

Supporting Information

Synthesis of core/satellite-like multifunctional nanocarrier for pH- and NIR-triggered intracellular chemothermal therapy and tumor imaging

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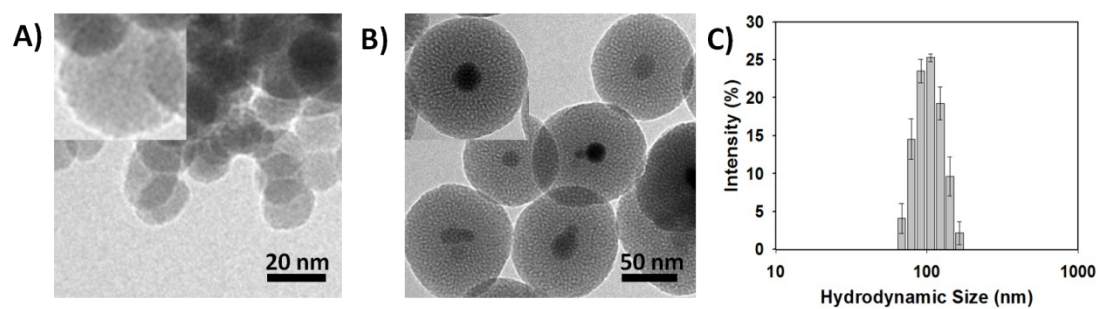


Fig. S1 TEM images of UCNP A) and UCNP@mSiO₂ B), and hydrodynamic size of UCNP@mSiO₂ C).

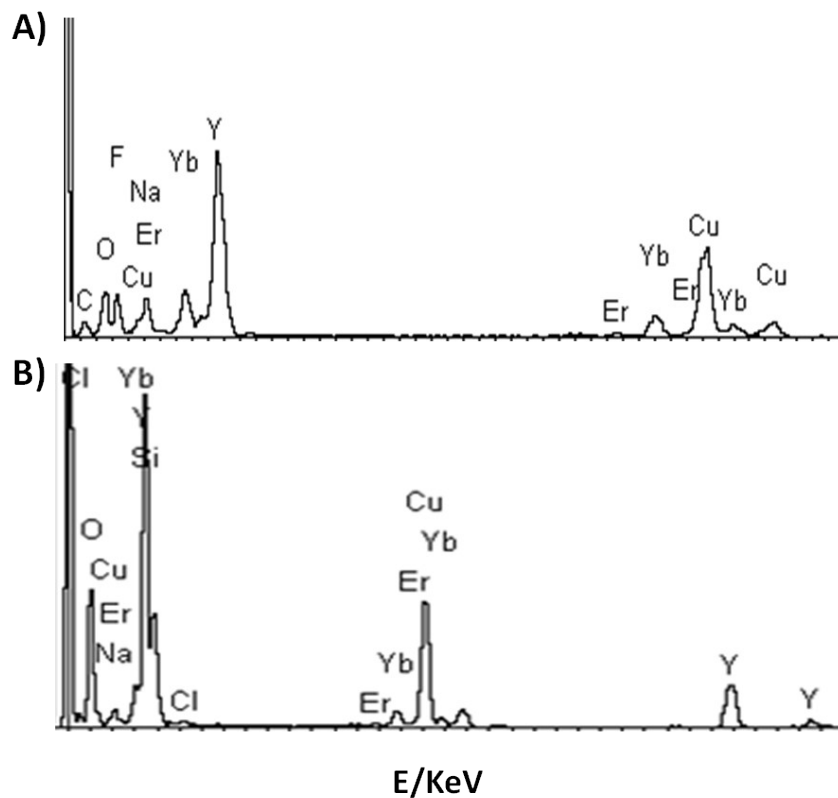


Fig. S2 TEM-associated EDX spectra of UCNP A), and UCNP@mSiO₂ B).

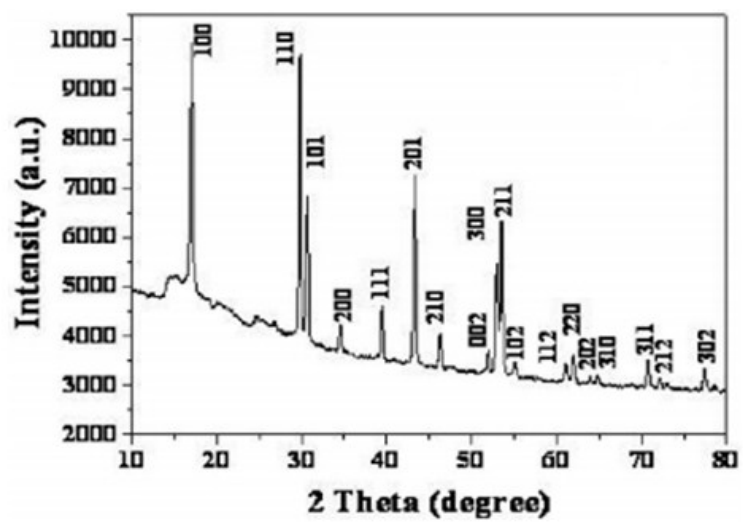


Fig. S3 Powder X-ray pattern of UCNP@mSiO₂.

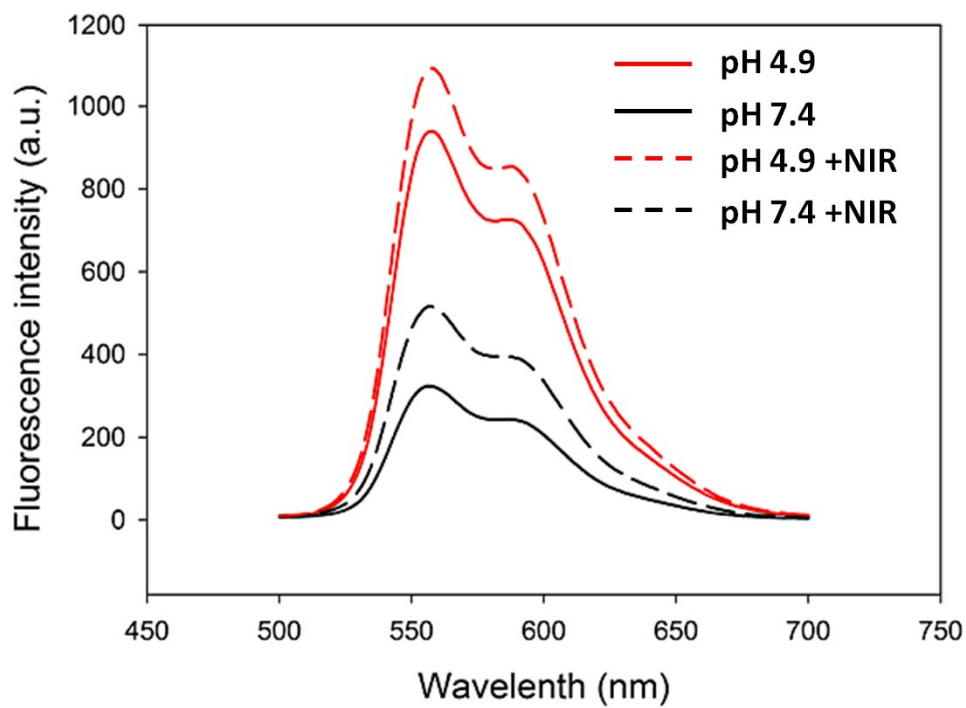


Fig. S4 Fluorescence spectra of released DOX from DOX@USNP@mSiO₂-AuNRs under different conditions.

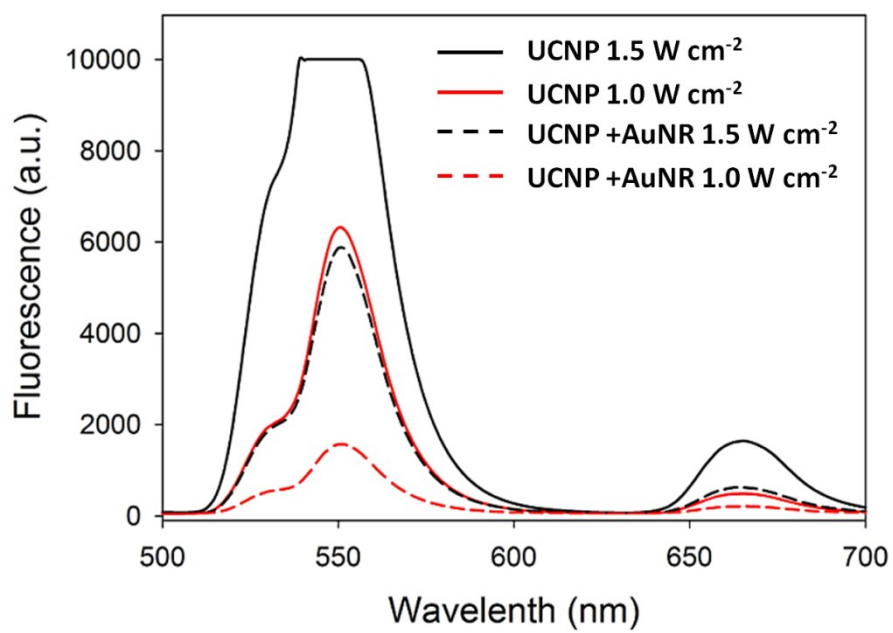


Fig. S5 The effect of AuNRs on the fluorescence spectra of UCNPs under different laser irradiation ($E_x = 980$ nm).

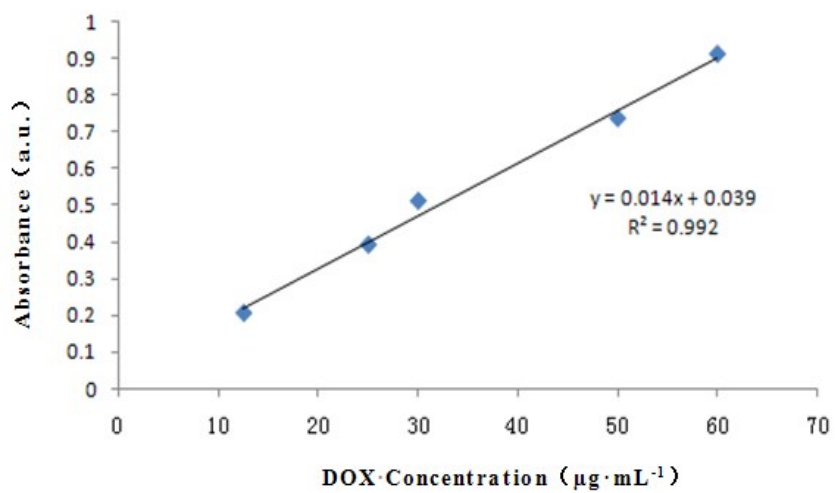


Fig. S6 Standard curve of DOX

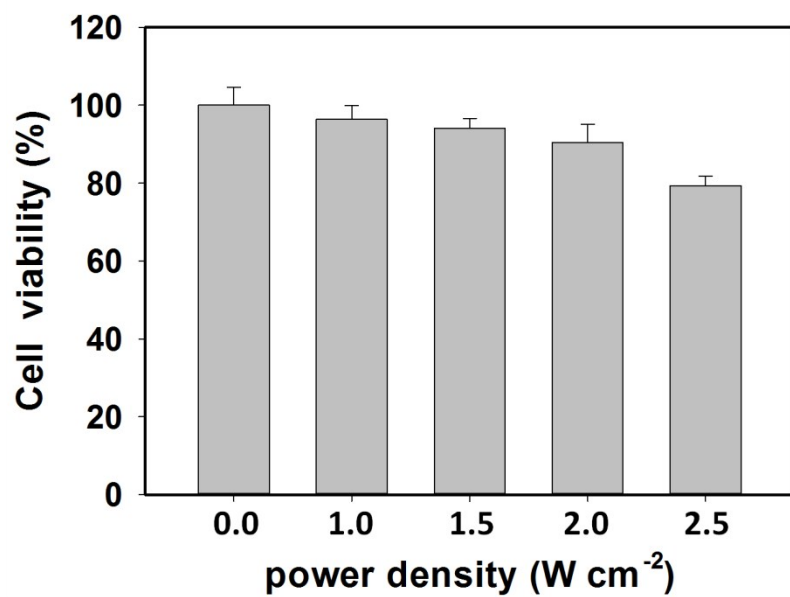


Fig. S7 The effect of NIR on the cell viability of SMCC-7721 cells under different power density.

Table S1. Related parameters of UCNP@mSiO₂

sample	BET surface area S _{BET} (m ² g ⁻¹)	BJH pore volume V _P (cm ³ g ⁻¹)	BJH pore diameter D _p (nm)
UCNP@mSiO ₂	211.3	0.236	4.2

Table S2. Hydrodynamic size and corresponding PDI of different nanoparticles

sample	UCNP	UCNP@mSiO ₂	AuNR
Size	23 nm	120 nm	Length: 21 nm Width: 7 nm aspect ratio: 3.0
PDI	0.082	0.137	0.096