Supporting Information

# Magnetically-targeted and near infrared fluorescence/magnetic resonance/photoacoustic imaging-guided combinational anti-tumor phototherapy based on polydopamine capped magnetic prussian blue nanoparticles

Yidan Wang,[a] Xiaojuan Pang,[a] Jinping Wang,[a] Yu Cheng,[a] Yilin Song,[a] Qi Sun,[a] Qing You,[a] Li Liu,[a] Siyu Wang,[a] Fengping Tan,[a] Jiao Li,*[b] and Nan Li*[a]

[a]Tianjin Key Laboratory of Drug Delivery & High-Efficiency, School of Pharmaceutical Science and Technology, Tianjin University, 300072, Tianjin, PR China.

[b]School of Precision Instruments and Optoelectronics Engineering, Tianjin University, 300072, Tianjin, PR China.

*[a]Corresponding author at: School of Pharmaceutical Science and Technology, Tianjin University, 300072, Tianjin, PR China.

Tel.:+86-022-27404986

E-mail address: linan19850115@163.com

*[b]Co-corresponding author at: School of Precision Instruments and Optoelectronics Engineering, Tianjin University, Tianjin, PR China.

E-mail address: jiaoli@tju.edu.cn

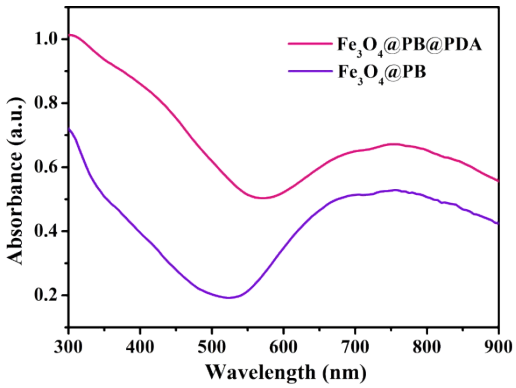


**Fig. S1** UV-vis absorption spectra of $Fe_3O_4$@PB and $Fe_3O_4$@PB@ PDA.

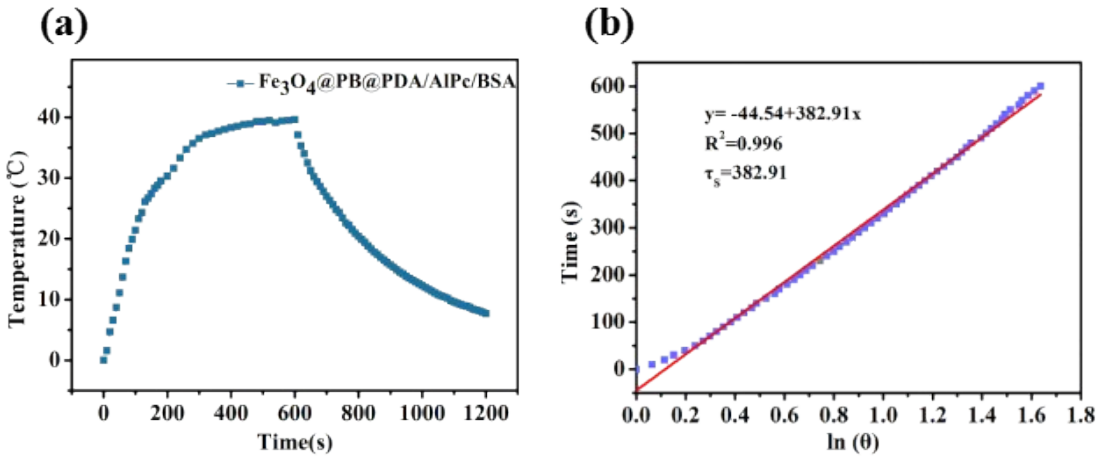


**Fig. S2** (a) Photothermal effect of $Fe_3O_4$@PB@PDA/AlPc/BSA nanocomposites irradiated by 660 nm laser, the laser was shut off after 600 s. (b) Plot of cooling time (after 600 s) versus negative natural logarithm of the driving force temperature obtained from a cooling stage.

The photothermal conversion efficiency: $\eta = \frac{h_s(T_{max} - T_{surr}) - Q_s}{I(1-10^{-A660})} = 22.3\%$

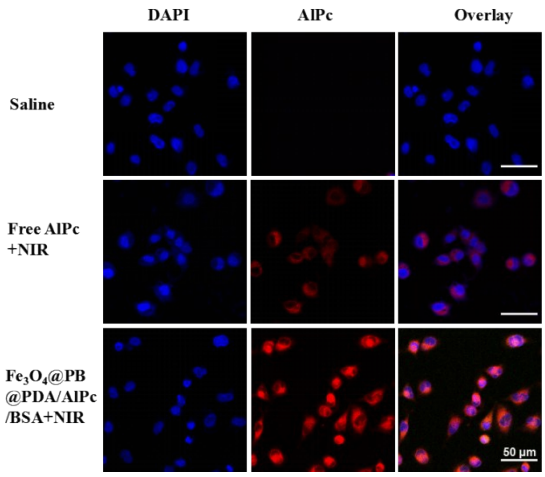


**Fig. S3.** CLSM images of 4T1 cells treated with Saline and different formulations, scale bar indicated 50 μm.

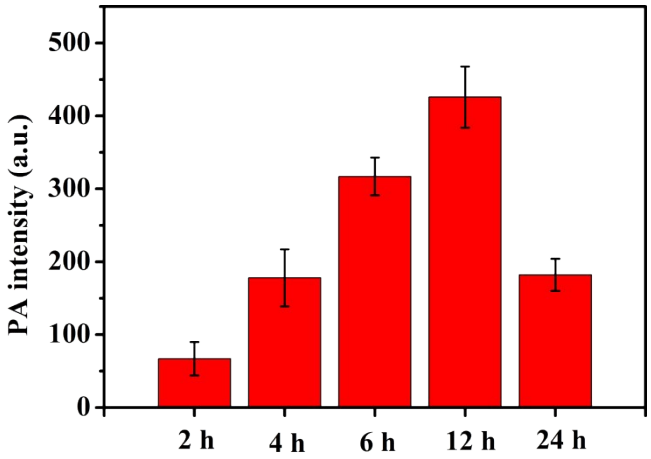


**Fig. S4.** The corresponding photoacoustic signal intensity of the $Fe_3O_4$@PB@PDA/AlPc/BSA nanocomposites in the tumor at different time points.

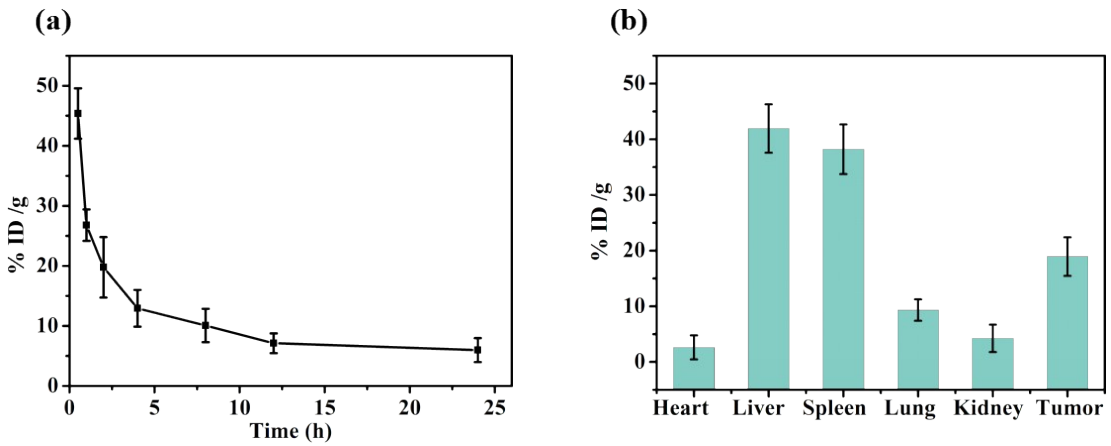


**Fig. S5.** (a) The blood circulation time of $Fe_3O_4$@PB@PDA/AlPc/BSA nanocomposites in mice at different time points post-injection. (b) The bio-distribution of Fe in main organs and tumor after 24 h of intravenous administration of $Fe_3O_4$@PB@PDA/AlPc/BSA nanocomposites.