

Hierarchically Structured Fe₃O₄ Microspheres: Morphology Control and Its Application in Water Treatment

Xiyan Li, Zhenjun Si, Yongqian Lei, Xiaona Li, Jinkui Tang, Shuyan Song and

Hongjie Zhang*

State Key Laboratory of Rare Earth Resource Utilization, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Graduate School of the Chinese Academy of Sciences, Changchun, 130022, Jilin, China.

* To whom correspondence should be addressed. E-mail: hongjie@ciac.jl.cn. Fax: +86-431-85698041. Tel: +86-431-85262127.

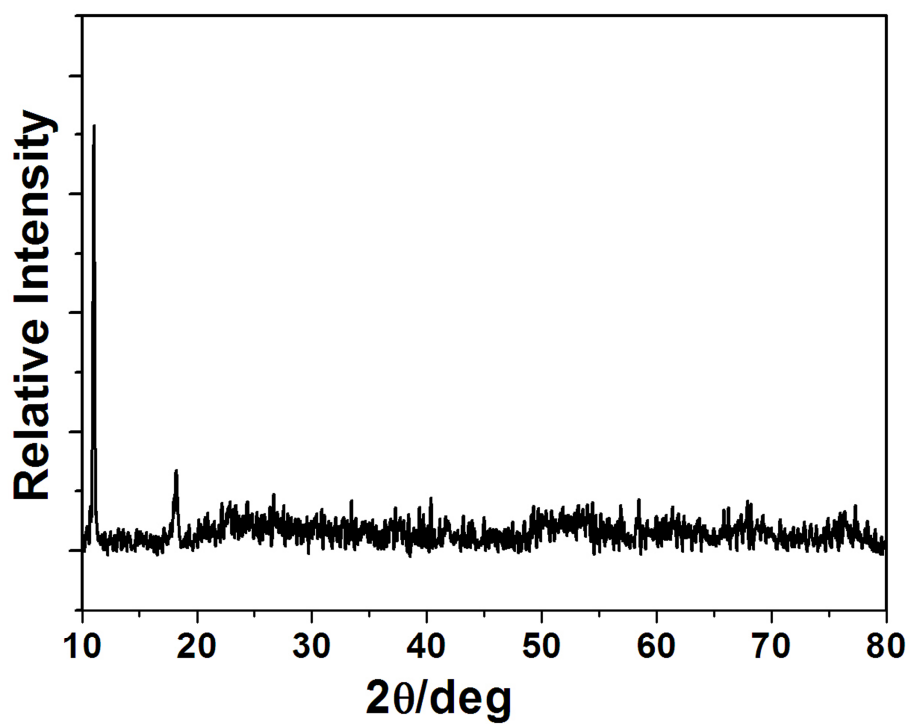


Fig. S1. XRD pattern of the precursor.

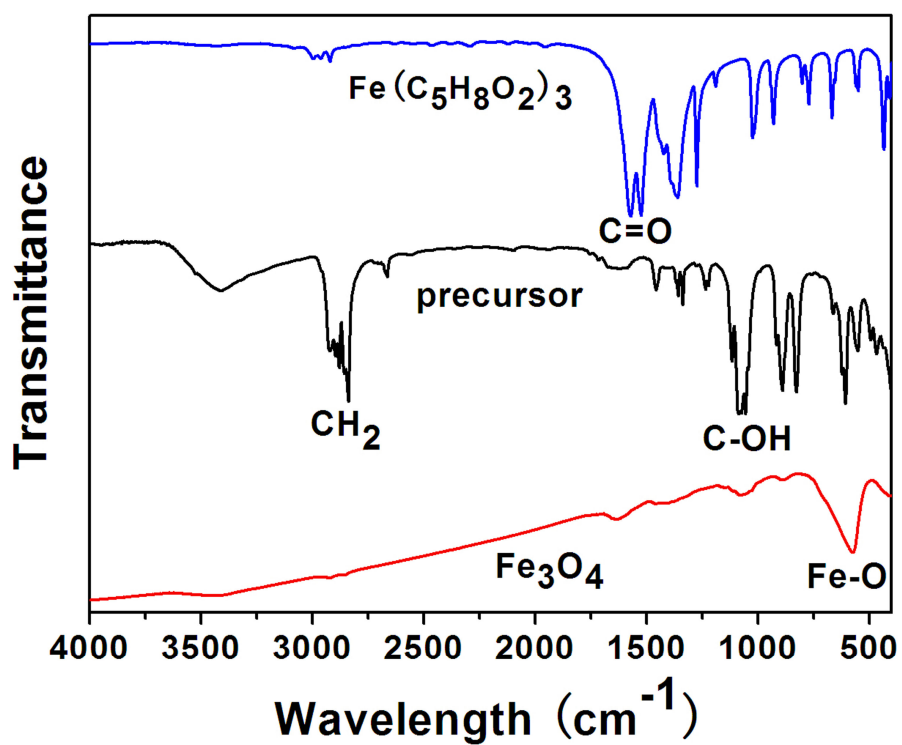


Fig. S2. IR spectra taken from KBr pellets that contained the starting material ($\text{Fe}(\text{acac})_3$) and iron oxide precursor before and after calcinations.

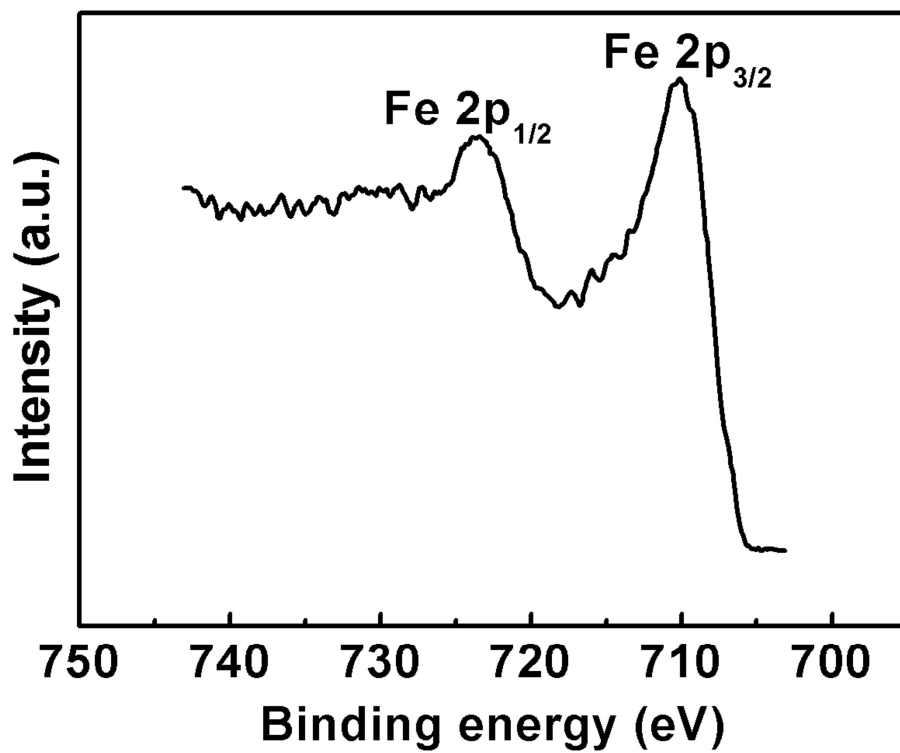


Fig. S3. XPS spectra of the precursor.

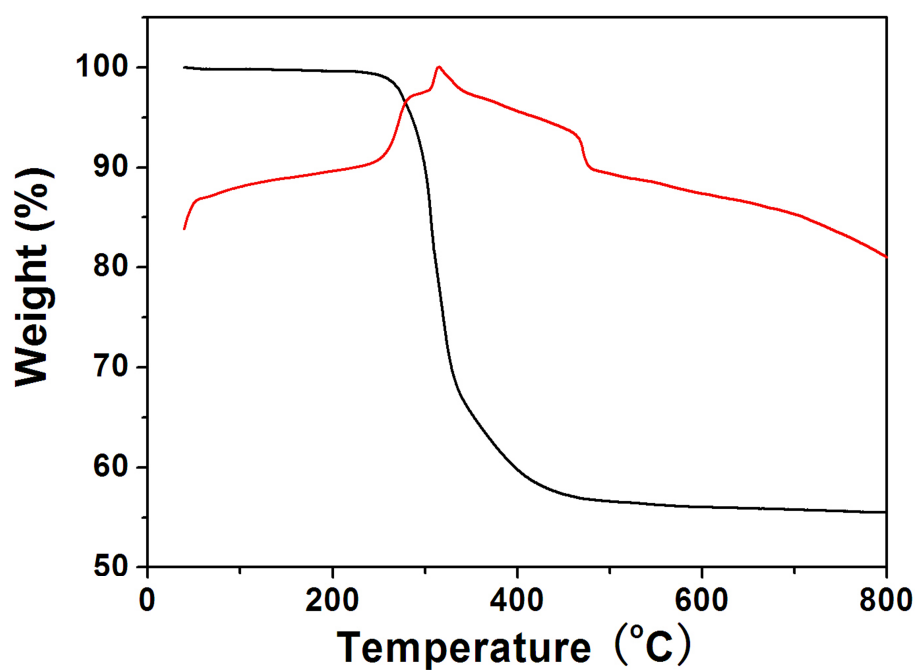


Fig. S4. TG (black line) and DTA (red line) curves of the precursor.

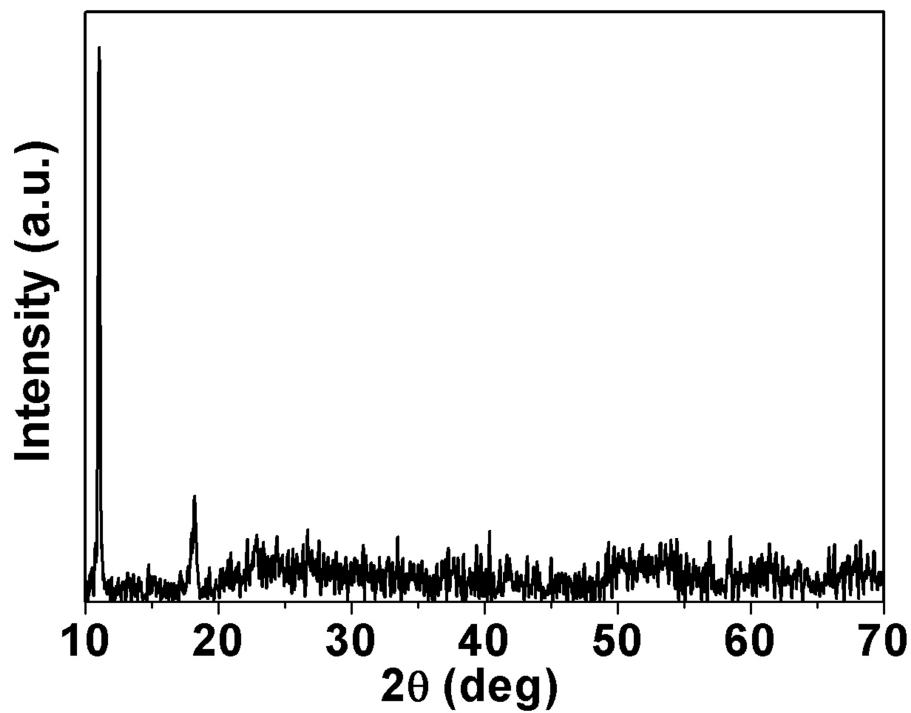


Fig. S5. XRD pattern of the products prepared with the amount of NH_4Ac (20 mmol).

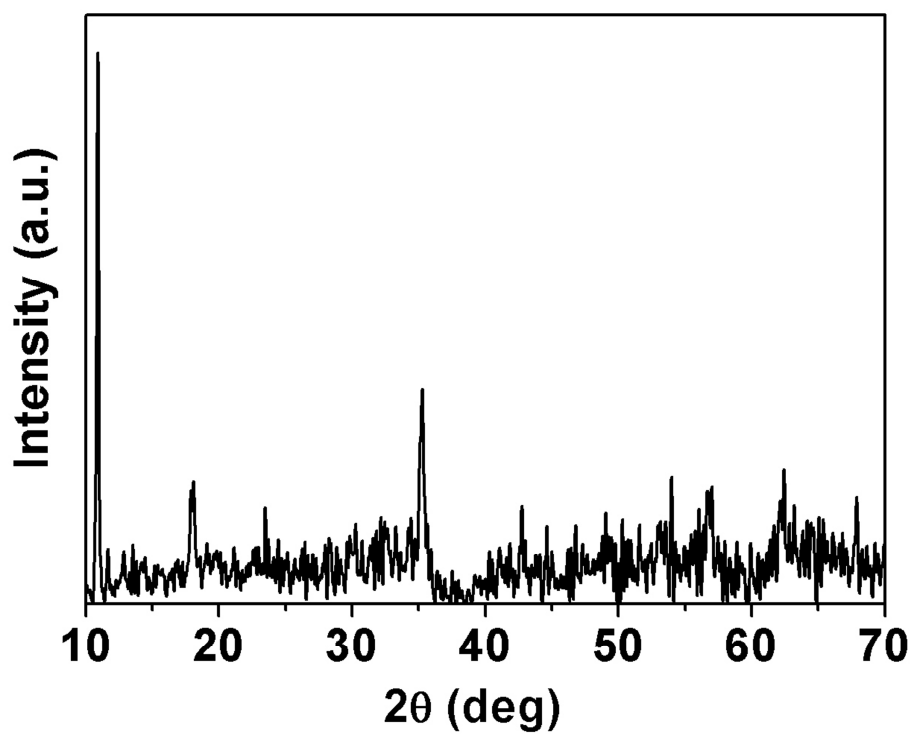


Fig. S6. XRD pattern of the products prepared with the amount of NH_4Ac (100 mmol).

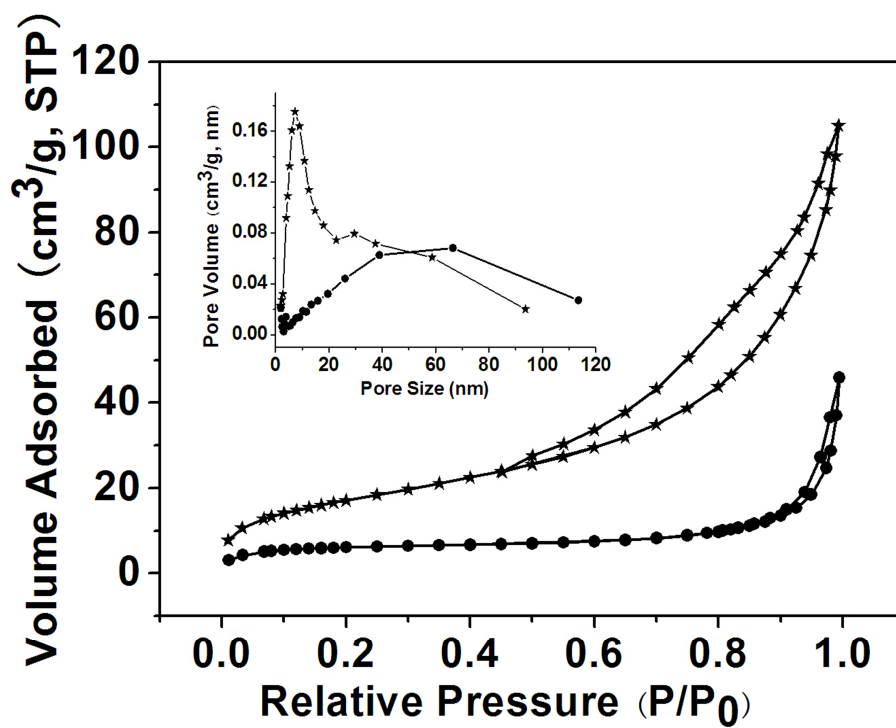


Fig. S7. Nitrogen adsorption/desorption isotherms and BJH pore plots (inset) of Fe₃O₄ nanoparticle (62.55 m²/g) and the hollow microsphere precursors (19.74 m²/g).