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Supporting Information

One-Pot Synthesis of Water-Soluble and Biocompatible Superparamagnetic Gadolinium-doped Iron Oxide Nanoclusters

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Table S1. The r_2 and r_1 of GdIO NCs with different Gd doping amounts at 1.5 T

GdIO NCs	r_1 ([Fe] mM·s^{-1})	r_2 ([Fe] mM·s^{-1})	r_2/r_1
$Gd_{0.26}Fe_{2.74}O_4$	2.06	844.8	410.1
$Gd_{0.36}Fe_{2.64}O_4$	3.54	974.0	275.1
$Gd_{0.45}Fe_{2.55}O_4$	5.06	859.7	169.9
$Gd_{0.53}Fe_{2.47}O_4$	4.29	703.8	164.1

Table S2. The r_2 and r_1 of GdIO NCs with different Gd doping amounts at 7 T

GdIO NCs	r_1 ([Fe] mM·s^{-1})	r_2 ([Fe] mM·s^{-1})	r_2/r_1
$Gd_{0.26}Fe_{2.74}O_4$	1.45	765.7	528.1
$Gd_{0.36}Fe_{2.64}O_4$	2.85	768.5	269.6
$Gd_{0.45}Fe_{2.55}O_4$	4.49	633.6	141.1
$Gd_{0.53}Fe_{2.47}O_4$	3.36	566.3	168.5

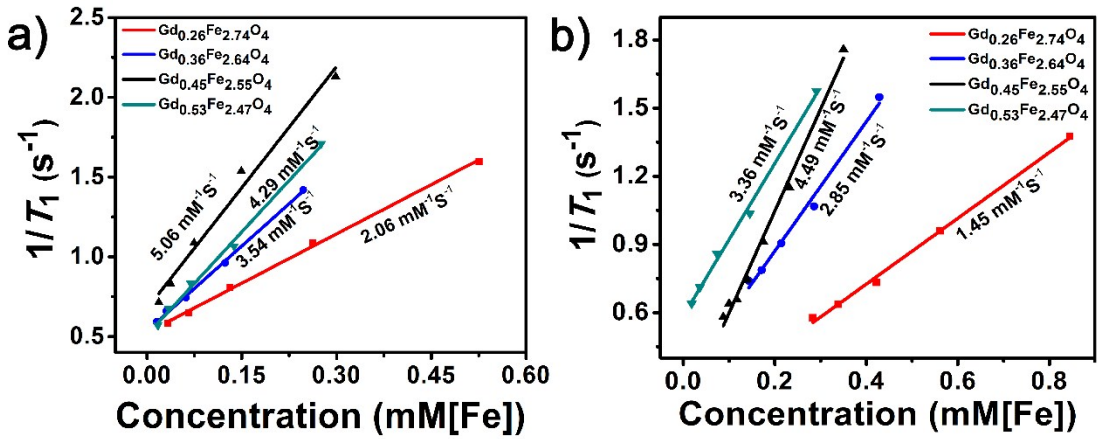

Fig. S1. Plots of the inverse longitudinal relaxation times ($1/T_1$) versus Fe concentrations at (a) 1.5 T and (b) 7 T, respectively.

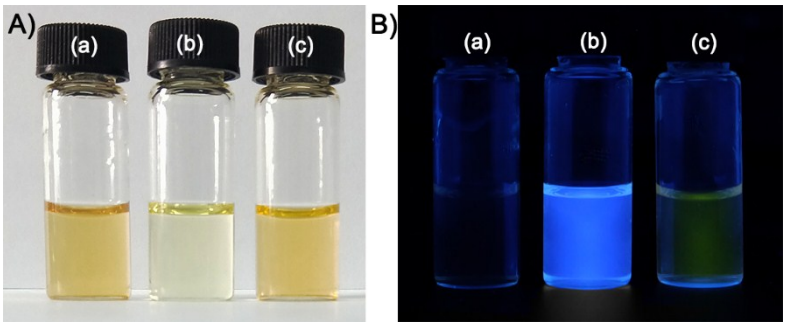

Fig. S2. A) Photograph of aqueous suspensions of (a) $Gd_{0.45}Fe_{2.55}O_4$ NCs, (b) FITC alone and (c) FITC@$Gd_{0.45}Fe_{2.55}O_4$ NCs. B) Photograph under 365 nm UV irradiation.

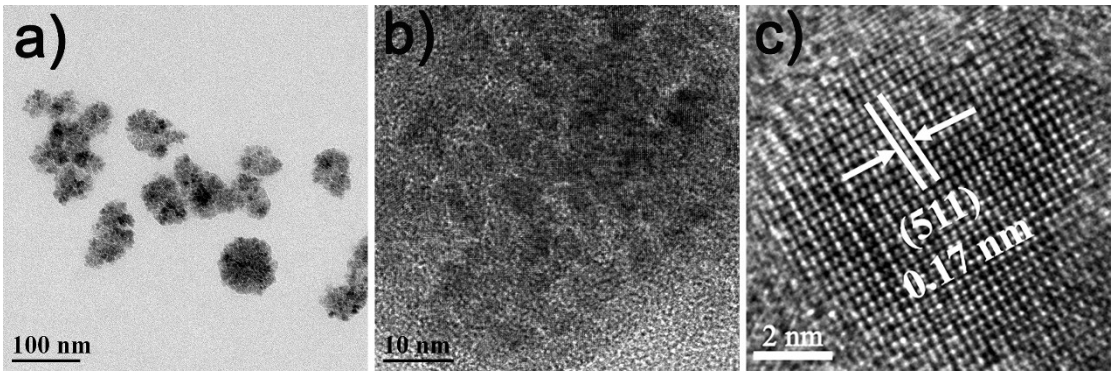

Fig. S3 TEM and high-resolution TEM images of $Gd_{0.53}Fe_{2.47}O_4$ NCs.

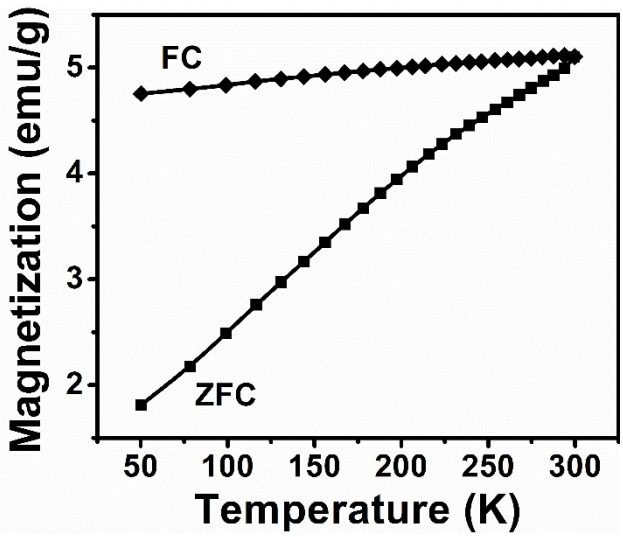

Fig. S4 The field-cooling (FC) and zero-field-cooling (ZFC) magnetization of $Gd_{0.26}Fe_{2.74}O_4$ NCs as a function of temperature measured in an external magnetic field (50 Oe).

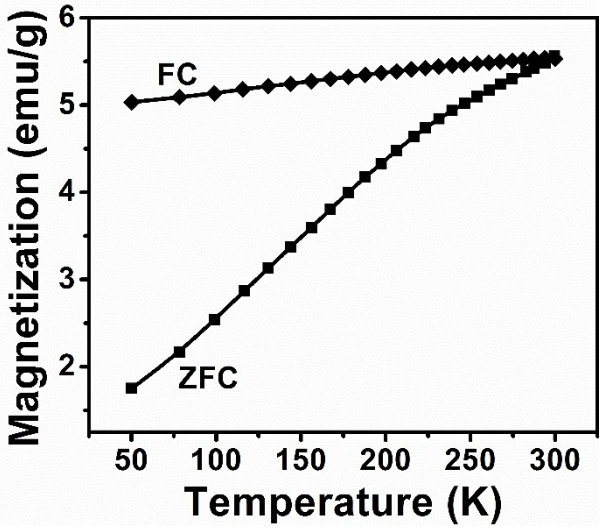

Fig. S5 The field-cooling (FC) and zero-field-cooling (ZFC) magnetization of $Gd_{0.36}Fe_{2.64}O_4$ NCs as a function of temperature measured in an external magnetic field (50 Oe).

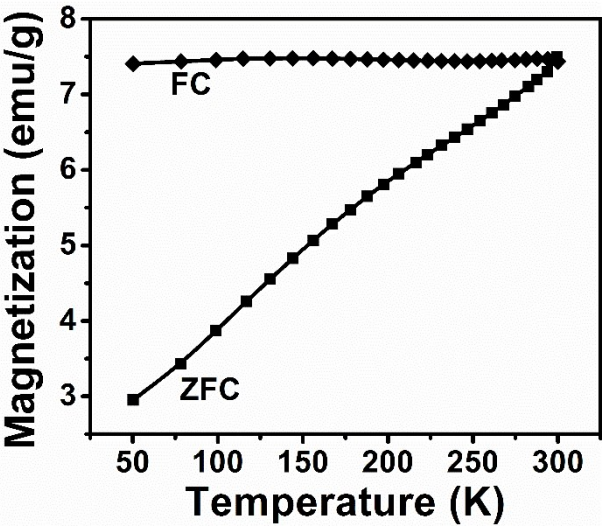

Fig. S6 The field-cooling (FC) and zero-field-cooling (ZFC) magnetization of $Gd_{0.45}Fe_{2.55}O_4$ NCs as a function of temperature measured in an external magnetic field (50 Oe).

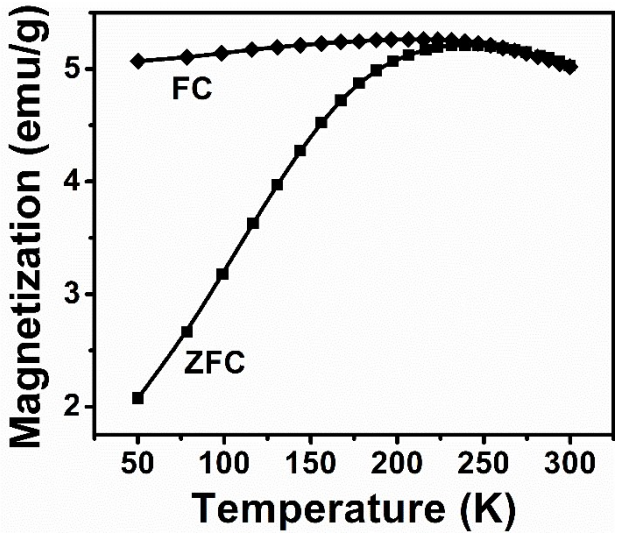

Fig. S7 The field-cooling (FC) and zero-field-cooling (ZFC) magnetization of $Gd_{0.53}Fe_{2.47}O_4$ NCs as a function of temperature measured in an external magnetic field (50 Oe).