## **Supporting Information**

## Visible-Light Induced Photocatalytic Degradation of Rhodamine B on One-Dimensional Iron Oxide Particles

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## Figure Captions

**Figure S1.** High-resolution TEM image (a) and corresponding HAADF-STEM image (b) of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> NRs. The variations of contrast in the images indicate the porous structure.

**Figure S2**. Micro-Raman spectra for 1D iron oxides before and after photocatalytic reaction.(a) $\alpha$ -FeOOH MRs. (b)  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> MRs. (c)  $\alpha$ -FeOOH NRs. (d)  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> NRs.

Figure S3. Schematic diagram of a needle shaped goethite nanorod.

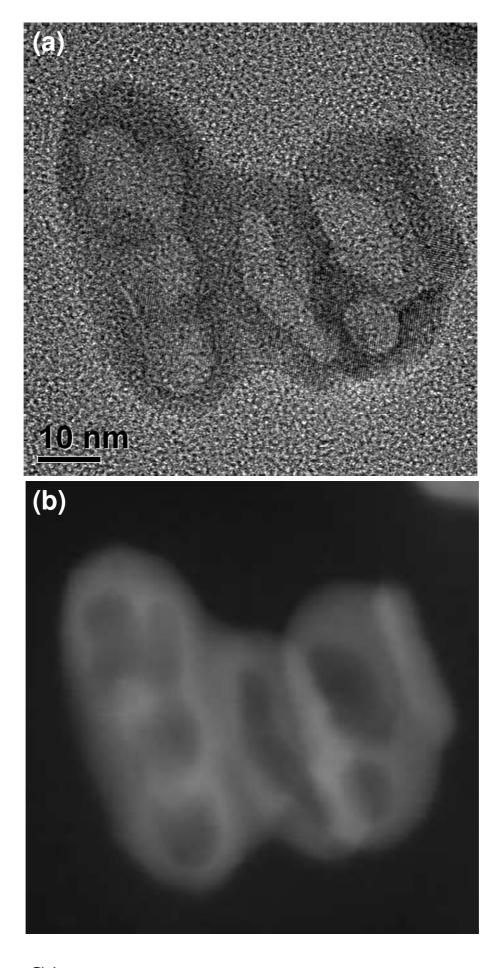
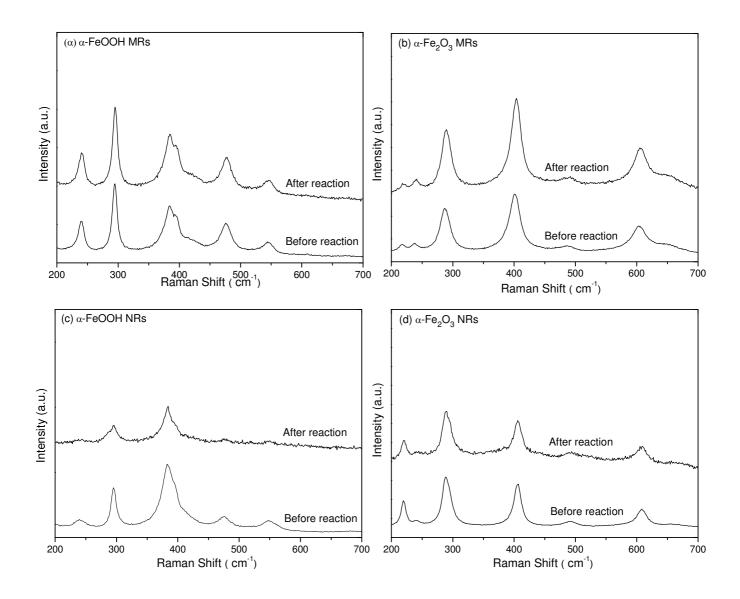


Figure S1



## Figure S2

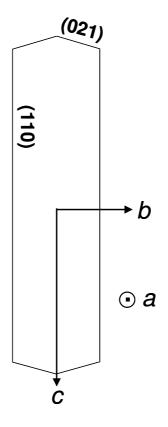


Figure S3