

Supporting Information

Template-mediated Synthesis of Hollow Microporous Organic Nanorods with Tunable Aspect Ratio

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Experimental

Materials

Anhydrous ferric chloride (FeCl_3), tetraethylorthosilicate (TEOS), ammonia water ($\text{NH}_3 \cdot \text{H}_2\text{O}$), 1,2-dichloroethane (DCE), styrene (St), methyl methacrylate (MMA), NaHCO_3 , sodium dodecyl sulfate (SDS), polyvinylpyrrolidone K-30 (PVP), trisodium citrate dehydrate, methanol and absolute ethanol were analysis grade and purchased from Sinopharm Chemical Reagent Co., Ltd. Divinylbenzene (DVB, Aldrich, 80 %), 1-pentanol (Aladdin, 98 %) and formaldehyde dimethyl acetal (FDA, Aladdin, 98 %) were used as received. Potassium persulfate ($\text{K}_2\text{S}_2\text{O}_8$, Fisher) was recrystallized from deionized water prior to drying under reduced pressure. 3-(trimethoxysilyl)propyl methacrylate (MPS) and other reagents of analytical grade were utilized without further purification.

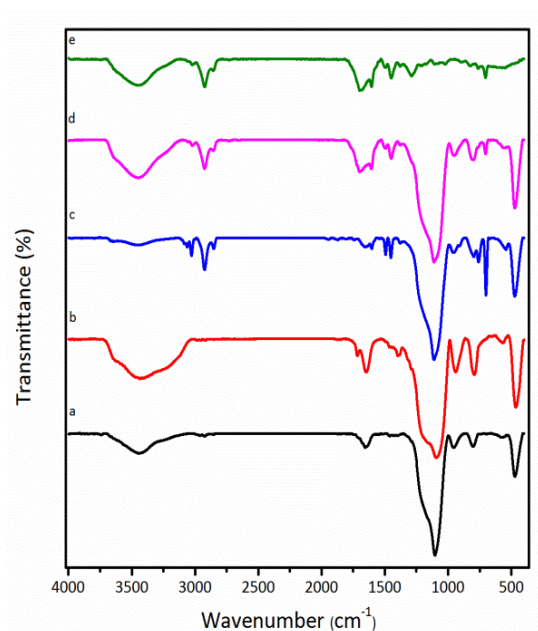


Fig. S1 FT-IR spectra of **SiO₂-3** (a), **m-SiO₂-3** (b), **SiO₂@PS-DVB-3** (c), **rod-HCPs-3** (d) and **HMORs-3** (e).

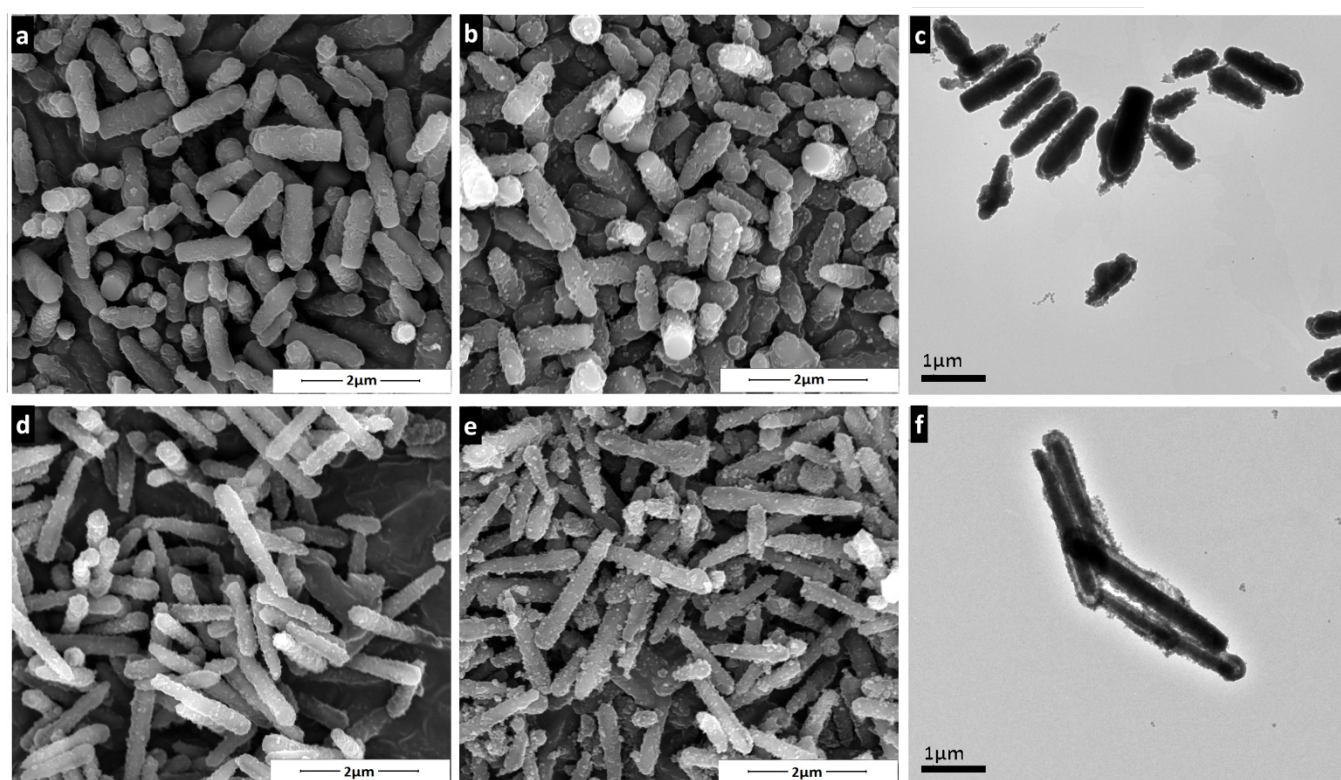


Fig. S2 SEM image of **SiO₂@PS-DVB-3** (a), **rod-HCPs-3** (b), **SiO₂@PS-DVB-7** (d), **rod-HCPs-7** (e), TEM image of **rod-HCPs-3** (c) and **rod-HCPs-7** (f)

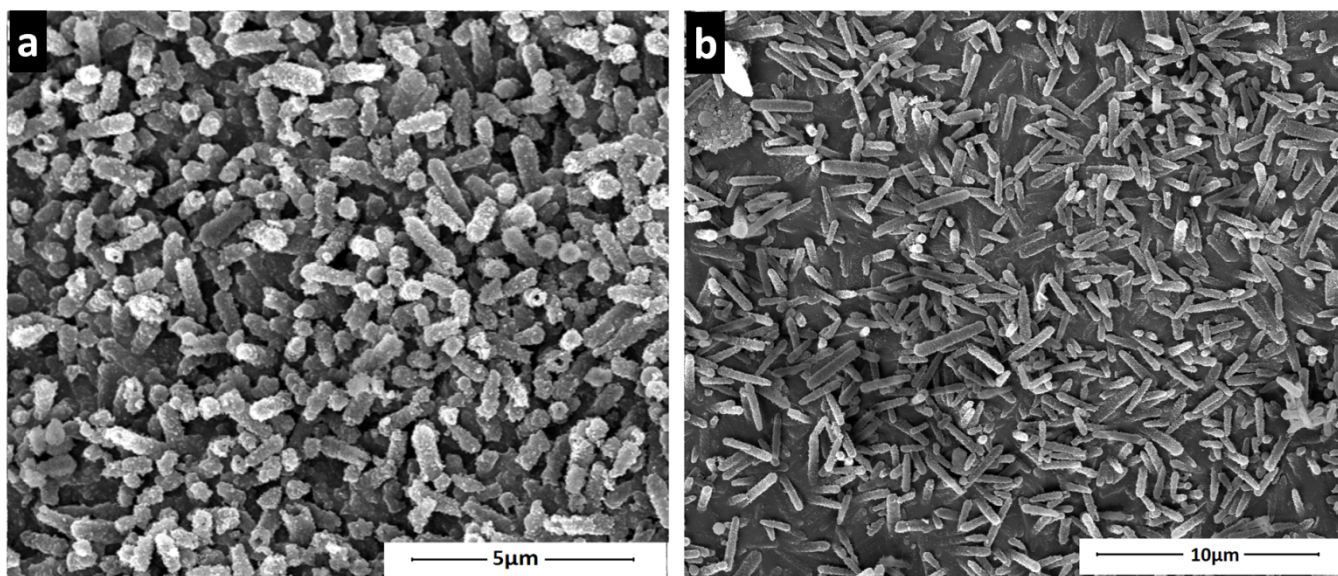


Fig. S3 SEM image of **HMORs-3** (a, 20,000×) and **HMORs-7** (b, 10,000×)

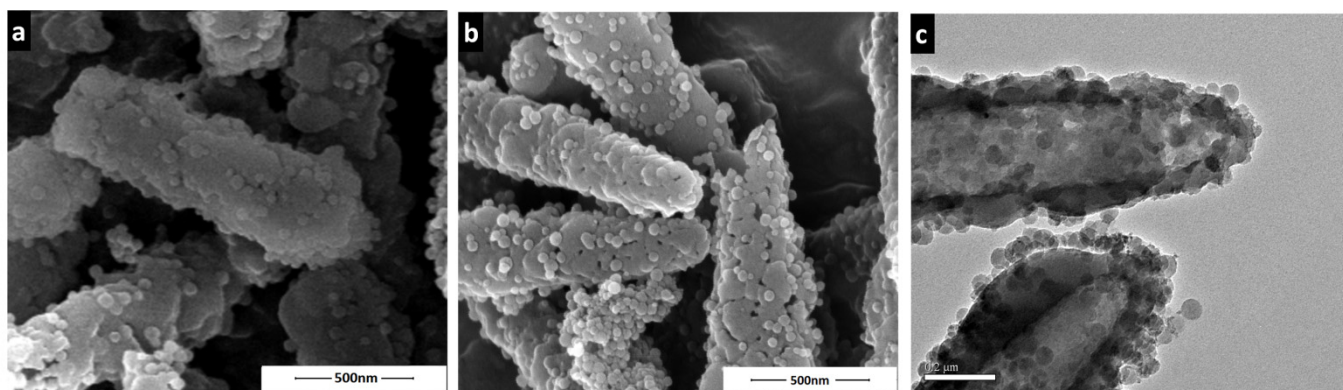


Fig. S4 SEM image of **HMORs-3** (a, 160,000×) and **HMORs-7** (b, 160,000×) and TEM of **HMORs-3**

Table S1 Physical parameters of **m-SiO₂-3**, **HMORs-3**, **m-SiO₂-7** and **HMORs-7**

	Length (μm) ^[a]	Diameter (μm) ^[a]	Aspect ratio ^[b, c]
m-SiO ₂ -3	1.1	0.3	3.4
HMORs-3	1.2	0.5	2.3
m-SiO ₂ -7	2.0	0.3	7.3
HMORs-7	2.1	0.4	5.6

^[a] The average length and diameter were confirmed by SEM (100 particles counted).

^[b] Aspect ratio was determined by dividing length by diameter.

^[c] The average aspect ratio was calculated by aspect ratio found by each particle.