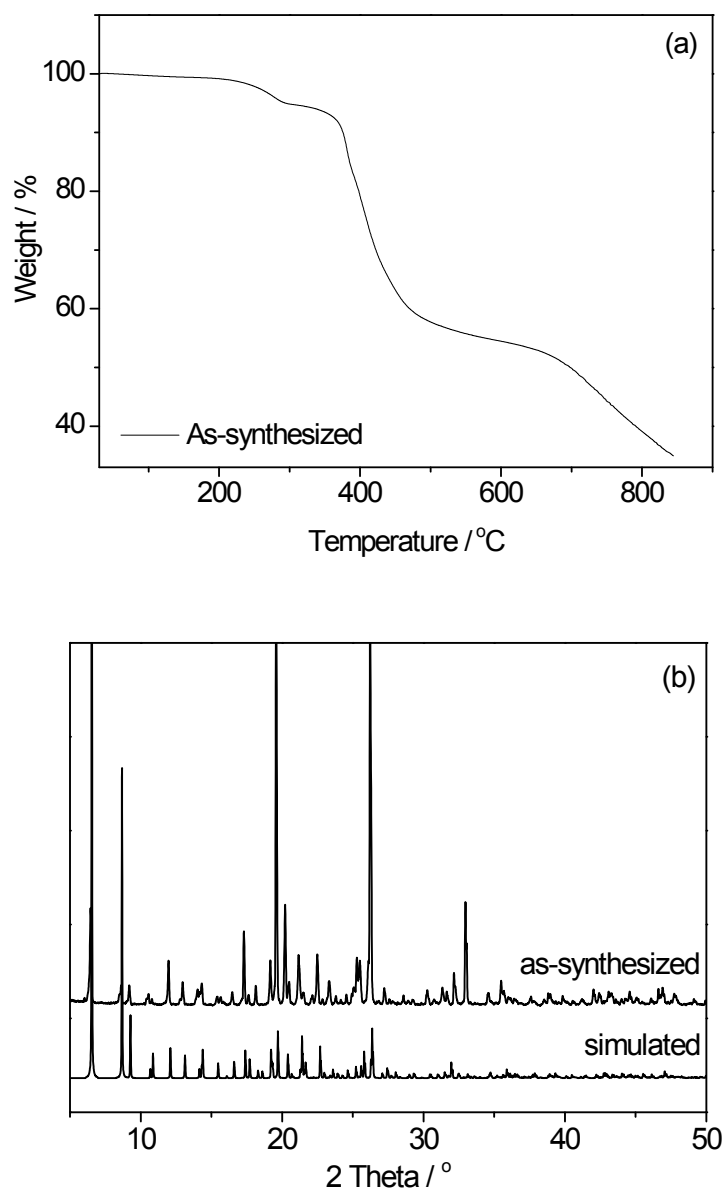
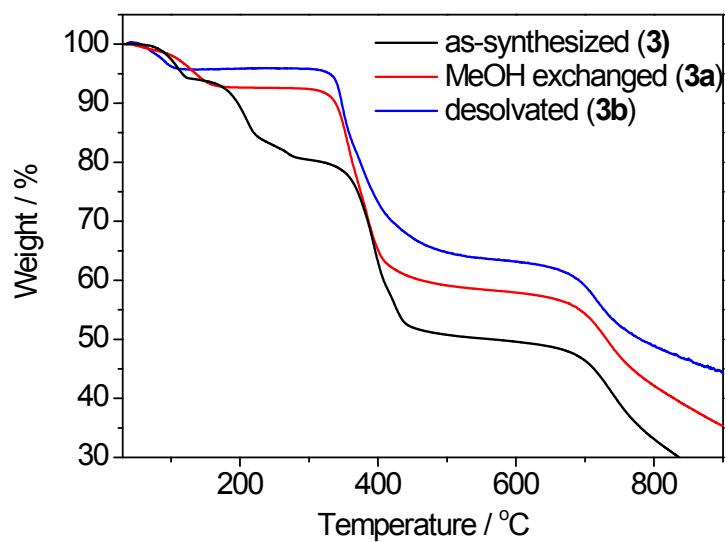
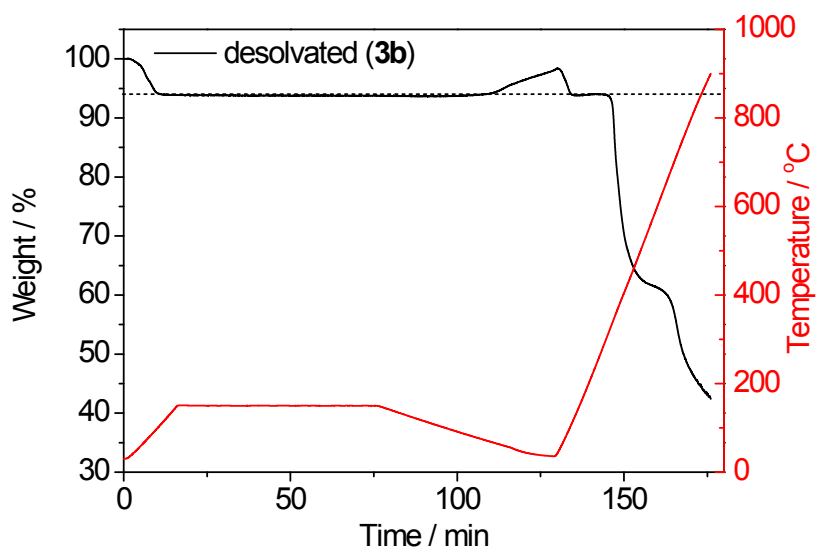


Fig. S4. (a) TG curves and (b) PXRD patterns of **2**.



(a)



(b)

Fig. S5. (a) TG curves of as-prepared (**3**), MeOH-exchanged (**3a**), and activated (**3b**) samples. (b) Time-dependent TG curve of **3**. One H₂O molecule (3.7%) per Zn was adsorbed from air when temperature was decreased to 30 °C.

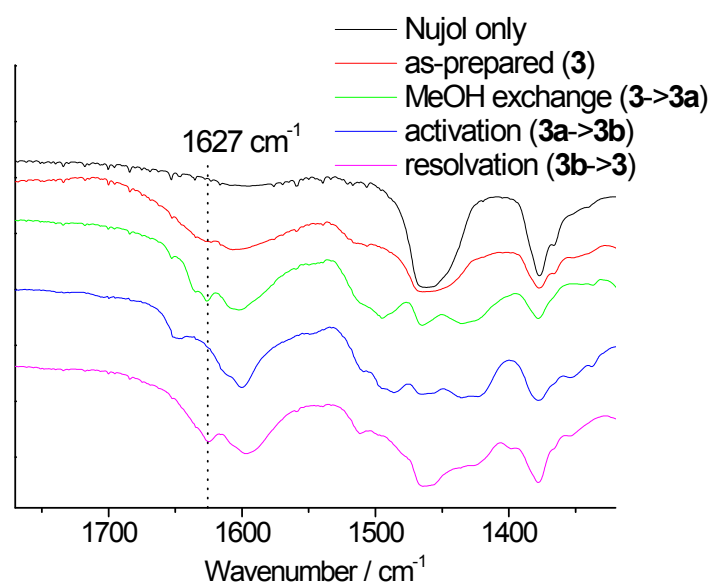
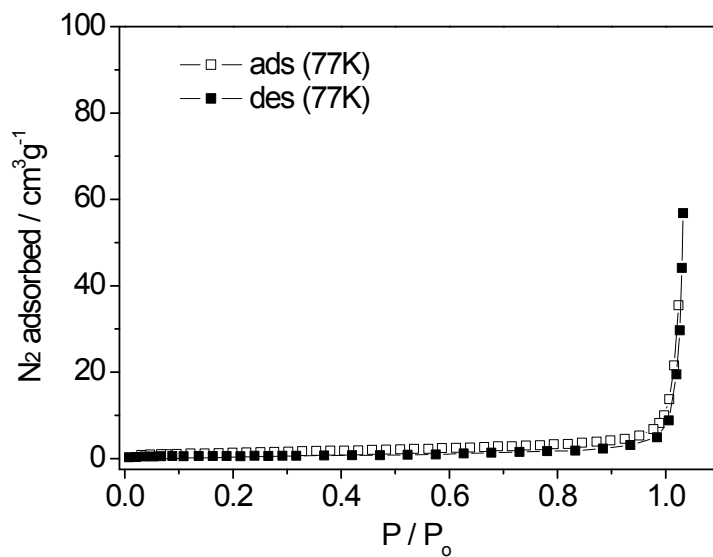
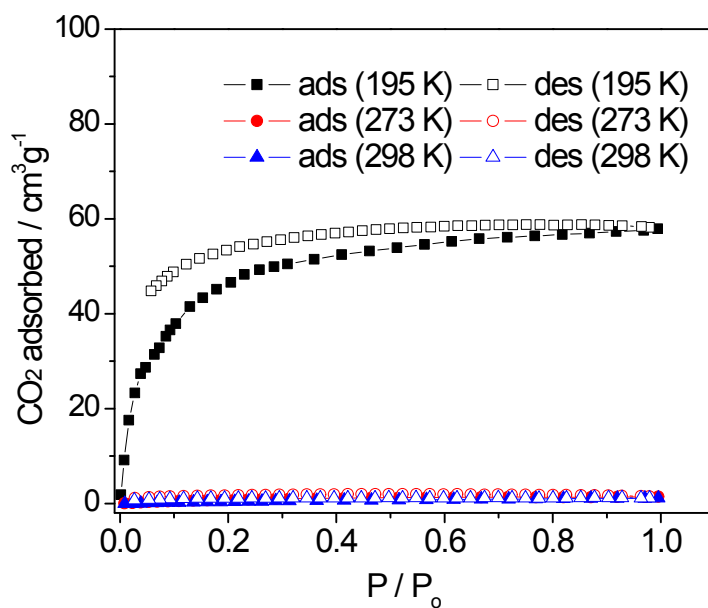


Fig. S6. Nujol IR data of as-synthesized, MeOH-exchanged, and activated phases of **3**. The dotted line indicates the C=O stretching vibration of DMA.



(a)



(b)

Fig. S7. (a) N_2 isotherms at 77 K and (b) CO_2 isotherms at 195, 273, and 298 K for **3b**.

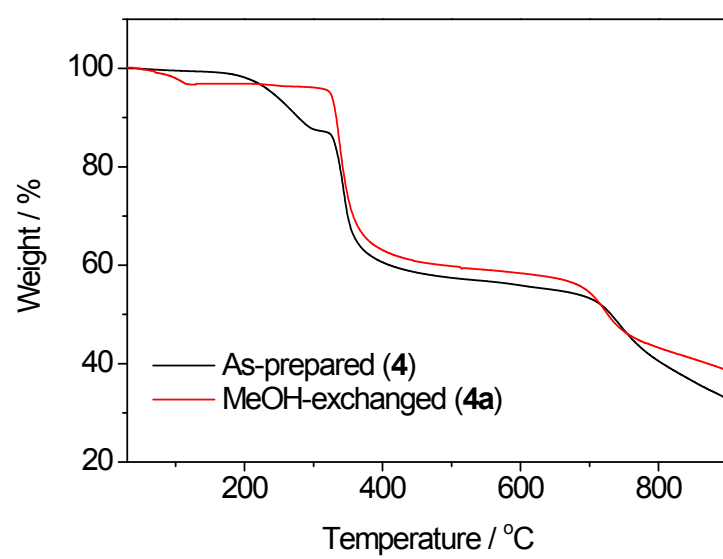


Fig. S8. TG curves of as-prepared (**4**) and MeOH-exchanged phases (**4a**).

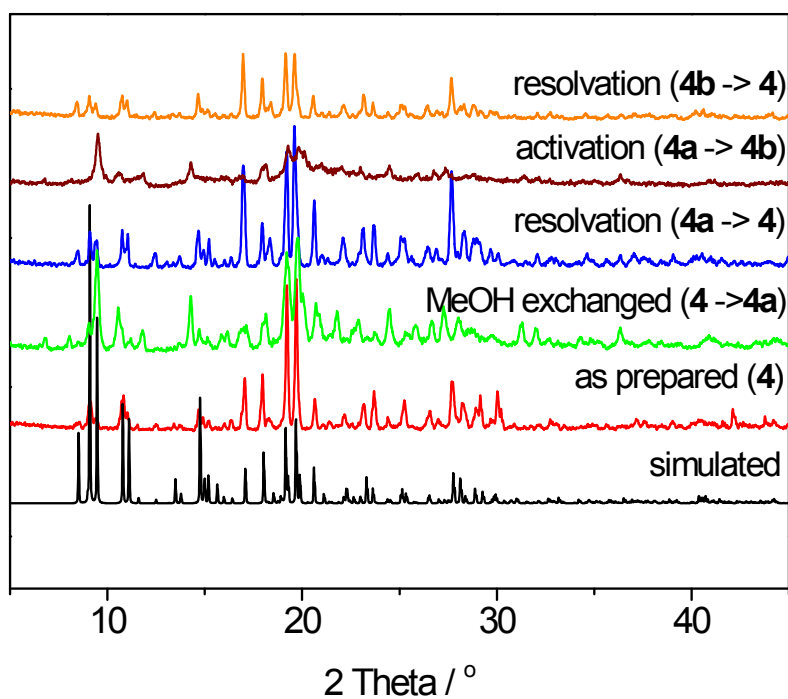
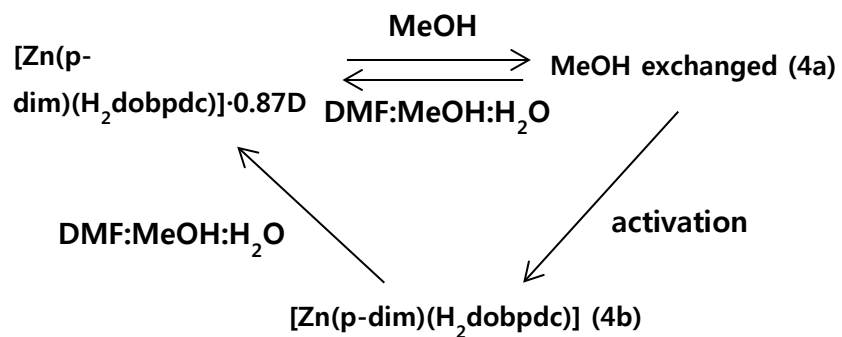


Fig. S9. PXRD profiles of as-synthesized, MeOH-exchanged, activated, and resolved samples of **4**. Schematic diagram shows phase transformations during the solvation-desolvation process.

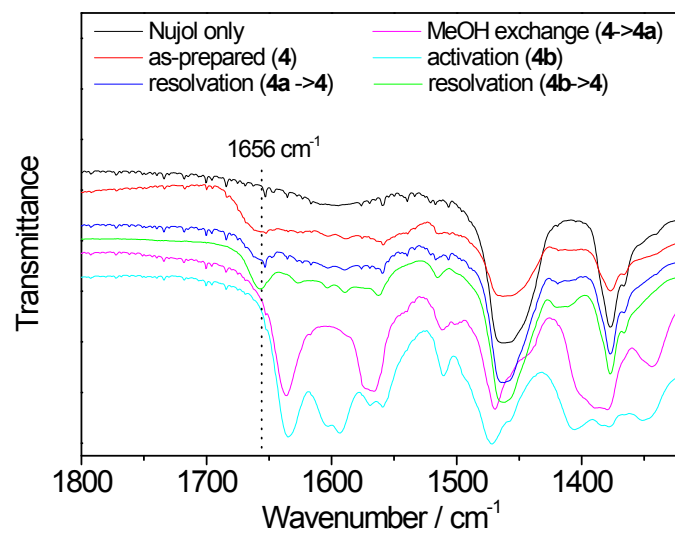
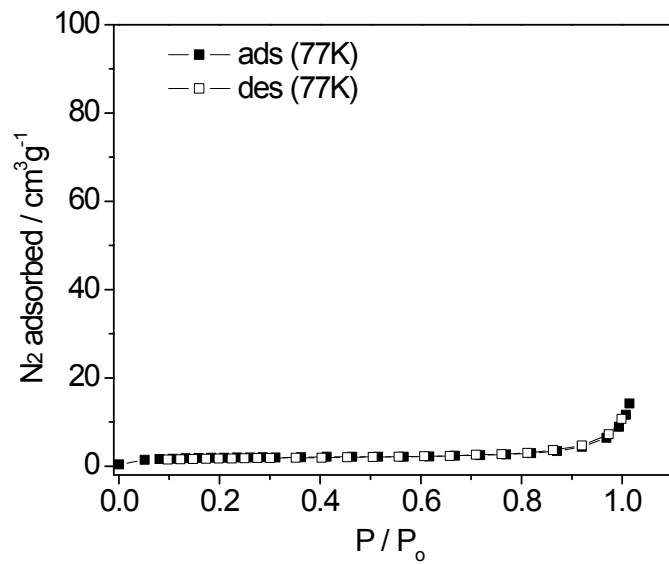
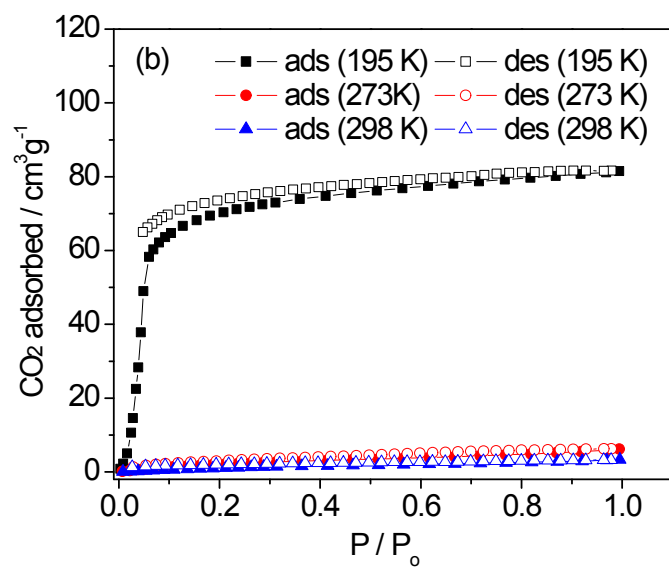


Fig. S10. Nujol IR data of as-synthesized, MeOH-exchanged, and activated phases of **4**. The dotted line indicates the C=O stretching vibration of DMF.



(a)



(b)

Fig. S11. (a) N_2 isotherms at 77 K and (b) CO_2 isotherms at 195, 273, and 298 K for **4b**.

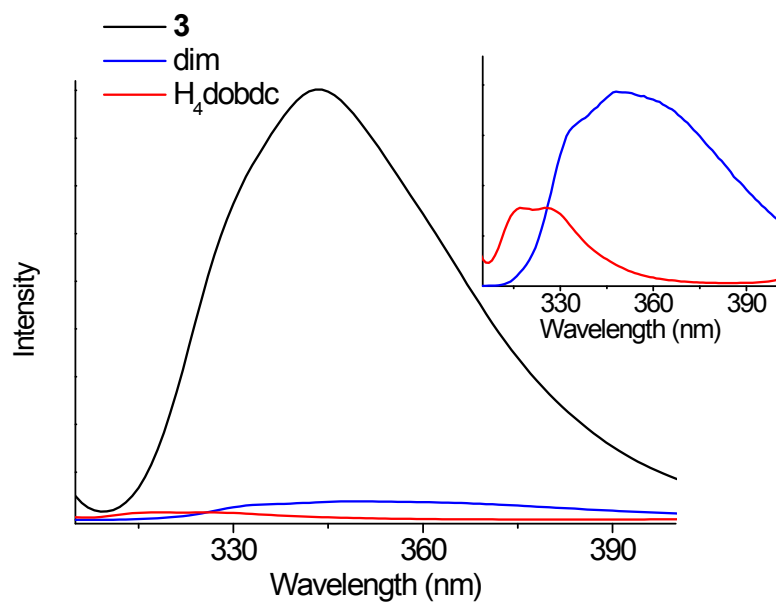


Fig. S12. Photoluminescence spectra of dim, H₄dobdc and **3** in DMF. The inset shows the enlargement of the spectra of dim and H₄dobdc (λ_{ex} = 295 nm).

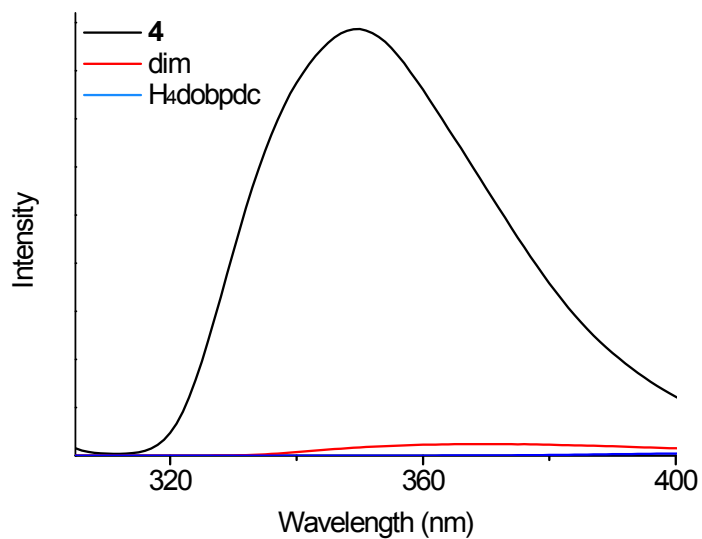


Fig. S13. Photoluminescence spectra of dim, H₄dobpdc and **4** in DMF.

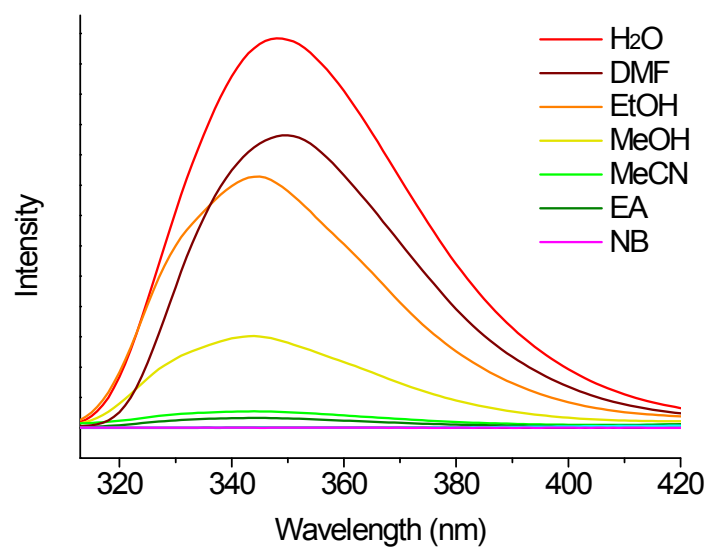


Fig. S14. Photoluminescence spectra of **4** in several solvents ($\lambda_{\text{ex}} = 295$ nm).

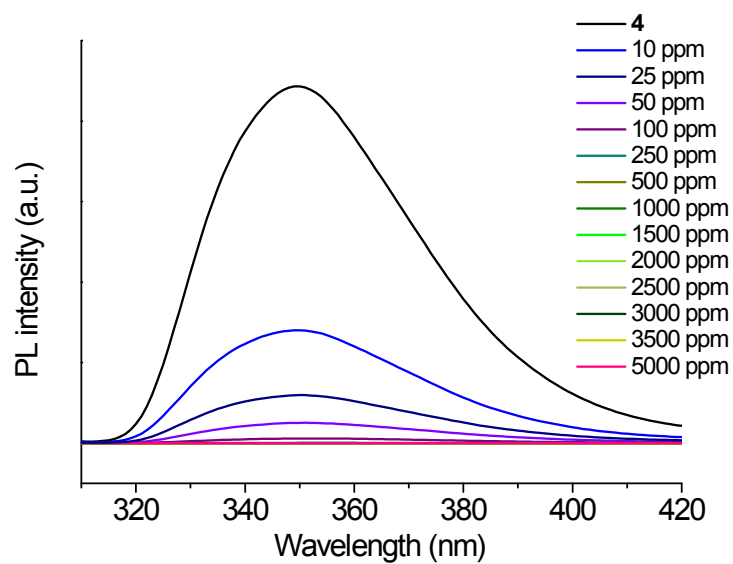
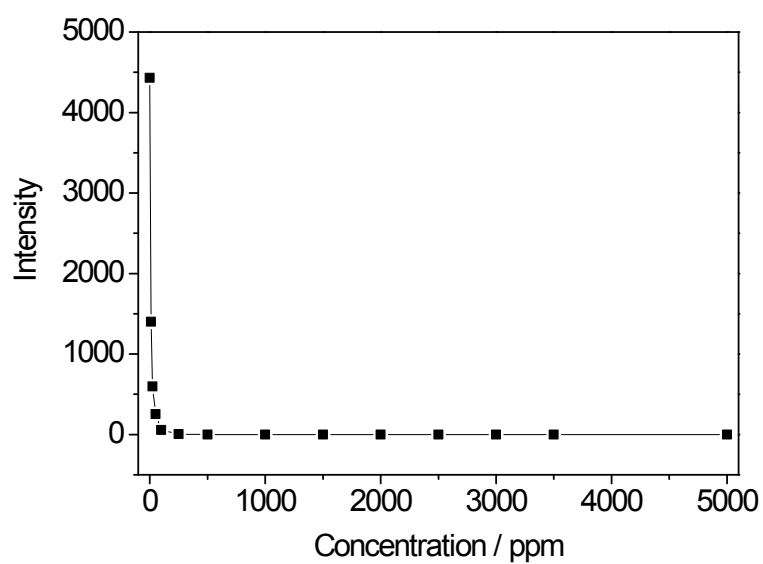


Fig. S15. Concentration-dependent photoluminescence of **4** by the addition of different amounts of NB in DMF.



Fig, S16. Plot of intensity versus concentration of NB of 4.