Supporting Information

An Effective Way to Increase the High-frequency Permeability of Fe_3O_4 Nanorods

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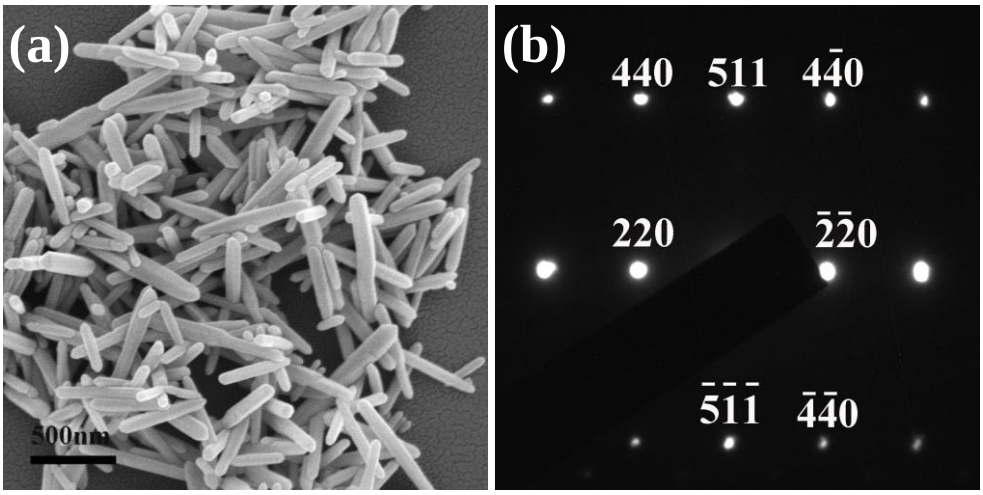

Fig. S1. (a).SEM image of the as-prepared α-Fe_2O_3 NRs; (b). SAED image of the Fe_3O_4 NRs

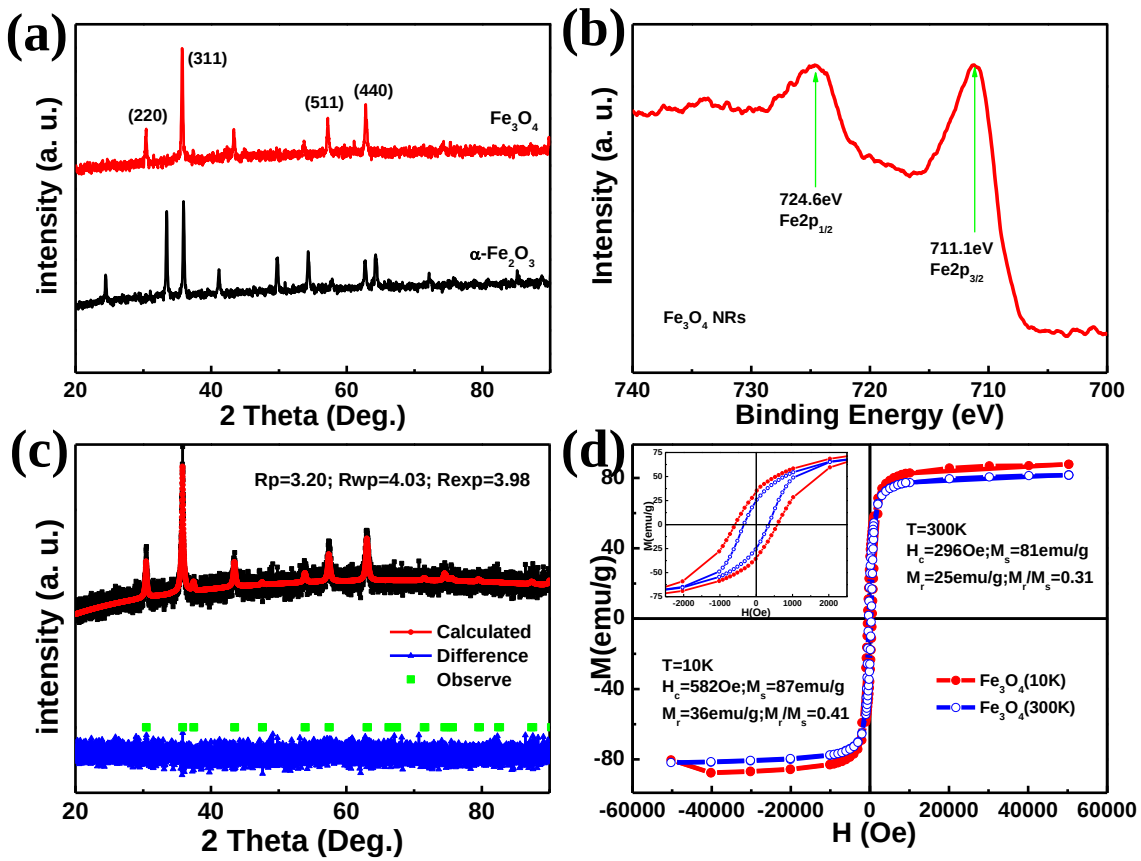

Fig. S2 (a). XRD patterns of α-Fe_2O_3 and Fe_3O_4 NRs; (b). XPS spectra of Fe_3O_4 NRs. (c). Background-subtracted XRD pattern of Fe_3O_4 NRs and Pawley fit. (d). Magnetization hysteresis loops for Fe_3O_4 NRs at 300 and 10K;

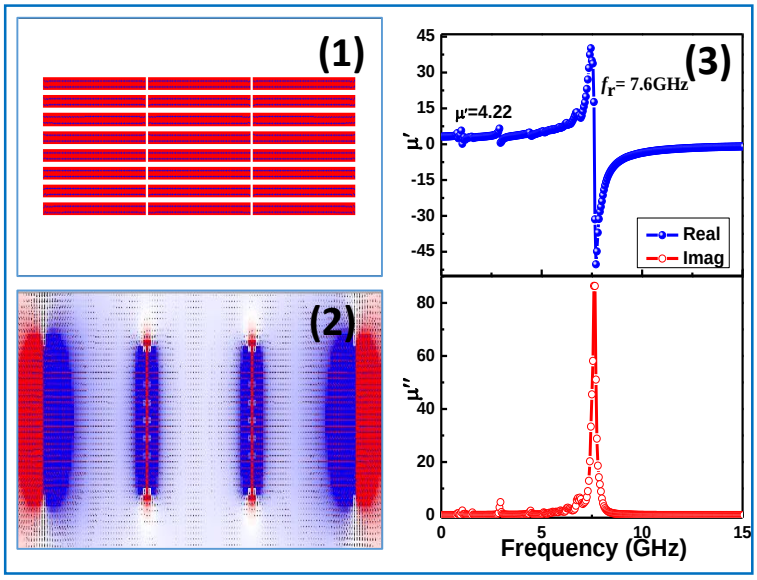

Fig. S3. Tight oriented Fe_3O_4 NRs of micromagnetic calculations results (M_s =0.6T) The (1), (2), and (3) diagram represent the magnetic moment equilibrium, distribution of demagnetizing field, and complex permeability of Fe_3O_4 NRs, respectively.