

SUPPORTING INFORMATION

To the paper “A Facile Bi-phase Synthesis of $\text{Fe}_3\text{O}_4@\text{SiO}_2$ Core-Shell Nanoparticles with Tunable Film Thicknesses”

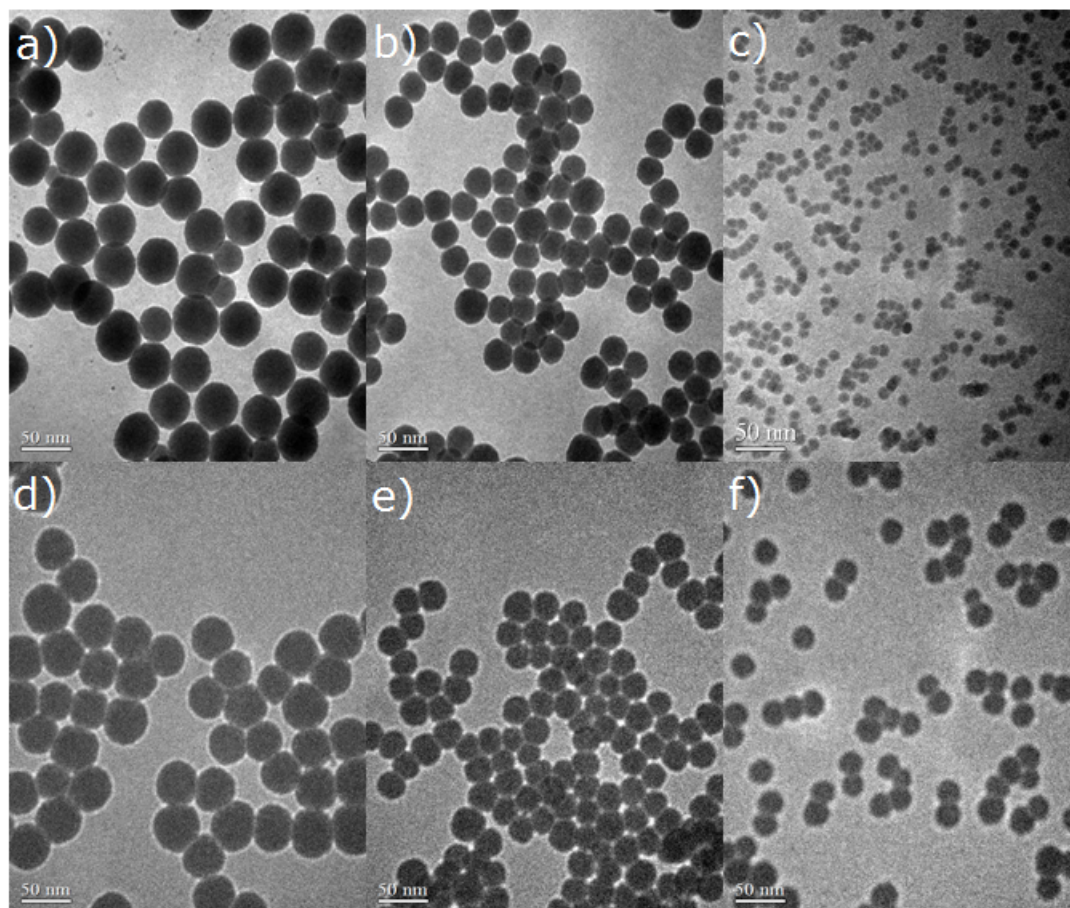


Fig.S1 TEM image of SiO_2 nanoparticles synthesized by bi-phase method by using 0.2 mL hydrazine as catalyst with various stirring rates and 5 mL TEOS: (a) 0, (b) 216, (c) 433 rpm; By using TEA as catalyst at static condition: d) 10 mL TEOS and 0.2 mL TEA, e) 5 mL TEOS and 0.2 mL TEA, f) 5 mL TEOS and 5 mL TEA.

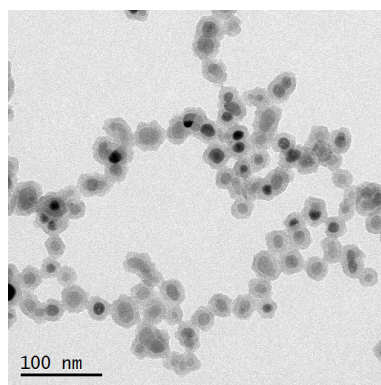


Fig.S2 TEM image of Fe₃O₄@SiO₂ core-shell nanoparticles prepared at 100 °C temperature

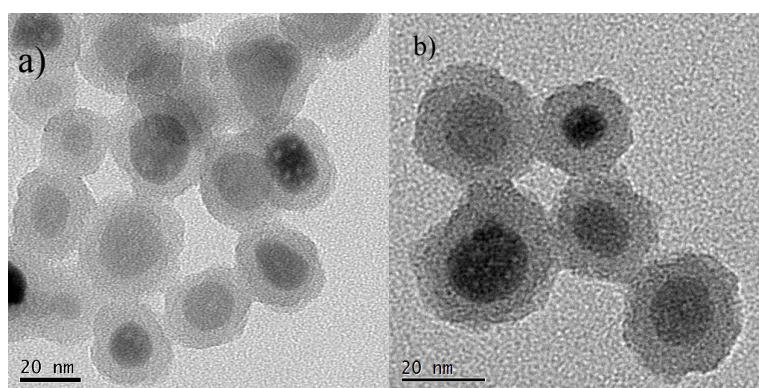


Fig.S3 TEM image of Fe₃O₄@SiO₂ core-shell nanoparticles prepared at different reaction time. a) 4 h, b) 20 h.

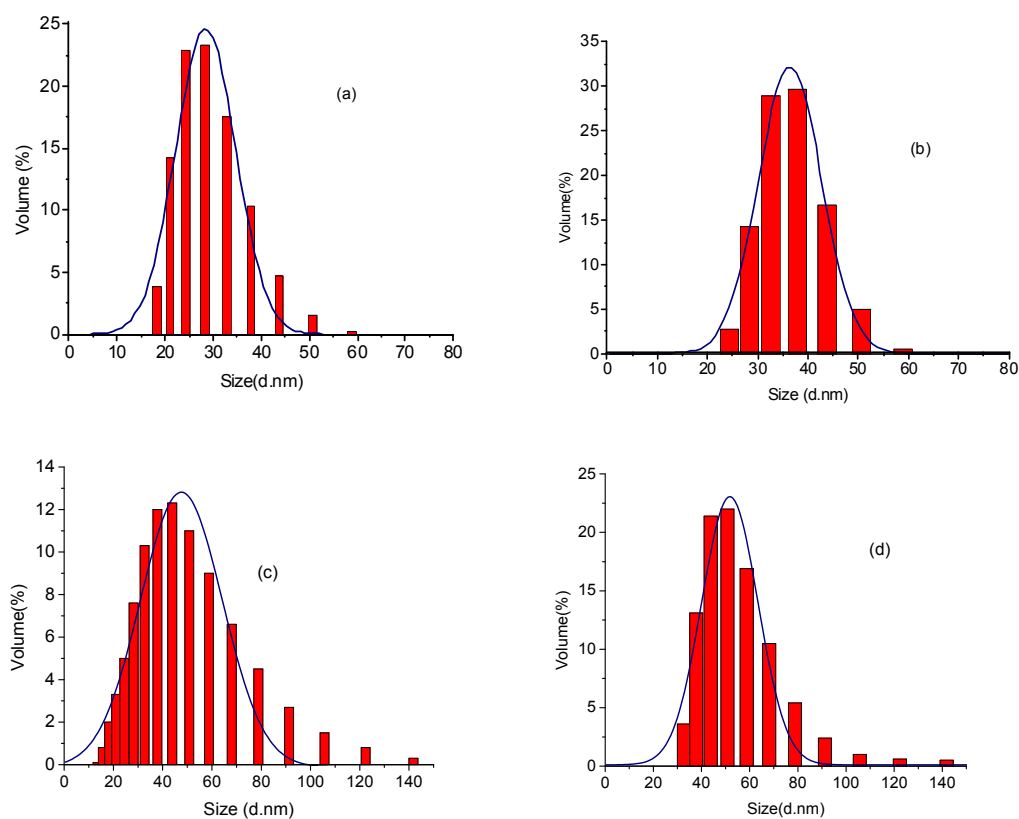


Figure S4 The sizes distribution of the uncoated Fe_3O_4 and $\text{Fe}_3\text{O}_4@\text{SiO}_2$ core-shell nanoparticles coated with different content TEOS. (a) Fe_3O_4 , (b) 0.4 mL TEOS, (c) 0.8 mL TEOS, (d) 1.6 mL TEOS

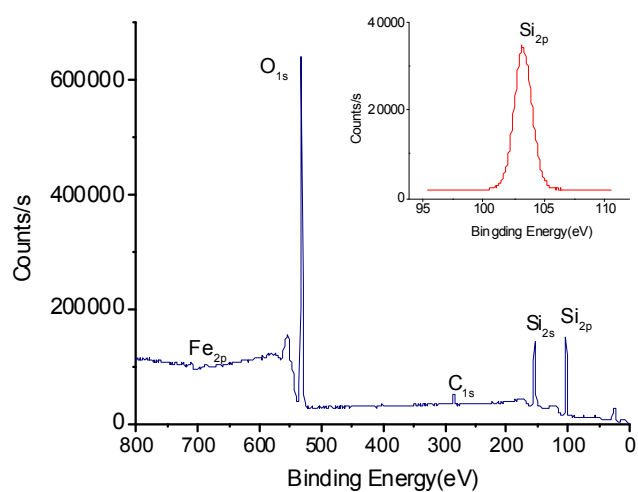


Fig.S5 XPS spectra of Fe₃O₄@SiO₂ nanoparticles with 0.4 mL TEOS by using hydrazine as catalyst. Inset: Si 2p high resolution XPS spectra

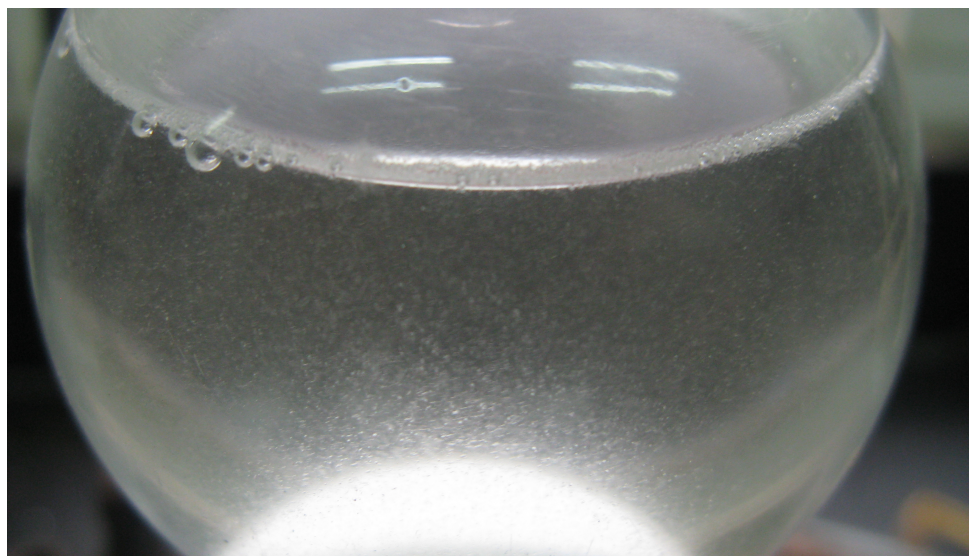


Fig.S6 TEOS oil droplets in the mixture of TEOS and water after stirring.