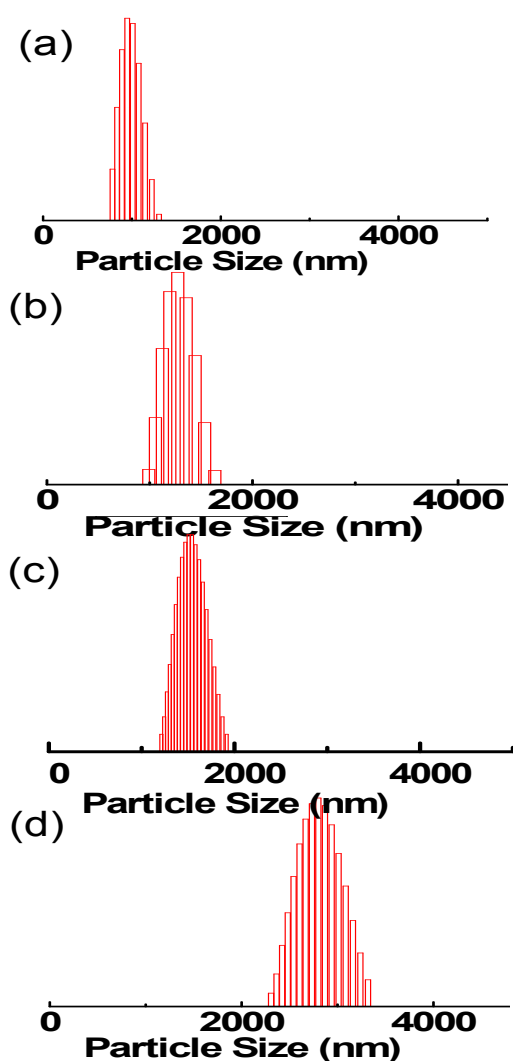


## Superhydrophobic polysilsesquioxane/polystyrene microspheres with controllable morphology: from raspberry-like to flower-like structure

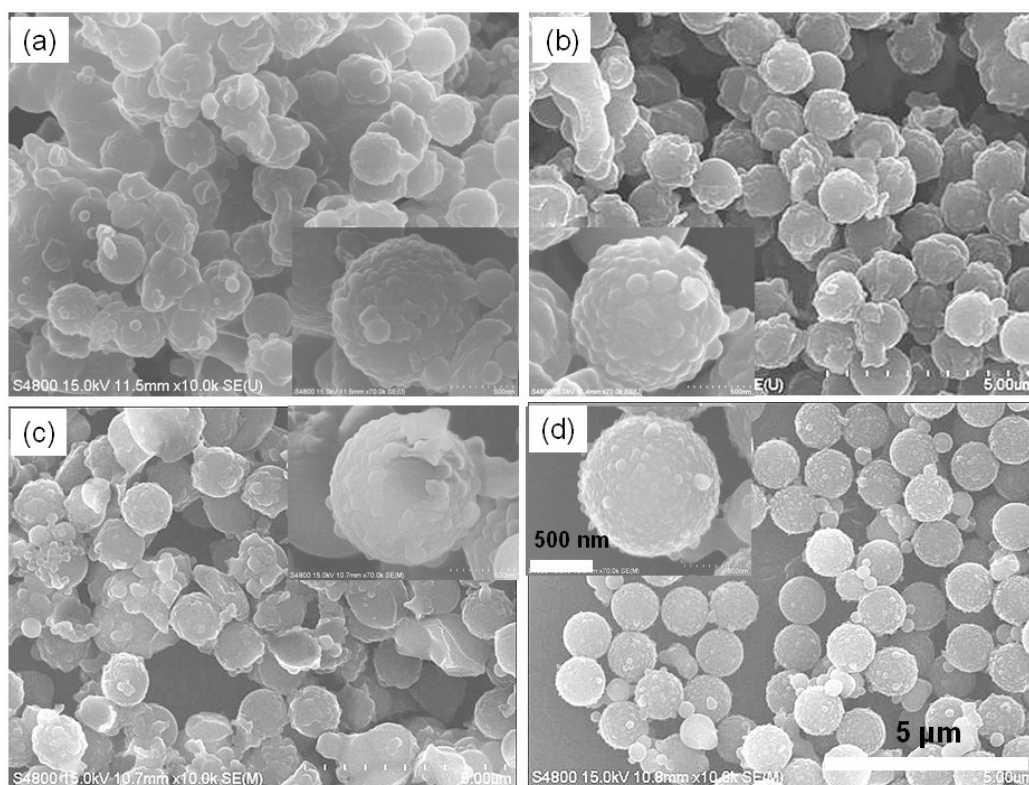
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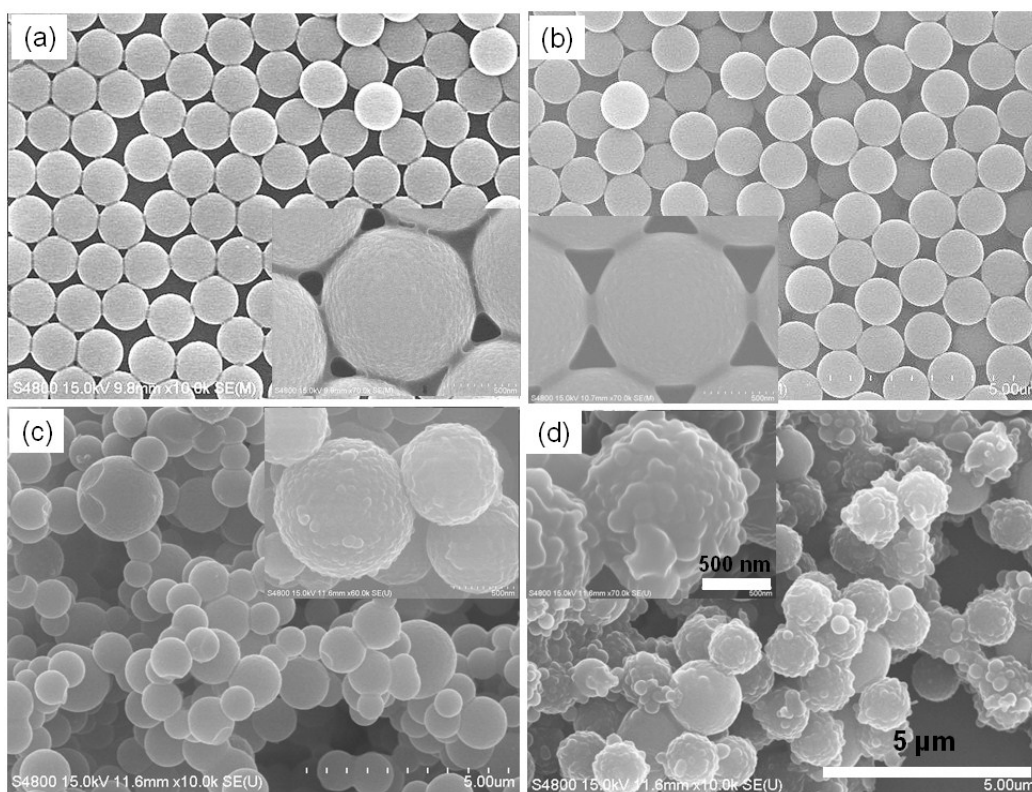
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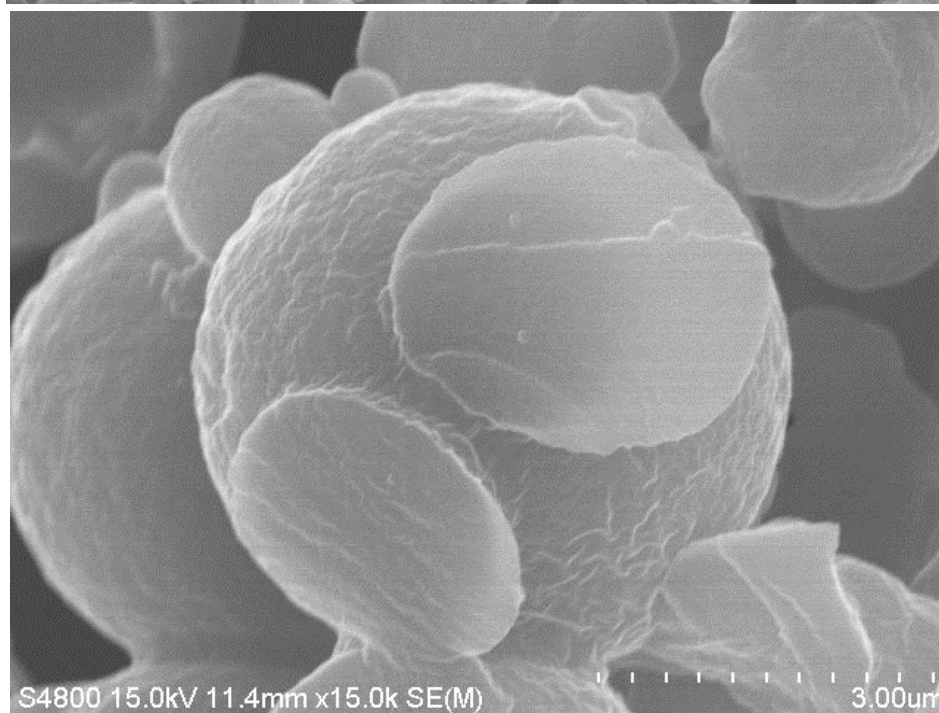
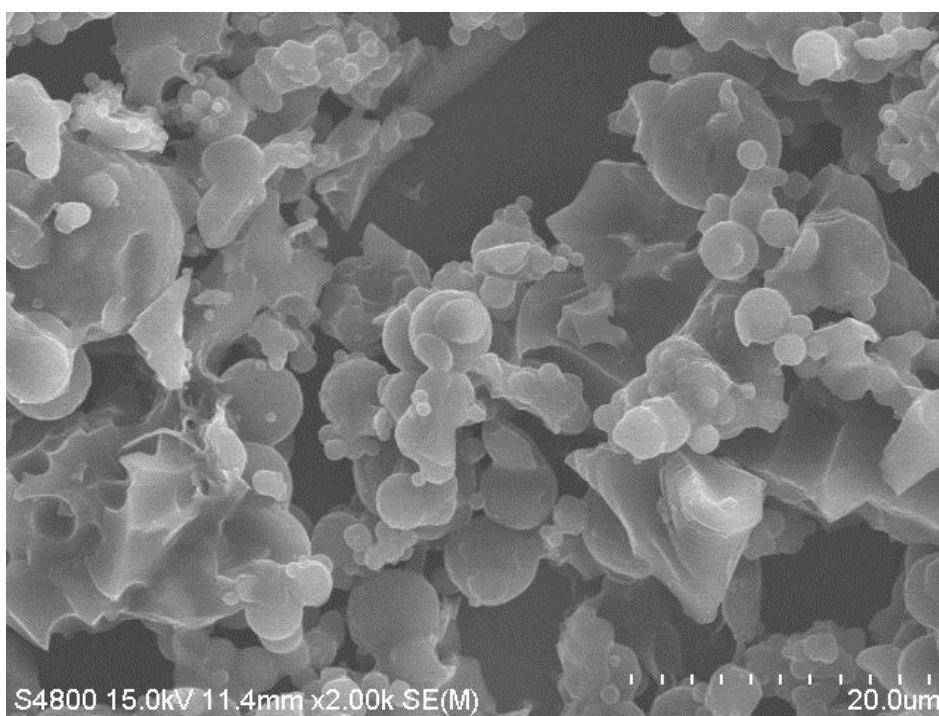
**Fig. S1** Particle size distribution of HPSQ/PS microspheres at different amount of ethyltrimethoxysilane: (a) 1 mmol, (b) 3 mmol, (c) 7 mmol, (d) 10 mmol.



**Fig. S2** SEM images of HPSQ/PS microspheres with different amount of  $\text{NH}_3 \cdot \text{H}_2\text{O}$  : (a) 0.01 mL, (b) 0.02 mL, (c) 0.1 mL, (d) 1 mL. All other reaction conditions were kept constant (5 mmol of ETMS, 0.1 g of CTAB, 0.25 g of PVP). Scale bar of 5  $\mu\text{m}$  is for image (a~d) and scale bar of 500 nm is for all inset images.



**Fig. S3** SEM images of the as-synthesized samples without CTAB at different amount of PVP: (a) 0.1 g, (b) 0.25 g of PVP; and SEM images of the as-synthesized samples without PVP at different amount of CTAB: (c) 0.1 g, (d) 0.25 g of CTAB. All other reaction conditions were kept constant (5 mmol of ETMS, 0.4 mL of  $\text{NH}_3 \cdot \text{H}_2\text{O}$ ). Scale bar of 5  $\mu\text{m}$  is for image (a~d) and scale bar of 500 nm is for all inset images.



**Fig. S4** SEM images of the polysilsesquioxane materials without using polymer template.