

Electronic Supplementary Information (ESI)

Transformation of hydrophobic iron oxide nanoparticles to hydrophilic and biocompatible maghemite nanocrystals for highly efficient MRI contrast agent

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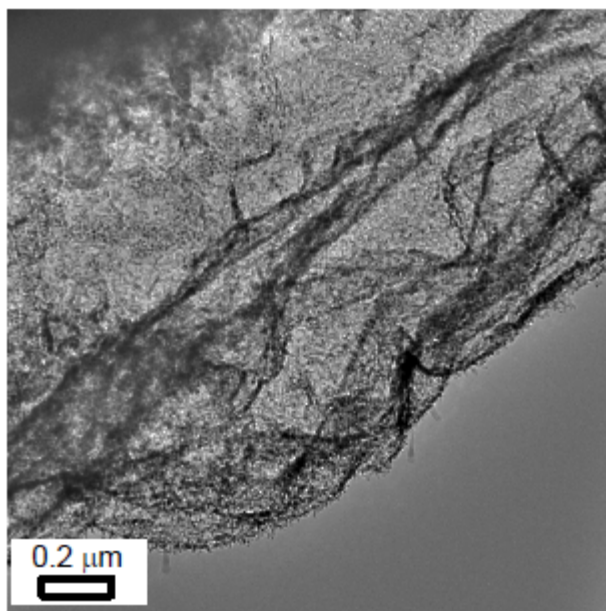


Fig. S1 TEM image of iron oxide nanocrystals supported on salt after thermal treatment. Large crystal is sodium sulfate, and tiny spots are iron oxide nanocrystals.

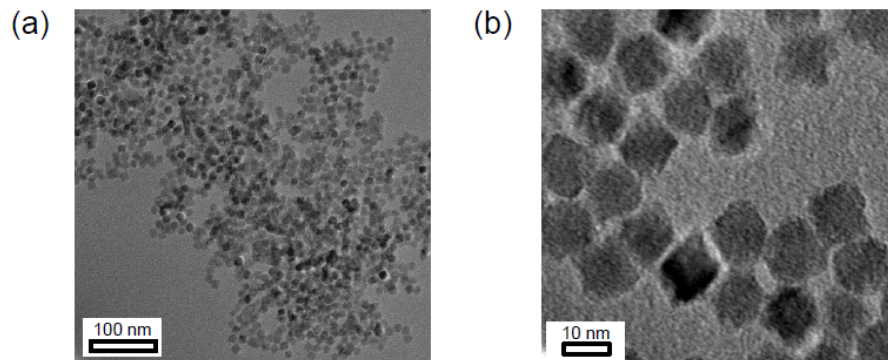


Fig. S2 (a, b) TEM images of iron oxide nanocrystals after MBW process.

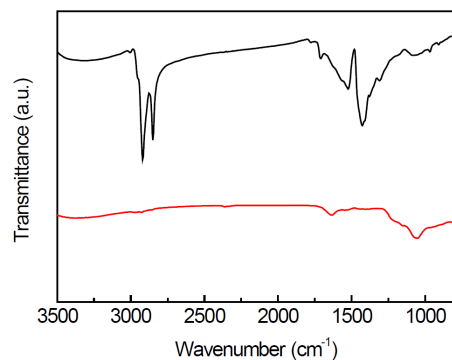


Fig. S3 Fourier transform infrared (FT-IR) spectra of as-synthesized nanoparticles (black) and iron oxide nanocrystals after MBW process (red). After MBW process, characteristic bands of oleic acid disappeared.

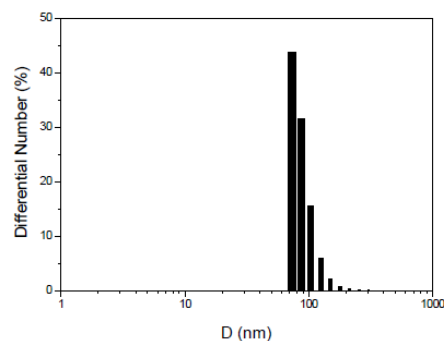


Fig. S4 Hydrodynamic diameter of DEAE-dextran coated iron oxide nanocrystals.

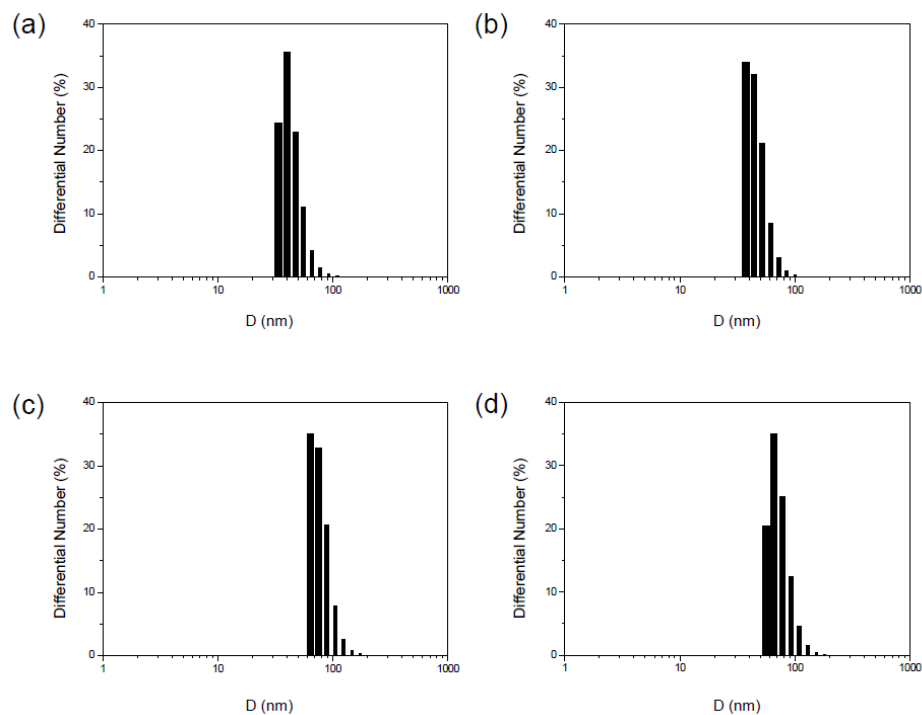


Fig. S5 (a) Hydrodynamic diameter of DS coated iron oxide nanocrystals (0 day). (b) Hydrodynamic diameter of DS coated iron oxide nanocrystals after 54 days. (c) Hydrodynamic diameter of CM-dextran

coated iron oxide nanocrystals (0 day). (d) Hydrodynamic diameter of CM-dextran coated iron oxide nanocrystals after 54 days.

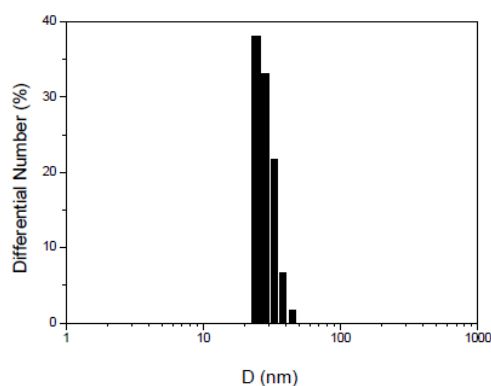


Fig. S6 Hydrodynamic diameter of PEG-phospholipid coated iron oxide nanoparticles.

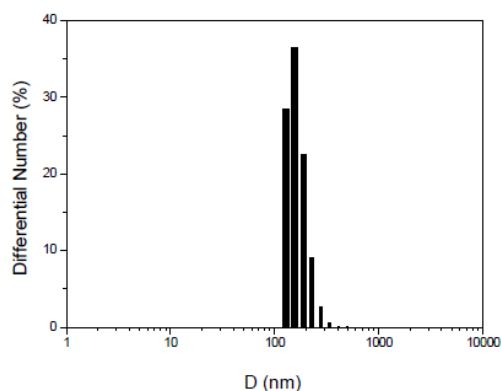


Fig. S7 Hydrodynamic diameter of uncharged dextran (M_r 1,500) coated iron oxide nanocrystals.

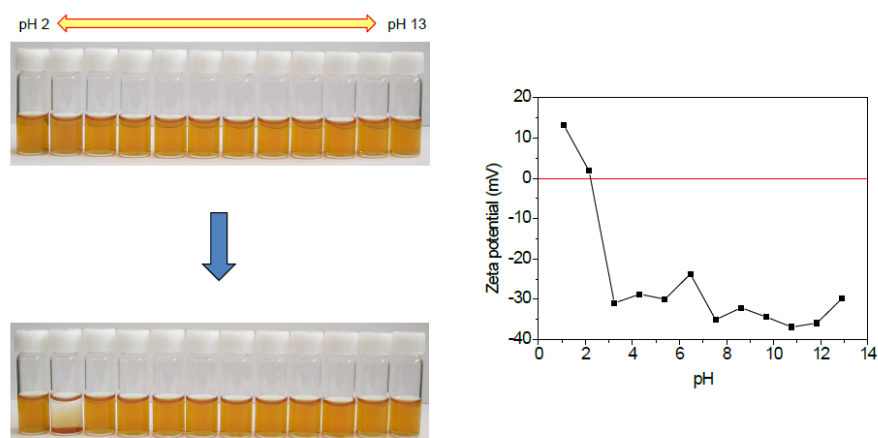


Fig. S8 Photograph and zeta potential data of CM-dextran coated iron oxide nanocrystals in various pH conditions.

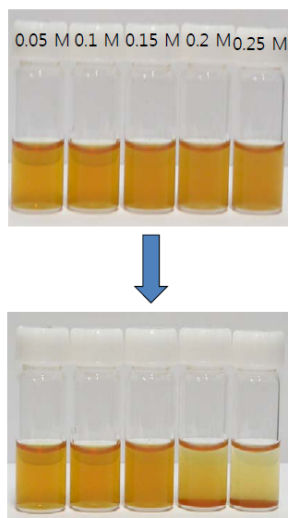


Fig. S9 Photograph of CM-dextran coated iron oxide nanocrystals in various NaCl concentrations.

Table S1 Hydrodynamic diameters and zeta potentials of iron oxide nanocrystals after MBW process according to pH.

pH	Size (nm)	Zeta potential (mV)
3	39.2	38.6
7	1555.9	-10.73
10	76.5	-34.99