

Electronic Supporting Information

Prussian blue decorated mesoporous silica hybrid nanocarriers for photoacoustic imaging-guided synergistic chemo-photothermal combination therapy

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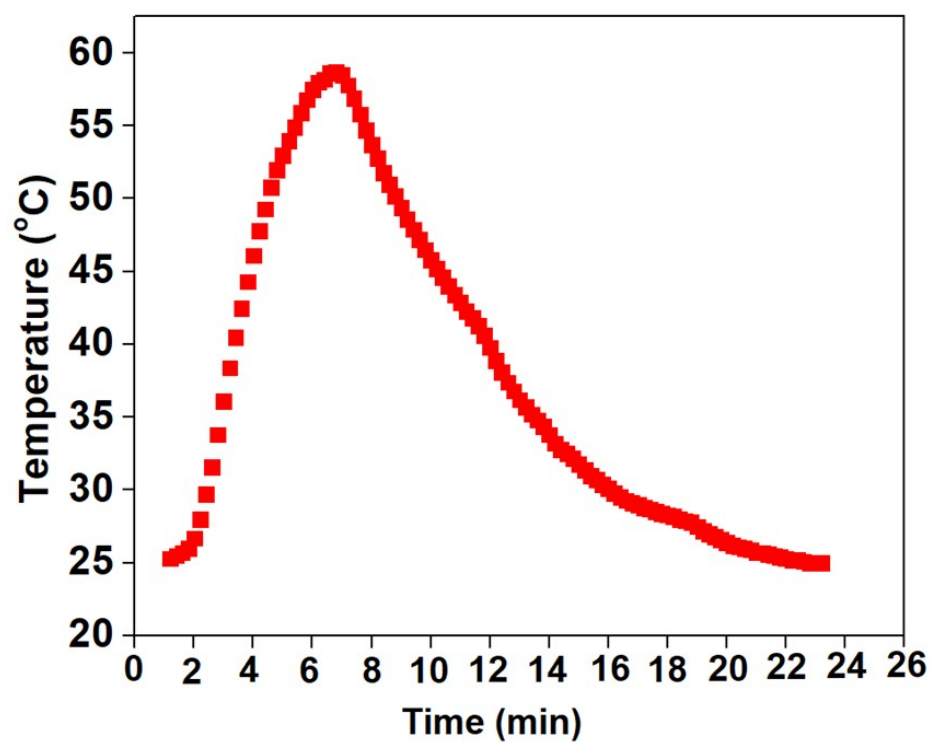


Figure S1 Thermal curve of heating and cooling process of PB@MSH-EDA NPs dispersed in water (200 $\mu\text{g/mL}$) and irradiated with 808 nm laser at 2 W/cm^2 .

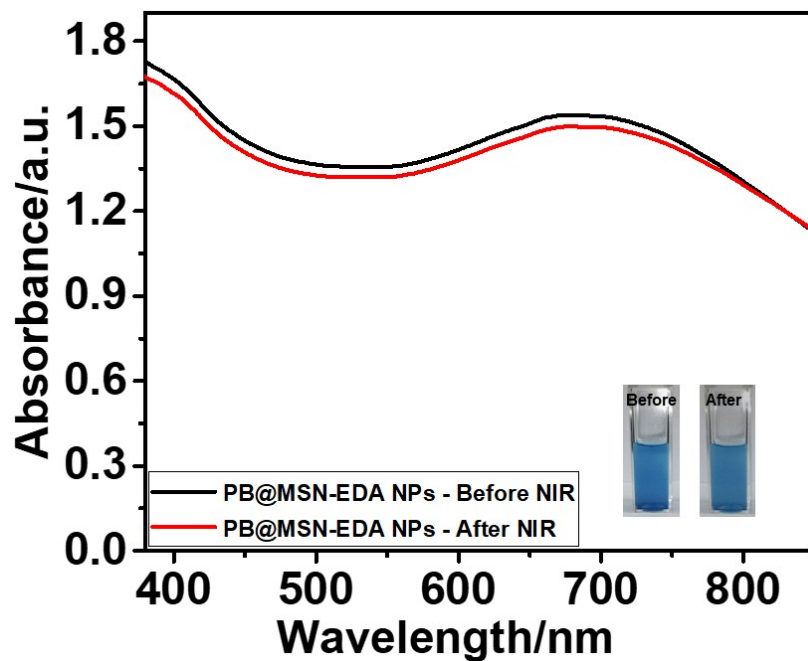


Figure S2 UV-vis absorption curves of PB@MSH-EDA NPs dispersed in water and measured before and after irradiation of 808 nm laser at 2 W/cm² for 5 min.

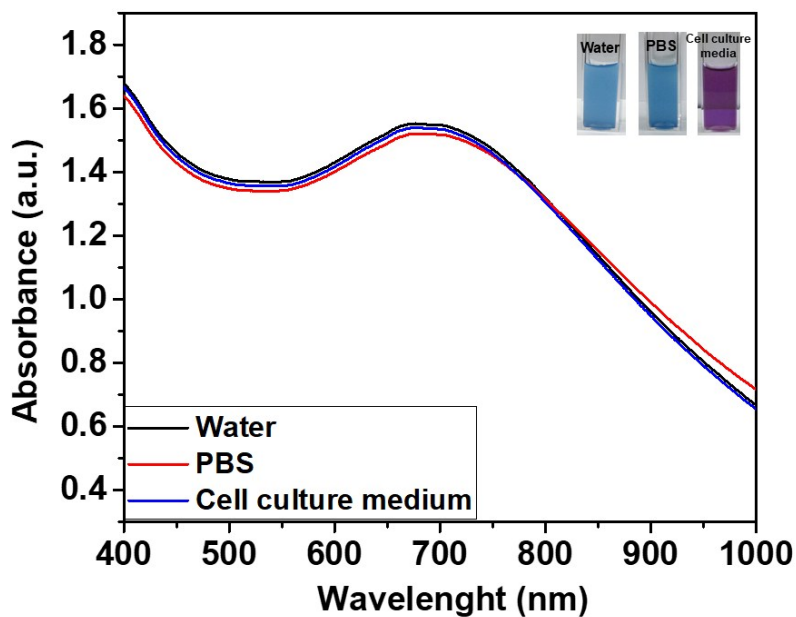


Figure S3 UV-vis absorption curves of the stability of PB@MSH-EDA NPs dispersed in different medium and stored for 3 months.

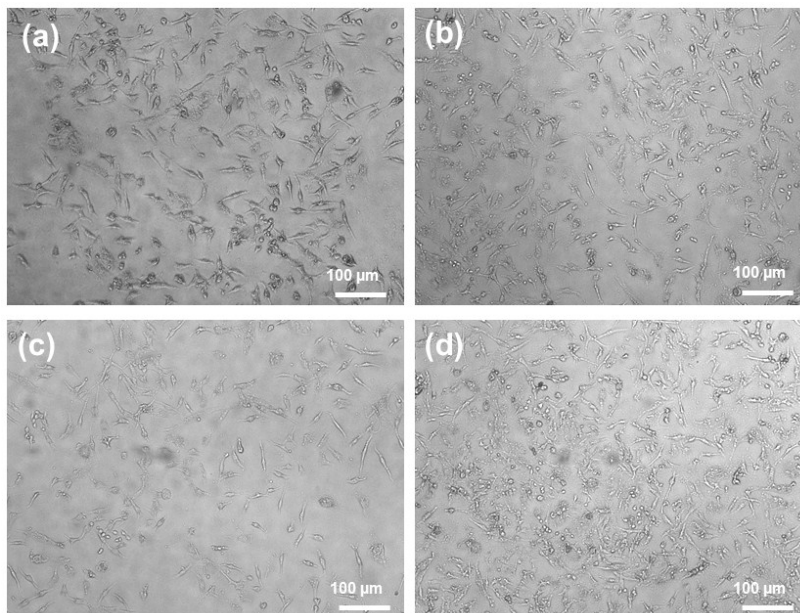


Figure S4 Bright-field images of MDA-MB-231 cells in different conditions and after the treatment of (a) only PBS, (b) PBS + NIR, (c) PB@MSH-EDA/Dox NPs without NIR and (d) PB@MSH-EDA/Dox + NIR laser irradiated at 808 nm, 2 W/cm² for 5 min.

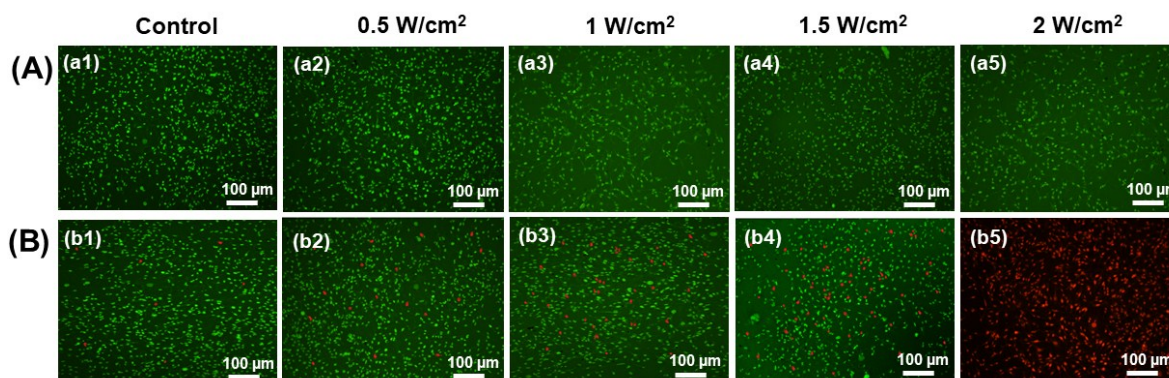


Figure S5 Merged fluorescence microscopic images of MDA-MB-231 cells without treating (A) control; and (B) after treatment of PB@MSH-EDA NPs (200 µg/mL) and further irradiated with 808 nm NIR laser at different laser power intensities (0.5 W/cm², 1 W/cm², 1.5 W/cm² and 2 W/cm², respectively, for 5 min) (20x magnification). The cells were stained by AO (live cells: green) and EB (dead cells: red).



Figure S6 Photographic images of MDA-MB-231 tumor-bearing nude mice curing after intratumoral injection of PB@MSH-EDA NPs followed by irradiation of mice with 808 nm laser with the laser power density at 2 W/cm² for 5 min.

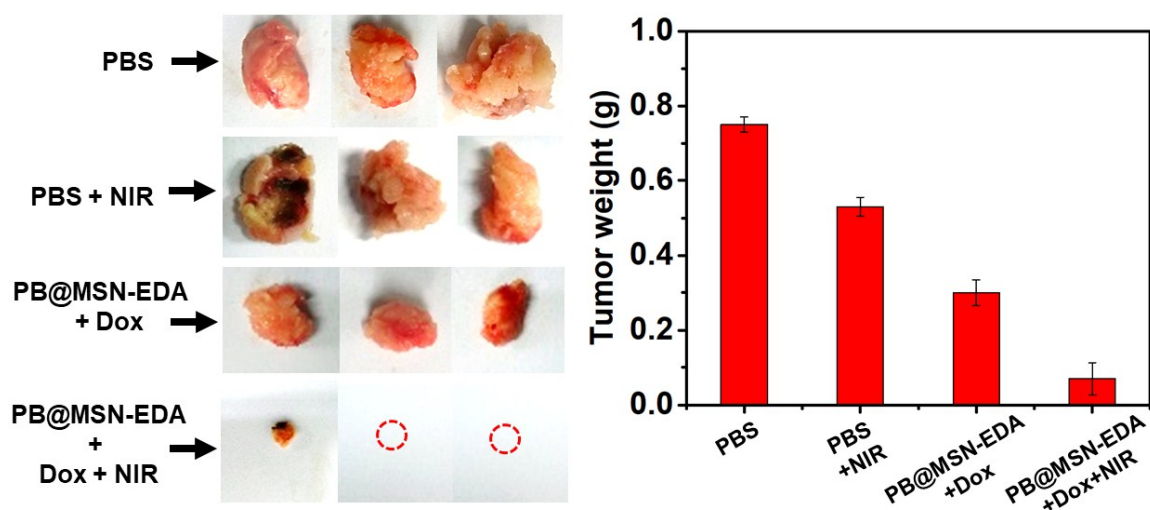


Figure S7 (A) The tumor images obtained from the sacrificed mice at the end of experiments; and (B) the weight of tumor at different groups of nude mice after 20 days of only PBS, PBS + NIR, PB@MSH-EDA/Dox NPs and PB@MSH-EDA/Dox + NIR irradiation, respectively.

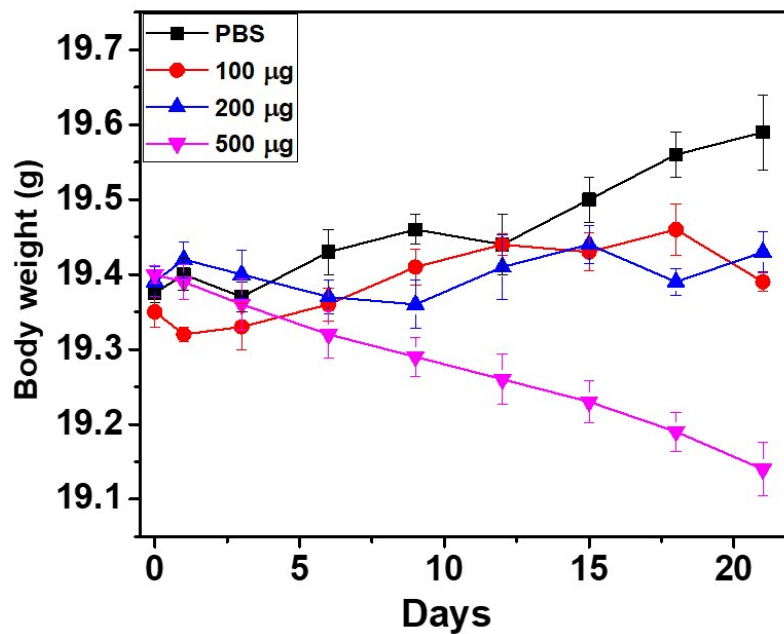


Figure S8 The estimation of animal body weight by treating the mice with different concentrations of PB@MSH-EDA NPs, respectively. Data represent mean \pm standard deviation.

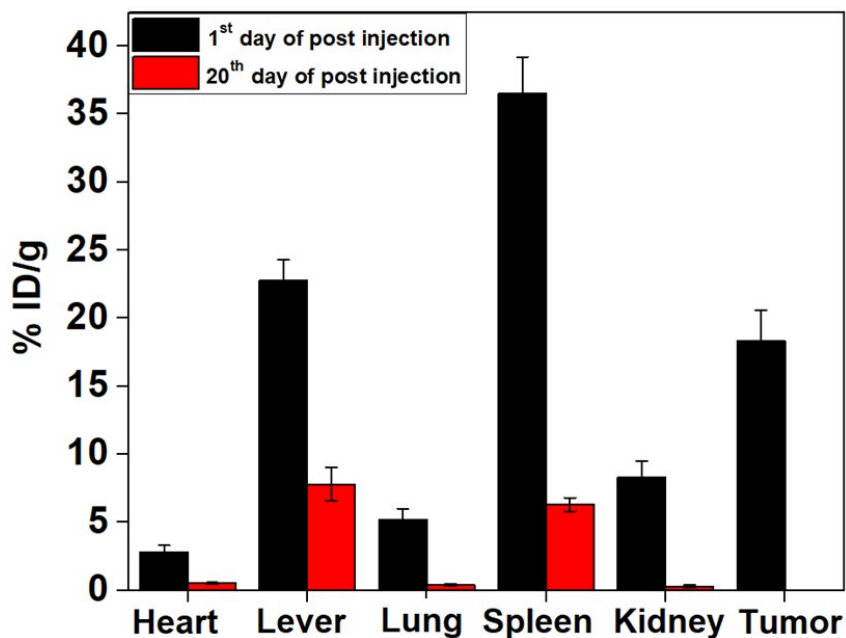


Figure S9 Biodistribution of PB@MSH-EDA NPs in major organs and tumor in nude mice. The results were presented as mean \pm standard deviation.

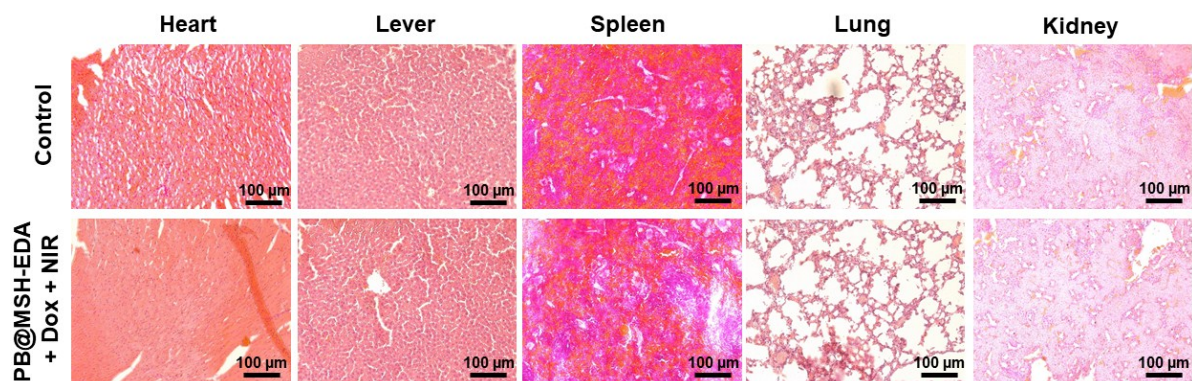


Figure S10 Fluorescence microscopic images of H&E staining of major organ slices collected from mice of control group and the combination therapy group after 20 days of treatment. No considerable sign of organ damage was observed in major organs of mice. Scale bar = 100 µm.