

Supplementary Materials: Polymerization of Alkylsilanes on ZIF-8 to Hierarchical Siloxane Microspheres and Microflowers

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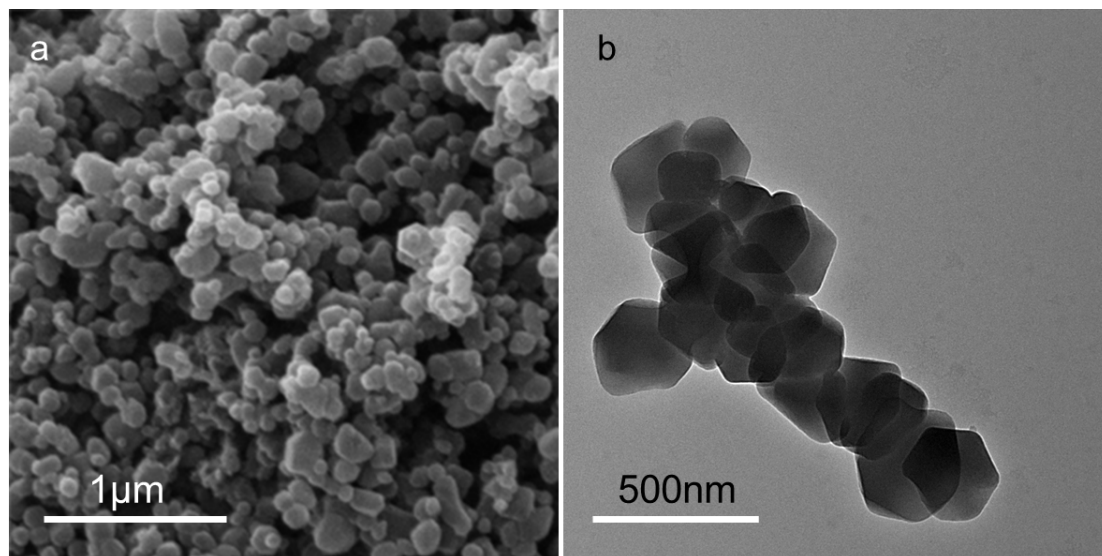


Figure S1. (a) SEM image of pure ZIF-8 particles; (b) TEM image of pure ZIF-8 particles.

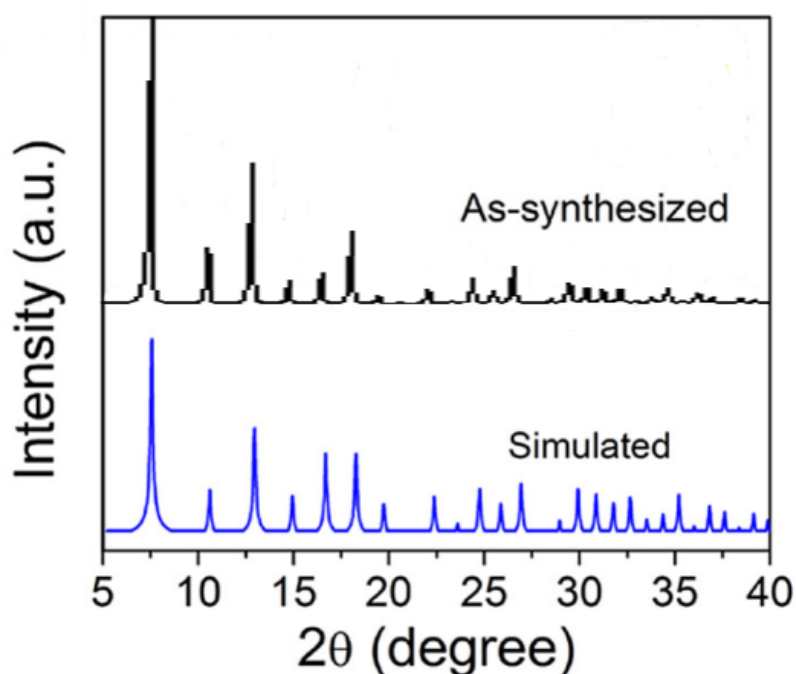


Figure S2. Powder XRD pattern for ZIF-8 nanoparticles before the reaction.

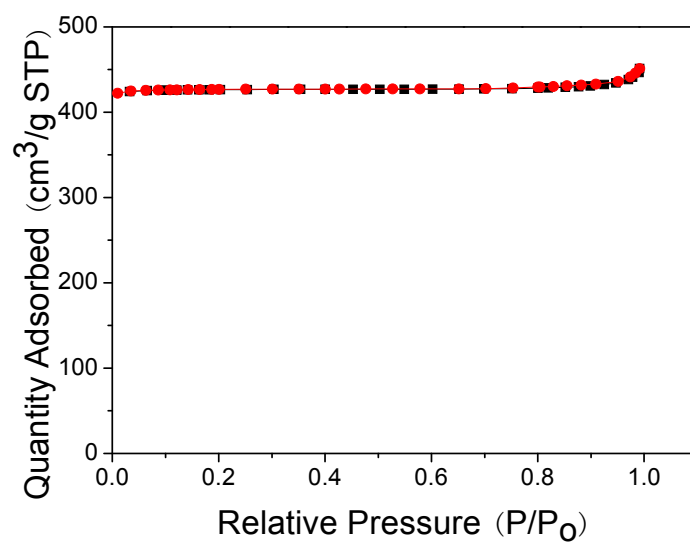


Figure S3. Nitrogen sorption isotherms of as-synthesized ZIF-8 nanocrystals at 77 K. Black and red data correspond to the adsorption and desorption branches, respectively.

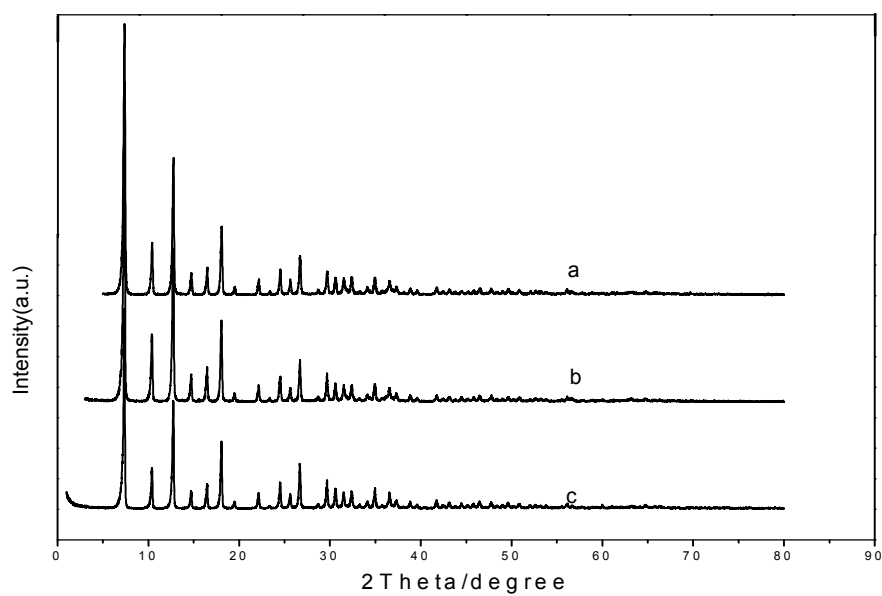


Figure S4. XRD patterns of pure ZIF-8 (a); ZIF-8 treated by o-xylene before the polymerization reaction (b); ZIF-8 treated by o-xylene after the polymerization reaction (c).

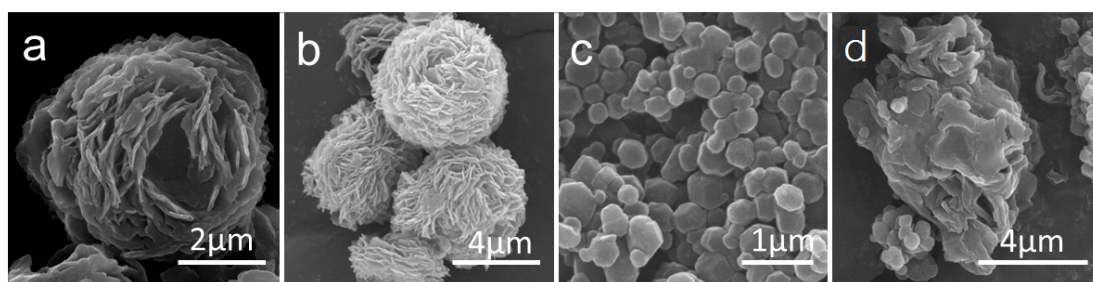


Figure S5. SEM images of the polymerization products of $C_{18}H_{37}SiH_3$ by 0.01 g ZIF-8 at (a) 20 °C, 4 h; (b) 30 °C, 4 h; (c) 30 °C, 5 min; (d) 30 °C, 12 h.

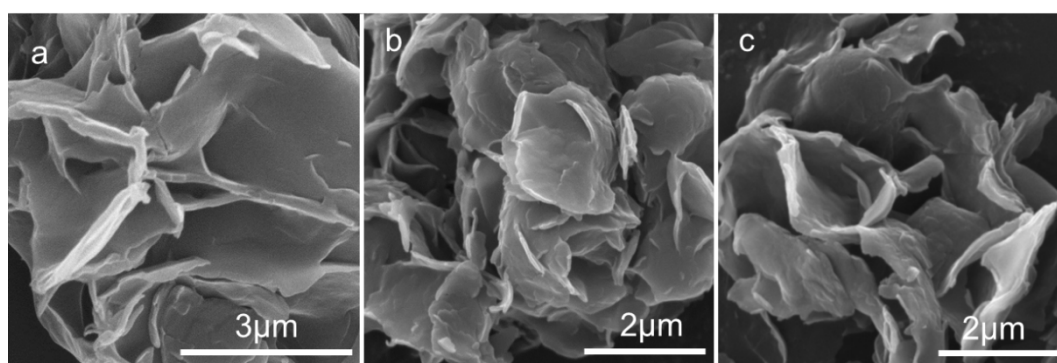


Figure S6. SEM images of the polymerization products of $C_{18}H_{37}SiH_3$ at 90 °C for 4 h. (a) 0.01 g ZIF-8; (b) 0.02 g ZIF-8; (c) 0.03 g ZIF-8.

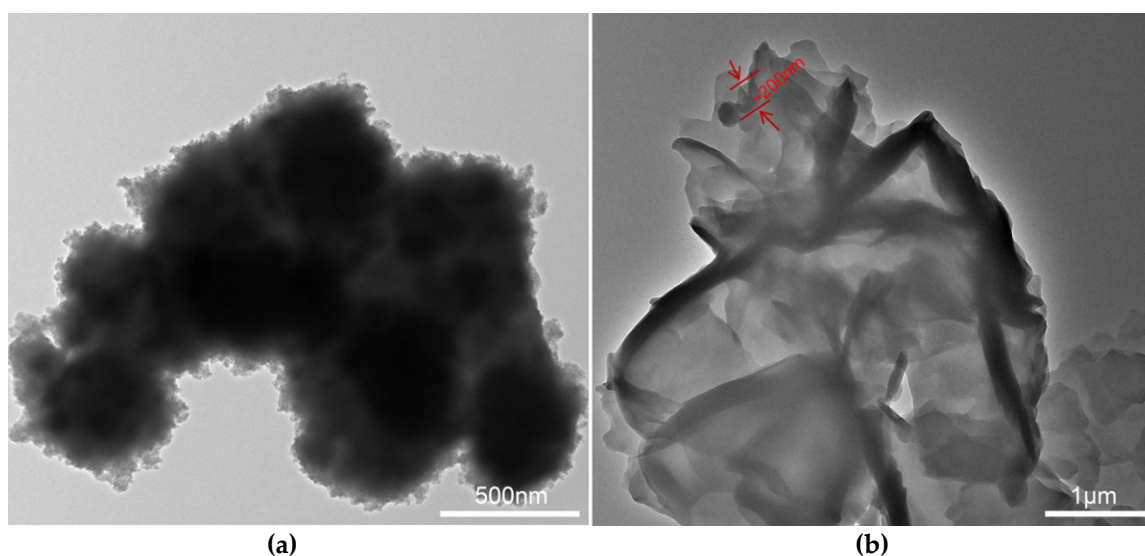
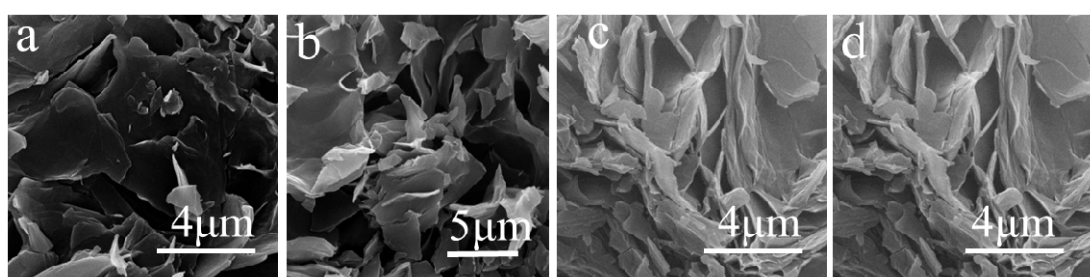


Figure S7. TEM images of the polymerization products of $C_{18}H_{37}SiH_3$ by ZIF-8 at (a) 30 °C; (b) 90 °C.



FigureS8. SEM images of the reaction products by using $\text{Zn}(\text{NO}_3)_2$ at 30 °C for 4 h (**a,b**); at 90 °C for 4 h (**c,d**).

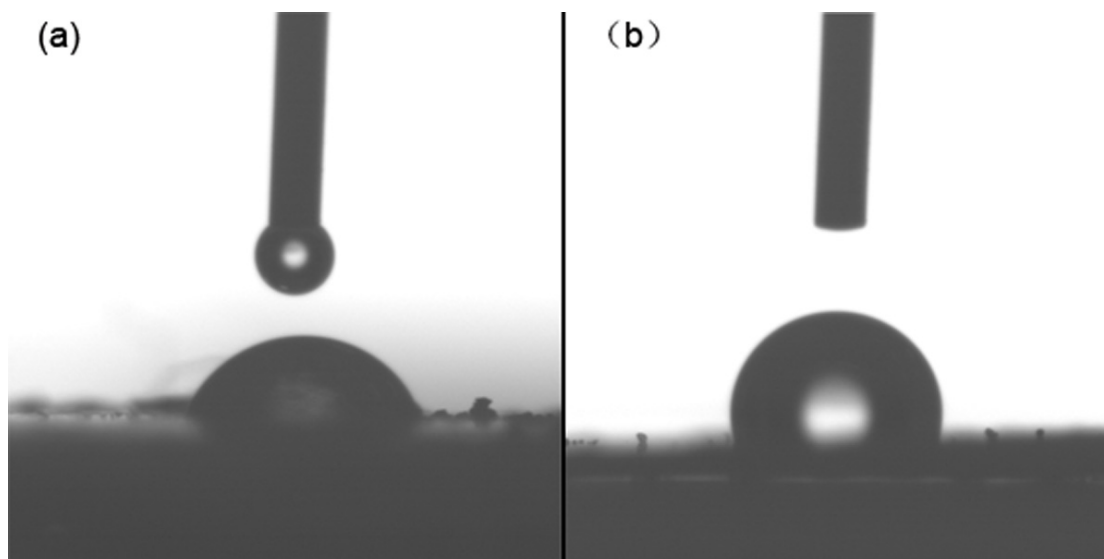


Figure S9. The profiles of water droplets on (a) ZIF-8; (b) and the polymerization products of $\text{C}_{18}\text{H}_{37}\text{SiH}_3$ by ZIF-8.