## Supporting Information



Figure S1. TEM image of the synthesized  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts (85 °C, 30 min, 5 mL PEG-200)



Figures S2-S3. AFM images of the synthesized  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts. Height image (left, Figure S2) and phase image (right, FigureS3).



Figure S4. TEM images of the precursors for  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts formed at (a) room temperature, (b) 50 °C and (c) 85 °C.



Figure S5. Lower TEM images of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts formed at 85  $^{\circ}$ C for 30 min in the presence of 10 mL PEG-200.



Figure S6. HRTEM images of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts formed at 85 <sup>o</sup>C for 30 min in the presence of 10 mL PEG-200.



Figure S7. Lower TEM images of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts formed at 85  $^{\circ}$ C for 30 min in the presence of 15 mL PEG-200.



Figure S8. HRTEM images of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanobelts formed at 85 °C for 30 min in the presence of 15 mL PEG-200.