

## SUPPLEMENTARY INFORMATION

# Iron Oxide Nanorings and Nanotubes for Magnetic Hyperthermia: The Problem of Intraparticle Interactions

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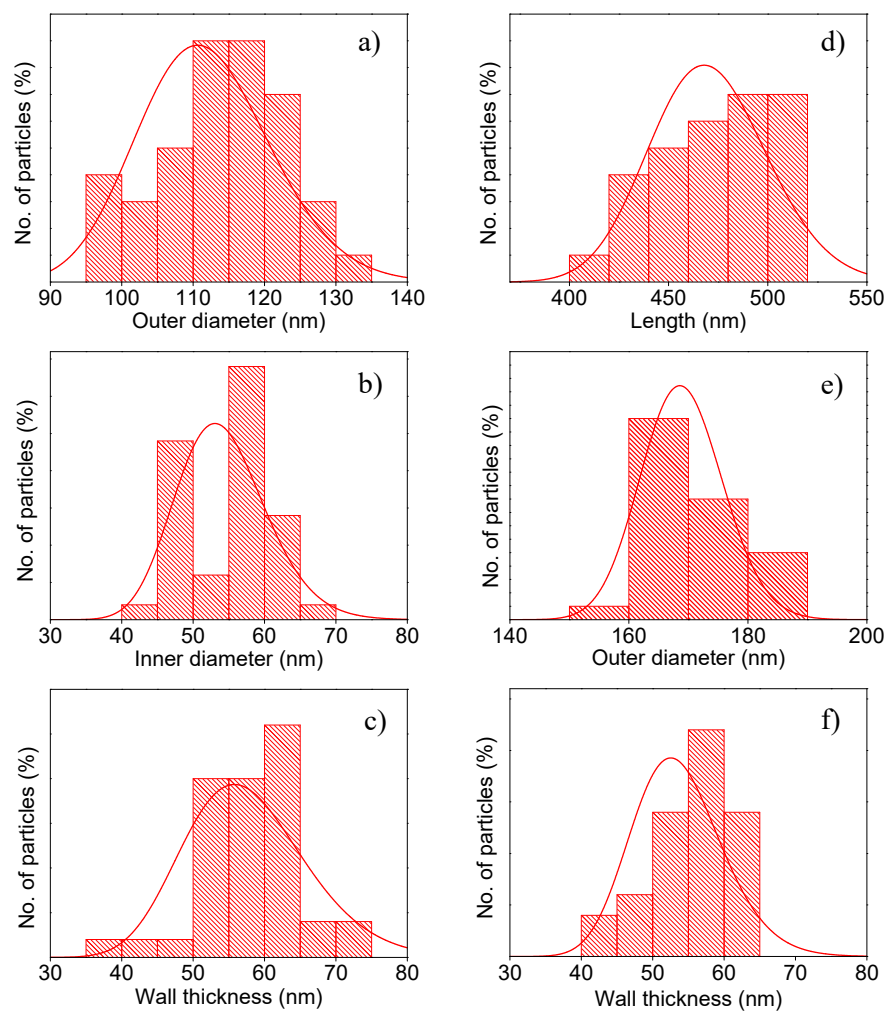
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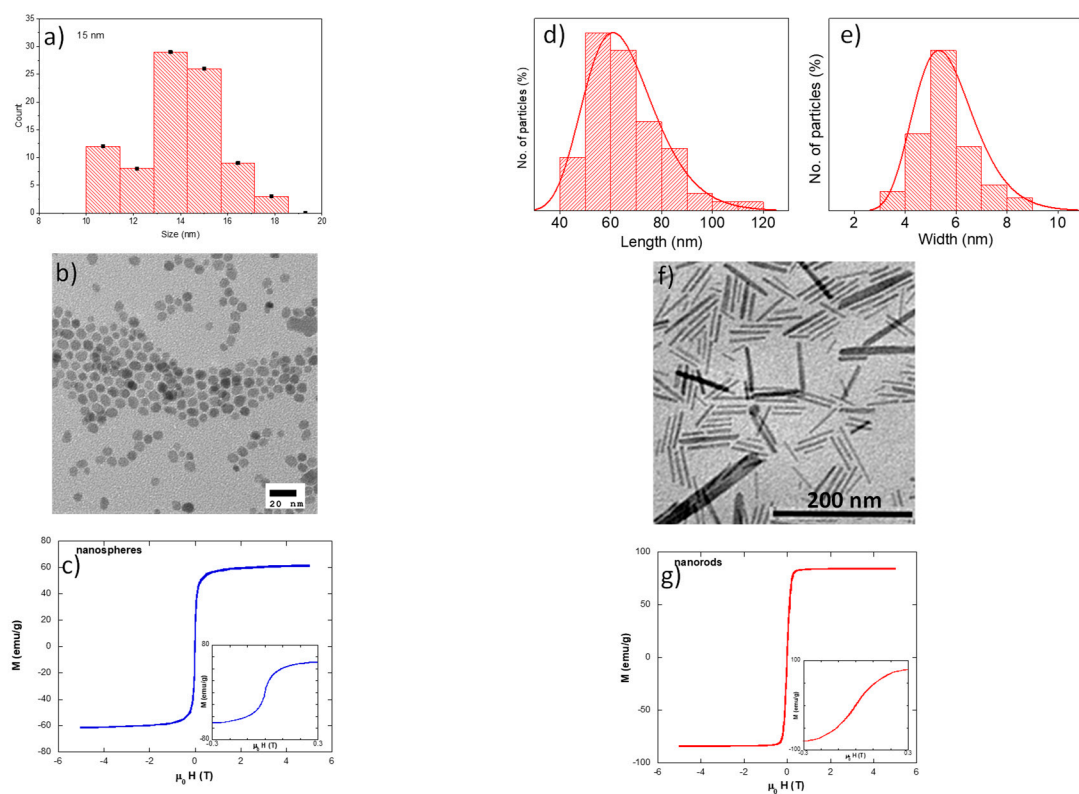
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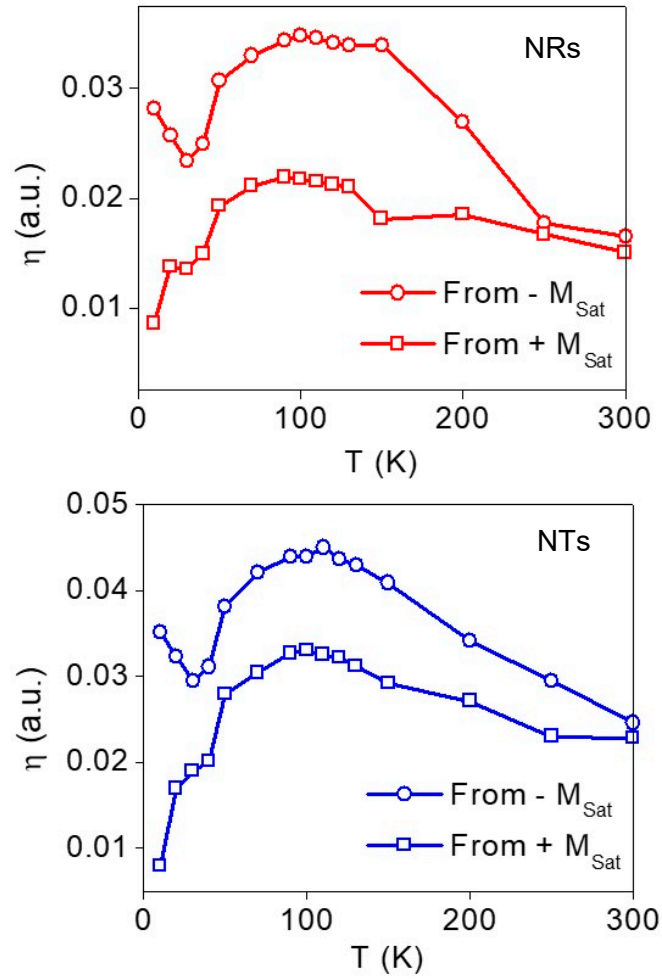
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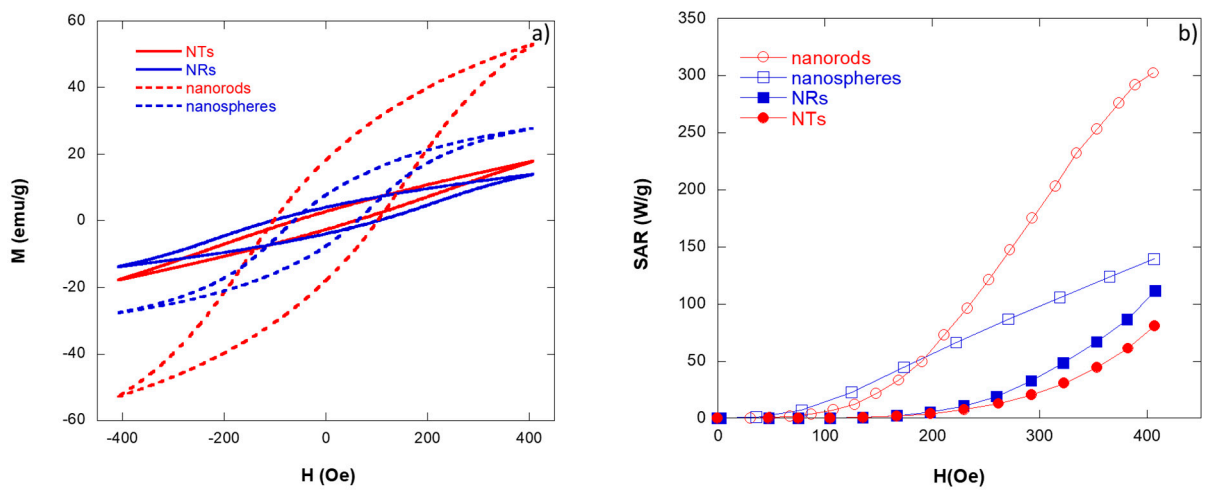
**Figure S1.** The size distribution histograms for (a–c) NRs and (d–f) NTs.



**Figure S2.** TEM images and size distributions of 15 nm nanospheres (a,b) and 65 × 6 nm nanorods (d-f). In addition, the M-H loops measured at 300 K for the nanospheres (c) and the nanorods (g) are also included. The insets are a zoom-in of the low field region of these M-H loops.



**Figure S3.** Peak height difference ( $\eta$ ) curves calculated from positive and negative saturation magnetization ( $M_{\text{sat}}$ ) for NRs and NTs.



**Figure S4.** (a) AC loops and (b) SAR vs  $H$  curves for NTs, NRs, and 15 nm nanospheres and 65 × 6 nm nanorods, similar to the constituent nanograins.