

Supplementary materials

for

A novel and rapid approach for the synthesis of biocompatible and highly stable Fe₃O₄/SiO₂ and Fe₃O₄/C core/shell nanocubes and nanorods

Mohamed Abbas^{1,2,3*}, Sri RamuluTorati¹, Asif Iqbal¹, CheolGi Kim^{1,*}

¹Department of Emerging Materials Science, DGIST, Daegu, 711-873, South Korea

²Ceramics Department, National Research Centre, 12622 El-Bohouth Str, Cairo, Egypt

³State Key Laboratory of Coal Conversion, Institute of Coal Chemistry, Chinese Academy of Science, Taiyuan 030001, China

Fig. S1

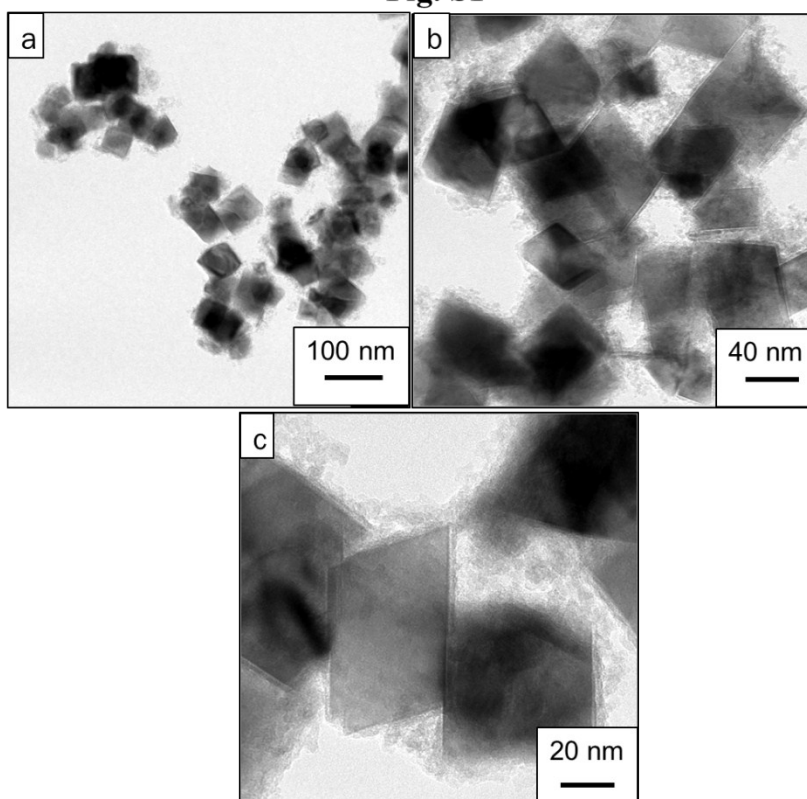


Fig S1. TEM images of $\text{Fe}_3\text{O}_4/\text{SiO}_2$ nanocubes with 2 mL TEOS; (a) low magnification and (b, c) high magnification.

Fig. S2

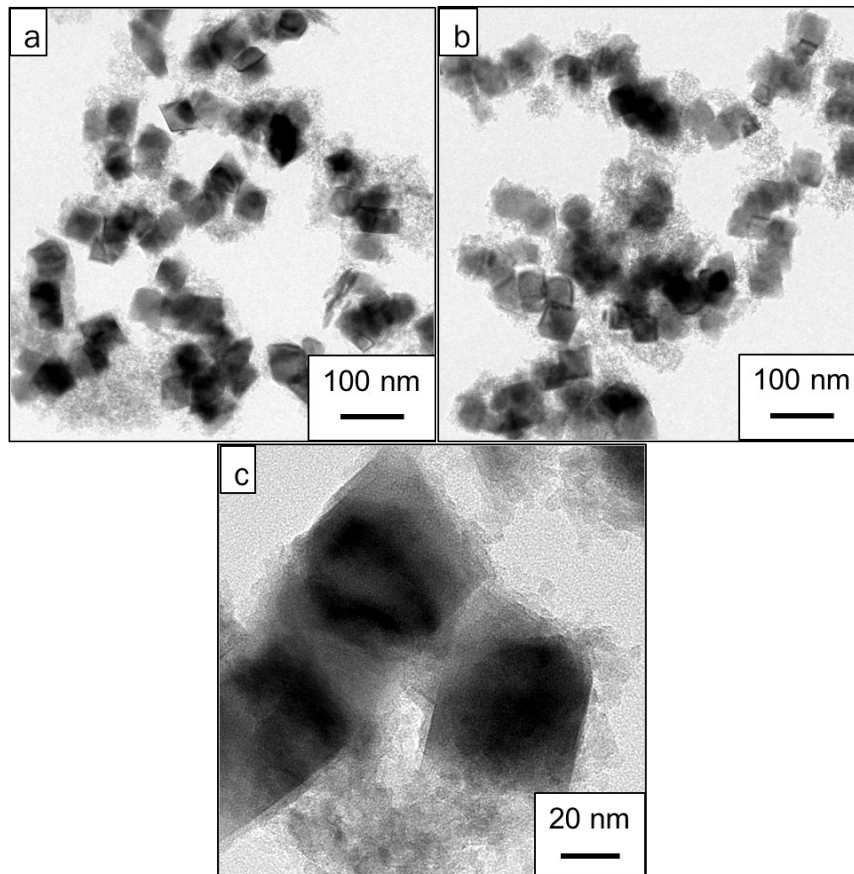


Fig S2. TEM images of $\text{Fe}_3\text{O}_4/\text{SiO}_2$ nanocubes with 4 mL TEOS; (a) low magnification and (b, c) high magnification.

Fig. S3

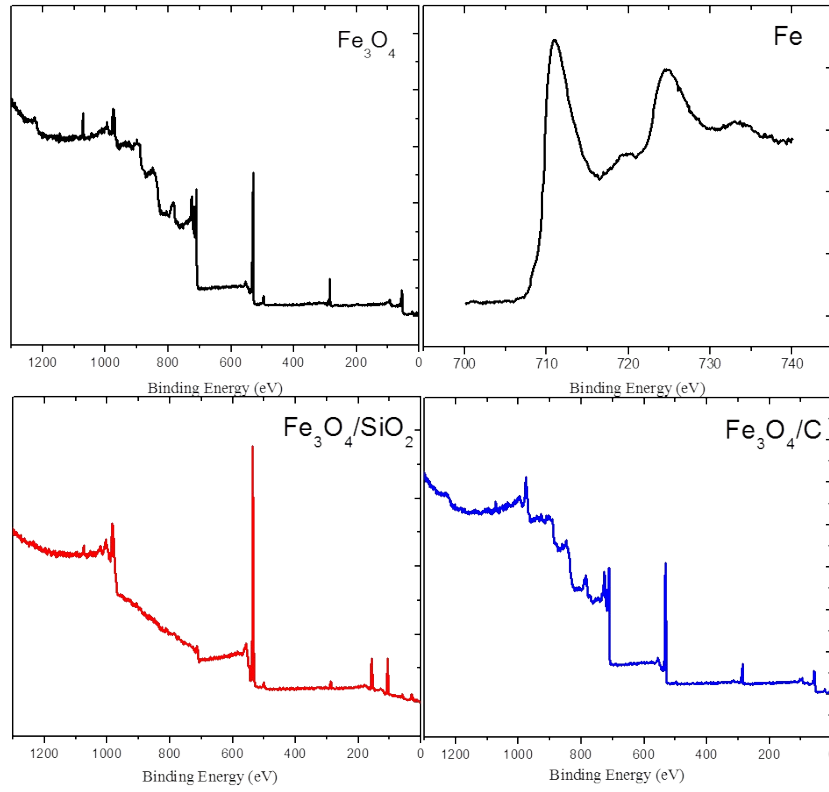


Fig S3. XPS survey spectra of Fe_3O_4 , $\text{Fe}_3\text{O}_4/\text{SiO}_2$ and $\text{Fe}_3\text{O}_4/\text{C}$ core/shell nanocubes

Fig. S4

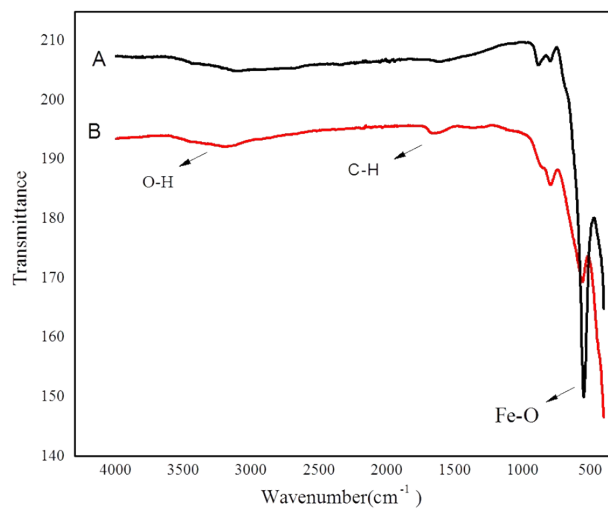


Fig S4. FTIR analysis data for both (A) Fe₃O₄ nanocubes and (B) Fe₃O₄/C synthesized in the presence of ultrasound.

Fig. S5

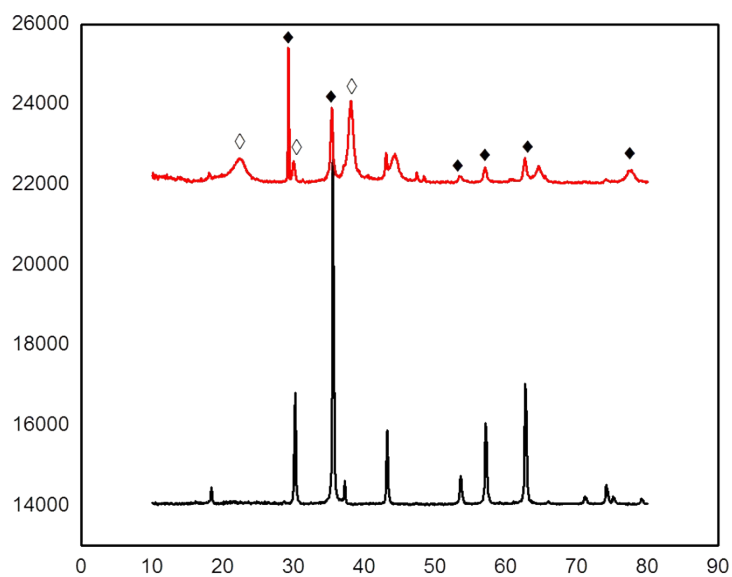


Fig S5. XRD patterns of (A) as-prepared Fe₃O₄ nanocubes and (B) Fe₃O₄/C synthesized in the presence of ultrasound.