Supporting Information

Fabrication of Mono-dispersed Silica-coated Quantum Dot-assembled Magnetic Nanoparticles

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Table S1. Classification of the fabricated NPs.

Nanoparticles	Structure of exploited QDs	Emission peak of QD fluorescence	Property of exploited silica NPs
SiO_2@red-QDs NPs	CdSe@CdS@ZnS	620 nm	Bare SiO_2 NPs[a]
Fe_3O_4@SiO_2@red-QDs NPs	CdSe@CdS@ZnS	620 nm	Fe_3O_4@SiO_2 NPs[b]
Fe_3O_4@SiO_2@green-QDs NPs	CdSe@CdS@ZnS	540 nm	Fe_3O_4@SiO_2 NPs[b]

a : NPs which were fabricated using general Stöber method[1].
b : NPs which were fabricated using by encapsulating PVP-coated Fe_3O_4 NPs[2].

[1] Stober, W., A. Fink, and E. Bohn, *Controlled Growth of Monodisperse Silica Spheres in Micron Size Range.* Journal of Colloid and Interface Science, 1968. **26**(1): p. 62-&
[2] Rho, W.Y., et al., *Facile synthesis of monodispersed silica-coated magnetic nanoparticles.* Journal of Industrial and Engineering Chemistry, 2014. **20**(5): p. 2646-2649.

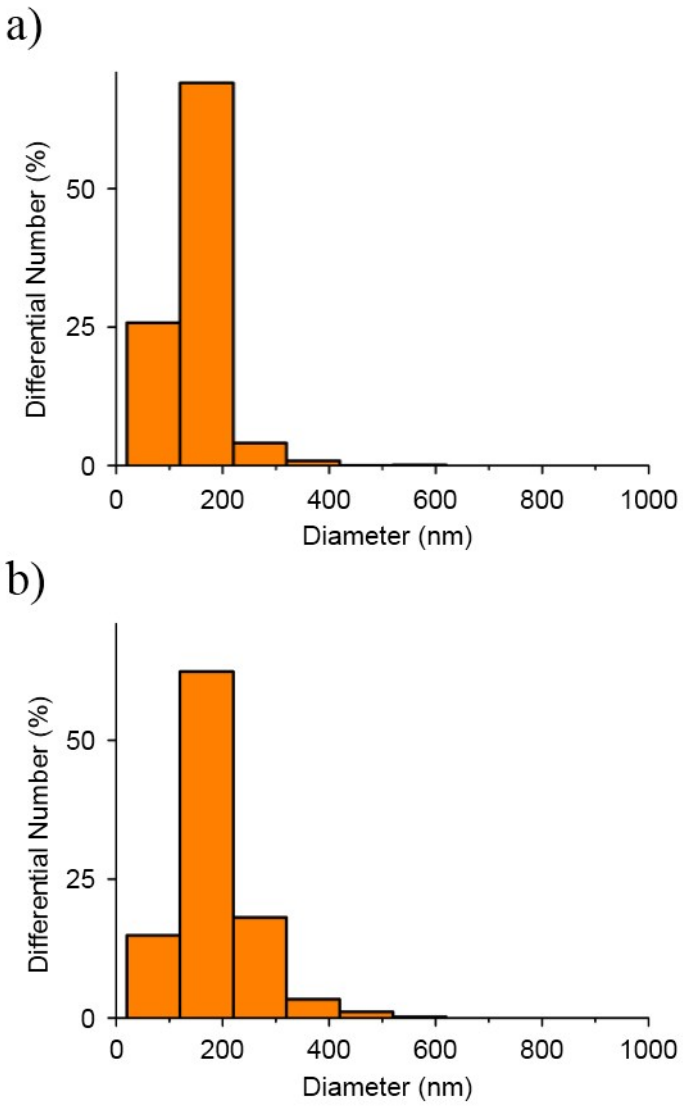

Figure S1. Hydrodynamic size distribution analysis of NPs. a) Fe_3O_4@SiO_2 NPs, b) Fe_3O_4@SiO_2@QDs NPs.

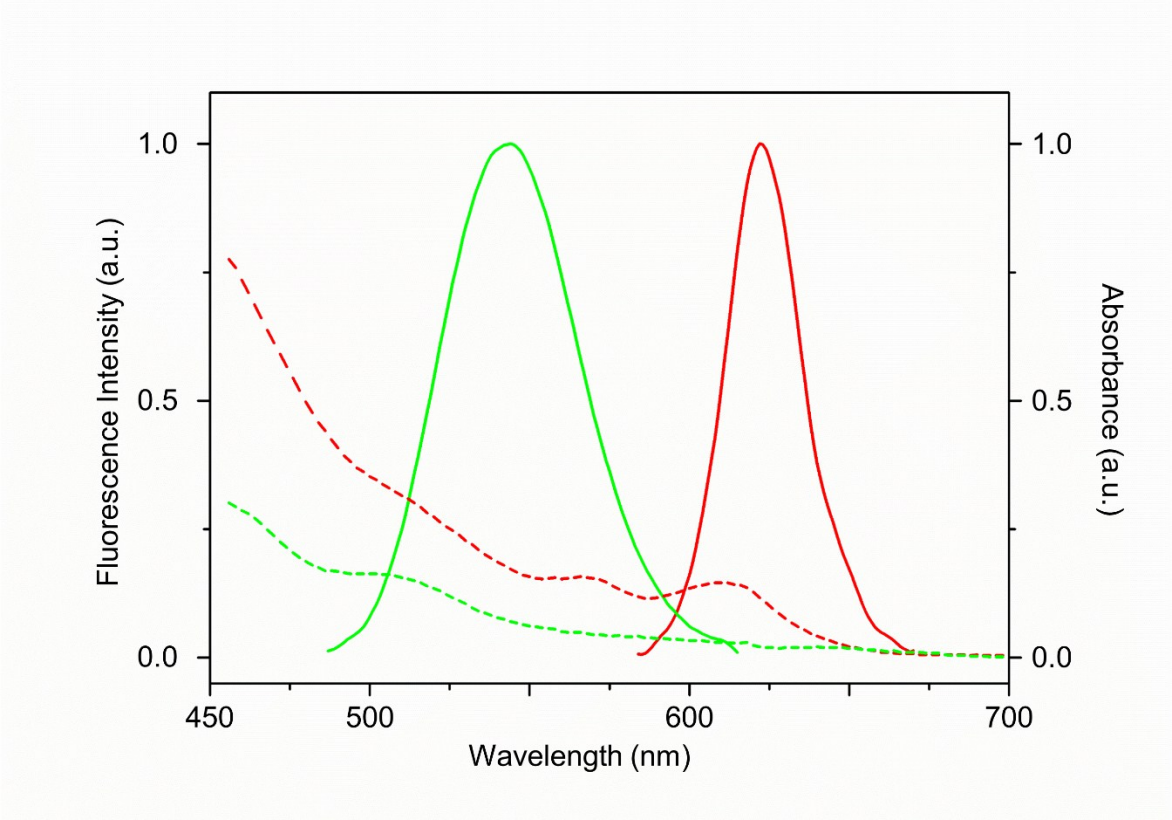

Figure S2. Ultraviolet (UV) absorption (dashed line) and fluorescence emission (solid line) spectra of the original red and green QDs.

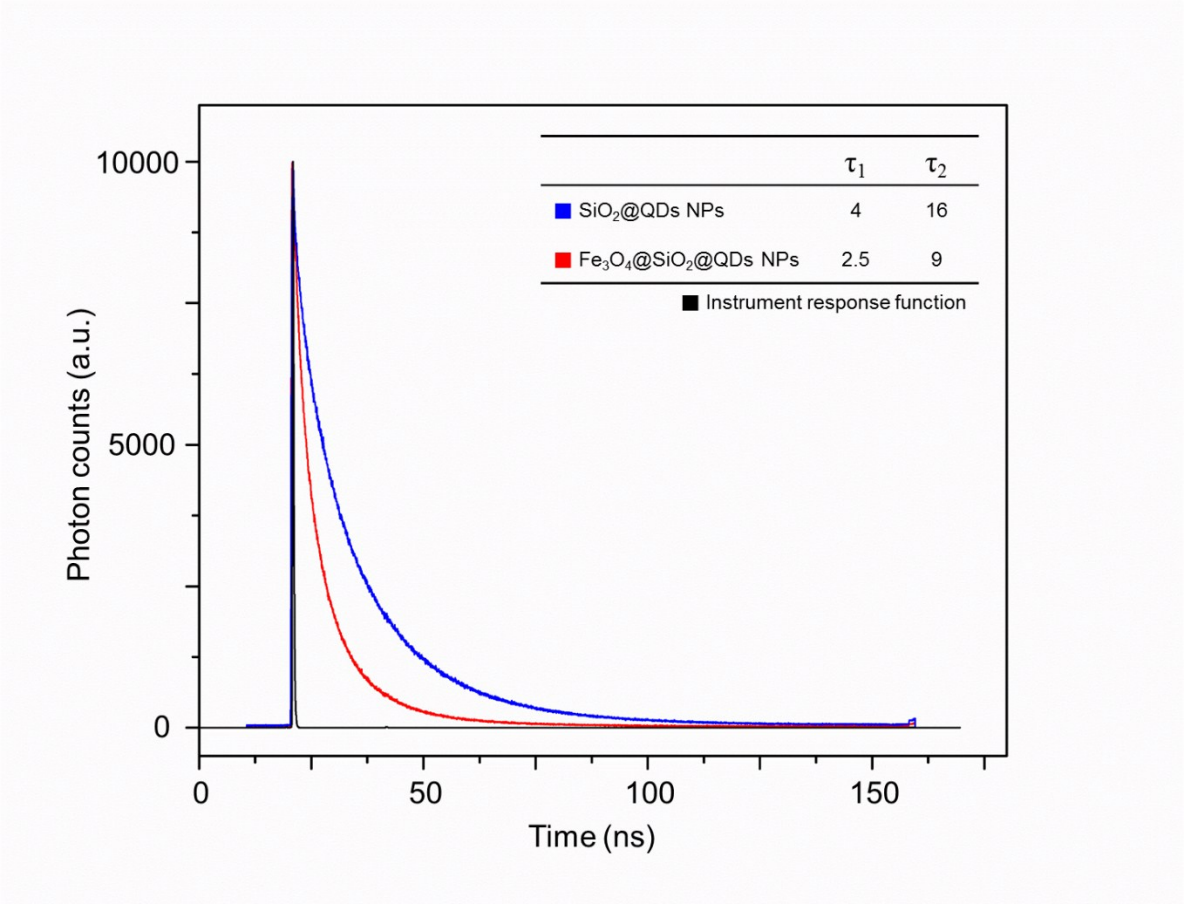

Figure S3. Fluorescence decay (405 nm excitation) of SiO_2@red-QDs NPs and Fe_3O_4@SiO_2@red-QDs NPs monitored at 583/75 nm and the corresponding instrument response function. The decays were fitted using a multi-exponential function and exhibited at least two distinct lifetimes (τ_1 and τ_2).