

Supporting information

PLA-PEG coated multifunctional imaging probe for targeted drug delivery

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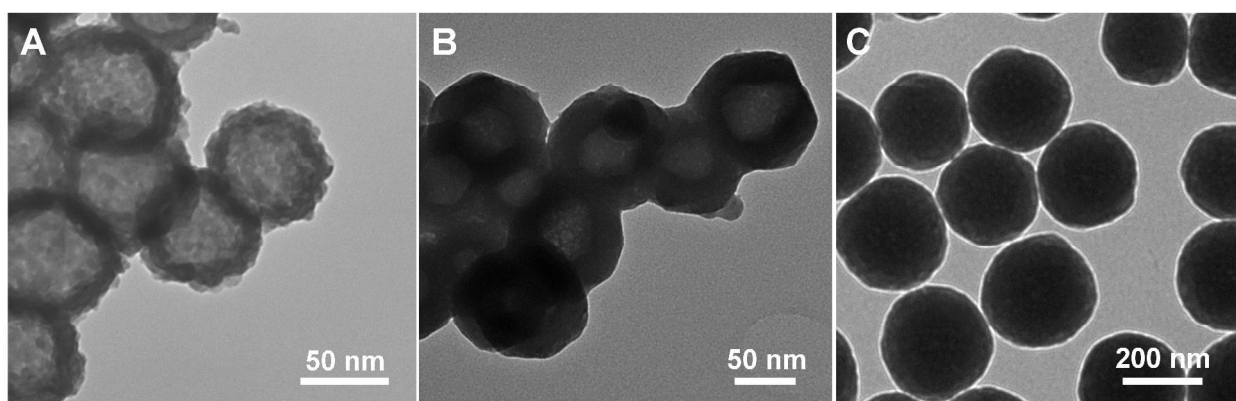


Figure S1. TEM images of hollow Gd₂O₂S:Eu nanophosphors with different thickness (A) 10 nm, (B) 30 nm, (C) 100 nm. Note: The nanophosphor shell in figure C cannot be identified from the TEM image due to the low penetration depth of the electrons in Gd₂O₂S based material, however, the shell thickness can be calculated by subtracting the core size (50 nm) from the diameter (253 nm) of the nanophosphors in figure C.

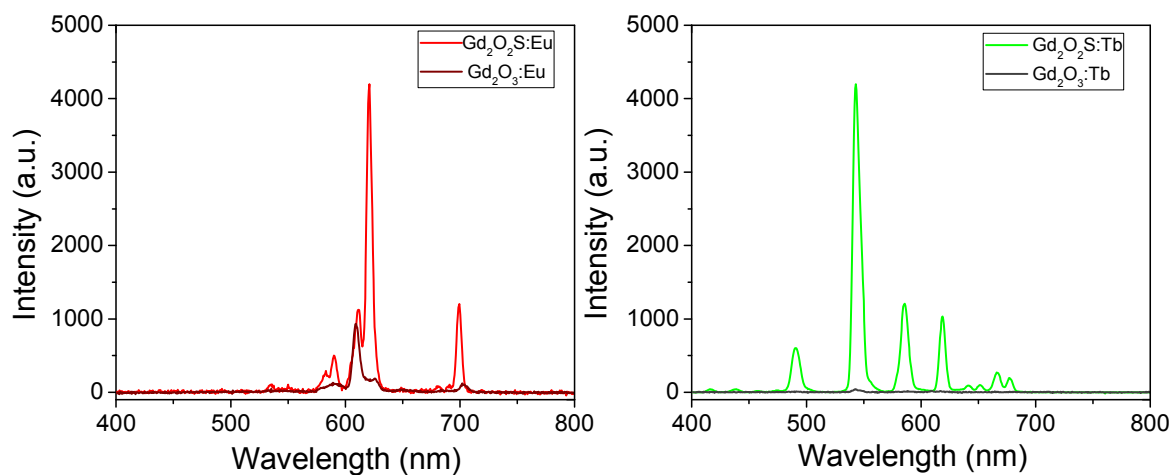


Figure S2. X-ray excited optical luminescence spectra of $\text{Gd}_2\text{O}_2\text{S}$ and Gd_2O_3 based X-ray nanophosphors at the same concentration.

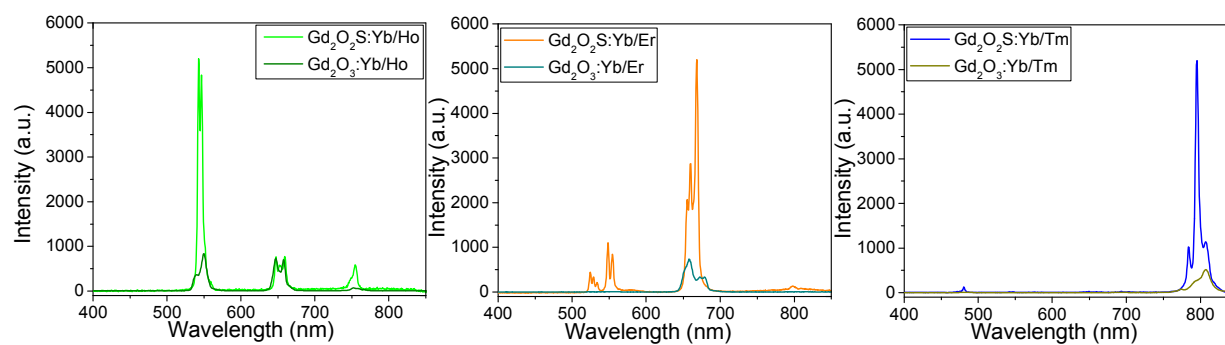


Figure S3. Upconversion luminescence spectra of $\text{Gd}_2\text{O}_2\text{S}$ and Gd_2O_3 based upconversion nanophosphors at the same concentration.

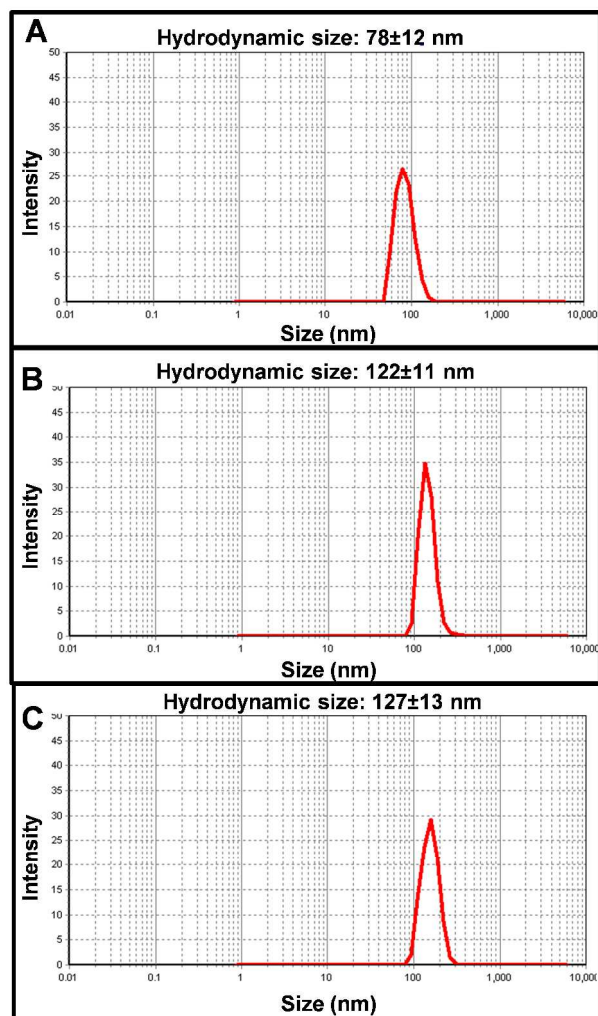


Figure S4. Hydrodynamic size of (A) hollow nanophosphors ($\text{Gd}_2\text{O}_2\text{S}:\text{Eu}$), (B) PLA-PEG coated hollow nanophosphors ($\text{Gd}_2\text{O}_2\text{S}:\text{Eu}@\text{PLA-PEG}$), (C) PLA-PEG-FA coated hollow nanophosphors ($\text{Gd}_2\text{O}_2\text{S}:\text{Eu}@\text{PLA-PEG-FA}$).

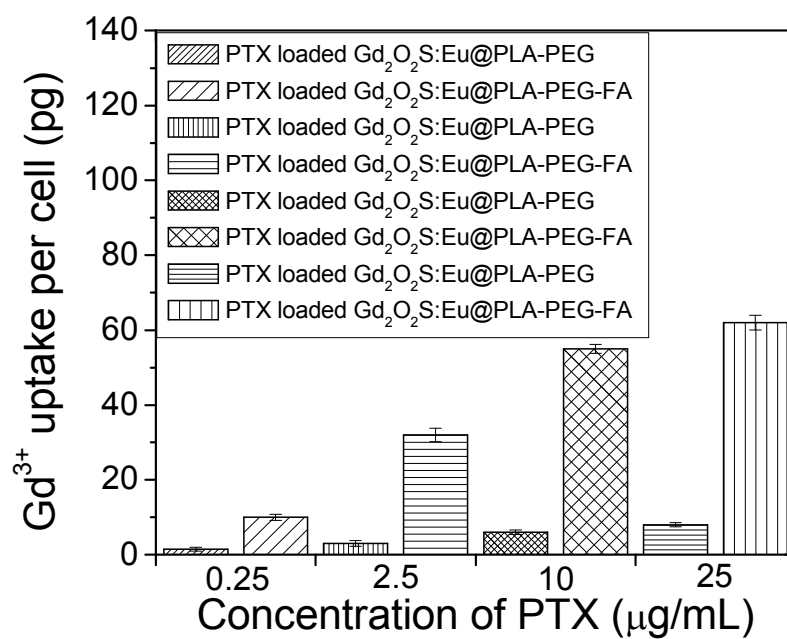


Figure S5. Cellular uptake of PTX loaded $\text{Gd}_2\text{O}_2\text{S:Eu}$ coated with PLA-PEG or PLA-PEG-FA by MCF-7 cells at different concentration of PTX for 72 hr.