

Supporting Information

Unexpected “Hammerlike Liquid” to Pulverize Silica Powders to Stable Sols and Its Application in the Preparation of Sub-10 nm SiO₂ Hybrid Nanoparticles with Chirality

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Table S1. The mass (or volume) of reactants and the mass of solid powders in the solution left after overnight refluxing at 100 °C

SiO ₂ source and mass		Volume of APS	Mass of solid residues
Synthetic SiO ₂ nanofibers	D-SiO ₂ (0.10 g)	2 mL	0.00 g
	L-SiO ₂ (0.10 g)	2 mL	0.00 g
	Achiral SiO ₂ (0.10 g)	2 mL	0.00 g
Commercial SiO ₂ gel	SiO ₂ gel (0.35mm) (0.10 g)	2 mL	0.00 g
	SiO ₂ gel (~0.063-0.200 mm) (0.10 g)	2 mL	0.00 g

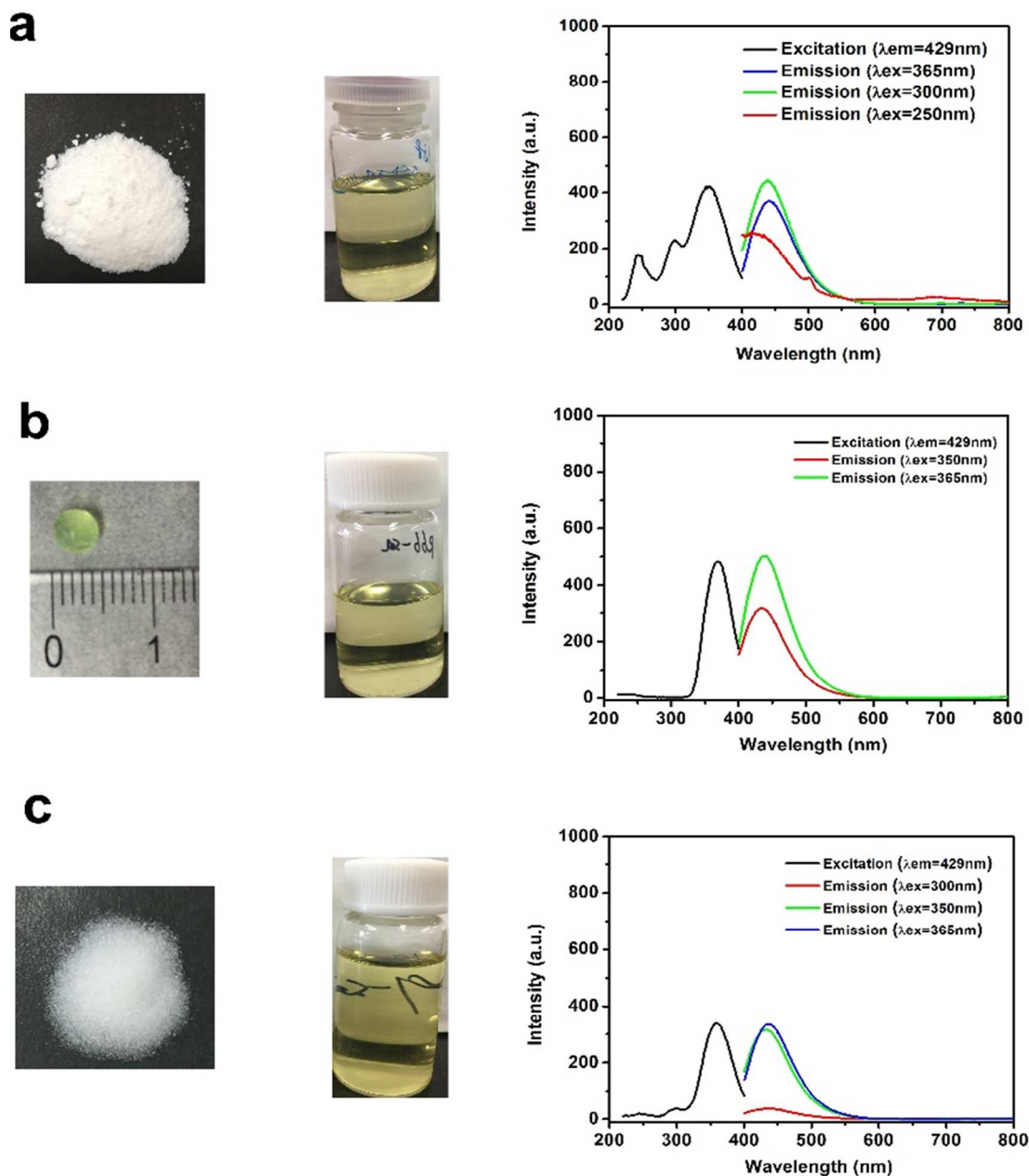


Figure S1. The digital images of SiO₂ reactant (left), the digital images (middle) and PL spectra (right) of the solution after refluxing for a) achiral SiO₂, b) SiO₂ gel (3.35mm) and c) SiO₂ gel (~0.063-0.200 mm). (The reaction conditions are listed in Table S1)

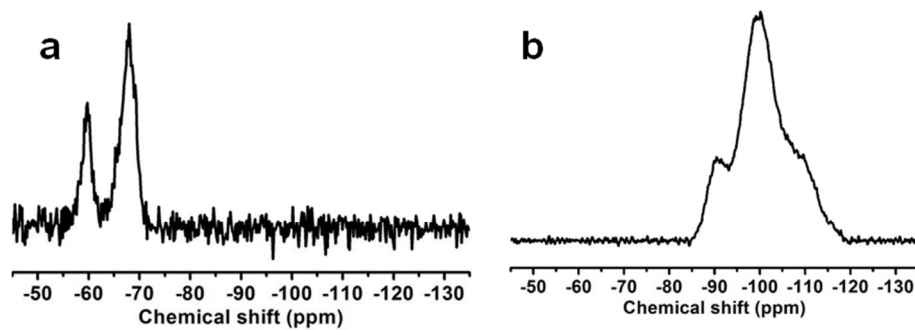


Figure S2. The solid ^{29}Si -NMR spectra for a) the solid sample obtained from the system containing only water and APS; b) D-type SiO_2 nanofibers reactants.

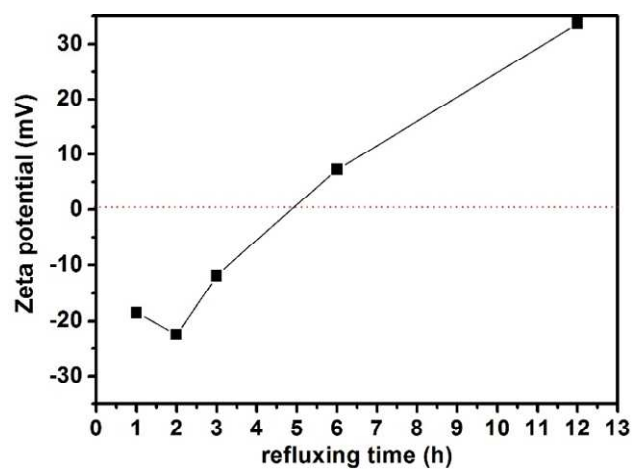


Figure S3. The zeta potential of the solutions collected by using L-type SiO_2 and APS as reactants after different refluxing time.

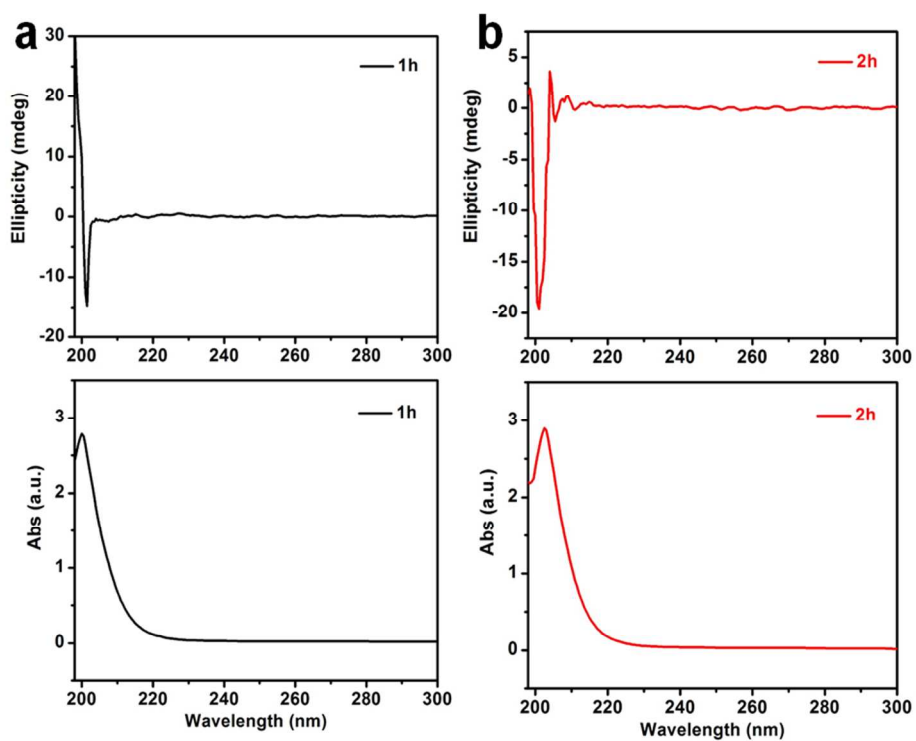


Figure S4. The CD spectra (upper) and UV absorption (bottom) of the solution obtained by using L-type SiO₂ and APS as reactants after refluxing for a) 1 h and b) 2 h.

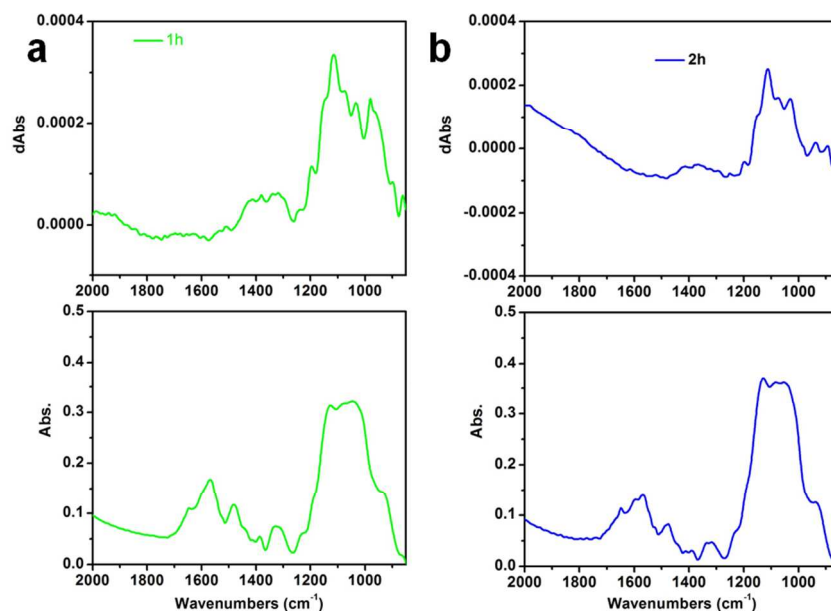


Figure S5. The VCD spectra (upper) and IR absorption (bottom) of the solution obtained by using L-type SiO₂ and APS as reactants after refluxing for a) 1 h and b) 2 h.

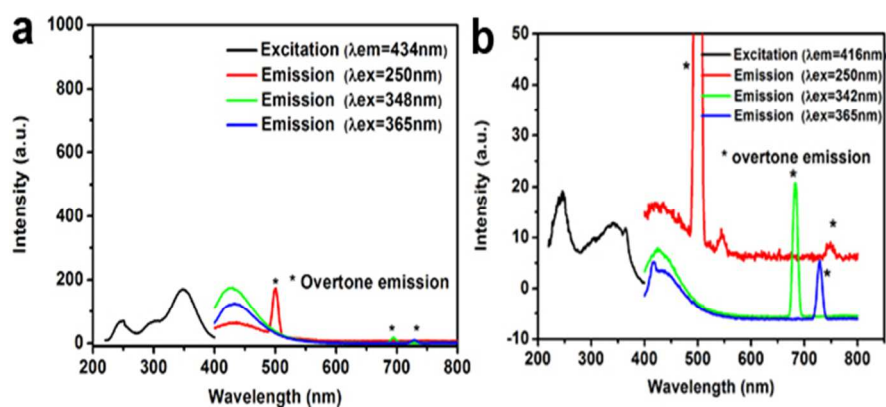


Figure S6. The PL spectra of solution collected from the reaction system a) with 2 mL of APS but no SiO₂ used and b) with 0.5 mL of APS and 0.10 g of D-SiO₂.