Electronic Supplementary Information

Synthesis of Anisotropic Silica Colloids

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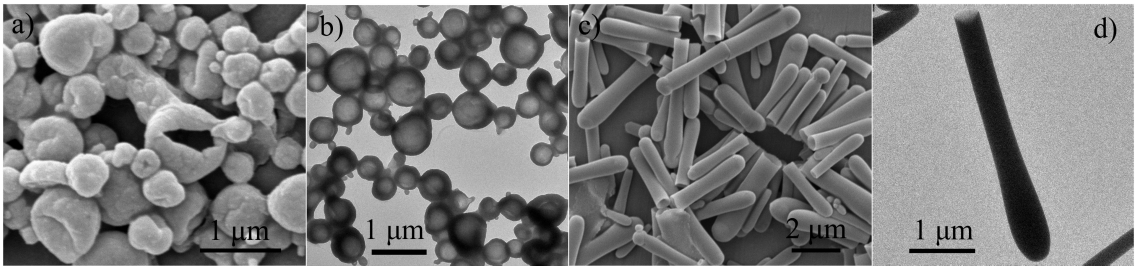


Fig. S1. Typical SEM and TEM images of the silica particles prepared with method II in (a, b) 2-propanol/ethanol (v/v = 10:1) and (c, d) benzyl alcohol/ethanol (v/v = 10:1).

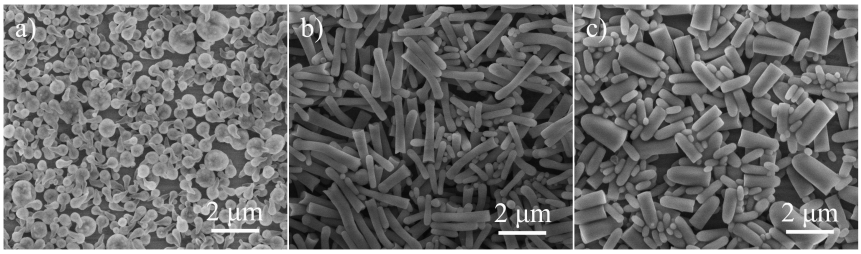


Fig. S2. Typical SEM images of the silica particles prepared with method I in three 1-hexanol/ethanol mixtures, v/v = a) 9:13, b) 1:1, and c) 7:4, respectively.

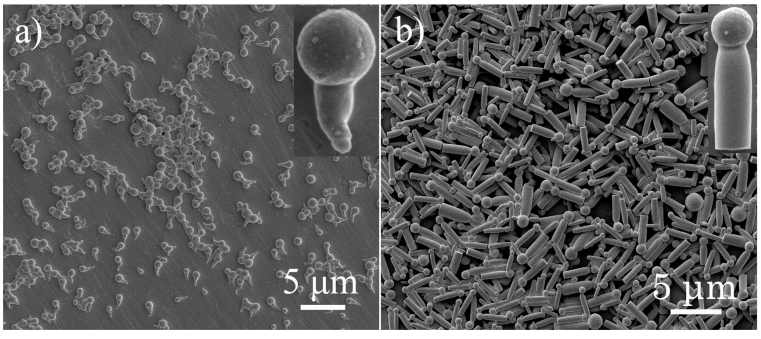


Fig. S3. Typical SEM images of the silica particles prepared with method II in two 1-hexanol/ethanol mixtures, v/v = a) 6:5 and b) 8:3, respectively.

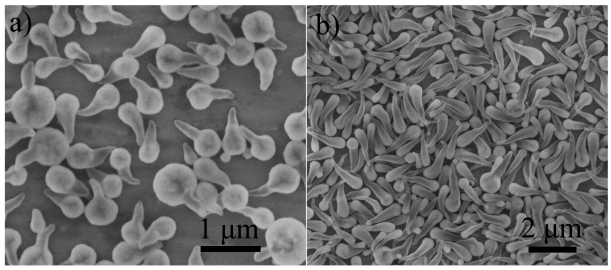


Fig. S4. Typical SEM images of the silica particles prepared with method I in 1-pentanol/ethanol mixtures, v/v = a) 5:6 and b) 6:5, respectively.

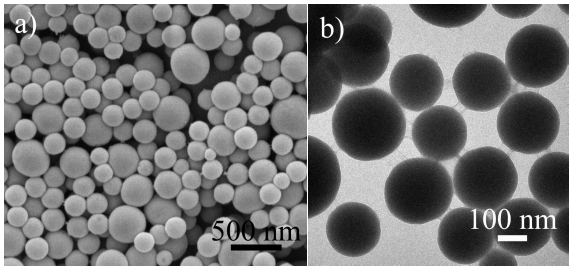


Fig. S5. Typical a) SEM and b) images of the silica particles prepared with method II in 1-octanol/ethanol (v/v =10:1) mixtures.

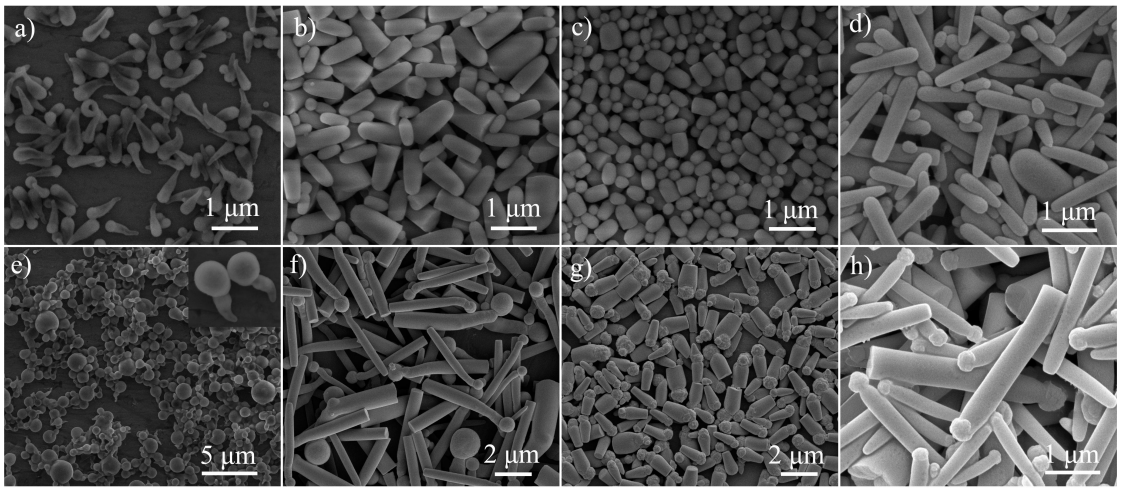


Fig. S6. Typical SEM images of anisotropic silica particles prepared with (a–d) method I and (e–h) method II in different alcohol solvent systems: a, e) 1-propanol; b, f) 1-butanol; c, g) 1-pentanol; d, h) 1-pentanol/ethanol (v/v = 10:1).

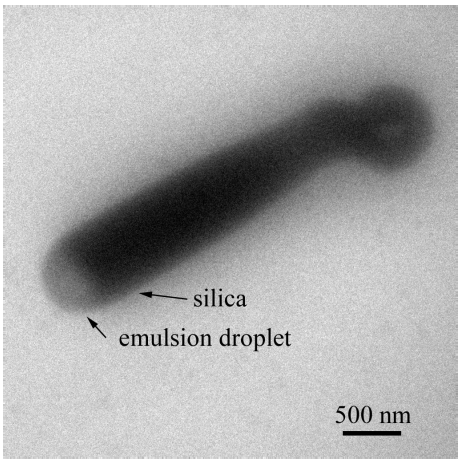


Fig. S7. The formation of a Janus-like silica–droplet structure. The sample was directly taken from the reaction medium (method II, in 1-butanol) for TEM characterization.

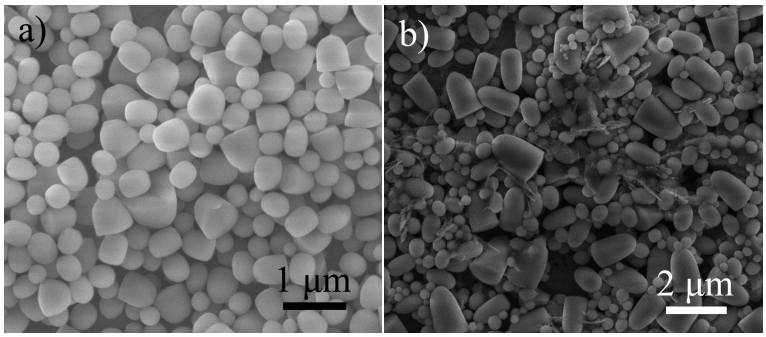


Fig. S8. Silica particles prepared in 1-pentanol/ethanol (v/v = 10:1) with method I by using (a) LD-tartaric acid or (b) citric acid instead of sodium citrate.

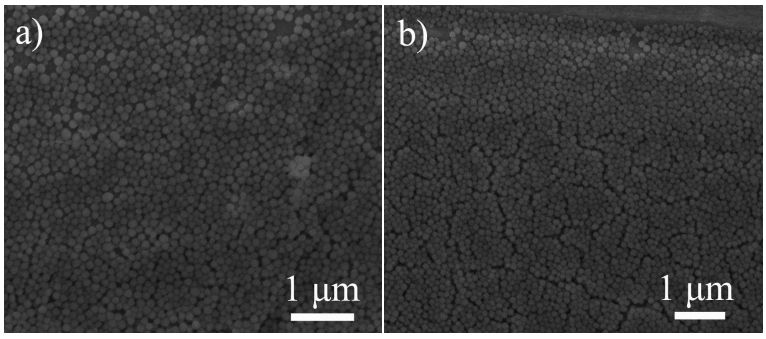


Fig. S9. Silica particles prepared in 1-pentanol/ethanol (v/v = 10:1) with method I by using (a) NH_4Cl or (b) NH_4NO_3 instead of sodium citrate.

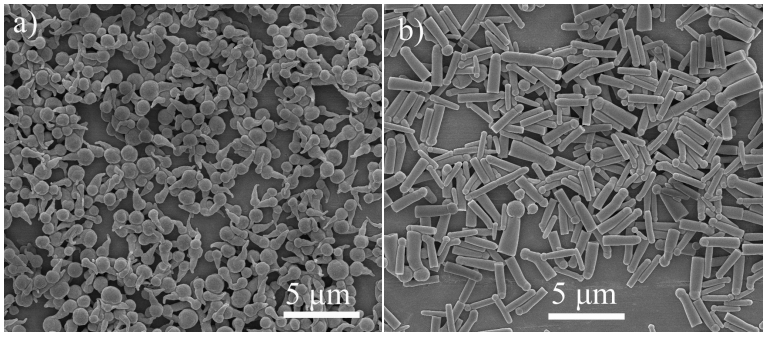


Fig. S10. Typical SEM images of the silica particles prepared with method II in two 1-hexanol/ethanol mixtures, v/v = a) 6:5 and b) 8:3, respectively. The synthesis adopted 55 mL alcohol solvent systems.

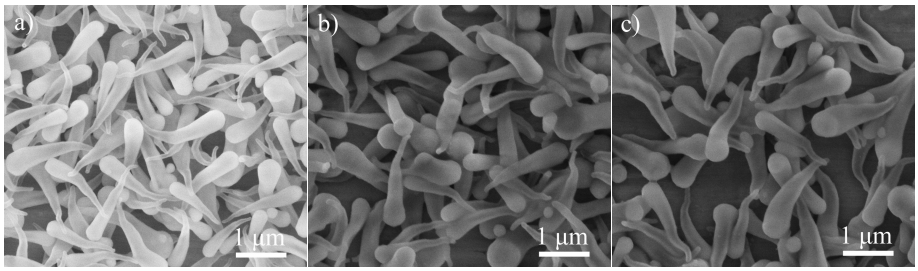
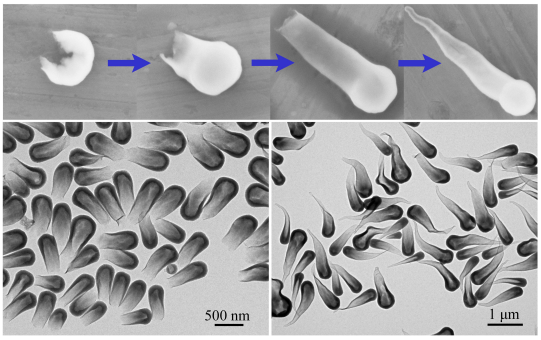


Fig. S11. Silica particles prepared with method I in 1-heptanol/ethanol (v/v =5:6): a) obtained after a reaction time of 2 hours; b, c) obtained after further aging for 2 and 6 hours, respectively.



Graphic Abstract. The morphological evolution of the tadpole-like hollow silica particles, and corresponding TEM images of typical intermediate and final products.