Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

A general top-down approach to synthesize rare earth doped-Gd_2O_3 nanocrystals as dualmodal contrast agents

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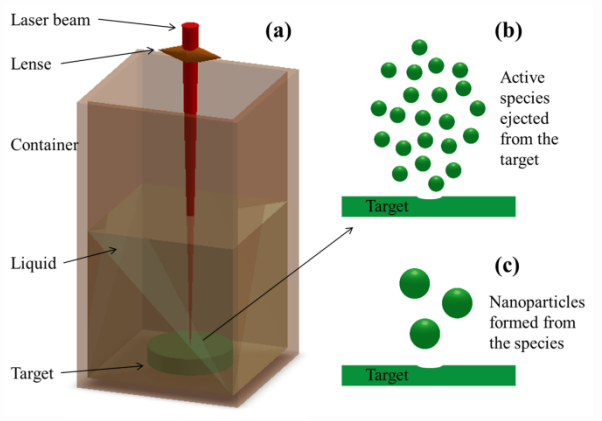

Figure S1 (a) Experimental setup of Laser Ablation in Liquid (LAL). (b) Active species ejected from the target after energy absorption of the focused laser. (c) Nanoparticles formed from the active species aggregation.

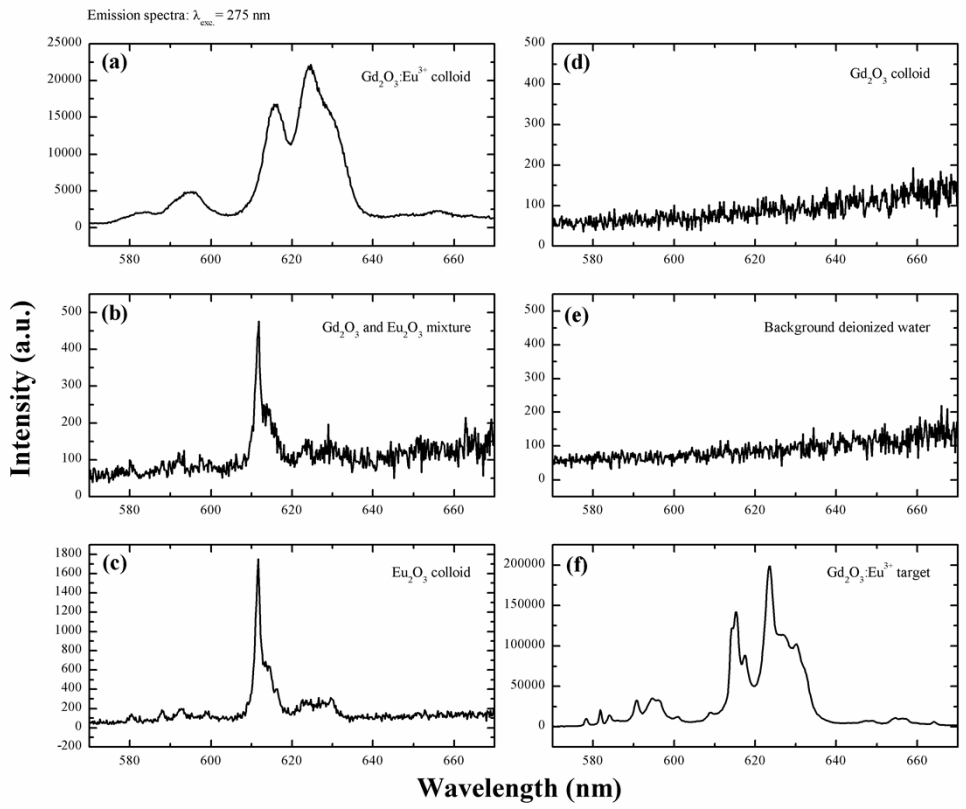

Figure S2. Emission spectra of Gd_2O_3:Eu^{3+} colloid, Gd_2O_3 and Eu_2O_3 mixture, Eu_3O_3 colloid, Gd_2O_3 colloid, background deionized water, and Gd_2O_3:Eu^{3+} target respectively.

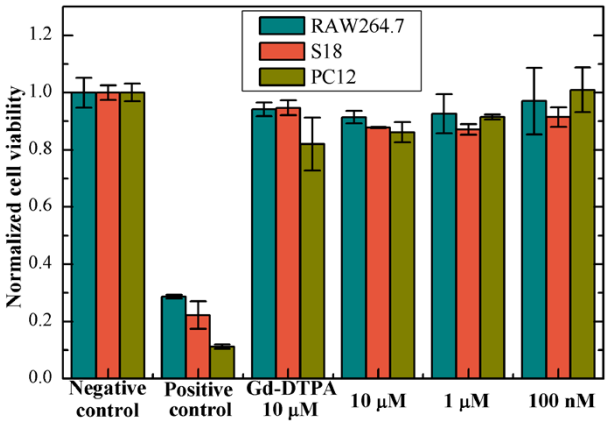

Figure S3 Cell viability of RAW264.7, S18, and PC12 cells after co-incubation with different concentrations of Gd2O3:Eu3+ nanoparticles (10μM, 1μM and 100nM Gd ion concentrations) for 48h, compared with Gd-DTPA (10μM), negative control (DMEM), and positive control (5%DMSO).

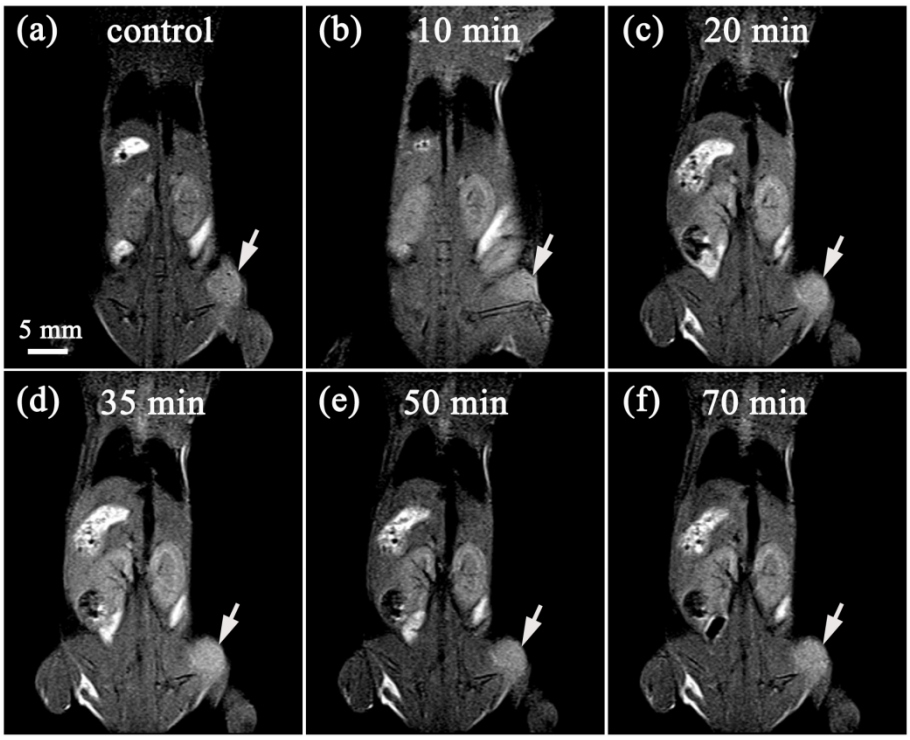

Figure S4. In vivo MRI of a NPC CNE-2 xenografted tumor. Before (a), 10min (b), 20min (c), 35min (d), 50min (e), and 70min(f) after injection of the $Gd_2O_3:Eu^{3+}$ nanoparticles (15 μmol kg^{-1}). The tumor get the best imaging enhancement after 35min of the particle injection.