Electronic Supplementary Information

Upconverting Nanocomposites with Combined Photothermal and Photodynamic Effects

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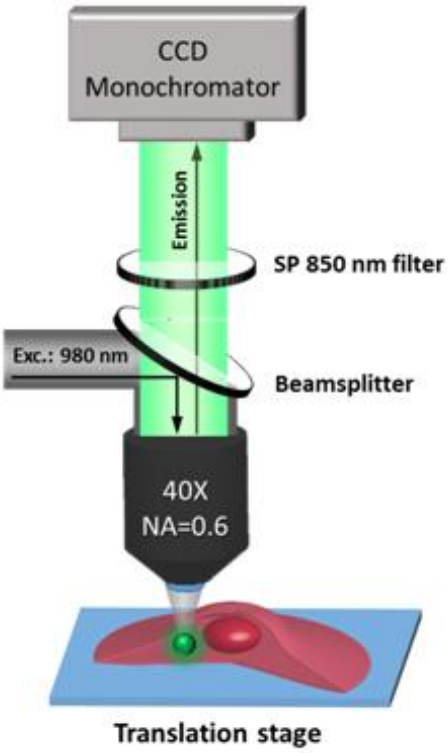

Figure S1. Experimental setup for microluminescence imaging.

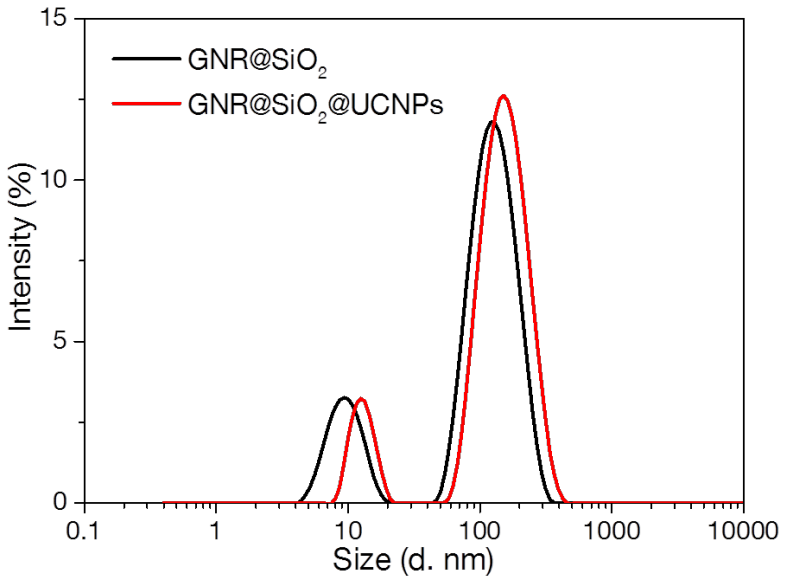

Figure S2. DLS indicates the hydrodynamic size distribution of the GNR@SiO_2 with the peak value at around 122 nm, while GNR@SiO_2@UCNPs nanocomposites have a peak value at around 144 nm.

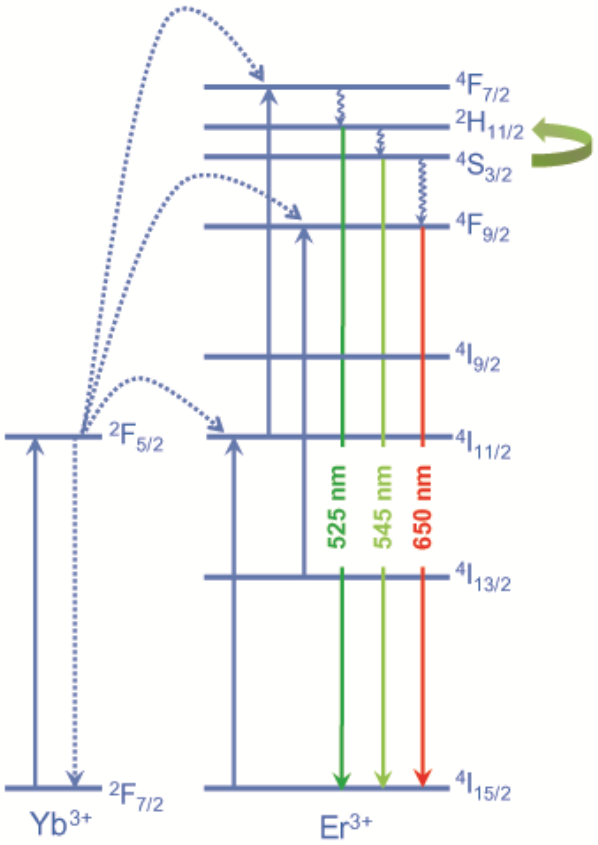

Figure S3. Scheme showing the upconversion mechanism of the $NaGdF_4:Er^{3+}$, Yb^{3+} UCNPs. The temperature sensitivity of the $NaGdF_4:Er^{3+}$, Yb^{3+} UCNPs occurs as a result of the thermally coupled $^2H_{11/2}$ and $^4S_{3/2}$ energy states.

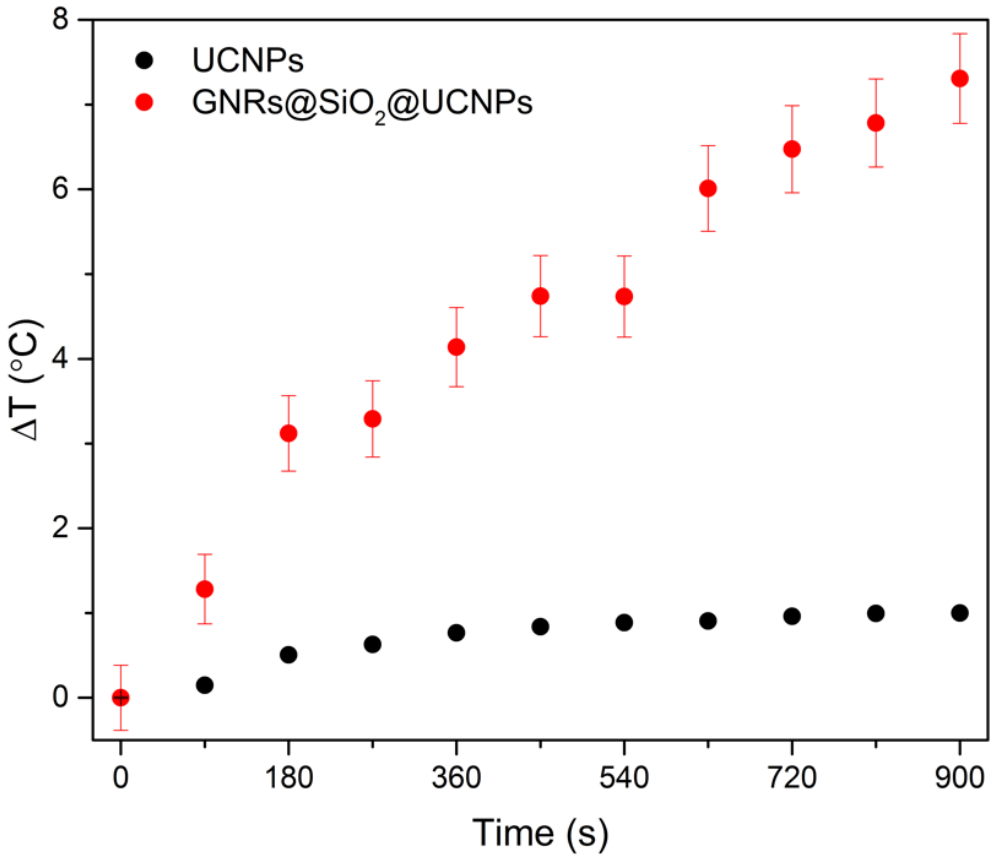

Figure S4. Temperature change of UCNPs and GNR@SiO_2@UCNPs under 980 nm laser irradiation.