

Supporting Information for

Metabolizable Lanthanum-Coordination Nanoparticles as Efficient Radiosensitizers for Solid Tumor Therapy

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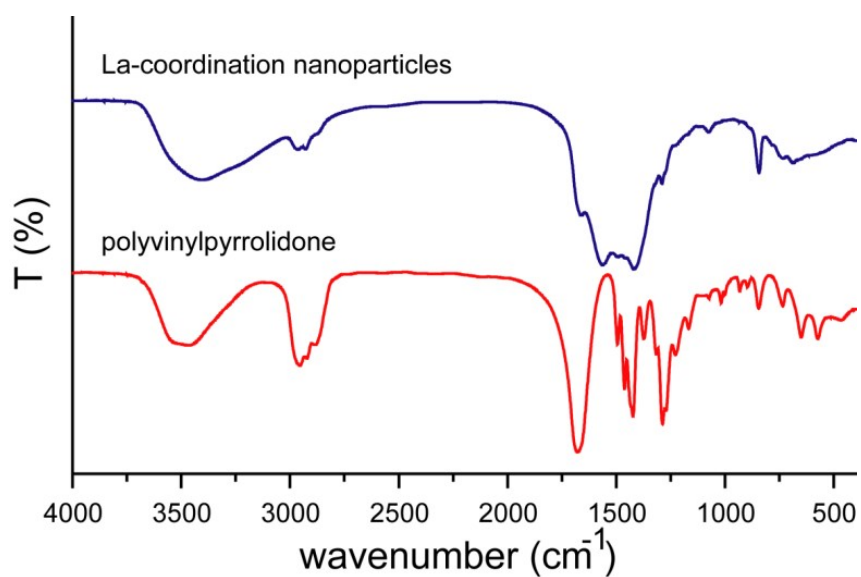


Fig. S1. FT-IR spectra of polyvinylpyrrolidone and lanthanum-coordination nanoparticles.

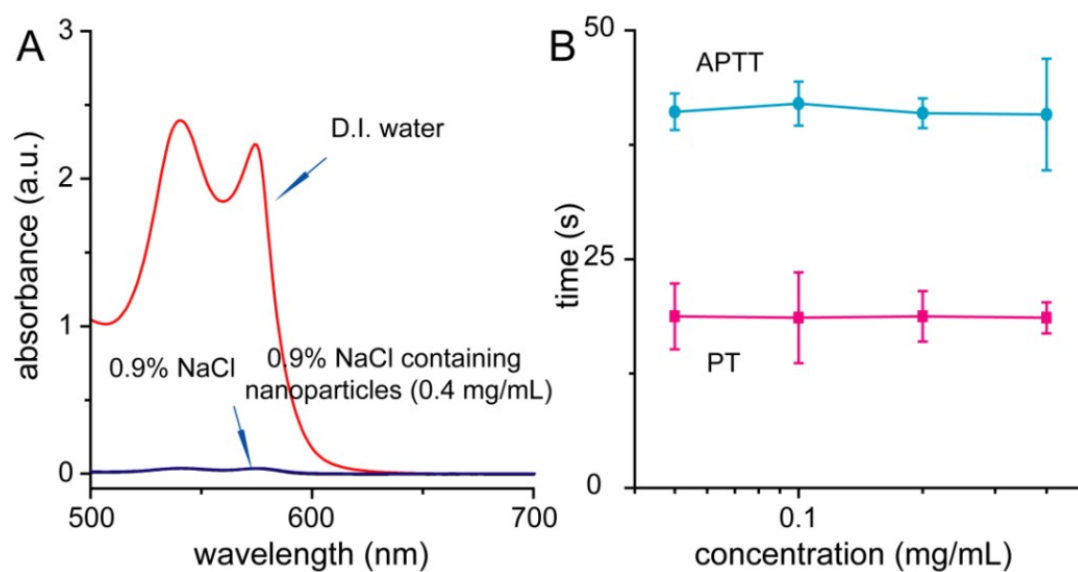


Fig. S2. UV-vis absorption spectra of hemoglobin (A) and blood coagulation results (B) in the presence of lanthanum-coordination nanoparticles with different concentrations.

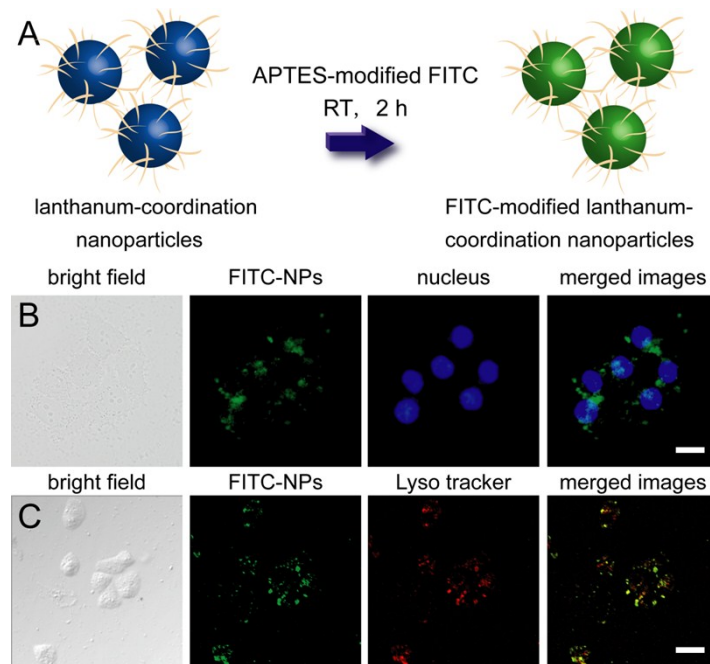


Fig. S3. Schematic illustration of the synthesis of fluorescent lanthanum-coordination nanoparticles (A) and fluorescence microscope images of 4T1 cells incubated with FITC-modified nanoparticles for 6 h at 37°C (B and C). The scale bar is 20 μm .

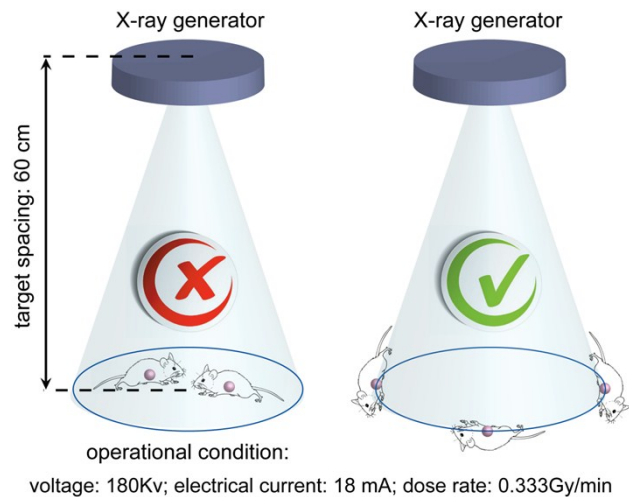


Fig. S4. Schematic illustration of X-ray radiation condition and related operation parameters in our present study. To minimize the whole body systemic toxicity of mice induced by X-ray radiation, tumor bearing mice were fixed around the area of X-ray exposure and tumors were directly exposed to X-ray radiation only.

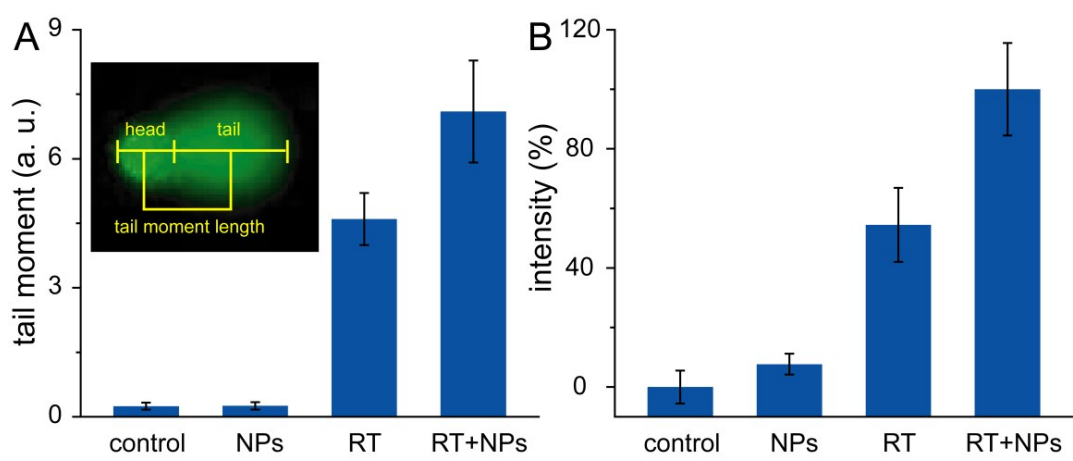


Fig. S5. Tail moment analysis of 4T1 cells after different treatments (A). Quantitative intracellular ROS levels after different treatments via flow cytometry analysis (B). Inset of A: definition of tail moment length.

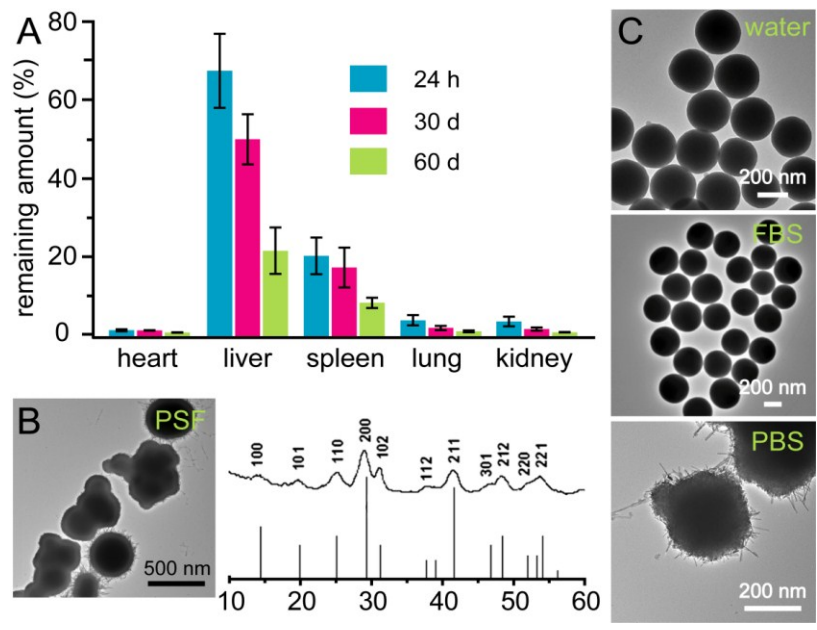


Fig. S6. Time-dependent bio-distribution of lanthanum-coordination nanoparticles after intravenous injection (A). Typical characterization of lanthanum-coordination nanoparticles 30 d after continuous phagolysosomal simulated fluid (PSF) exposure (B). TEM images of lanthanum-coordination nanoparticles 7 d after continuous water, fetal bovine serum (FBS), and phosphate buffer saline (PBS) exposure (C).

Table S1. Leakage percentages of LDH from 4T1 cells after co-incubation with lanthanum-coordination nanoparticles.

Concentrations (mg/mL)	Leakage percentages of LDH (%)
0	4.95
0.0125	10
0.025	5.85
0.05	9.65
0.1	10.7
0.2	9.95
0.4	8.35

Table S2. Values of hemolysis percentage of lanthanum-coordination nanoparticles.

Concentrations (mg/mL)	Value of hemolysis (%)
0.9% NaCl solution	0
water	100
0.0125	-0.085
0.025	0.44
0.05	0.165
0.1	0.21
0.2	0.11
0.4	0.195