

## Supporting Information

# General fabrication of hollow colloids from polymer self-assembly cavity-forming strategy

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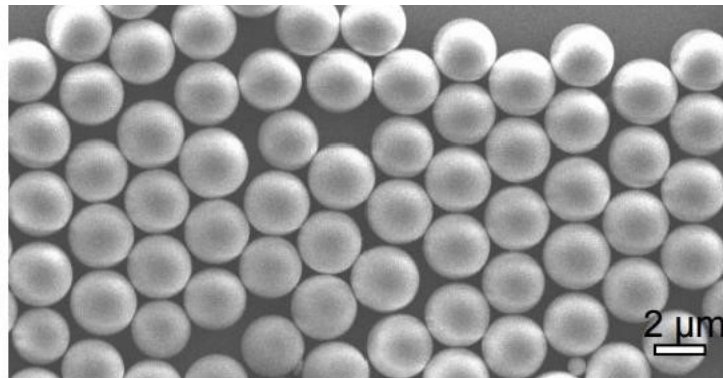
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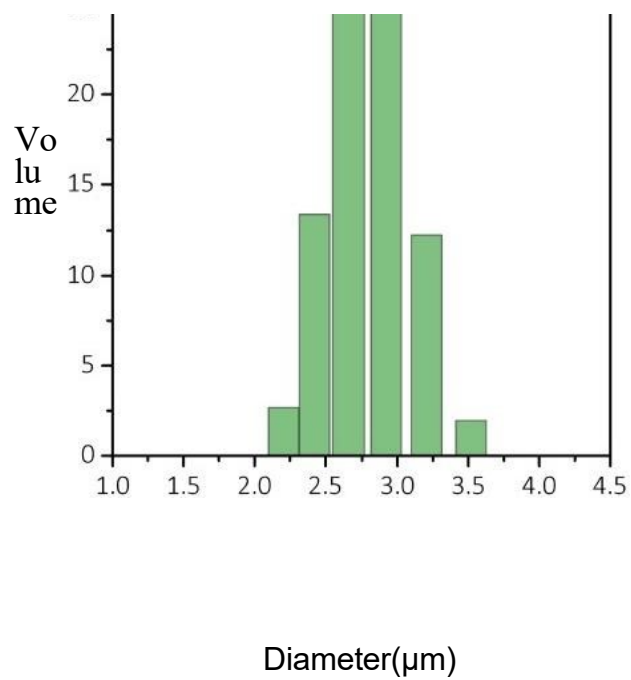
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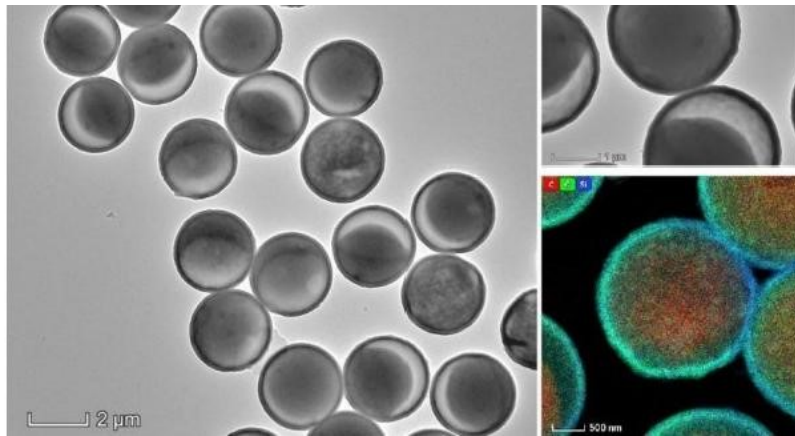
## Results and Discussion



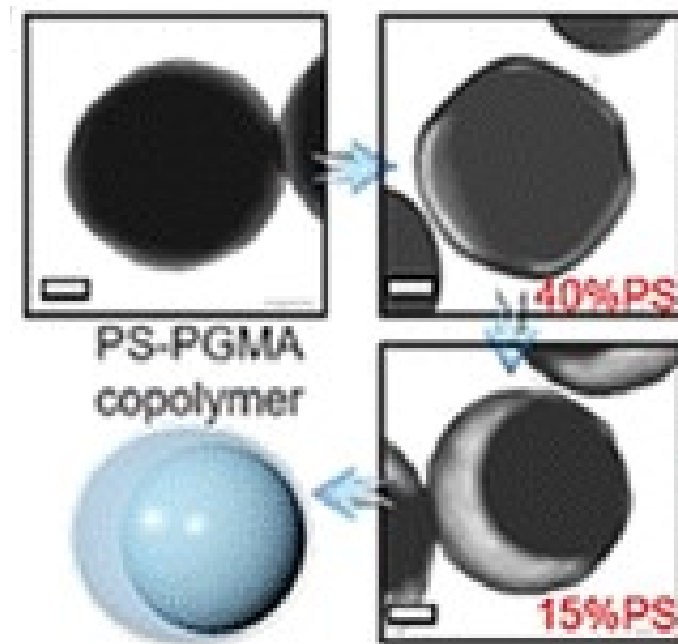
**Figure S1.** SEM image of PGMA microparticles.



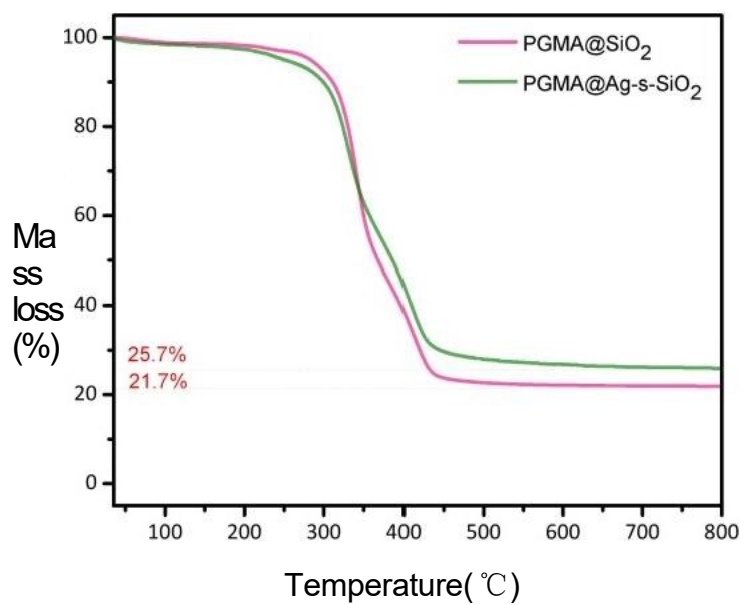
**Figure S2.** Particle size distribution curve of PGMA microparticles.



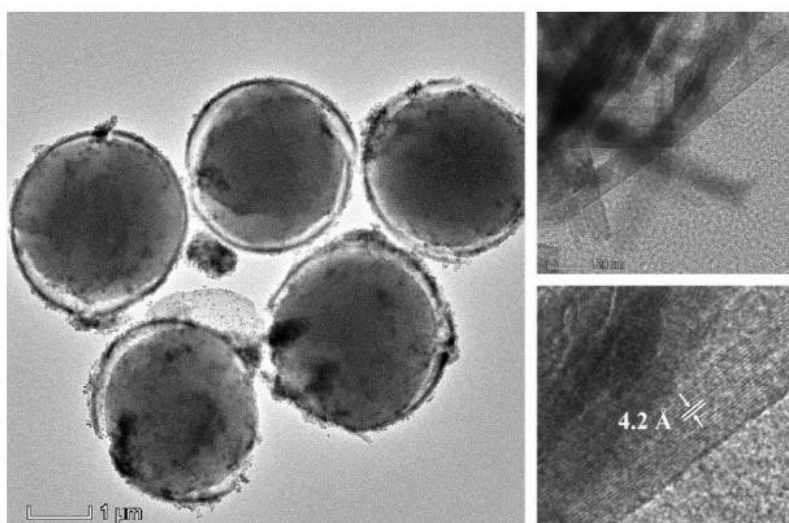
**Figure S3.** TEM and elemental mapping images of hollow microtumblers.



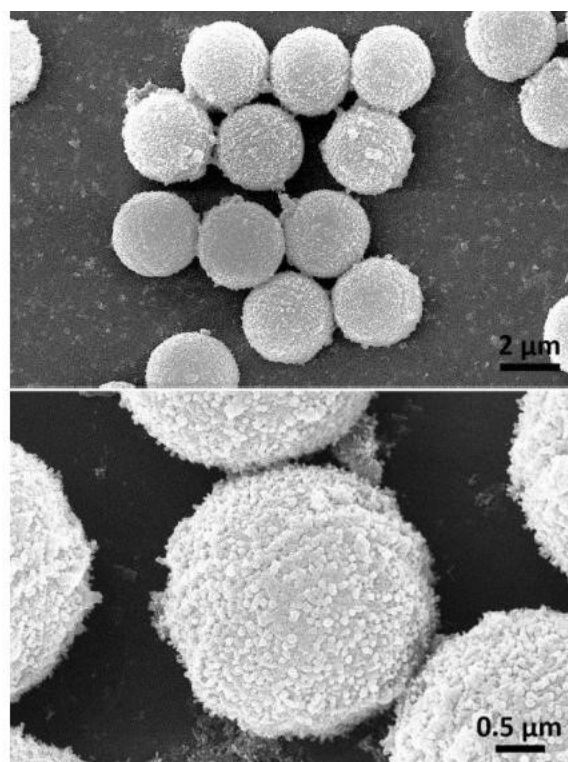
**Figure S4.** Cartoon and TEM images showing control of cavity via co-polymerization with different proportions of St. Scale bar: 500 nm.



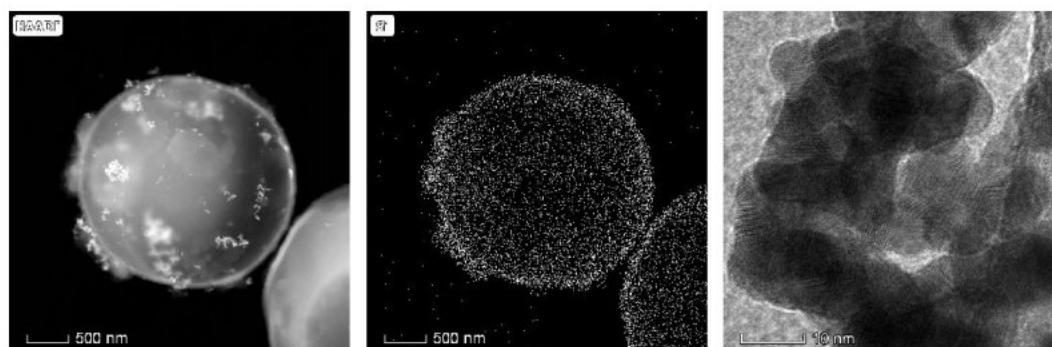
**Figure S5.** TGA curves of PGMA@Ag-s-SiO<sub>2</sub> and s-SiO<sub>2</sub>@Ag hollow colloid.



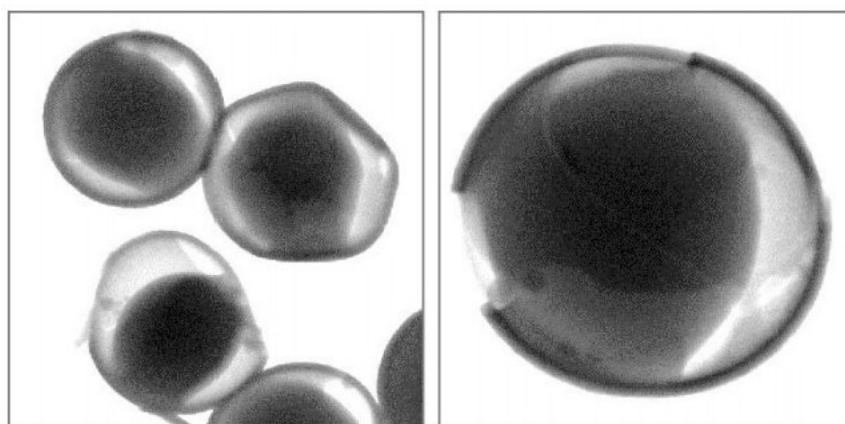
**Figure S6.** TEM images of PGMA@FeOOH-s-SiO<sub>2</sub>.



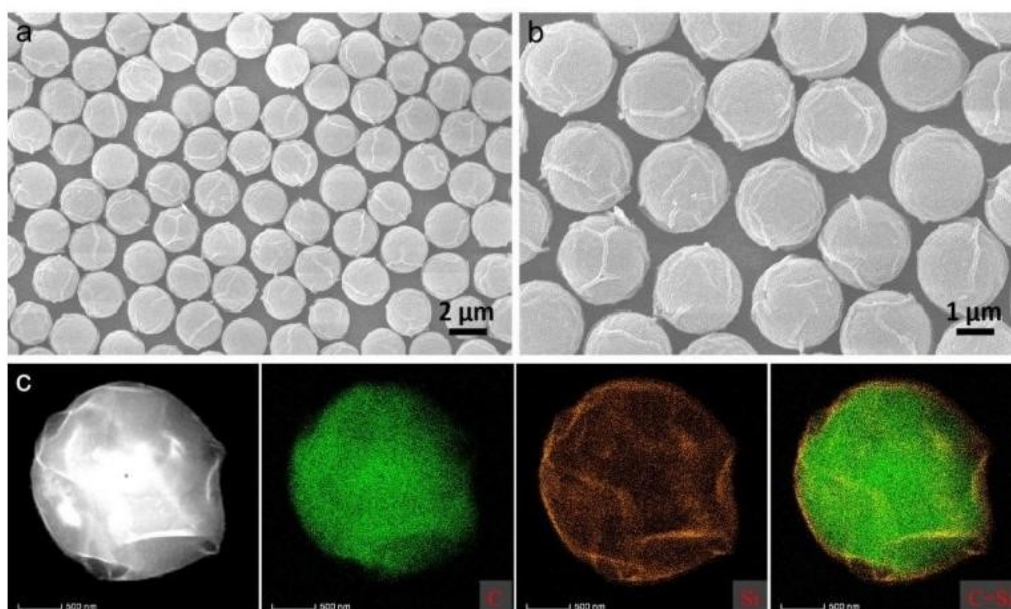
**Figure S7.** SEM images of PGMA@FeOOH-s-SiO<sub>2</sub>.



**Figure S8.** TEM and EDX mapping images of Au@s-SiO<sub>2</sub>.



**Figure S9.** TEM images of hollow tumblers swelled by DCM.



**Figure S10.** SEM images (a,b), and TEM and EDX mapping images(c) of hollow tumblers swelled by THF.