

Electronic Supplementary Information

UCNPs@gelatin-ZnPc nanocomposite: synthesis, imaging and anticancer properties

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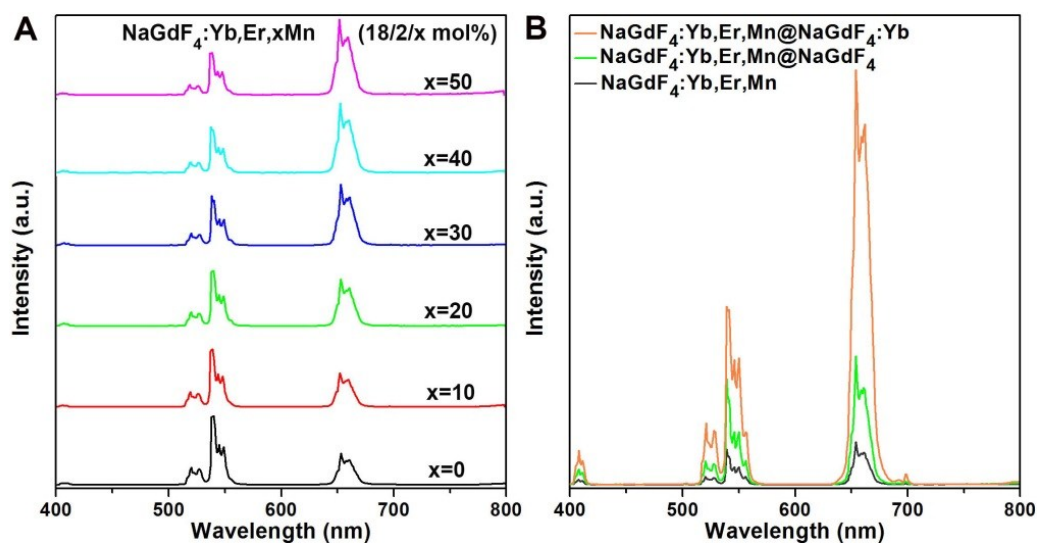


Fig. S1 UC emission spectra of $\text{NaGdF}_4:\text{Yb,Er,xMn}$ nanoparticles (A); $\text{NaGdF}_4:\text{Yb,Er,xMn}$, $\text{NaGdF}_4:\text{Yb,Er,Mn@NaGdF}_4$ (core-inert shell) and $\text{NaGdF}_4:\text{Yb,Er,Mn@NaGdF}_4:\text{Yb}$ (core-active shell) nanoparticles (B).

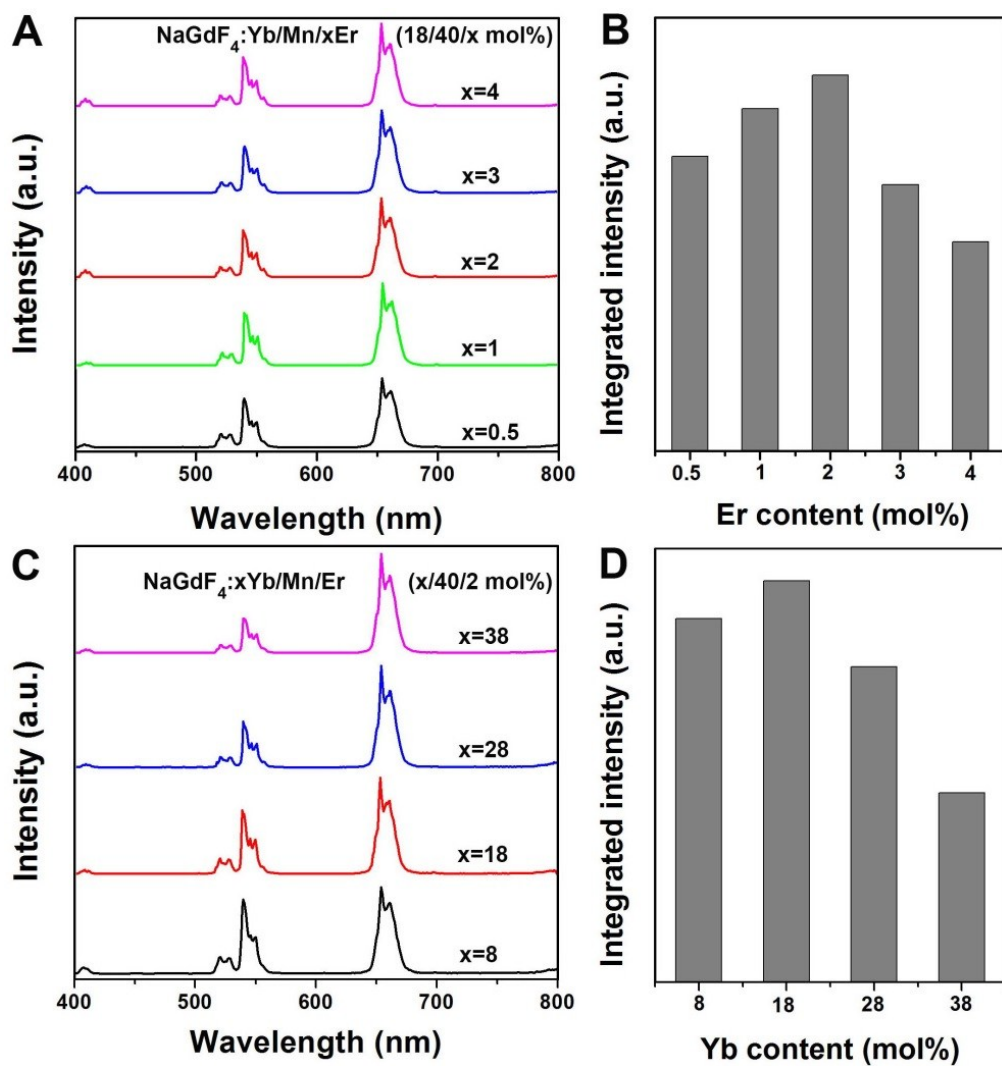


Fig. S2 UC emission spectra (A, B) and the integrated UC emission intensity (C, D) of NaGdF₄:Yb,Mn,xEr and NaGdF₄:Er,Mn,xYb nanoparticles.

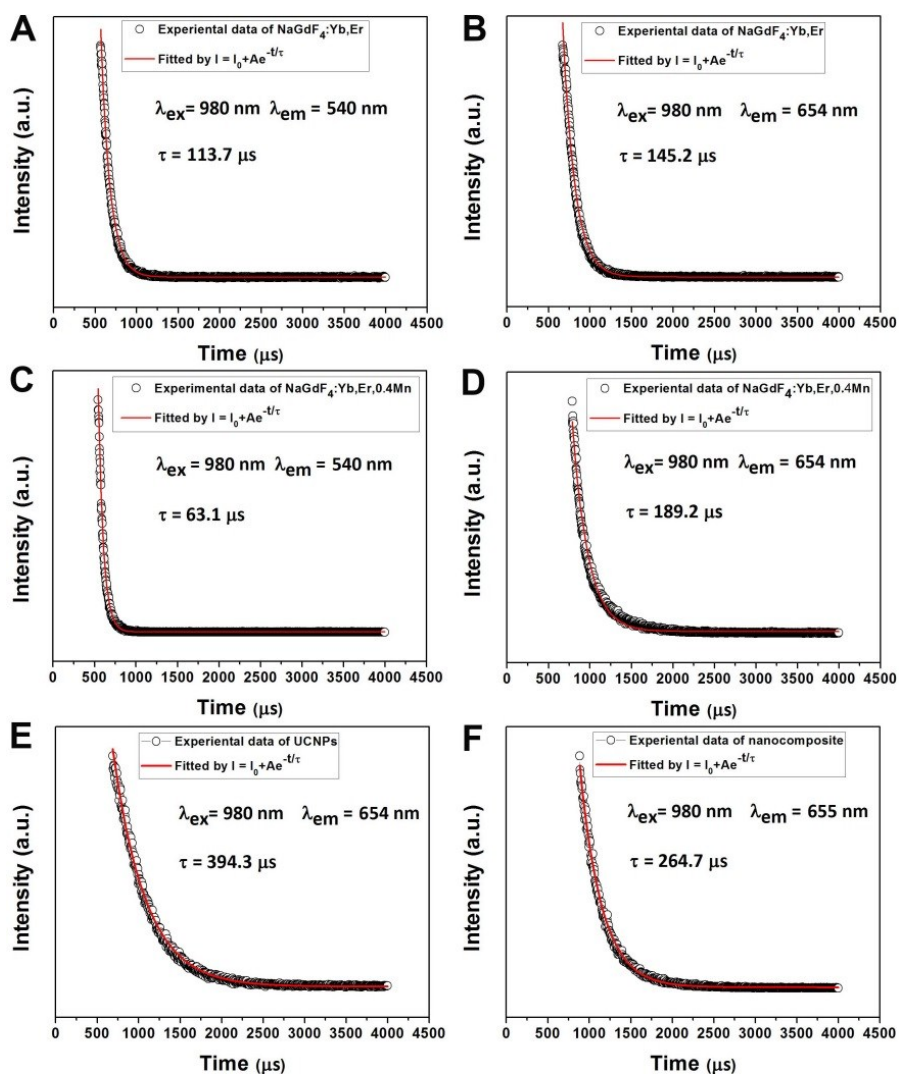


Fig. S3 Decay curves of Er³⁺ in NaGdF₄:Yb,Er (A, B), NaGdF₄:Yb,Er,0.4Mn (C, D), core-shell structured UCNP (E) and UCNP@gel-ZnPc nanocomposite (F) under 980 nm NIR light excitation.