

Electronic Supplementary Information (ESI)

A facile fabrication of upconversion luminescent and mesoporous core/shell structured β -NaYF₄:Yb³⁺, Er³⁺@mSiO₂ nanocomposite spheres for anti-cancer drug delivery and cell imaging

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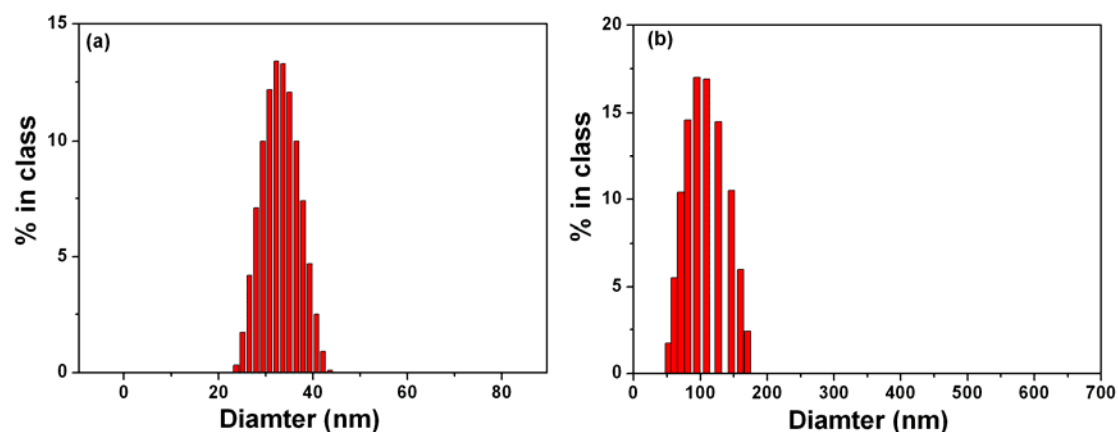


Figure S1 The size distribution of β -NaYF₄:Er³⁺/Yb³⁺ core (a) and core-shell structured β -NaYF₄:Er³⁺/Yb³⁺@mSiO₂ (b) by dynamic light scattering.

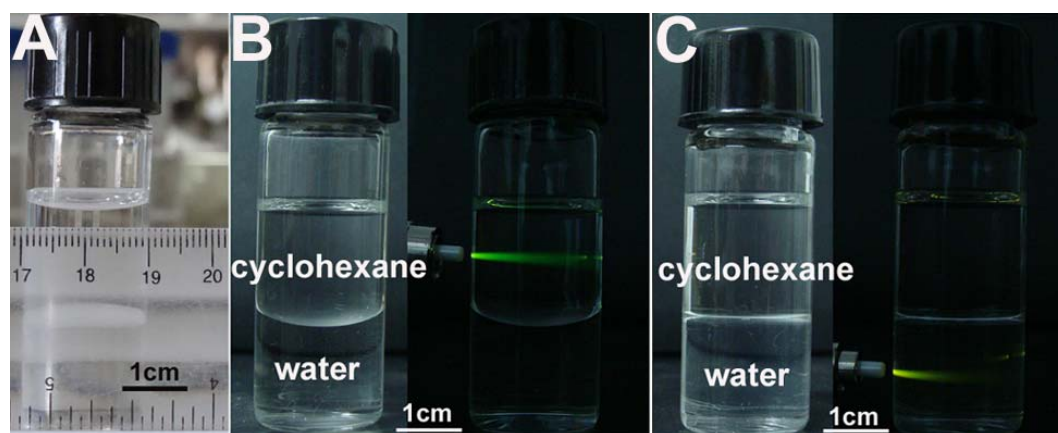


Figure S2 The digital photograph (A) of UCNPs dispersed in cyclohexane under daylight with a ruler. And other digital photographs and luminescence photographs dispersed in cyclohexane (B) and water (C) were obtained using the same magnification and bottles.

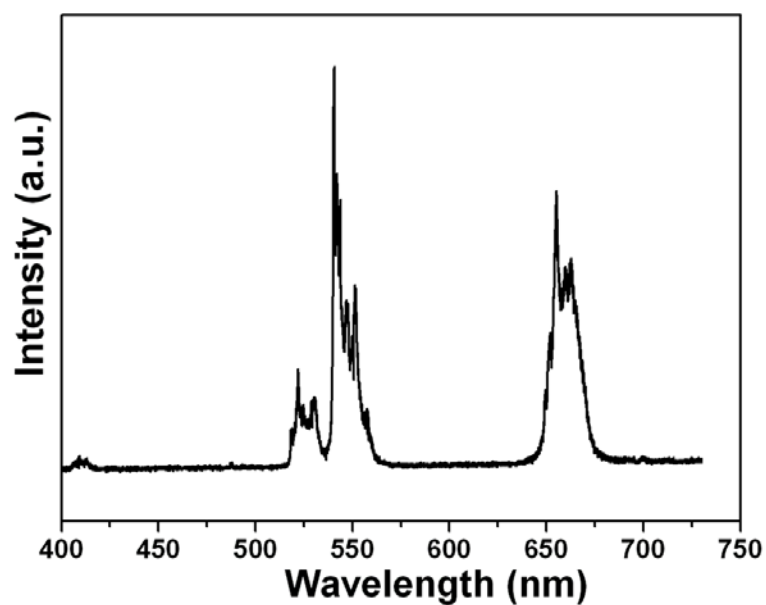


Figure S3 The upconversion emission spectrum of UCNPs@mSiO₂ nanoparticles dispersed in water.

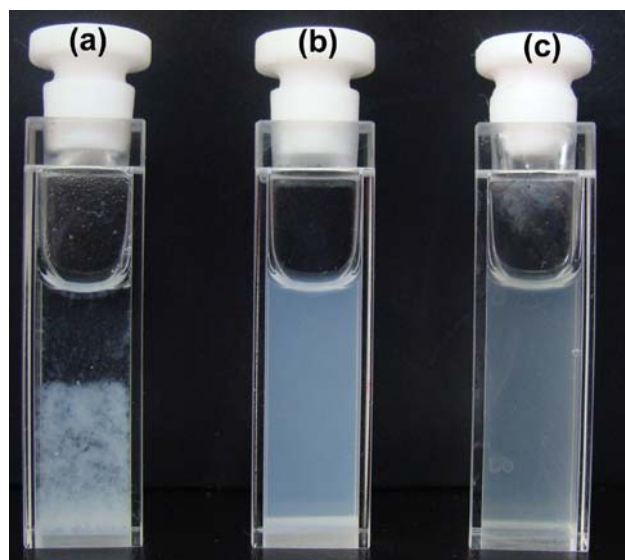


Figure S4 the digital photographs of UCNPs@mSiO₂ (a), UCNPs@mSiO₂-PEG (b), and UCNPs@mSiO₂-PEG/FA (c) dispersed in water.

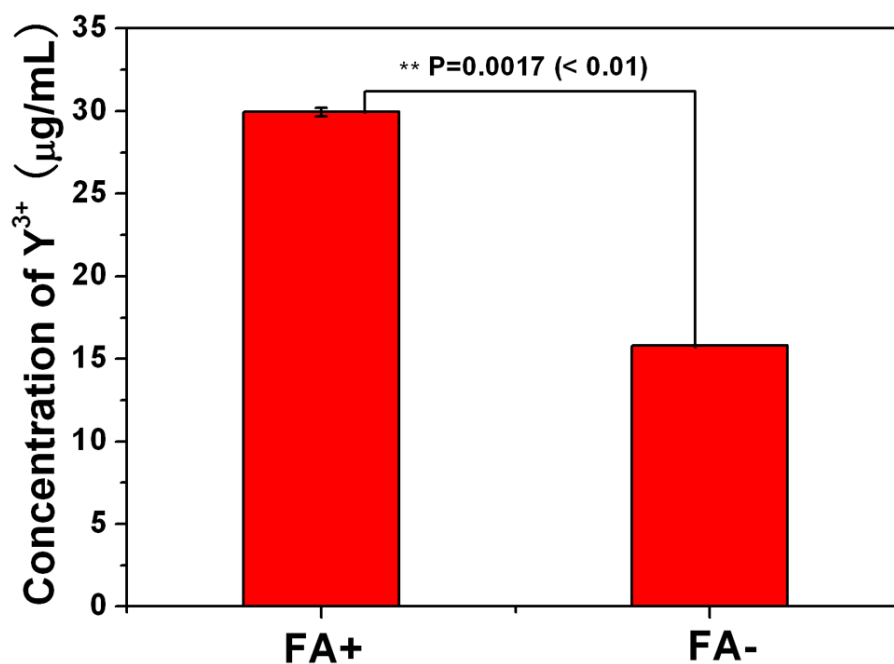


Figure S5 The concentration of Y³⁺ internalized in HeLa cells measured by ICP-OES technique after incubated with UCNPs@mSiO₂-PEG/FA (FA+) and UCNPs@mSiO₂-PEG (FA-).