

Electronic Supplementary Information

New nanoplatforms based on UCNPs linking with polyhedral oligomeric silsesquioxane (POSS) for multimodal bioimaging

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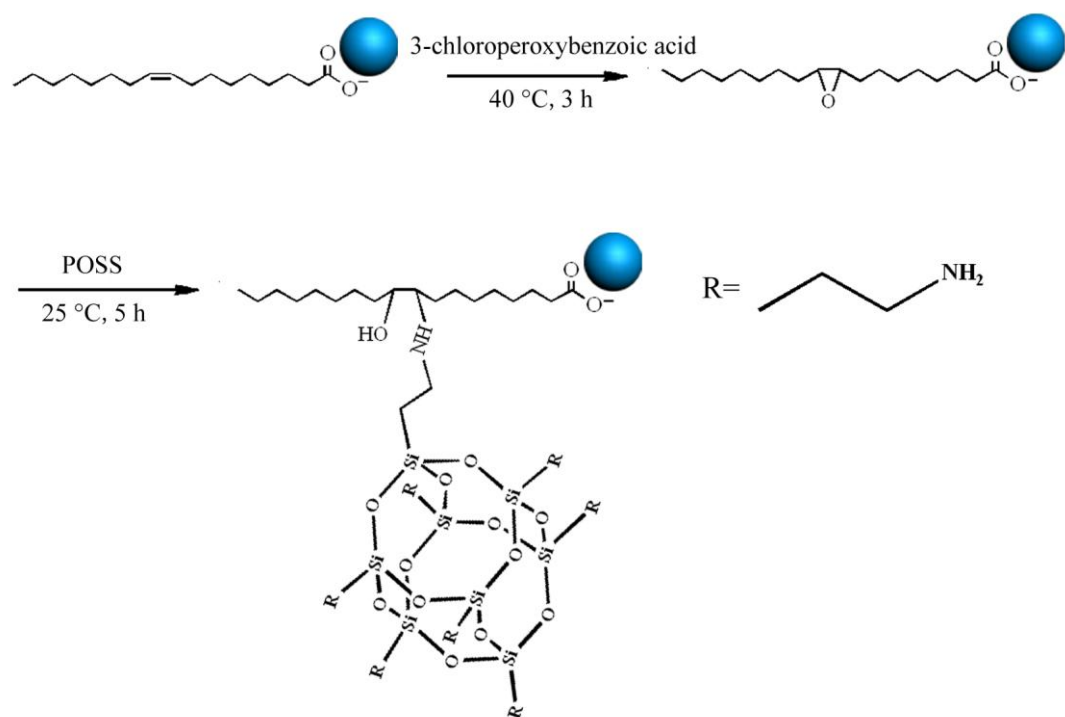


Fig. S1. Schematic illustration of the formation of POSS-UCNPs.

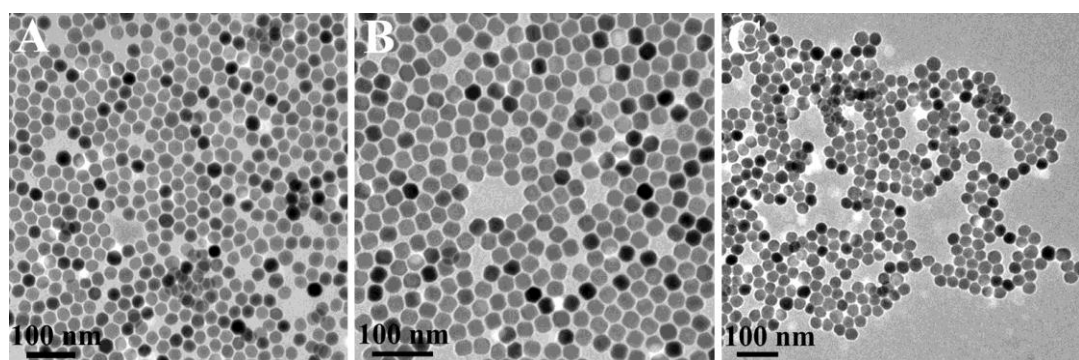


Fig. S2. TEM images of NaYF₄:Yb,Tm (A) and NaYF₄:Yb,Tm@NaGdF₄ (B) nanoparticles in cyclohexane; TEM image of POSS-UCNPs(Tm) in water (C).

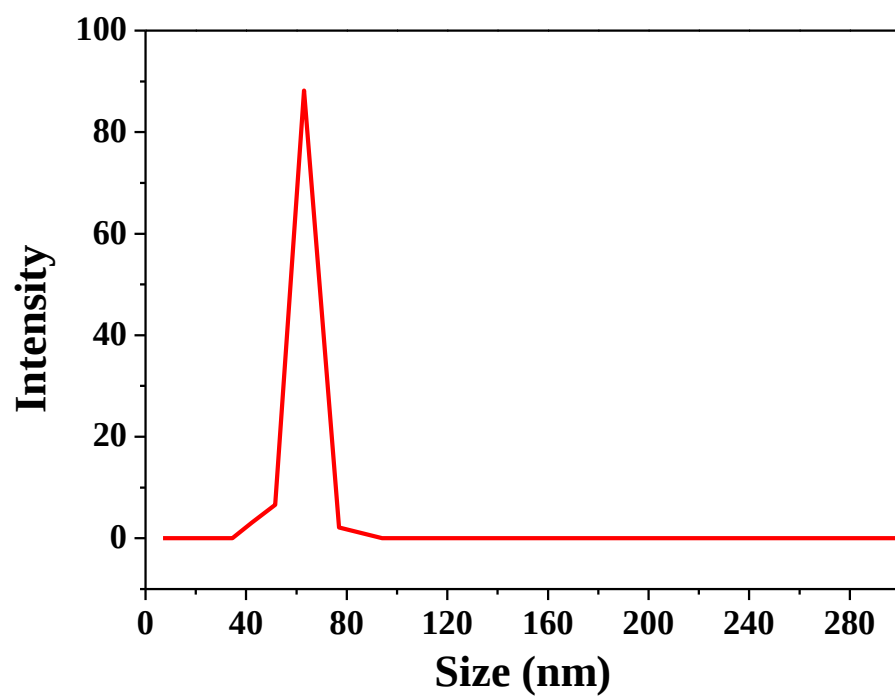


Fig. S3. Dynamic light scattering (DLS) of POSS-UCNPs(Tm) in water.

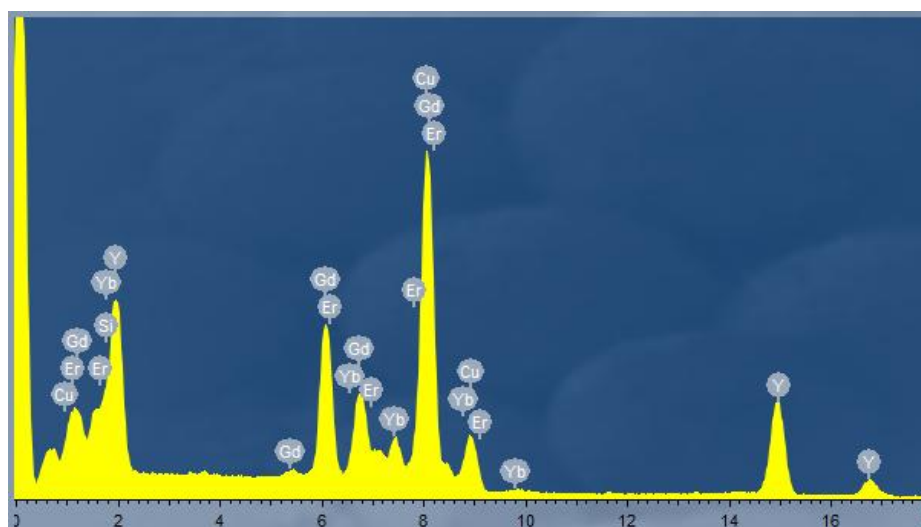


Fig. S4. Energy dispersive X-ray (EDX) spectrum of POSS-UCNPs(Er).

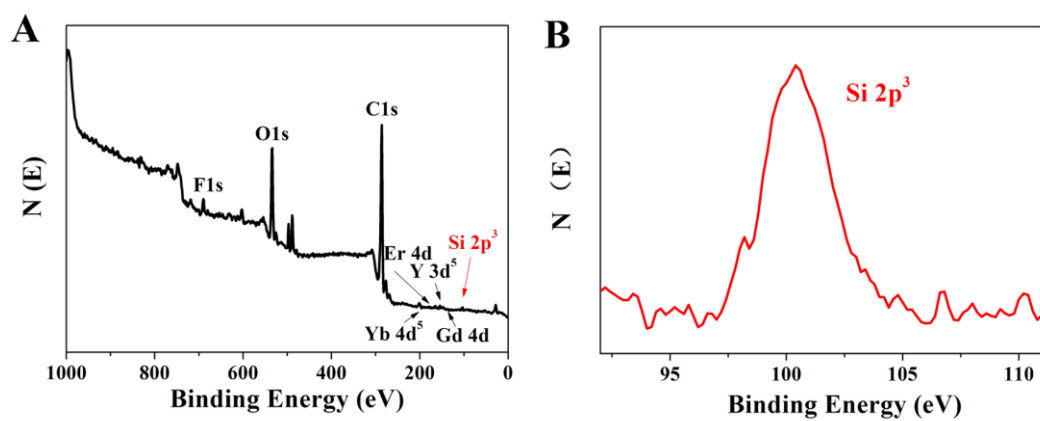


Fig. S5. (A) XPS of POSS-UCNPs(Er); (B) XPS of Si element after expanding of curve A.

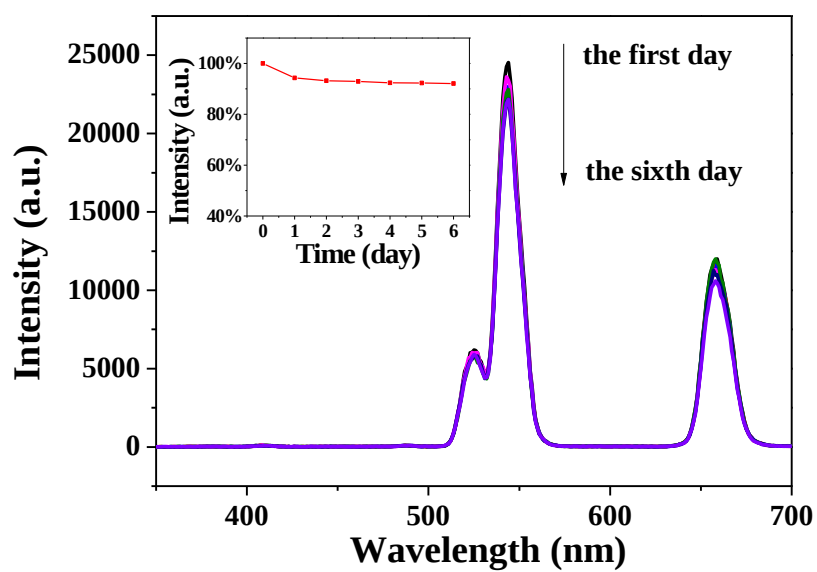


Fig. S6. UCL spectra of POSS-UCNPs(Er) in physiology saline as a function of time (inset: time-dependent luminescence at 545 nm).

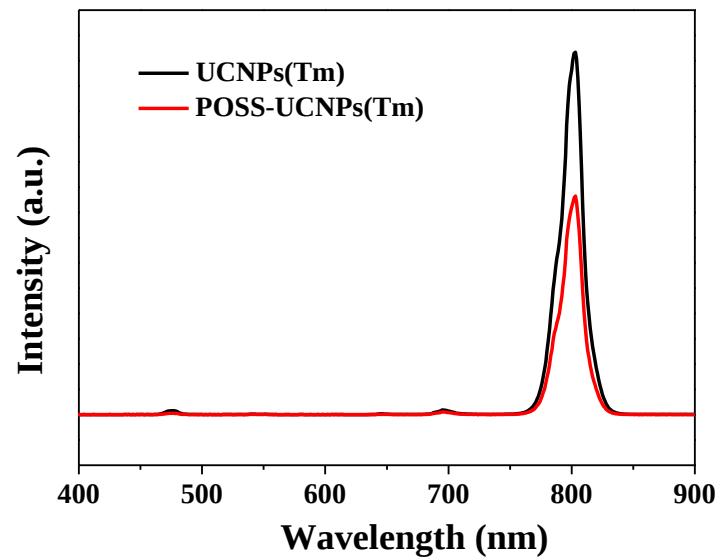


Fig. S7. UCL spectra of NaYF₄:Yb,Tm@NaGdF₄ [UCNPs(Tm)] and POSS-UCNPs(Tm), excited with 980 nm laser (100 mW·cm⁻²).

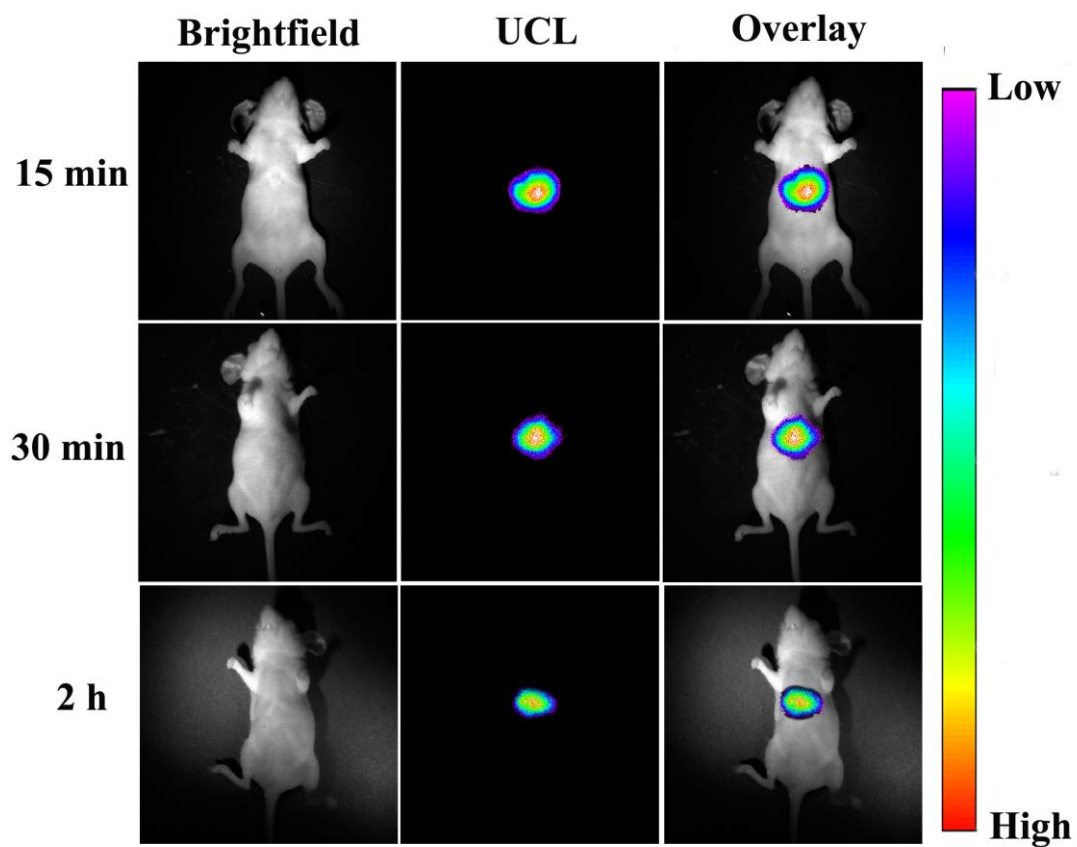


Fig. S8 *In vivo* UCL imaging of Kunming mice after intravenous injection with POSS-UCNPs(Tm) at different time points: 15 min, 30 min, and 2 h, respectively.