

Supplementary Information for

Efficient delivery of photosensitizers and hypoxic prodrugs for tumor combination therapy by membrane camouflage nanoparticles

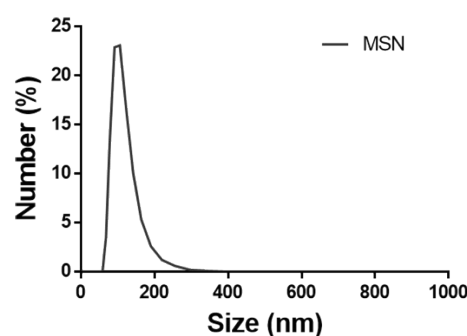


Figure S1. The size distribution of MSN

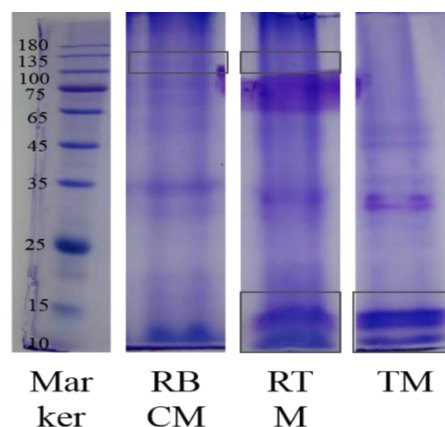


Figure S2. (D) SDS-PAGE analysis. The RBCM, RTM, TM (20 μ g) was resolved by 10% SDS-PAGE. Protein bands were visualized by Coomassie blue staining

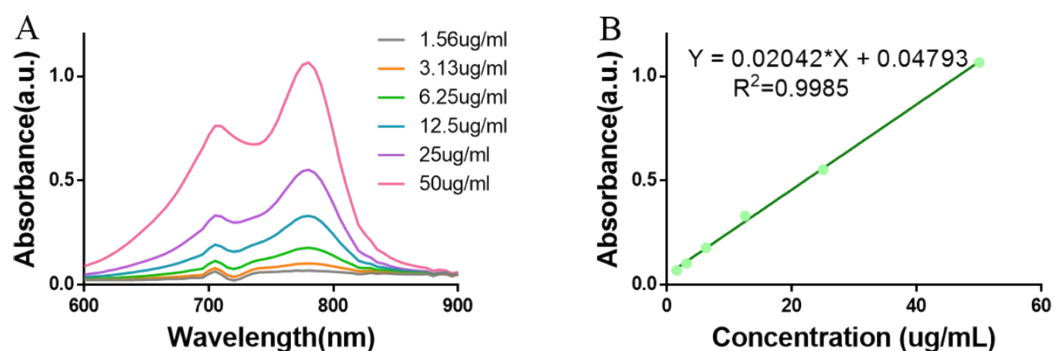


Figure S3. (A) UV-vis absorption spectrum of ICG content of 1.56 µg/mL, 3.13 µg/mL, 6.25 µg/mL, 12.5 µg/mL, 25 µg/mL, 50 µg/mL; (B) ICG concentration and UV absorption standard curve.

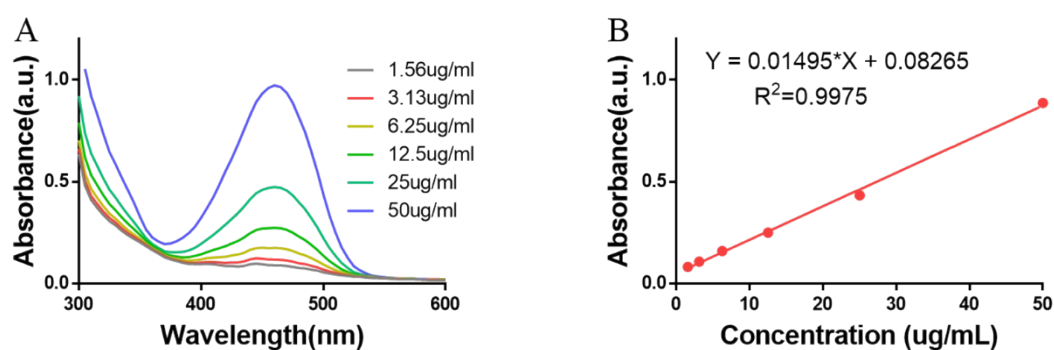


Figure S4. (A) UV-vis absorption spectrum of TPZ content of 1.56 µg/mL, 3.13 µg/mL, 6.25 µg/mL, 12.5 µg/mL, 25 µg/mL, 50 µg/mL; (B) TPZ concentration and UV absorption standard curve.

Table 1. The drug-loaded rate of nanoparticles

Nanoparticle	Loading drug system				Loading TPZ		Loading ICG	
	MSN (mg)	TPZ (mg)	ICG (mg)	Solvent(water, mL)	TPZ (mg)	Rate (%)	ICG (mg)	Rate (%)
IT@MSN	40	1	4	4	0.8	2	3.5	8.75
IT@MSN@RBCM	20	0.5	2	2	0.35	1.75	1.6	8
IT@MSN@TM	20	0.5	2	2	0.36	1.8	1.6	8
IT@MSN@RTM	40	0.5	2	2	0.35	1.7	1.65	8.25
T@MSN@RTM	20	0.5	0	2	0.45	2.25	0	0
I@MSN@RTM	20	0	2	4	0	0	1.85	9.25

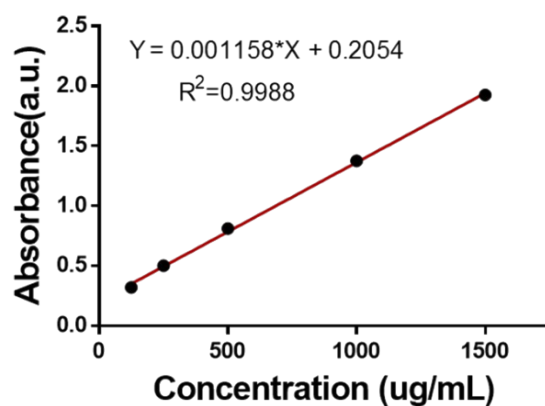


Figure S5. ABS protein quantitative concentration and UV absorption standard curve.

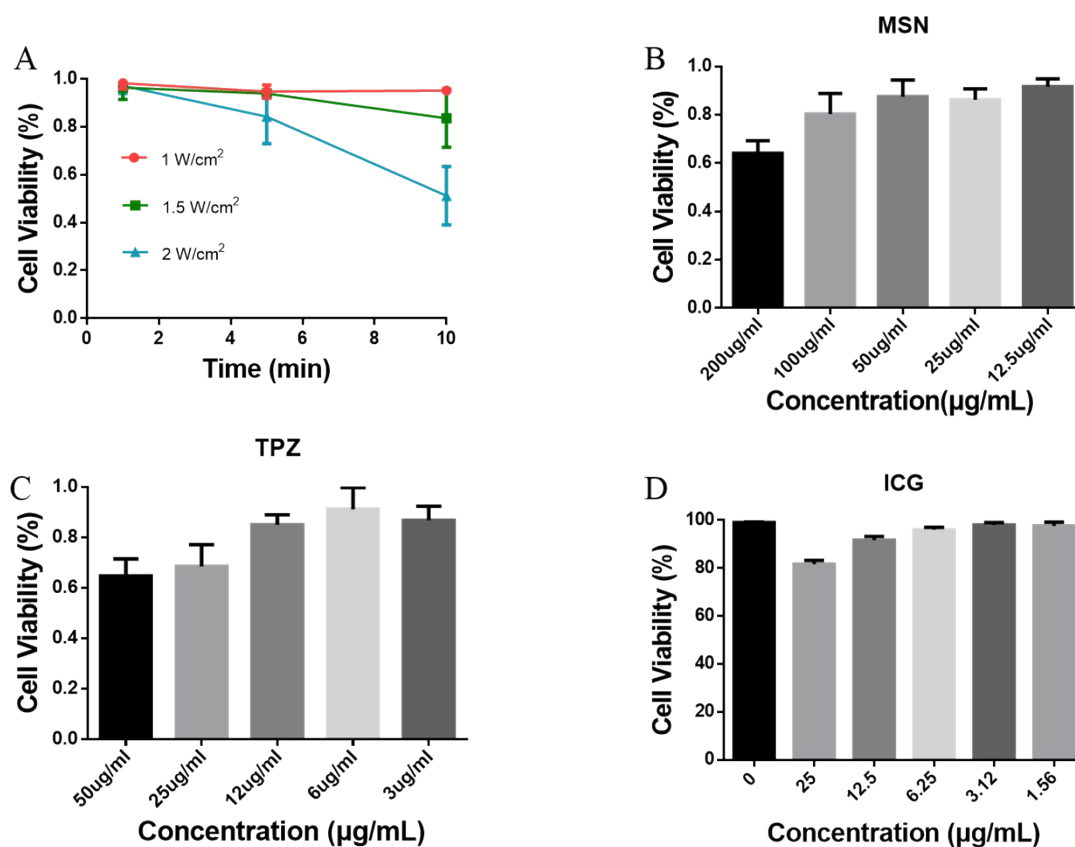


Figure S6. (A) Research on laser safety conditions; (B) MSN safety research; (C) free TPZ security exploration, (D) free ICG security exploration.

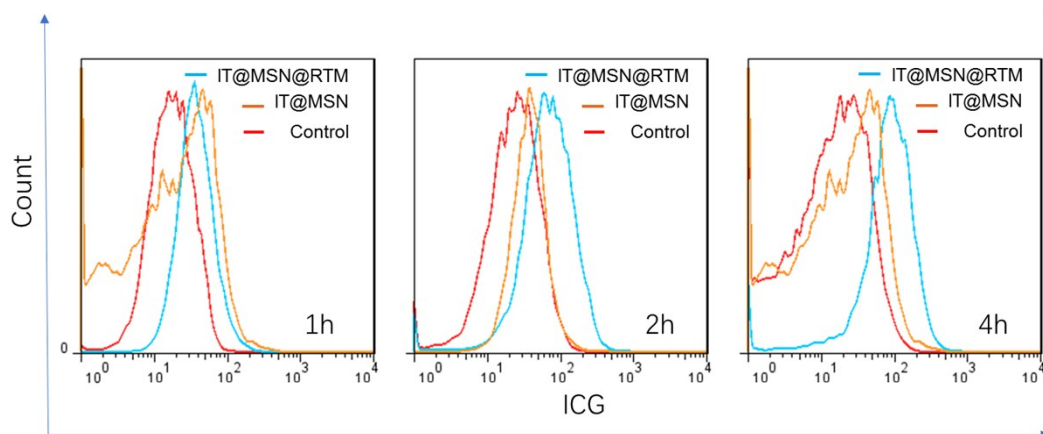


Figure S7. Flow cytometric analysis of 4T1 cells phagocytosing nanoparticles with controls as controls (red line), IT @ MSN @ RTM (yellow line), IT @ MSN (blue line).

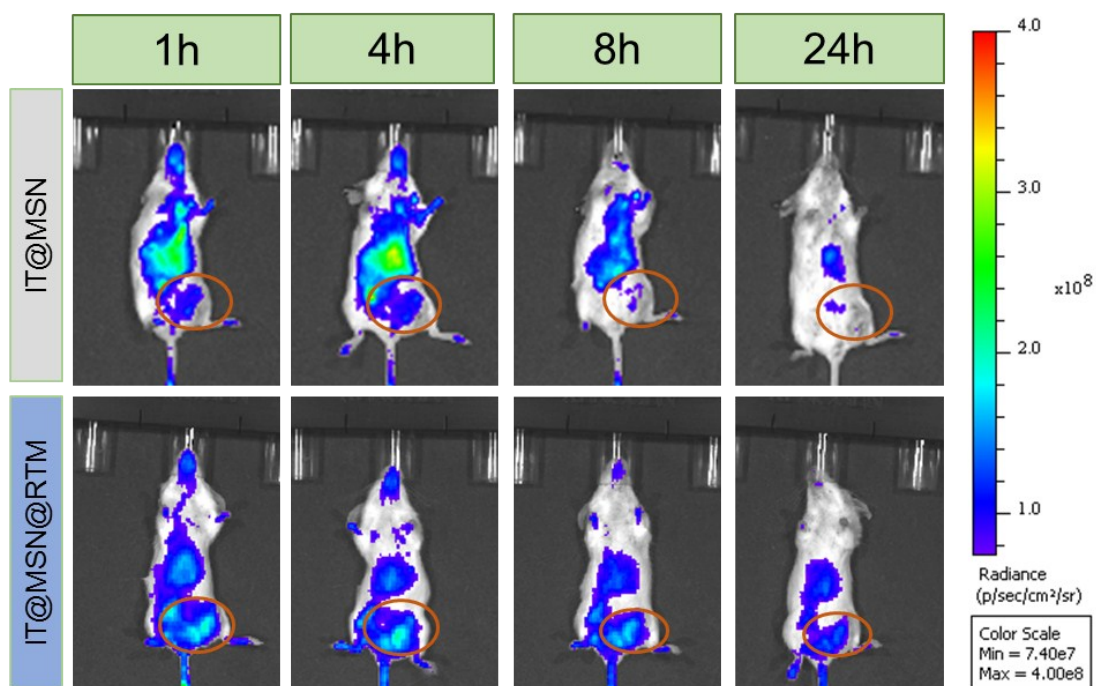


Figure S8. In vivo imaging of tumor in BALB/c. ICG@MSN and ICG@MSN@RTM nanoparticles were injected into the 4T1 tumor-bearing mice model by caudal vein and in vivo imaging was used for detecting the fluorescence at 1h, 4h, 8h, 24 h.

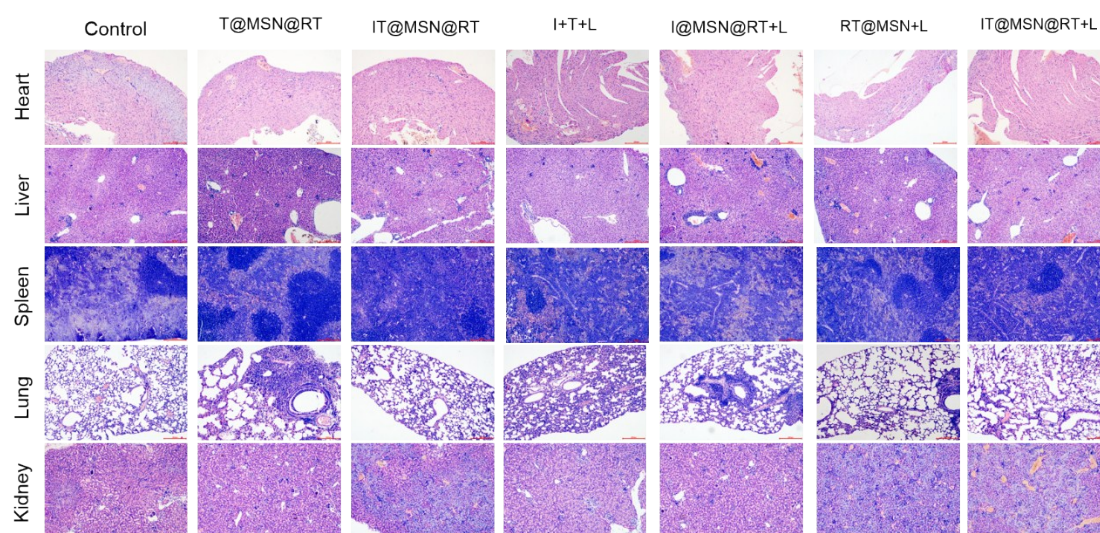


Figure S9. H&E-stained slices of major organs including heart, liver, spleen, lung, and kidney from each group. Tumor-bearing mice without any treatment were used as a control. Scale bar=200 μ m.