

Electronic supplementary information (ESI)

Morphology evolution and gas adsorption of porous metal-organic framework microcrystals

Zhao-Peng Qi,^{a,b} Ji-Min Yang,^a Yan-Shang Kang^a and Wei-Yin Sun^{*a}

^a *Coordination Chemistry Institute, State Key Laboratory of Coordination Chemistry, School of Chemistry and Chemical Engineering, Nanjing National Laboratory of Microstructures, Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210093, China. E-mail: sunwy@nju.edu.cn; Fax: +86 25 83314502*

^b *School of Chemistry and Chemical Engineering, Huangshan University, Huangshan 245041, China*

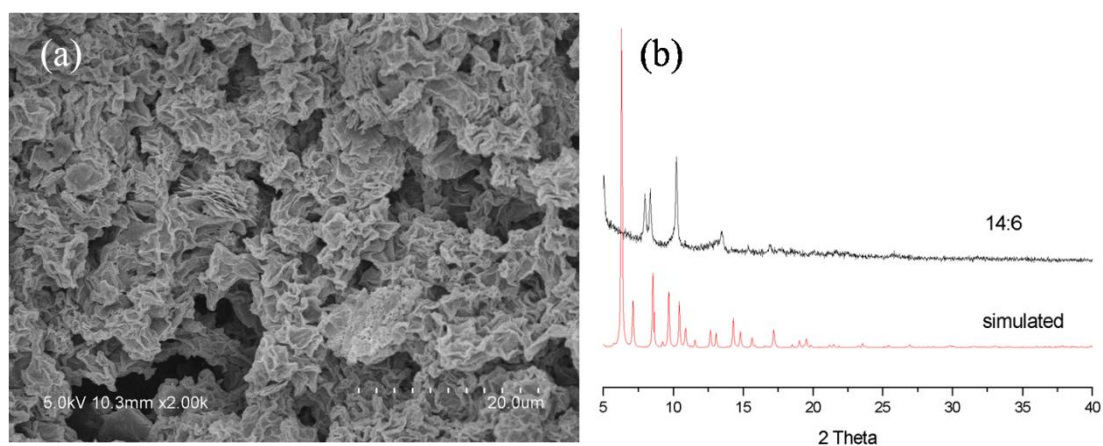


Fig. S1 (a) SEM image of the sample morphology with volume ratio of DMF and H₂O 14:6; (b) PXRD patterns of the sample with volume ratio of DMF and H₂O 14:6 and simulated **1**.

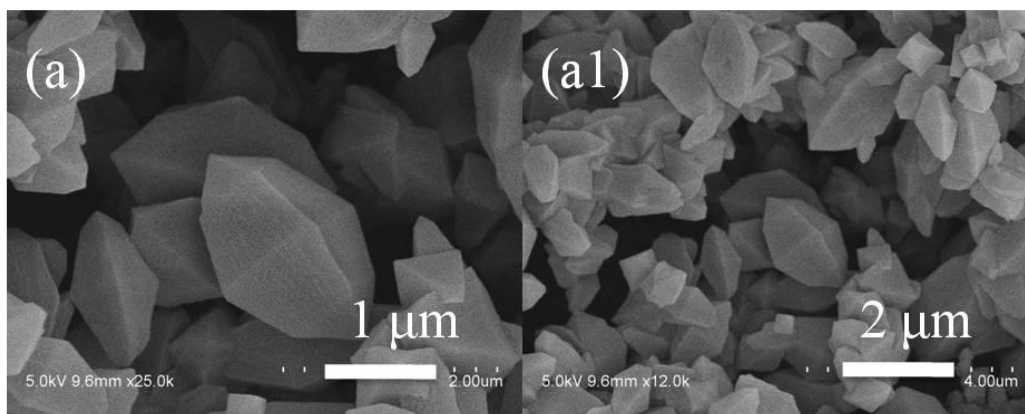


Fig. S2. SEM images of the sample morphology with reaction concentration of 2.5 mM.

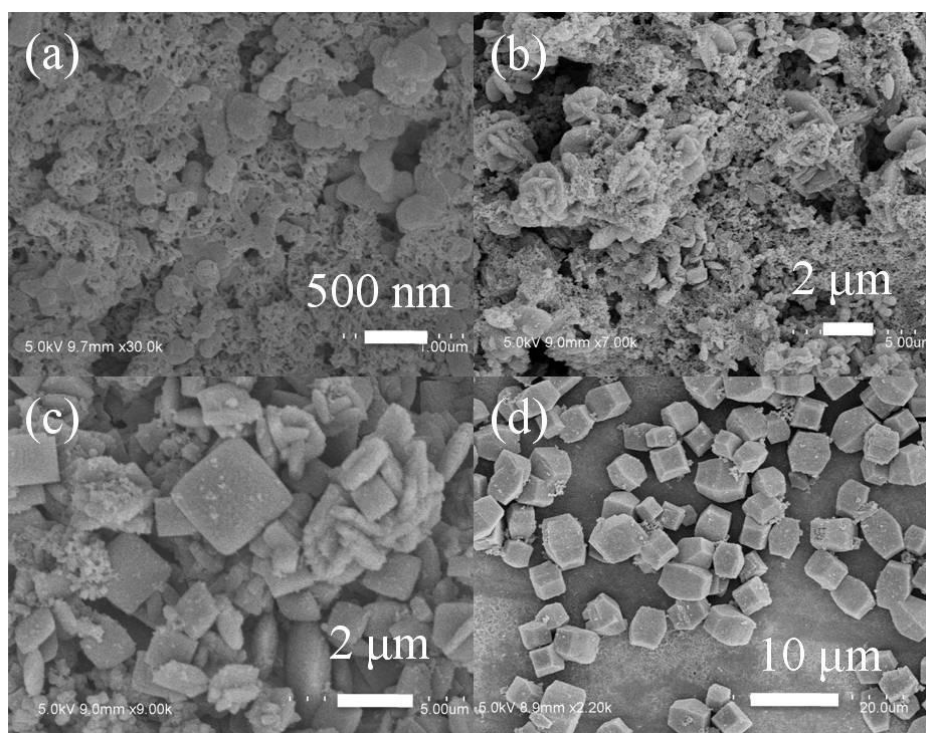


Fig. S3. SEM images in 20 mL 0.5 mM solution without HCl, with different volume ratios of DMF and H₂O: (a) 20:0; (b) 19.9:0.1; (c) 18:2; (d) 16:4.

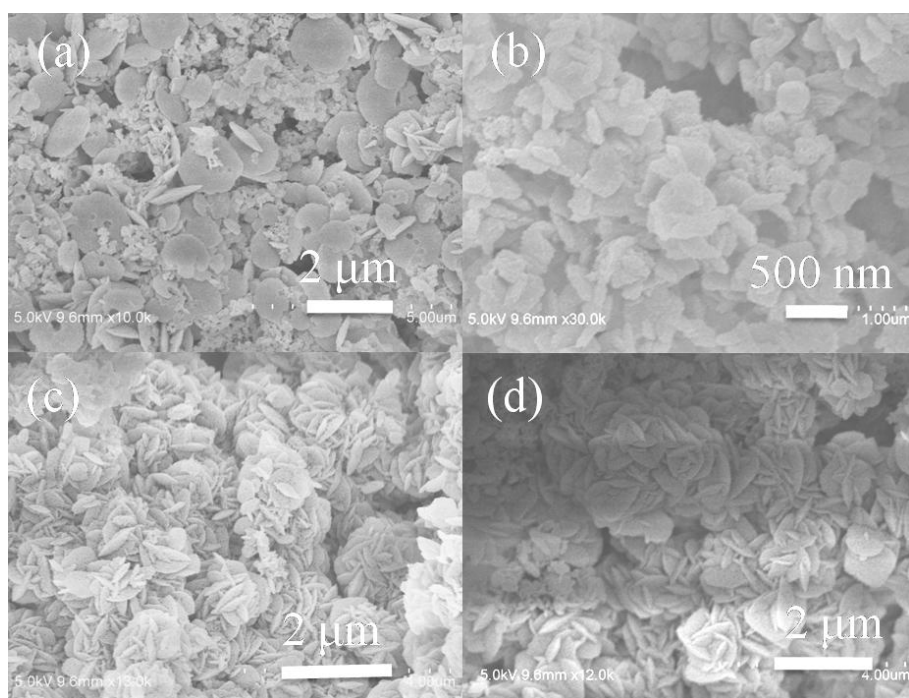
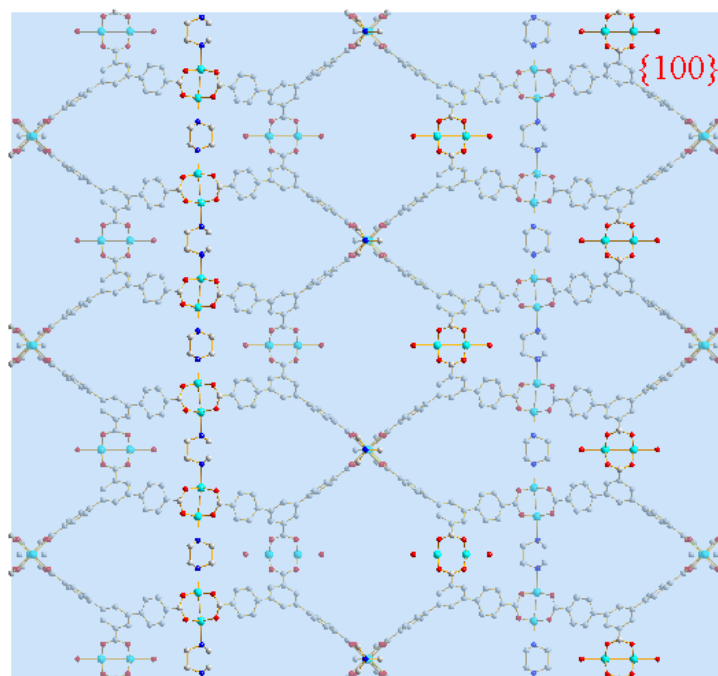
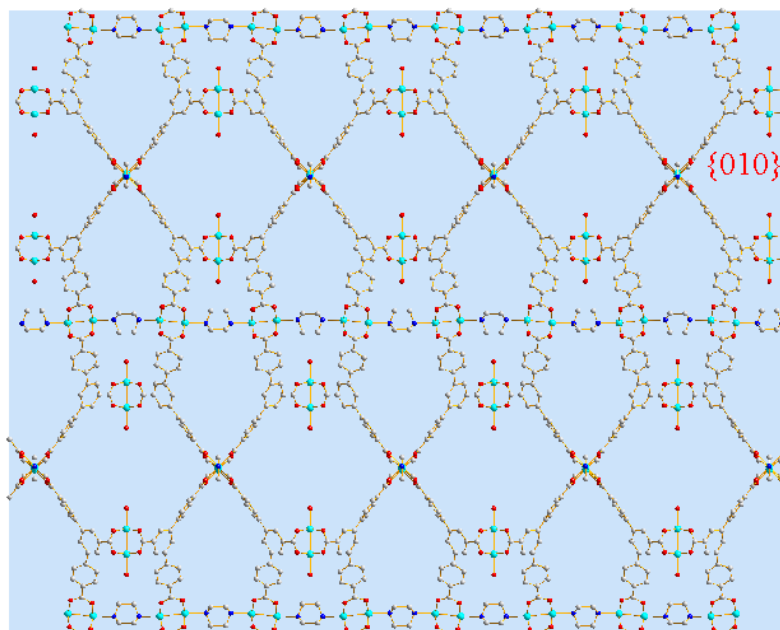


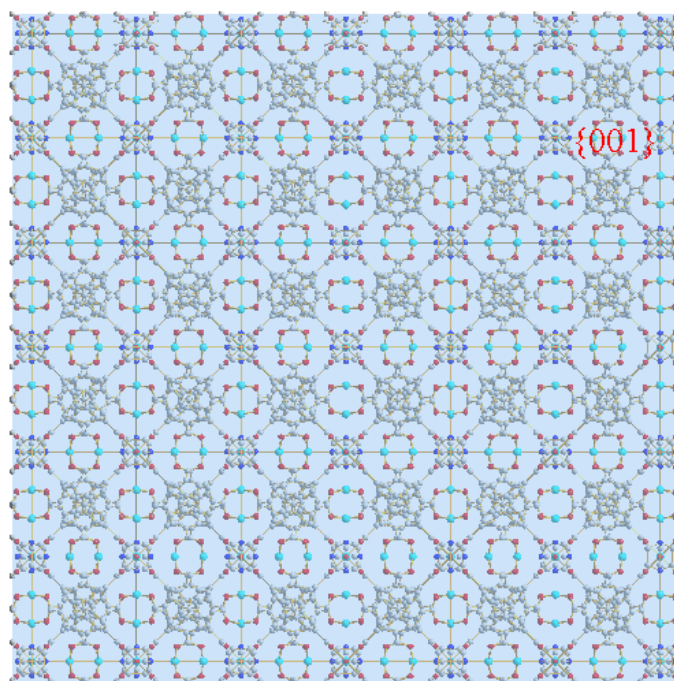
Fig. S4. SEM images in 20 mL 0.5 mM solution without HCl, with different volume ratios of DMF and dioxane: (a) 18:2; (b) 16:4; (c) 14:6; (d) 12:8.



(a)



(b)



(c)

Fig. S5. The large hexagonal-shaped channels viewed from different crystal plane in the packing mode of crystal structure **1**: (a) $\{100\}$; (b) $\{010\}$; (c) $\{001\}$.