Supporting Information

Easy synthesis and characterization of single-crystalline hexagonal prism-shaped \( \alpha \)-Fe\(_2\)O\(_3\) (Hematite) in aqueous media

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Fig. S1. HR-TEM images and electron diffraction pattern (inset) of Hexagonal Fe\(_2\)O\(_3\).

Fig. S2. (A) TEM and (B) SEM images of Fe\(_2\)O\(_3\) synthesized at 90 °C for 12 h without using urea.
Fig. S3. (A) TEM and (B) SEM images of Fe₂O₃ synthesized by addition of urea at room temperature.

Fig. S4. N₂ adsorption/desorption isotherms for the hexagonal prism-shaped α-Fe₂O₃ and pore size distribution (the inset). Solid symbols: adsorption, open symbols: desorption.
Fig. S5. The temperature dependence of ZFC/FC curve of the Hematite $\alpha$-Fe$_2$O$_3$. 