

Supplementary Material

Fluorescent Metal Nanoshells: Lifetime-Tunable Molecular Probes in Fluorescent Cell Imaging

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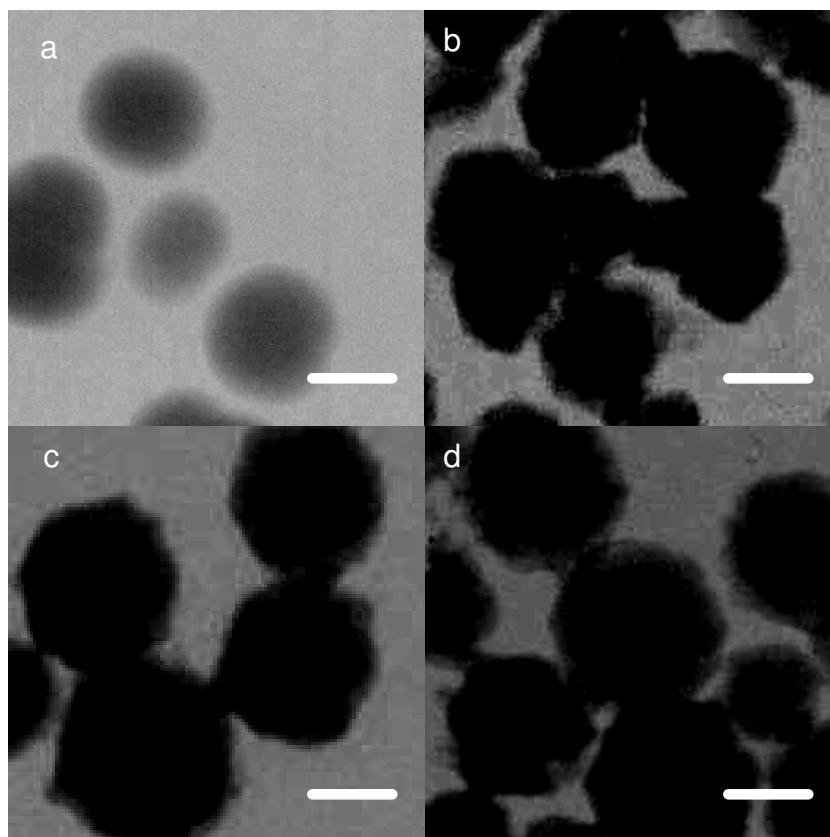


Figure S1. TEM images of (a) metal free silica spheres and metal nanoshells with (b) $\text{Ru}(\text{phen-NH}_2)_3^{2+}$, (c) $\text{Ru}(\text{bpy})_3^{2+}$, and (d) $\text{Ru}(\text{dpp})_3^{2+}$ -complex encapsulations in the cores. The scale bar is 50 nm.

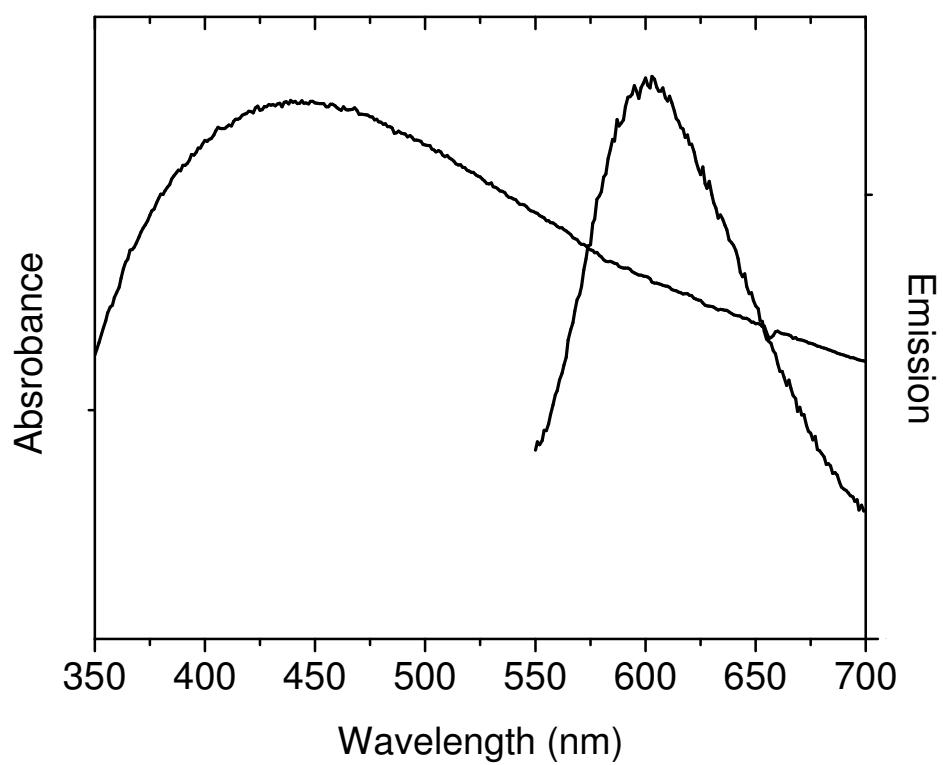


Figure S2. Absorbance and ensemble fluorescence spectra of metal nanoshells with the $\text{Ru}(\text{phen-NH}_2)_3^{2+}$ complex encapsulations in 10 mM PBS solution. The emission spectrum was determined upon the excitation at 450 nm.

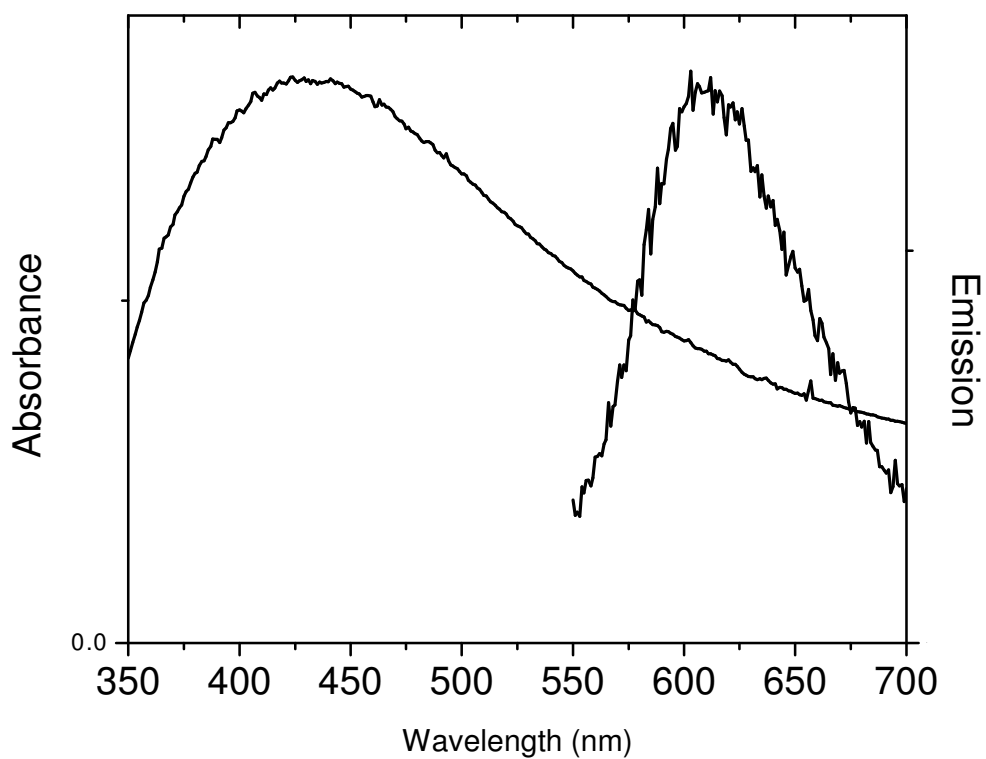


Figure S3. Absorbance and ensemble fluorescence spectra of metal nanoshells with the $\text{Ru}(\text{bpy})_3^{2+}$ complex encapsulations in 10 mM PBS solution. The emission spectrum was determined upon the excitation at 450 nm.

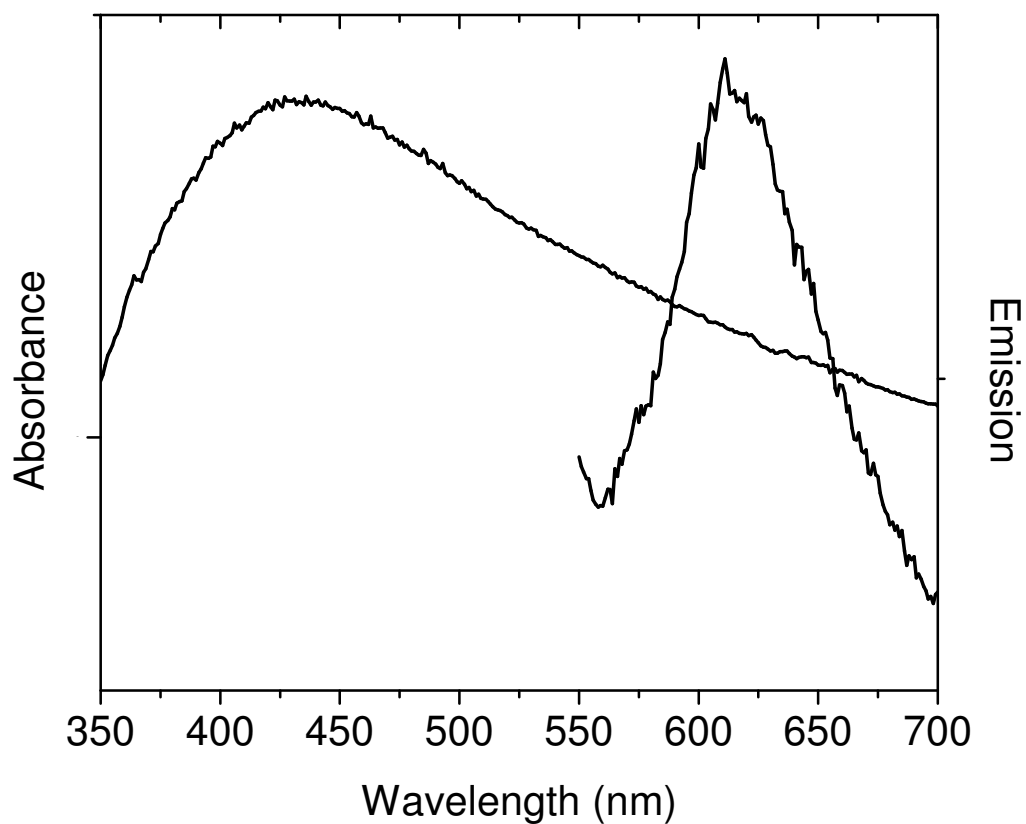


Figure S4. Absorbance and ensemble fluorescence spectra of metal nanoshells with the Ru(dpp)₃²⁺ complex encapsulations in 10 mM PBS solution. The emission spectrum was determined upon the excitation at 450 nm.