Supporting Information

Compact Zwitterion-coated Iron Oxide Nanoparticles for *In Vitro* and *In Vivo* Imaging

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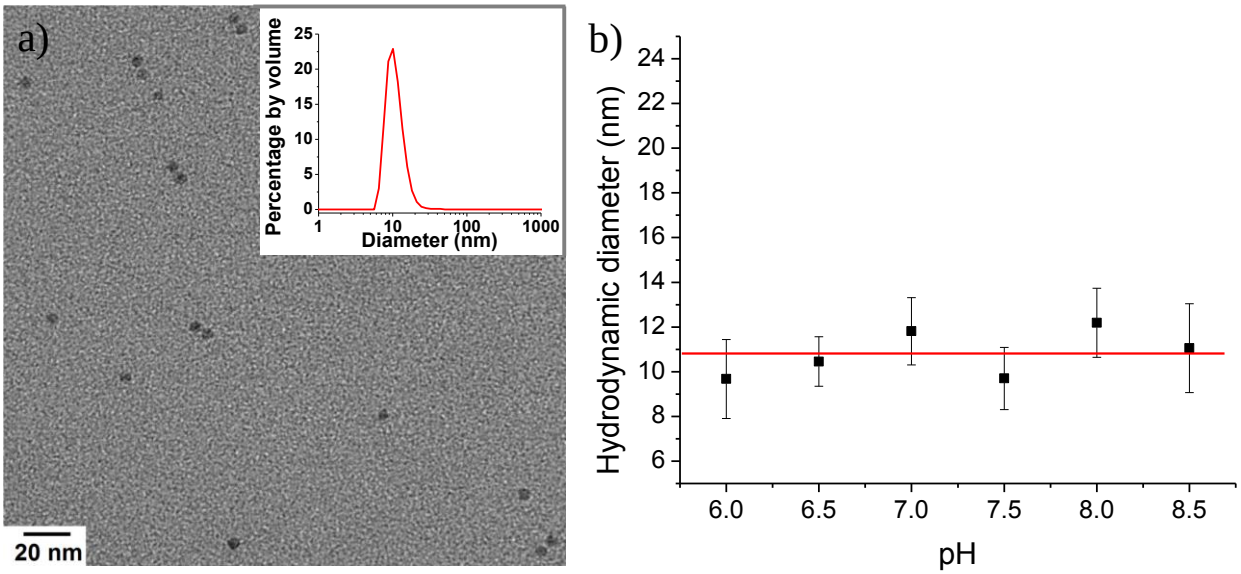

Figure S1. a) A TEM image of ZDS-NPs (inset: size distribution of ZDS-NPs at pH = 7.5) and b) hydrodynamic size of ZDS-NPs versus pH.

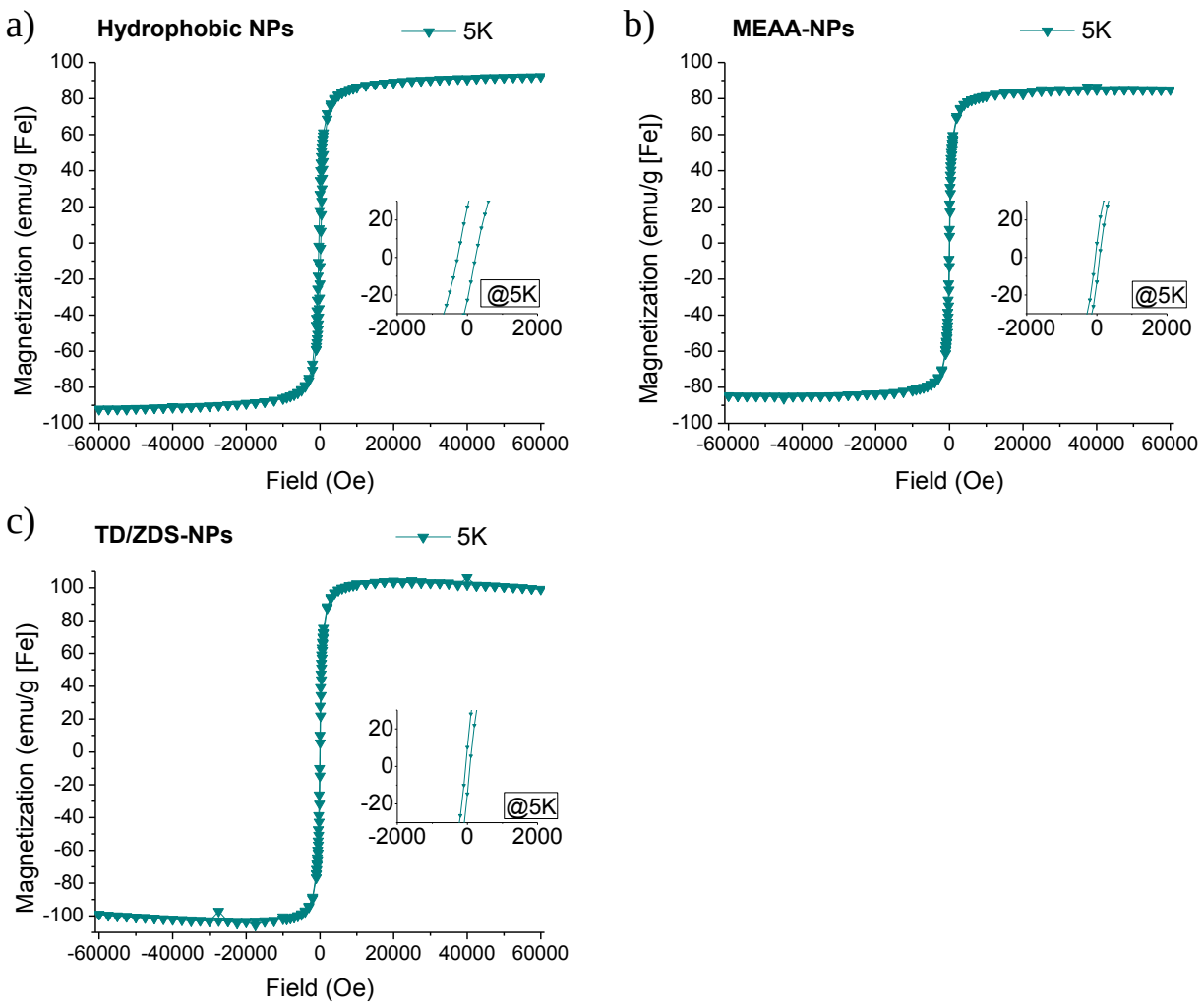

Figure S2. SQUID curves at 5K of a) hydrophobic NPs, b) MEAA-NPs, and c) TD/ZDS-NPs (inset: magnified SQUID curves near zero field).

The M_s of MEAA-NPs and TD/ZDS-NPs at room temperature were found to be ~63 and ~74 emu/g [Fe] (Figure 2b and c), respectively. These values are reasonably close to the M_s value of hydrophobic NPs (~74 emu/g [Fe]). The changes of magnetic coercivity among the insets of Figure S2a-c are presumably originated from the altered magnetic coupling between NPs, a possible result of different ligand coatings (i. e. spacing intervals) of NPs.[1]

1. Gross, A. F.; Diehl, M. R.; Beverly, K. C.; Richman, E. K.; Tolbert, S. H. *J. Phys. Chem. B* **2003,** *107*, 5475.