

Supplementary materials

Metal-phenolic network-based multifunction nanocomposite with pH-responsive ROS generation and drug release for synergistic chemodynamic/photothermal/chemo-therapy

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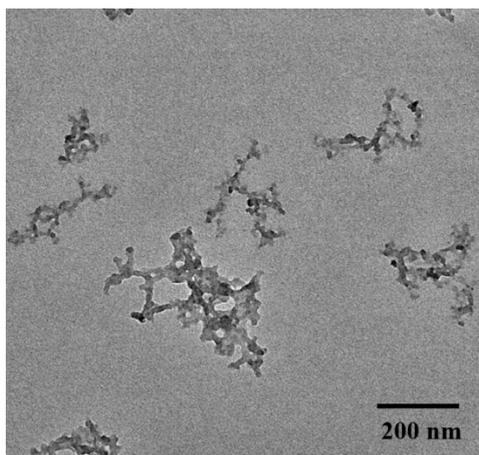


Fig. S1 TEM of Fe-TA.

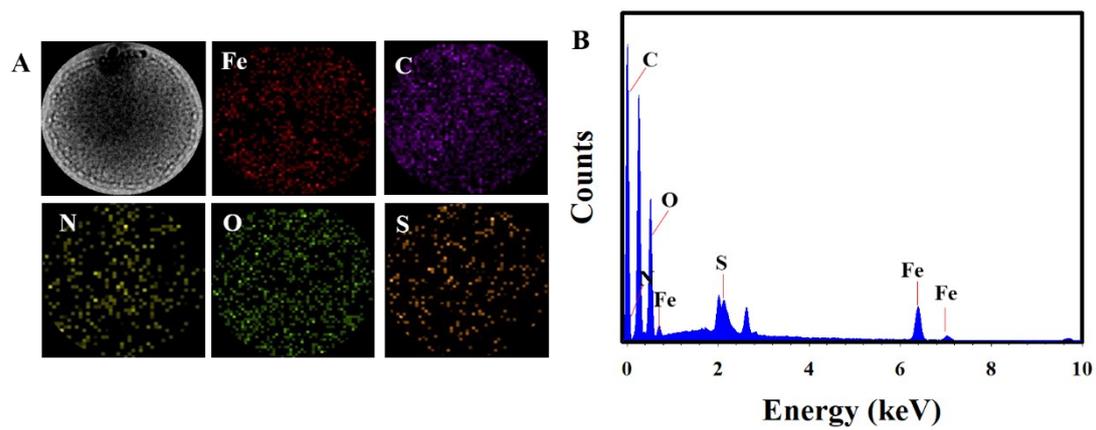


Fig. S2 Elements analysis of PID@Fe-TA (A) TEM image and corresponding area-elemental mappings, (B) EDX result.

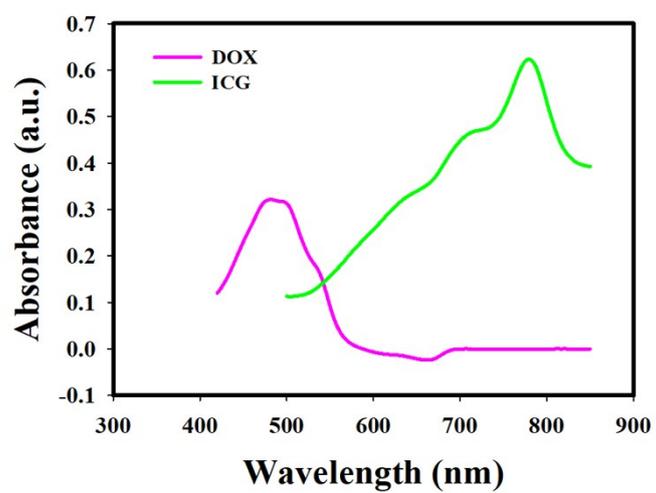


Fig. S3 UV-vis absorption spectrum of DOX and ICG.

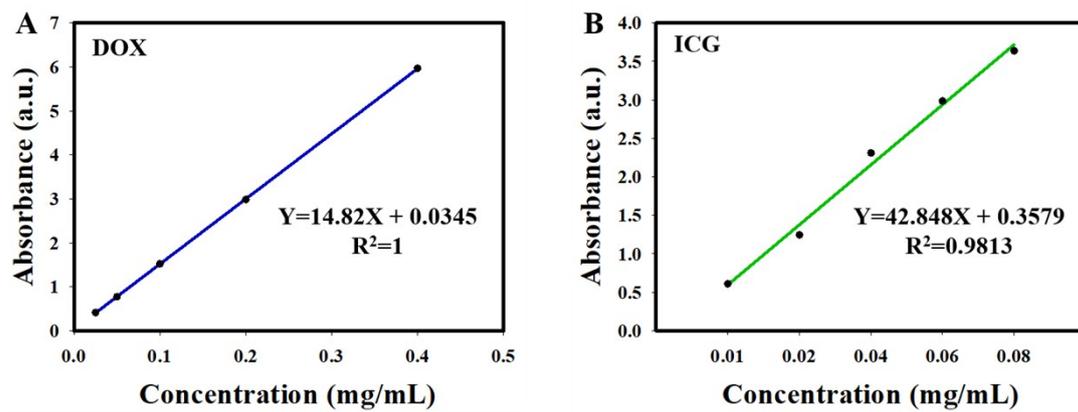


Fig. S4 The standard curve of DOX (A) and ICG (B).

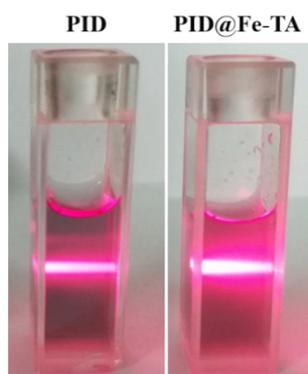


Fig. S5 Tyndall effect of PID and PID@Fe-TA

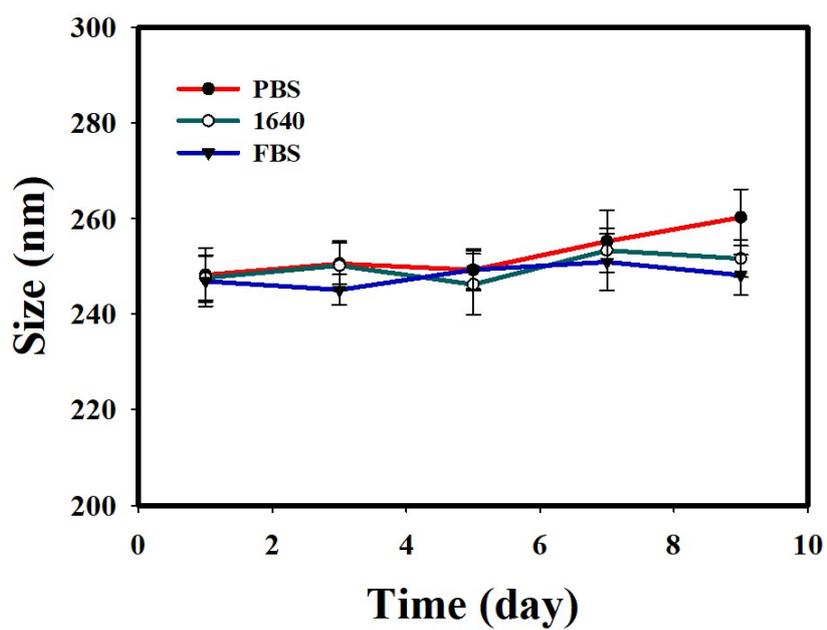


Fig. S6 The size of PID@Fe-TA during 9 days scoking in PBS, 1640 medium and FBS.

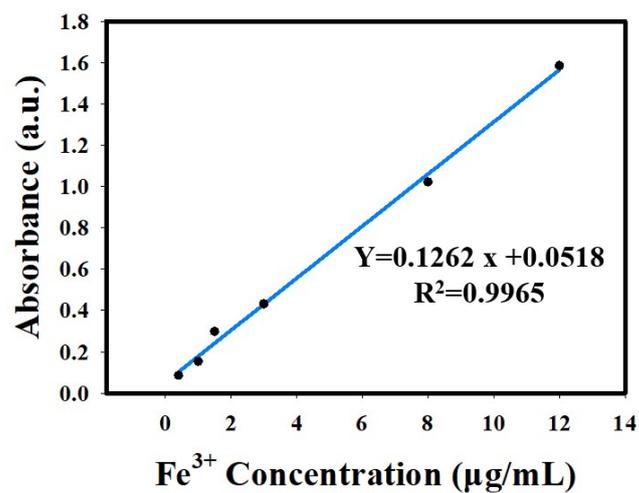


Fig. S7 Detection of Fe³⁺ convert to Fe²⁺ by 1,10-phenathroline. The standard curve for absorbance value at 510 nm.

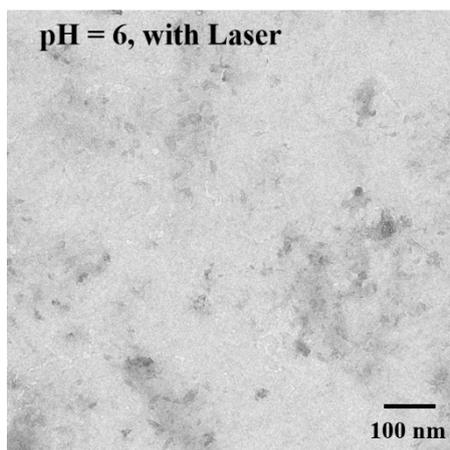


Fig. S8 TEM image of PID@Fe-TA under pH = 6 with NIR irradiation for 5 min at initial time of the experiment, and then incubation for another 6 h.

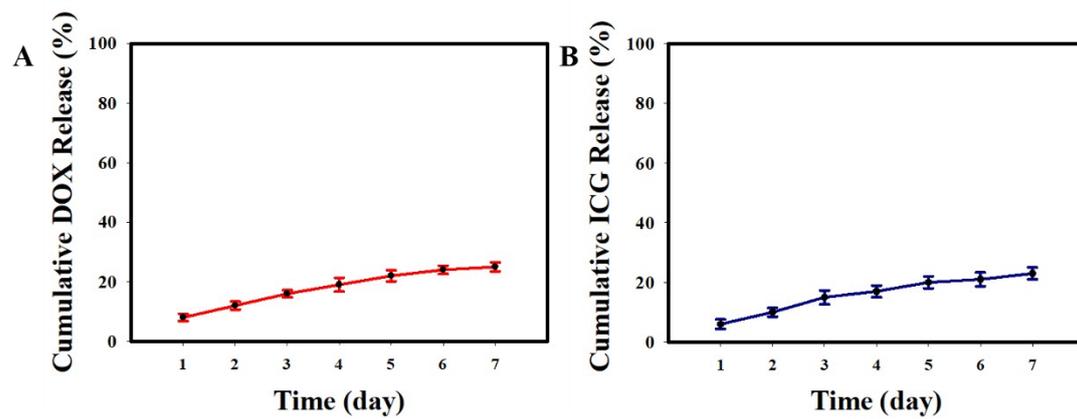


Fig. S9 The release rate of DOX and ICG in PBS.

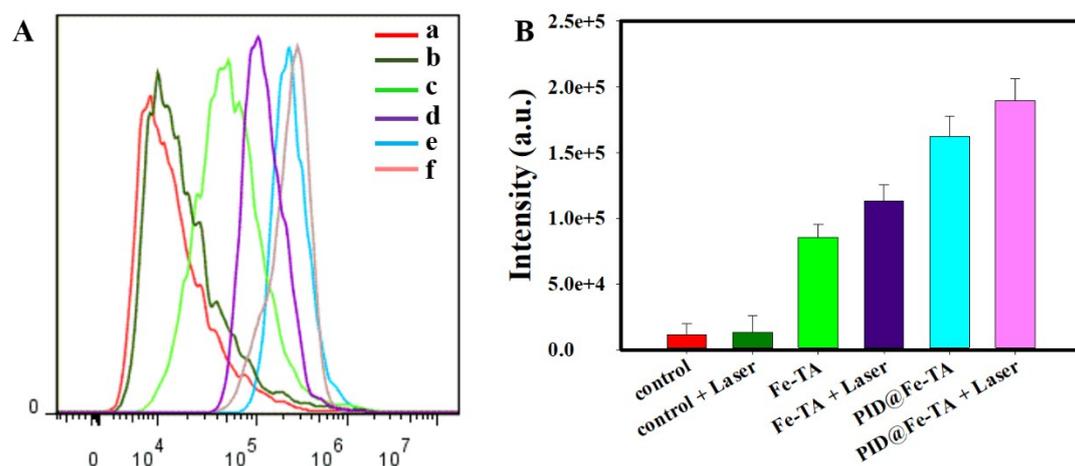


Fig. S10 (A) The quantitative analysis of ROS generation by flow cytometry after treatment with (a) PBS, (b) PBS + NIR, (c) Fe-TA, (d) Fe-TA + NIR, (e) PID@Fe-TA and (f) PID@Fe-TA + NIR, and (B) the corresponding fluorescence value.

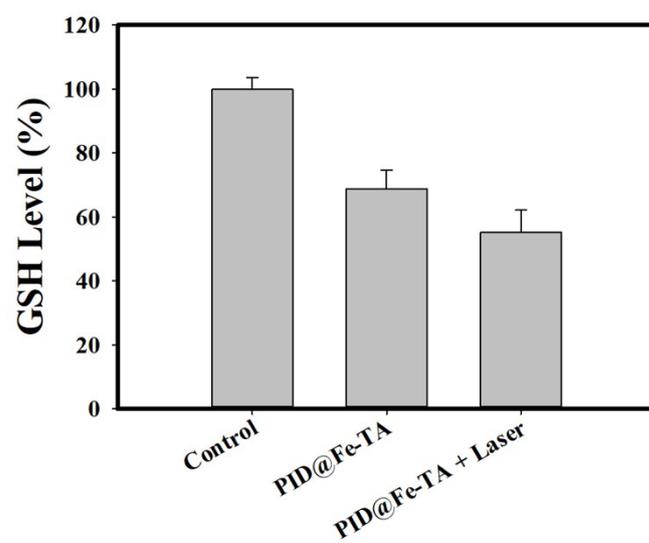


Fig. S11 GSH level in MCF-7 cells after treated with PID@Fe-TA or PID@Fe-TA + Laser.

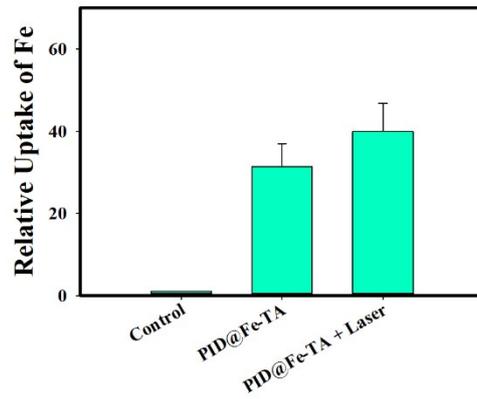


Fig. S12 ICP analysis of Fe uptake by MCF-7 cells incubated with PID@Fe-TA for 4 h without or with laser irradiation by comparison with the cells incubated with fresh medium.

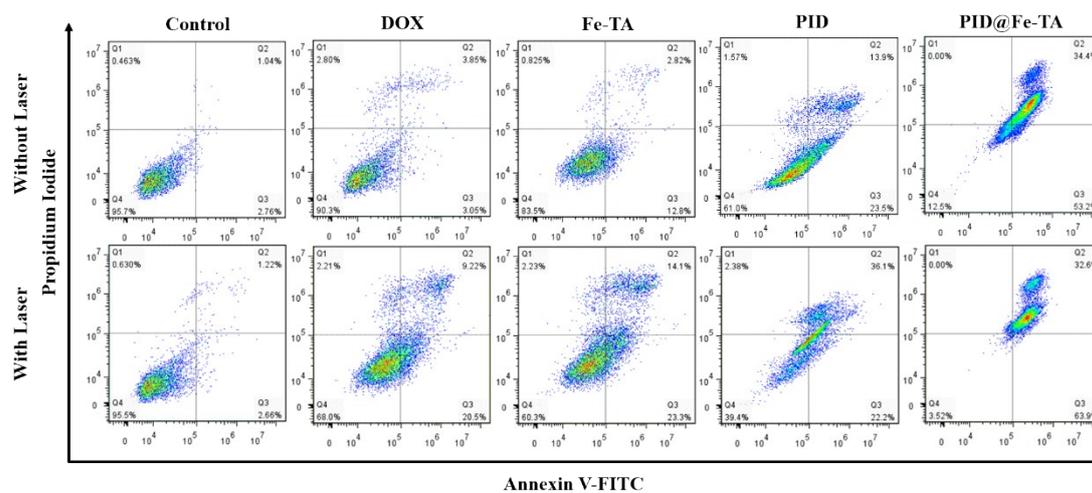


Fig. S13 Apoptosis analysis of MCF-7 cells after incubating with DOX, Fe-TA, PID and PID@Fe-TA with or without Laser for 24 h via Annexin V/PI staining analyzed by flow cytometry.

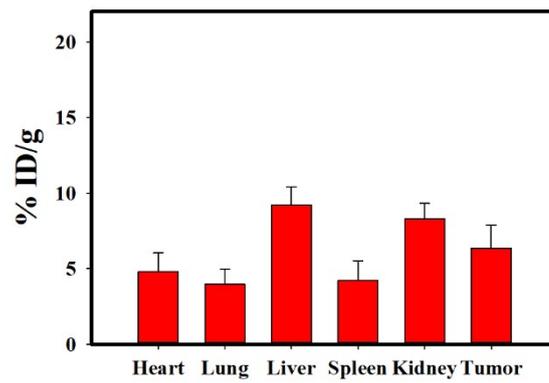


Fig. S14 The biodistribution of the mice treated with PID@Fe-TA + Laser at 24 h postinjection by intravenous injection.

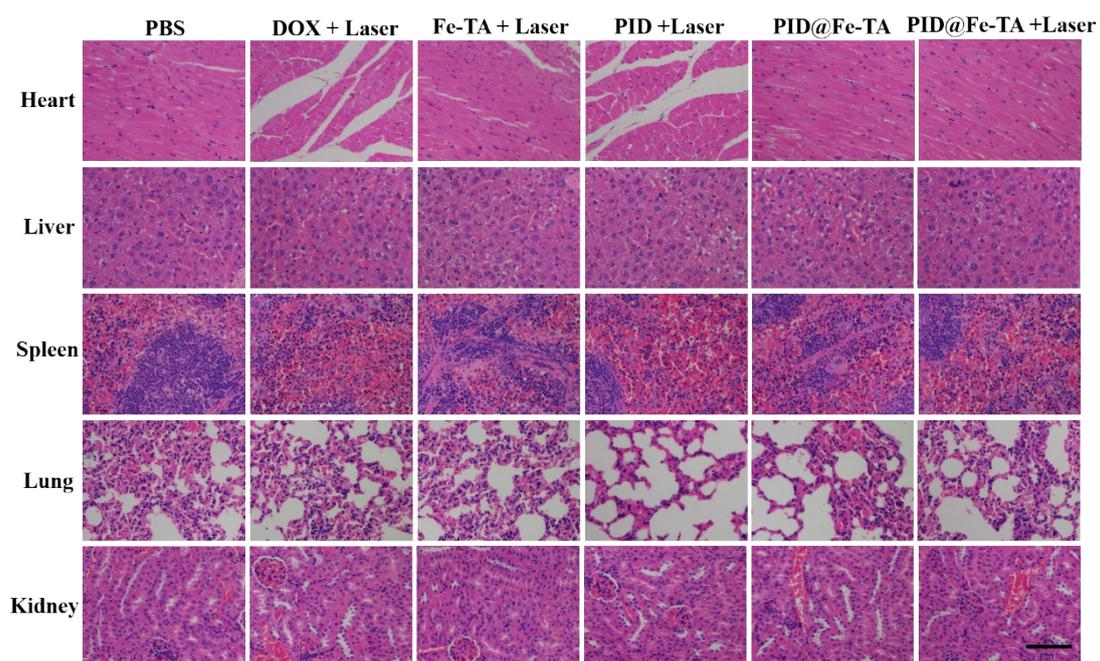


Fig. S15 Histological analysis of tissue sections at the end of treatments. Scale bars are 50 μm .