

Electronic Supplementary Material (ESI) for RSC Advances.
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Electronic Supplementary Information

794 nm excited core-shell upconversion nanoparticles for optical temperature sensing

Guicheng Jiang,^a Shaoshuai Zhou,^{b,c} Xiantao Wei,^b Yonghu Chen,^b Changkui

Duan,^b Min Yin,^{*b} Bin Yang^{*a} and Wenwu Cao^{a,d}

^a Condensed Matter Science and Technology Institute, Harbin Institute of Technology,
Harbin 150001, China. E-mail address: binyang@hit.edu.cn

^b Department of Physics, University of Science and Technology of China, Hefei 230026,
China. E-mail address: yinmin@ustc.edu.cn

^c Department of Physics, Qufu Normal University, Qufu, Shandong 273165, China.

^d Department of Mathematics and Materials Research Institute, The Pennsylvania State
University, Pennsylvania 16802, USA

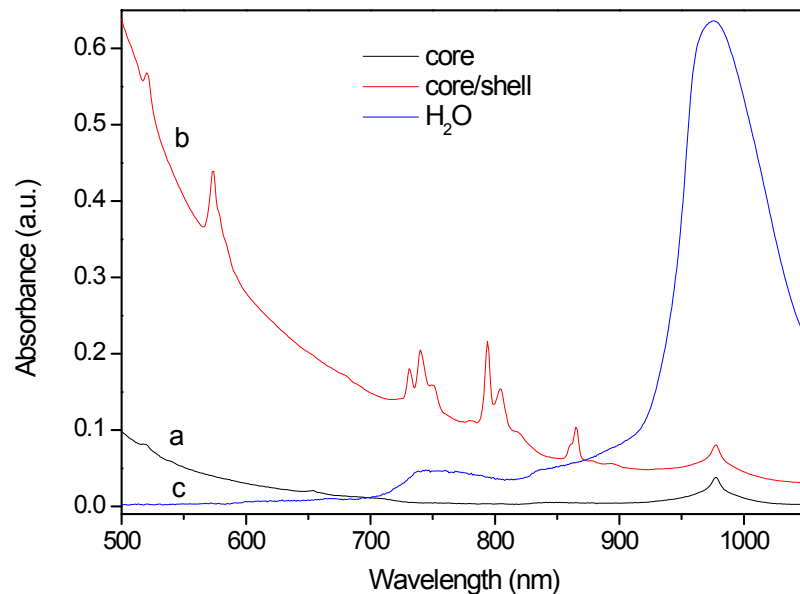


Fig. S1 Absorption spectra of (a) core NaYF₄:Yb³⁺/Er³⁺ UNCPS dispersed in cyclohexane, (b) core/shell NaYF₄:Yb³⁺/Er³⁺@NaYF₄:Yb³⁺/Nd³⁺ UNCPS dispersed in cyclohexane, and (c) H₂O.

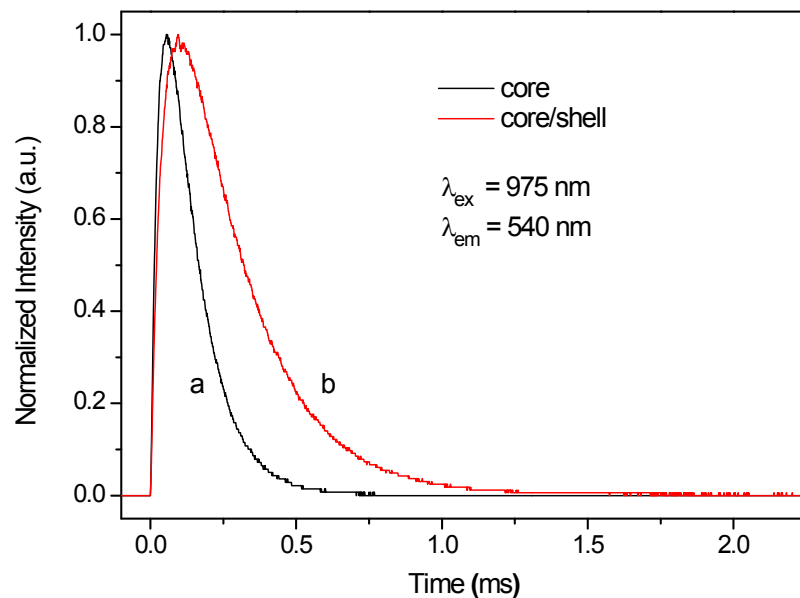


Fig. S2 Decay curves of (a) core NaYF₄:Yb³⁺/Er³⁺ UNCPS, (b) core/shell NaYF₄:Yb³⁺/Er³⁺@NaYF₄:Yb³⁺/Nd³⁺ UNCPS dispersed in cyclohexane.

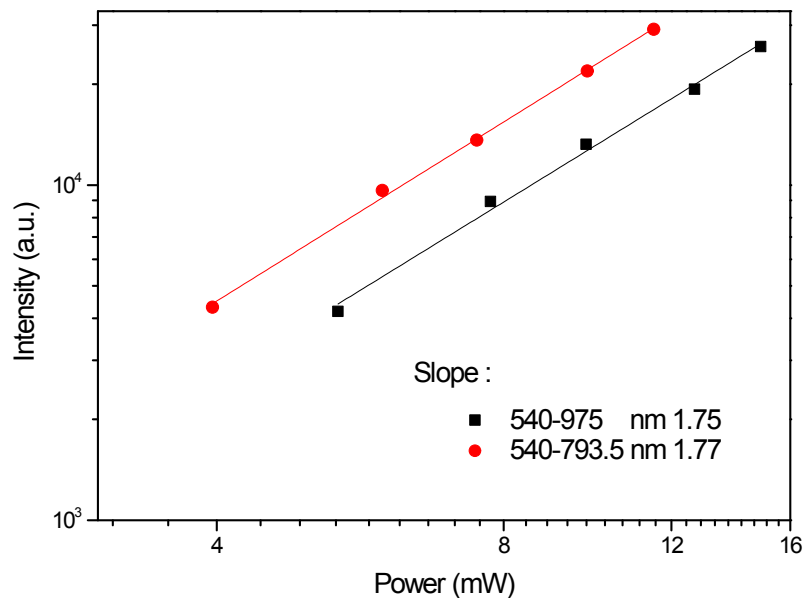


Fig. S3 Power dependence curves of core/shell $\text{NaYF}_4:\text{Yb}^{3+}/\text{Er}^{3+}@\text{NaYF}_4:\text{Yb}^{3+}/\text{Nd}^{3+}$ UCNPs for 540 nm emission under (a) 975 nm, and (b) 793.5 nm excitation.

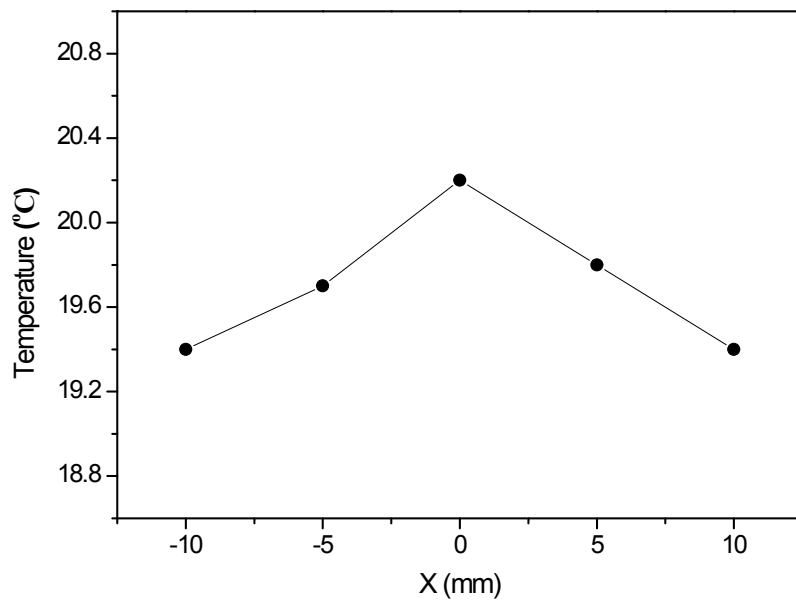


Fig. S4 Temperature of a glass plate heated by 808 nm laser (0.2 W/cm^2). The room temperature is about $19.4 \text{ }^\circ\text{C}$.