Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Figure S1. Continuous flow reactor for Fe_3O_4 and ferrite nanoparticles production.

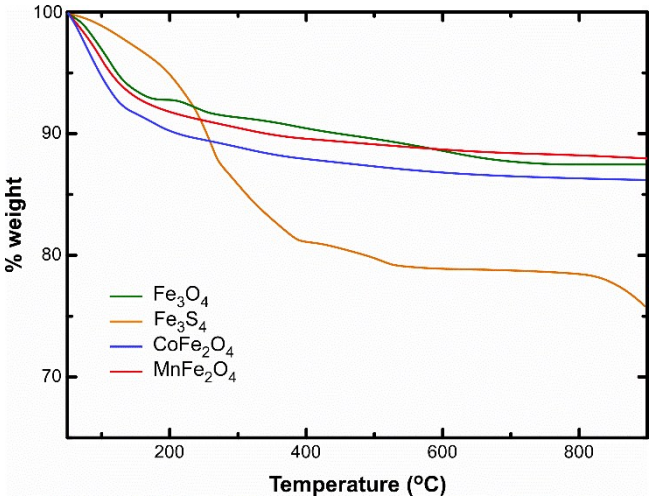

Figure S2. Thermogravimetric curves of uncoated nanoparticles.

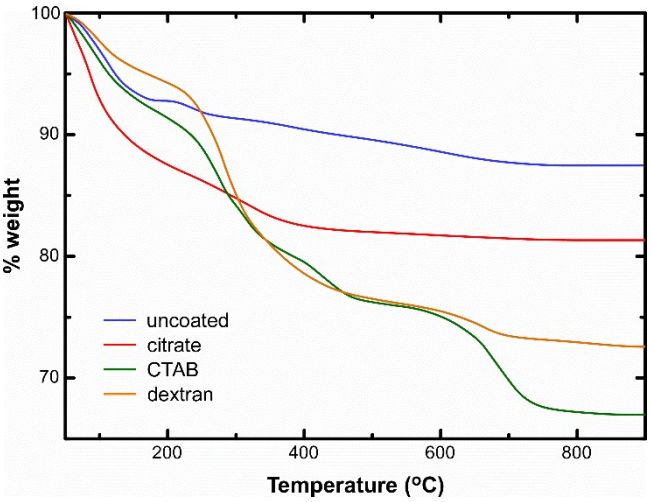

Figure S3. Thermogravimetric curves of uncoated and functionalized Fe_3O_4 nanoparticles with citrate, CTAB and dextran.

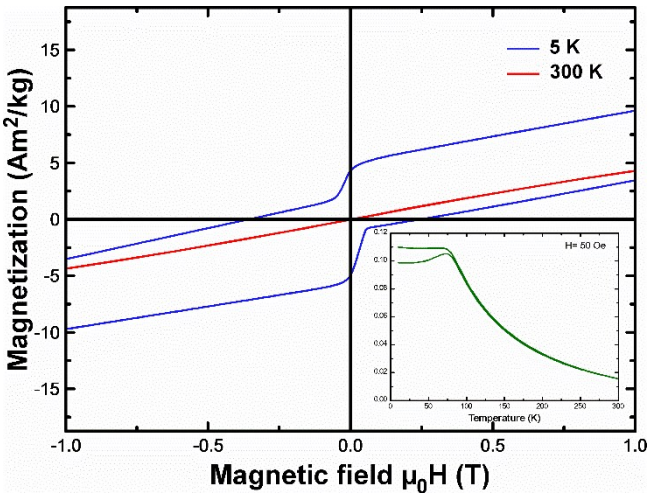

Figure S4. Magnetic hysteresis loops of citrate-coated $CoFe_2O_4$ nanoparticles at 5 K and 300 K. The inset shows ZFC/FC curves in an external field of 50 Oe.

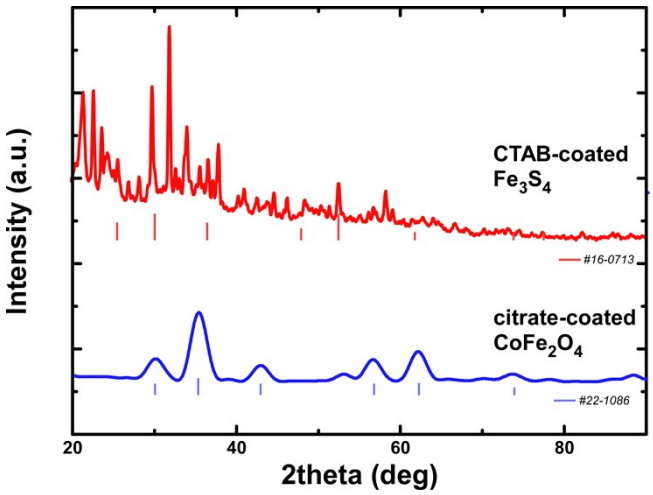

Figure S5. XRD diagram of citrate-$CoFe_2O_4$ and CTAB-Fe_3S_4 nanoparticles.

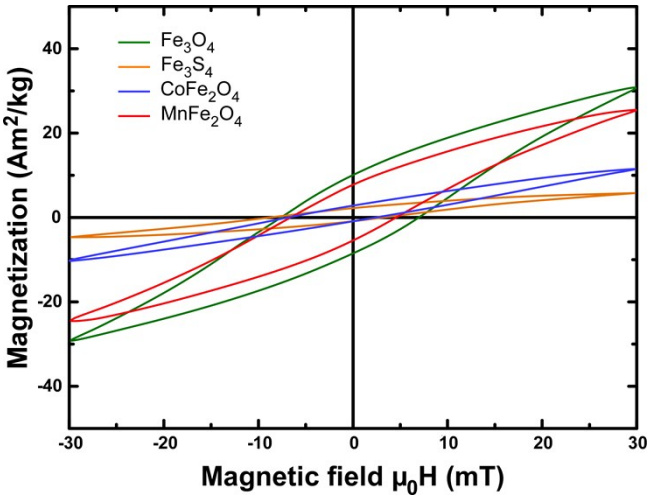

Figure S6. Minor loops at 30 mT of uncoated nanoparticles (data not normalized to metal content).

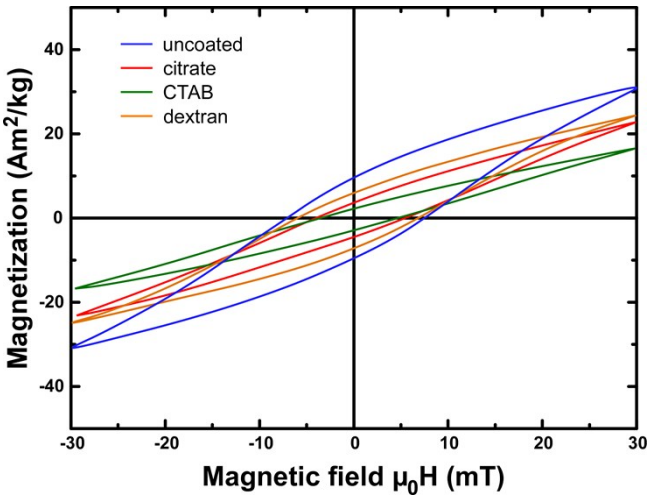

Figure S7. Minor loops at 30 mT of functionalized Fe_3O_4 nanoparticles (data not normalized to metal content).

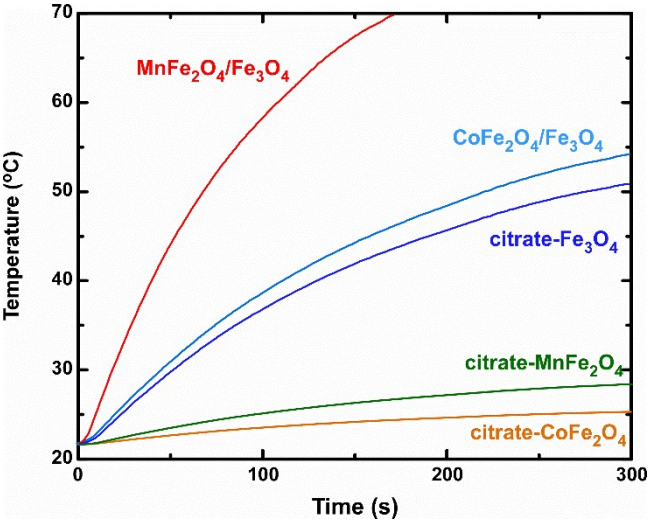

Figure S8. Magnetic hyperthermia heating curves of citrate-coated and binary nanoparticle systems at 30 mT and 765 kHz.

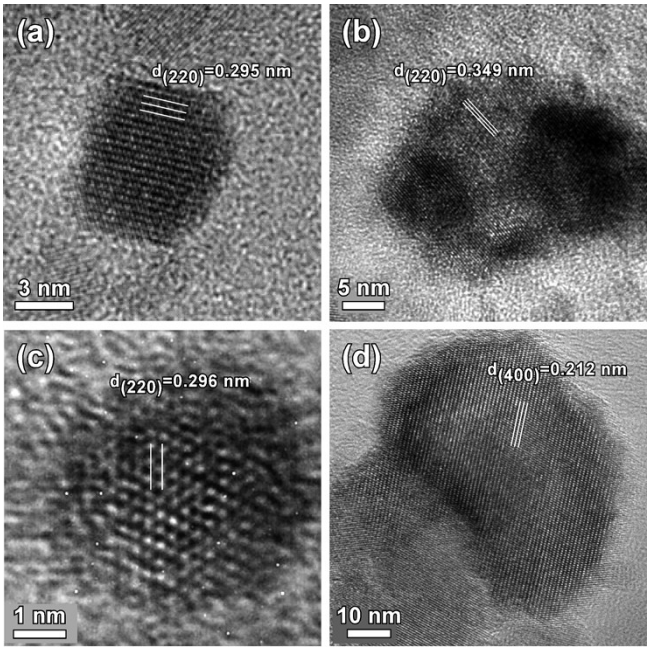

Figure S9. HRTEM images of citrate-coated Fe_3O_4 (a), Fe_3S_4 (b), $CoFe_2O_4$ (c) and $MnFe_2O_4$ (d) nanoparticles.