Electronic Supplementary Information

Direct hydrothermal synthesis of single-crystalline triangular nanoprisms structure of Fe₃O₄

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Fig. S1 The edge length distribution of the TNPs.
Fig. S2 (a) XPS spectrum of the as-prepared Fe₃O₄ TNPs. (b) The expanded spectrum of Fe 2p.

Fig. S3 XPS spectrum of Fe 2p for γ-Fe₂O₃.
**Fig. S4** SEM images of Fe₃O₄ prepared using the quantity of NaAc: (a) 1 g, (b) 2 g, (c) 4 g, (d) 5 g with other experiment parameters kept constant (FeCl₃·6H₂O 1 g, EG 20 mL, PDA 10 mL, at 200°C for 12 h).

**Fig. S5** SEM images of as-prepared Fe₃O₄ NCs using (a) 1,6-hexadiamine (b) ethylenediamine with other experiment parameters kept constant (FeCl₃·6H₂O 1 g, NaAc 3 g, EG 20 mL, at 200°C for 12 h).
Fig. S6 (a) SEM image of Fe₃O₄ prepared using DEG as solvent with other experiment parameters kept constant (FeCl₃·6H₂O 1 g, NaAc 3 g, PDA 10 mL, at 200°C for 12 h). (b) SEM image of Fe₃O₄ prepared with the volume ratio of EG to PDA (mL): 20:2, with other experiment parameters kept constant (FeCl₃·6H₂O 1 g, NaAc 3 g, at 200°C for 12 h).