

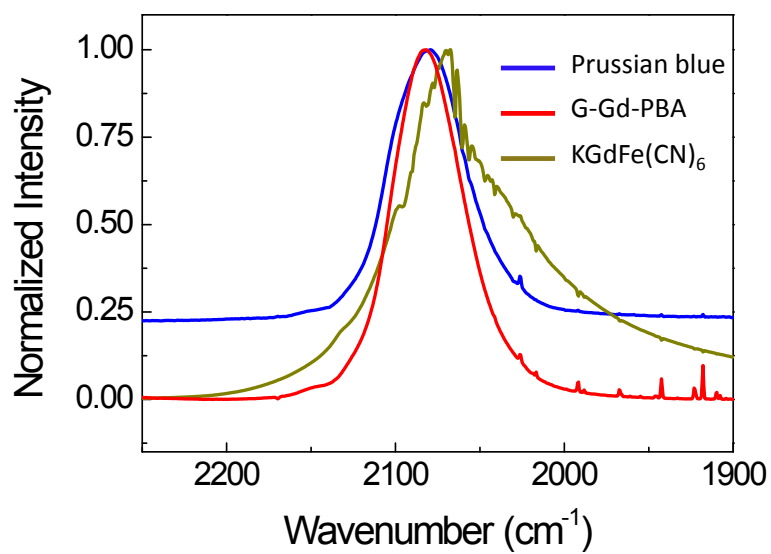
**Supporting Information**

**One-Step Synthesis of Gradient Gadolinium  
Ironhexacyanoferrate Nanoparticles: A New Particle  
Design Easily Combining MRI Contrast and  
Photothermal Therapy**

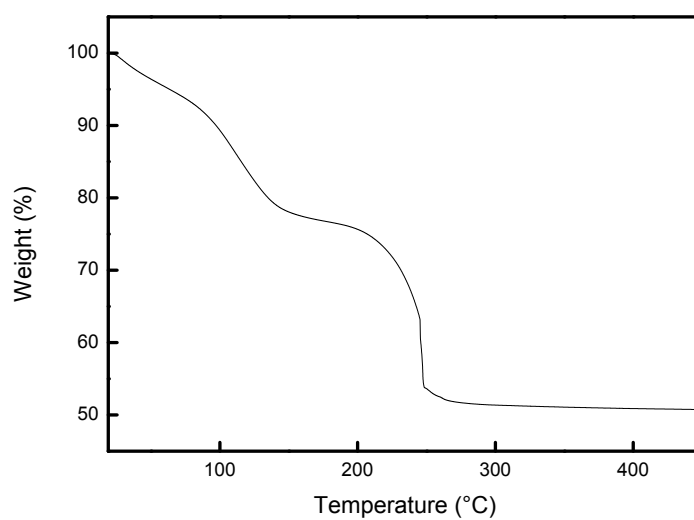
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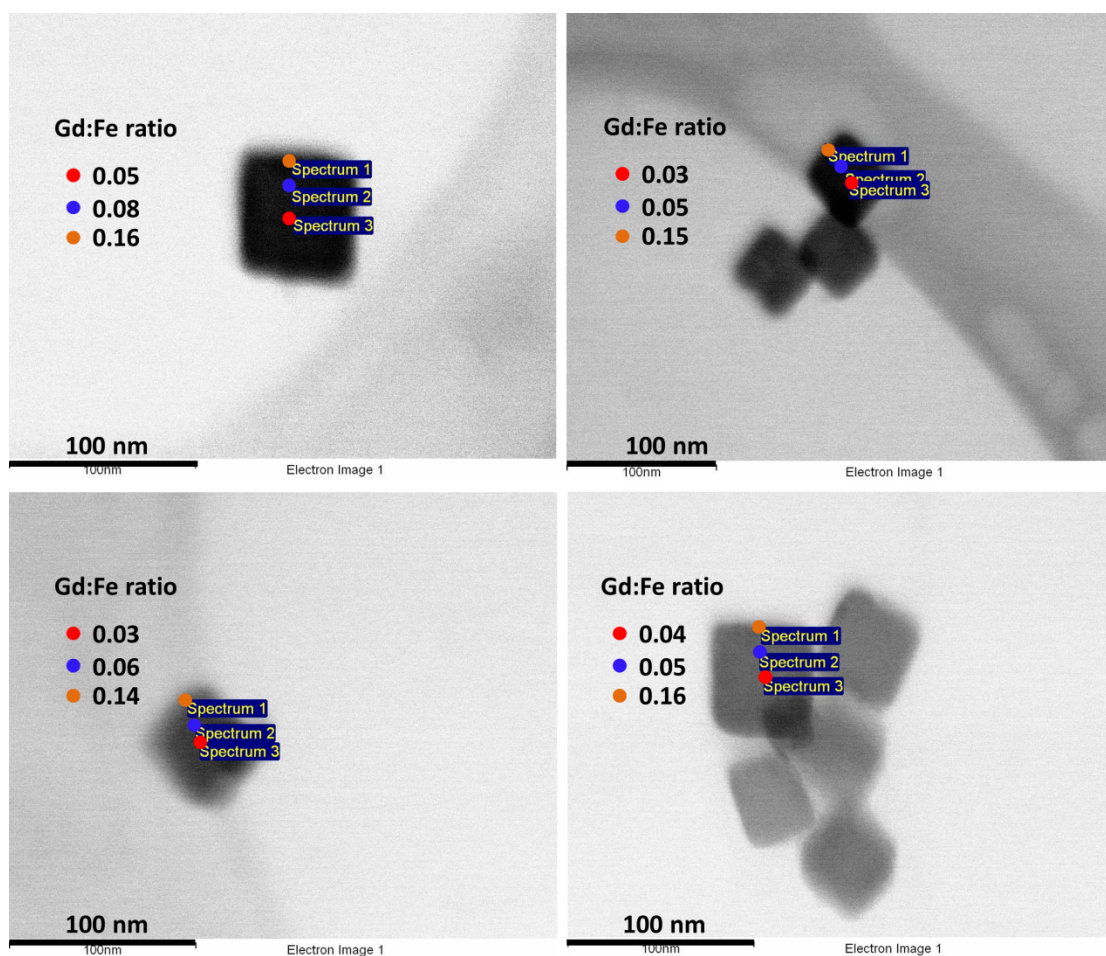
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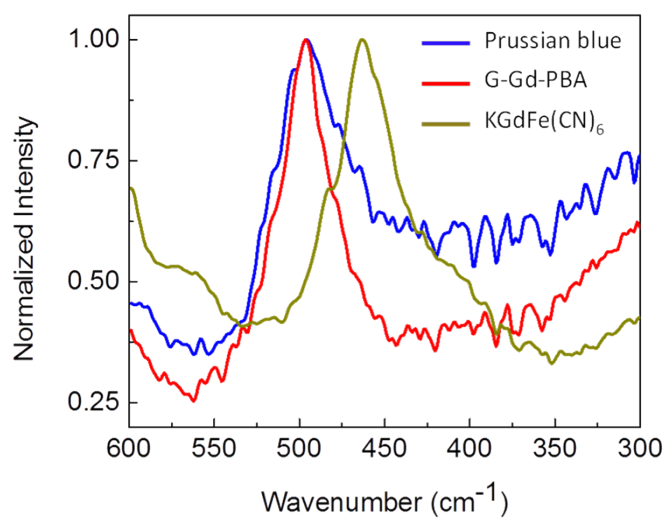
**Figure S1.** Room temperature FT-IR spectra of PB, **g-Gd-PB** and GdFe-PBA particle sample.



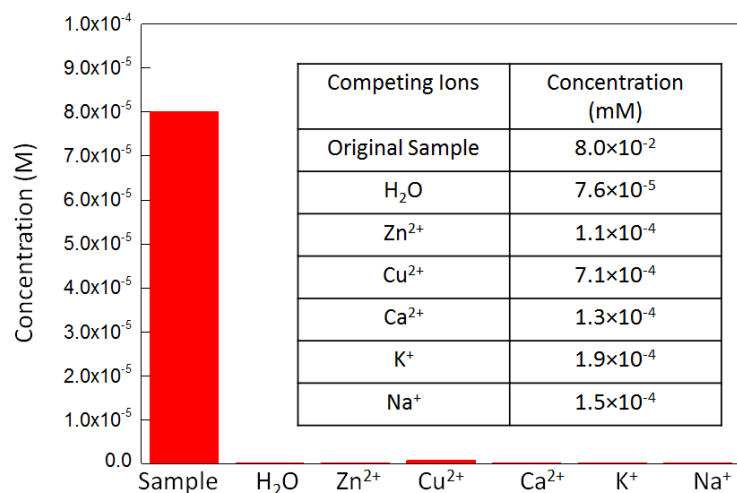
**Figure S2.** The TGA curve of citrate-coated potassium/gadolinium Prussian blue nanoparticles.



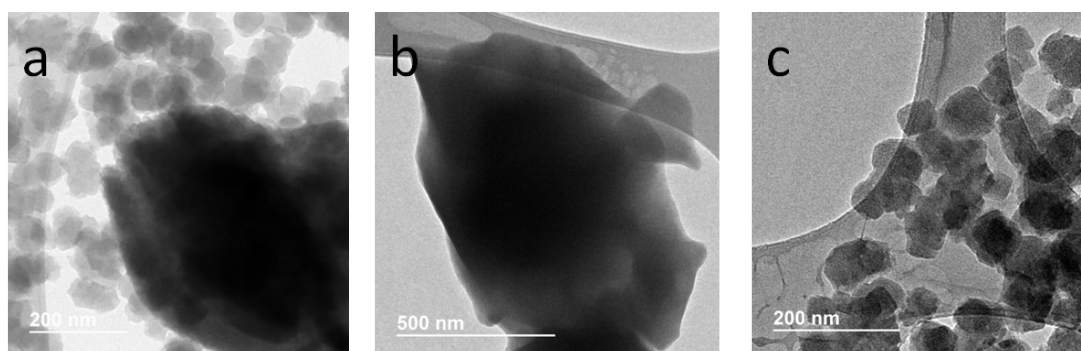
**Figure S3.** TEM image and EDS spot scan analyses determined Gd:Fe ratios for spectra taken at 3 points from the core to the edge of the particle.



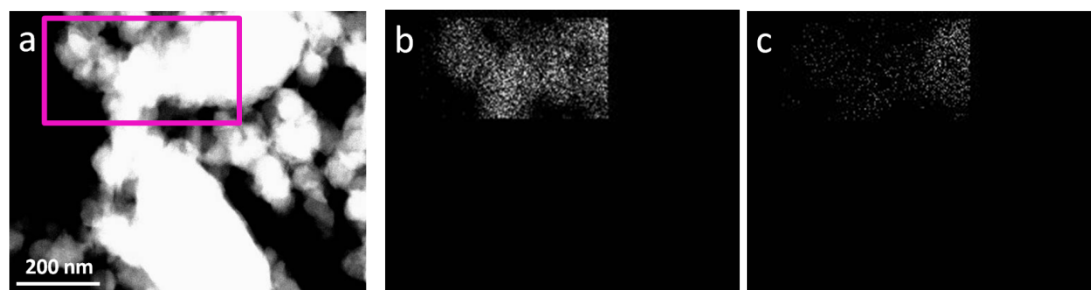
**Figure S4.** Room temperature far-IR spectra of PB, **g-Gd-PB** and GdFe-PBA particle sample.



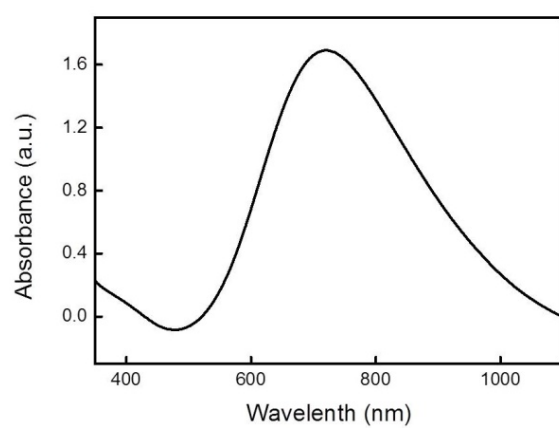
**Figure S5.** g-Gd-PB suspension ( $\text{Gd}^{3+} 8 \times 10^{-5} \text{ M}$ ) dialyzed against nanopure water and different competing ions, including  $\text{Zn}^{2+}$  ( $5 \times 10^{-4} \text{ M}$ ),  $\text{Cu}^{2+}$  ( $5 \times 10^{-4} \text{ M}$ ),  $\text{Ca}^{2+}$  ( $5 \times 10^{-4} \text{ M}$ ),  $\text{K}^{+}$  (1 M),  $\text{Na}^{+}$  (1 M) for 48 hours. Then  $\text{Gd}^{3+}$  concentration in dialysis solution was measured by ICP-AES.



**Figure S6.** a) TEM image of attempted core-shell (mixture of PB and GdFe-PBA), b) GdFe-PBA and c) PB.



**Figure S7.** a) EDS map of attempted core-shell (mixture of PB and GdFe-PBA), b) Fe map and c) Gd map only.



**Figure S8.** UV-Vis spectrum of **g-Gd-PB** showing a broad absorption band around 700 nm.

**Table S1.** ICP results of the **g-Gd-PB** and pure PB.

	<b>g-Gd-PB</b>	PB
K/Fe	0.16/1	0.42/1
Gd/Fe	0.09/1	0/1