Supplementary material

ATP-Activated Self-Cascade Nanoplatform for ROS/mPTT/Starvation Tri-Therapy through Tumor Microenvironment Remodeling

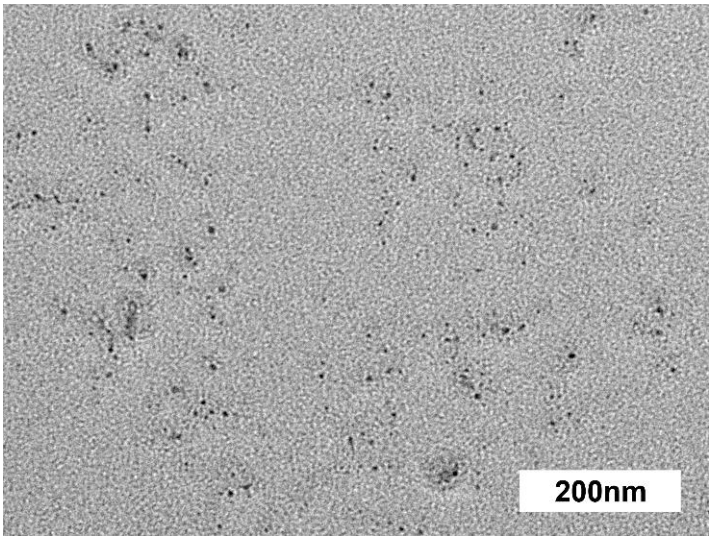

Fig. S1 TEM image of Fe-GA NPs, scale bar: 200 nm.

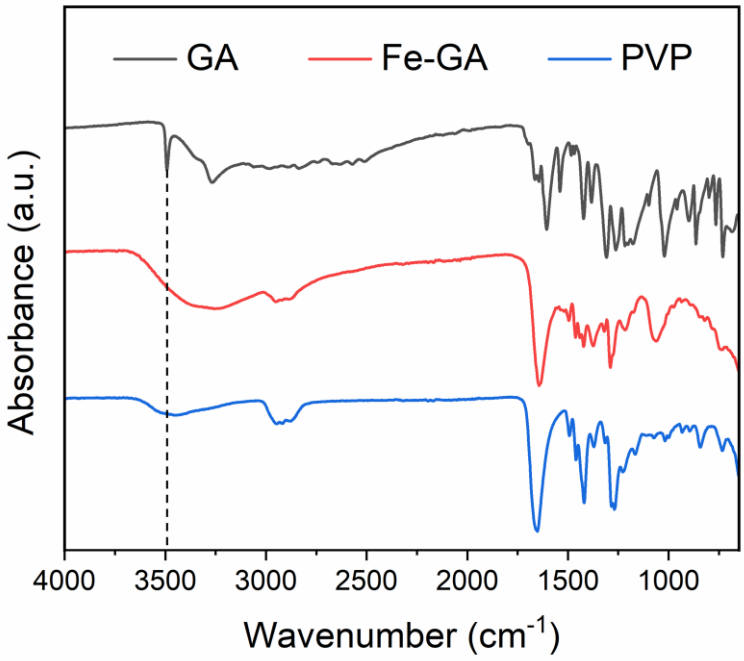

Fig. S2 FT-IR image of Fe-GA NPs.

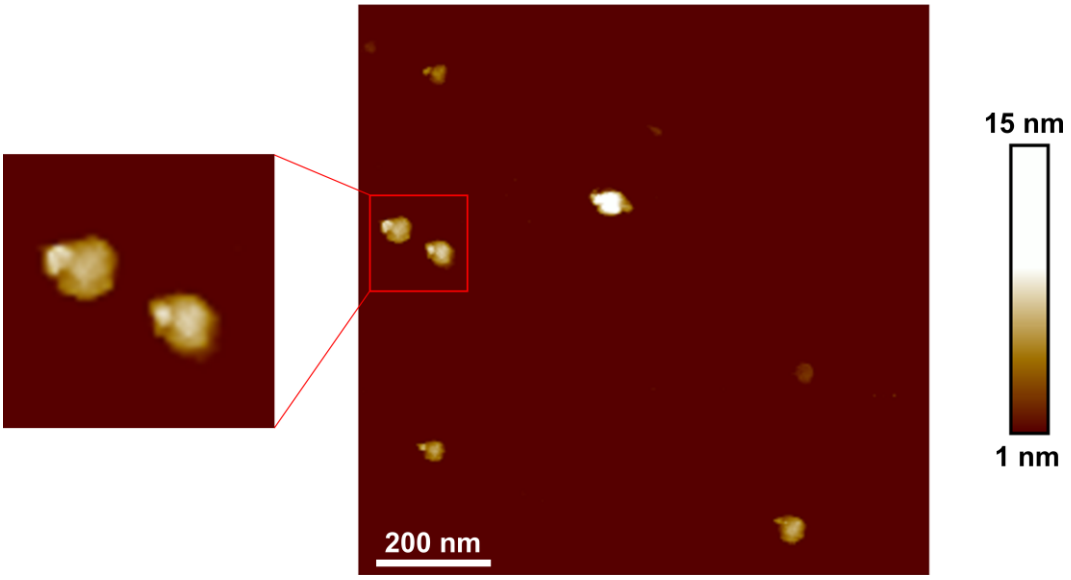

Fig. S3 AFM image of GOx@Fe-GA NPs; scale bar: 200 nm.

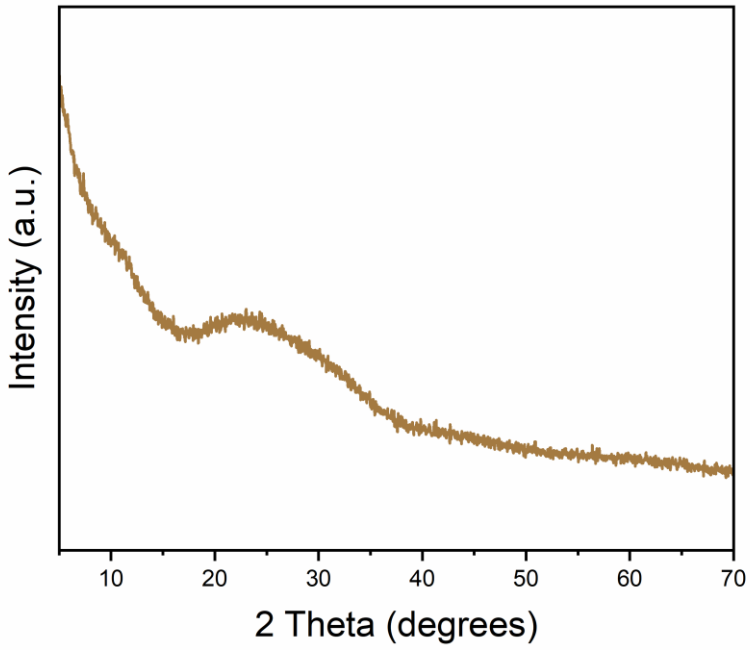

Fig. S4 The XRD pattern of GOx@Fe-GA NPs.

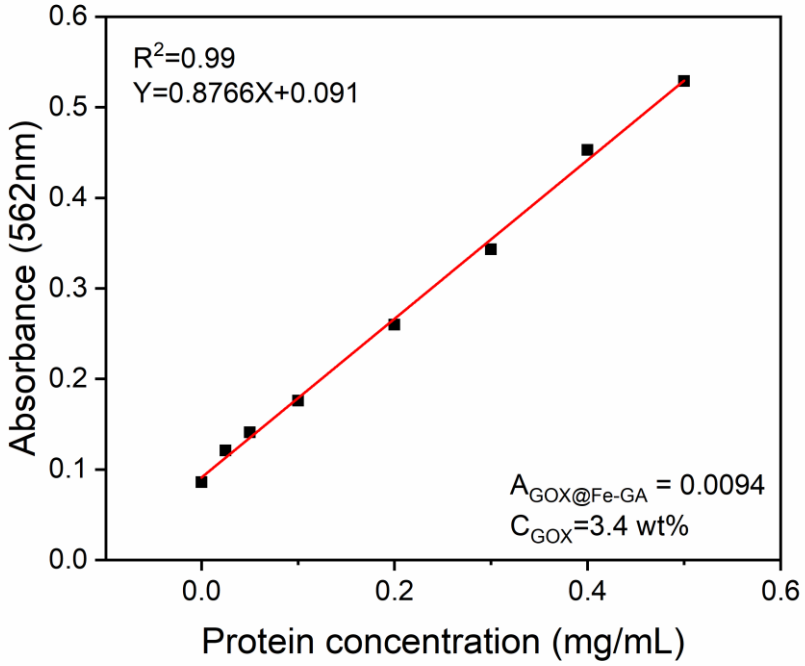

Fig. S5 The standard curve of BCA for BCA protein assay kit.

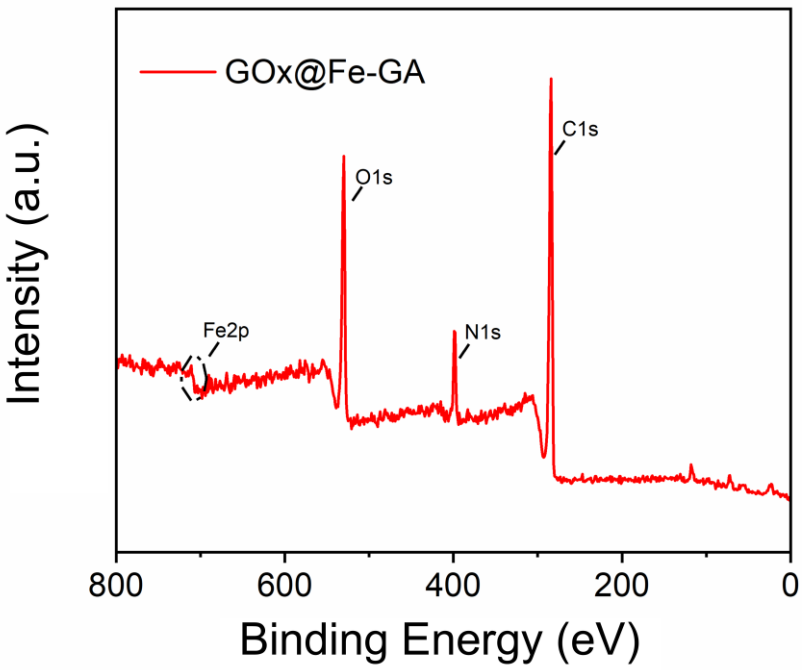

Fig. S6 XPS spectrum of GOx@Fe-GA NPs.

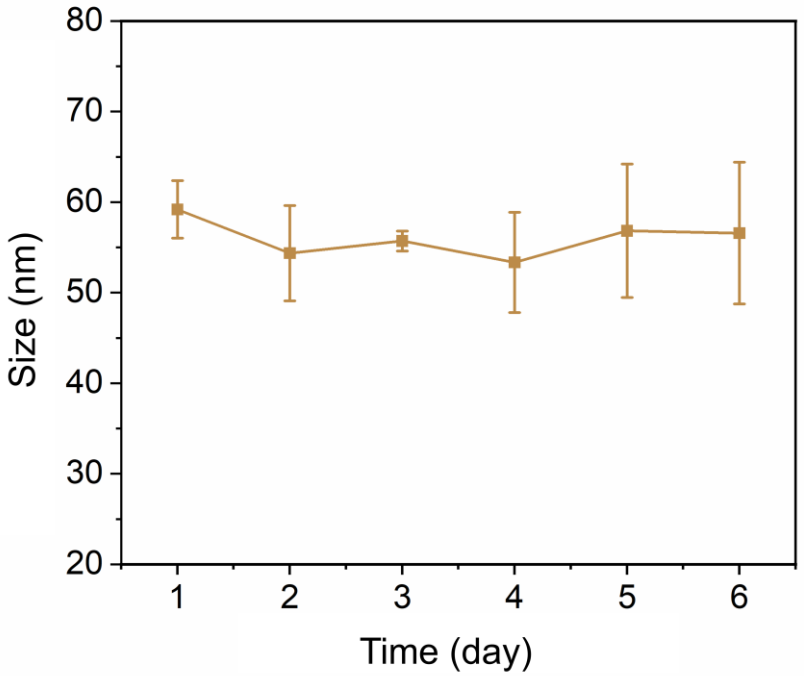

Fig. S7 Size distribution of GOx@Fe-GA NPs in PBS within 6 days.

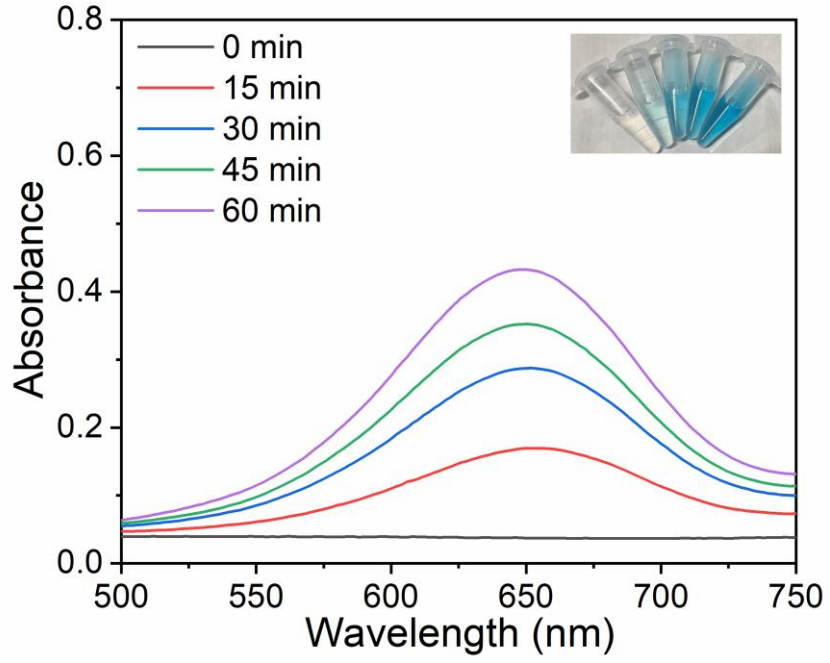

Fig. S8 GOx@Fe-GA NPs at different times of UV-vis absorbance at 652 nm with TMB, [GOx@Fe-GA] = 100 μg/mL.

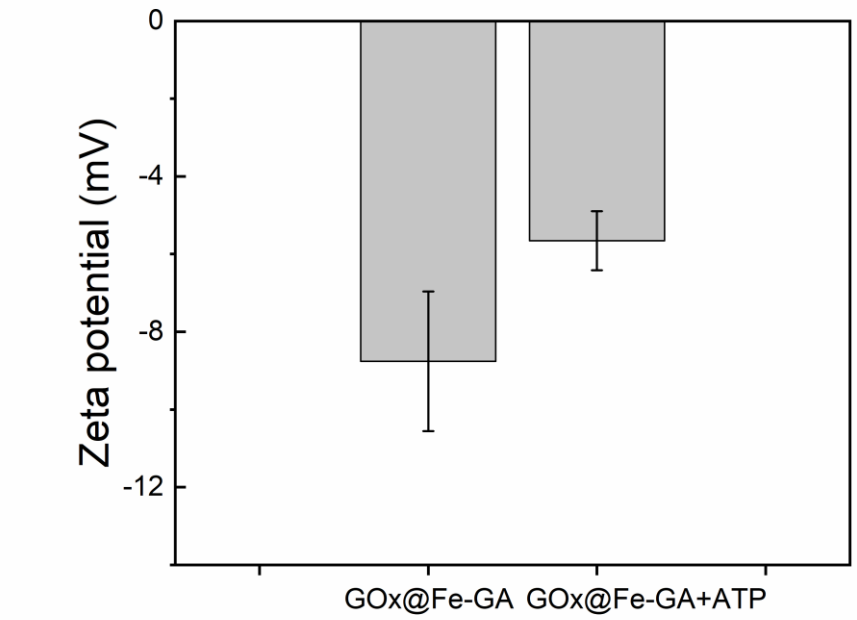

Fig. S9 Zeta potential of GOx@Fe-GA NPs before and after adding ATP, [GOx@Fe-GA] = 2 mg/mL, [ATP] = 10 mg/mL.

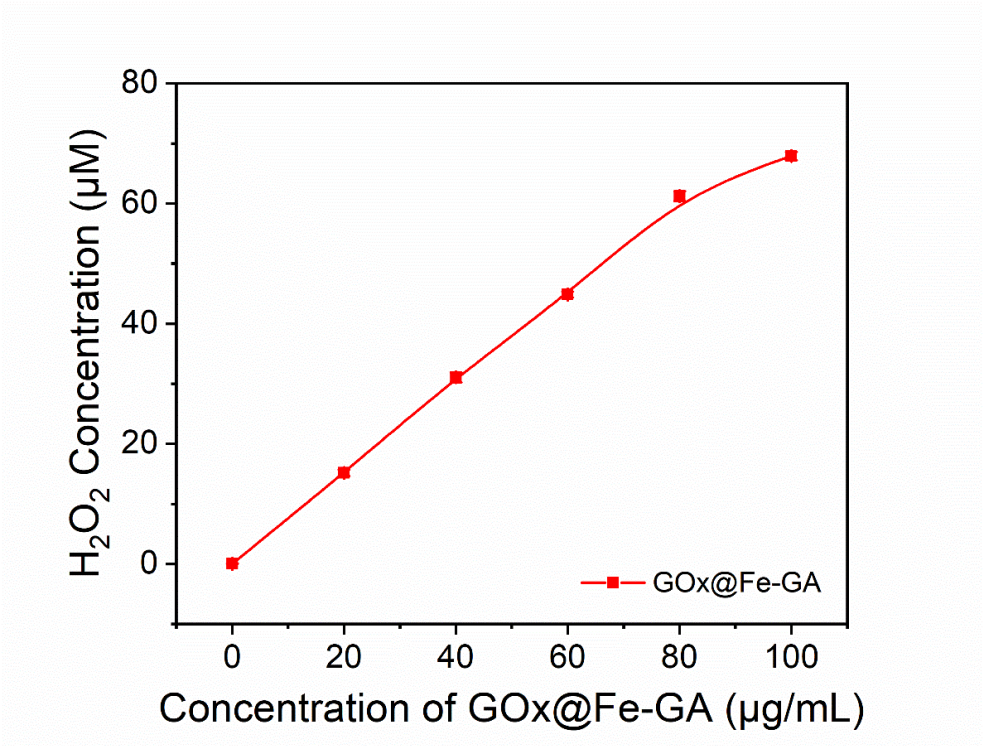

Fig. S10 H_2O_2 concentrations after 3 h of incubation with different concentration of GOx@Fe-GA, [glucose] = 500 μg/mL, n = 3.

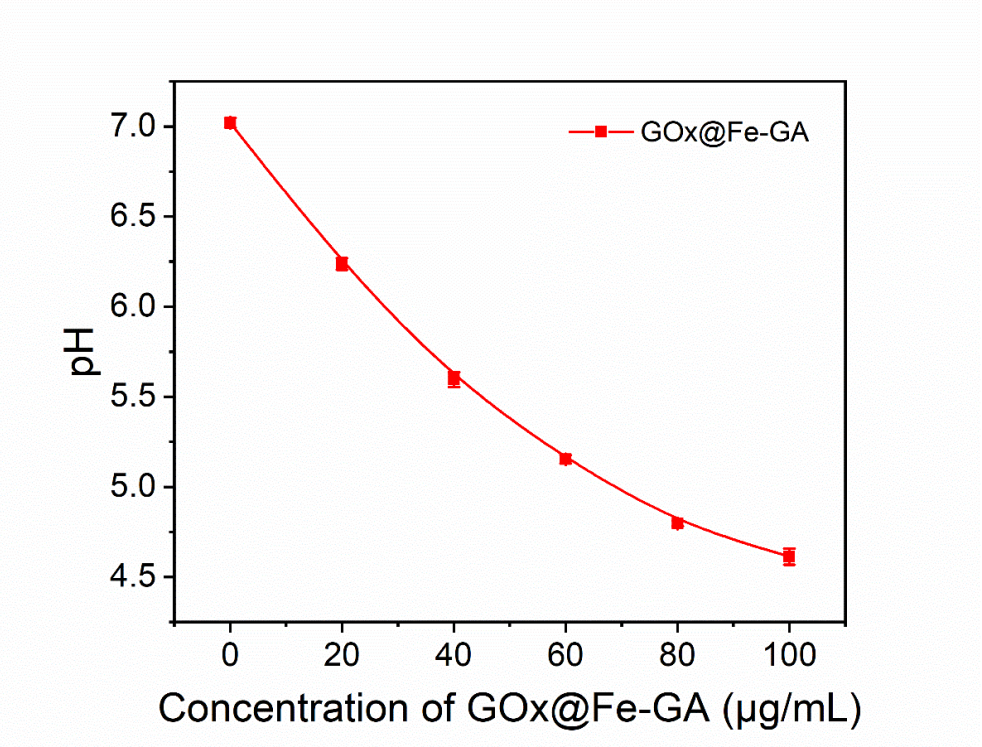

Fig. S11 pH values of GOx@Fe-GA after 3 h of incubation with different concentration of GOx@Fe-GA, [glucose] = 500 μg/mL, n = 3.

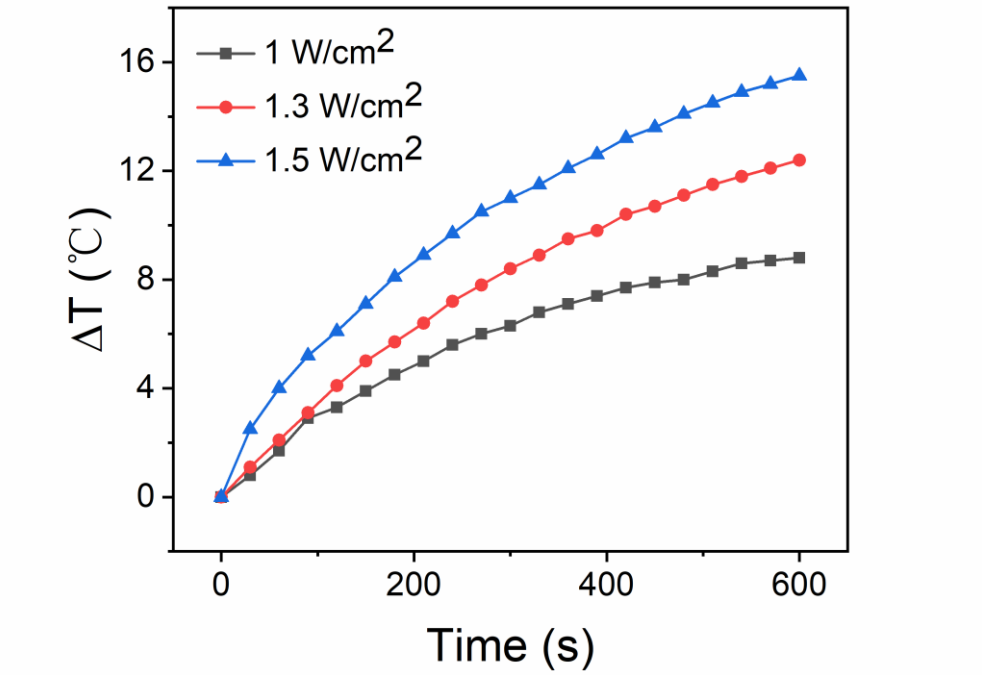

Fig. S12 Different laser indensity illumination heating images, [GOx@Fe-GA] = 100 μg/mL.

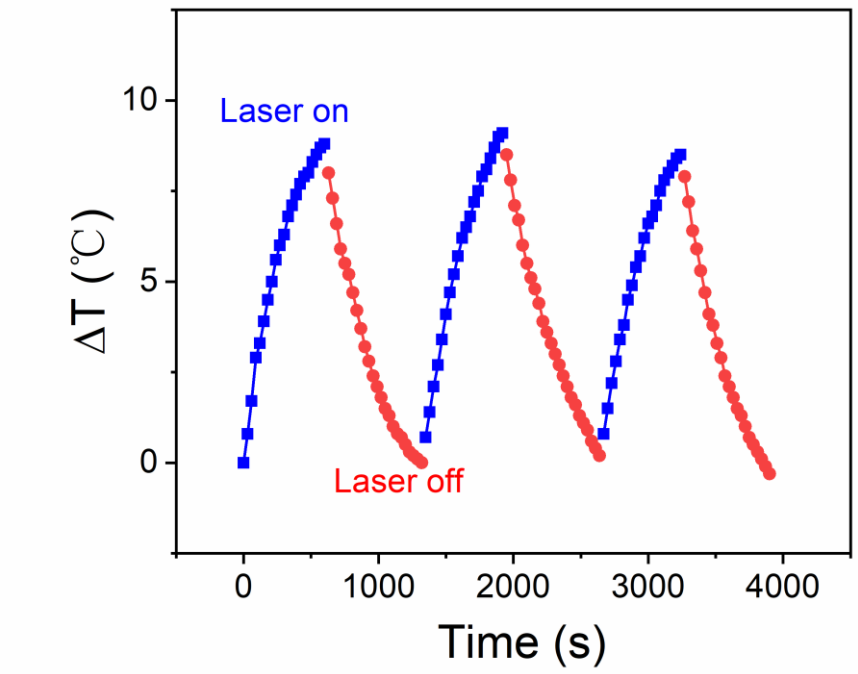

Fig. S13 Cyclic stability test of Fe-GA@GOx NPs after three cycles of on/off 808nm laser irradiation.

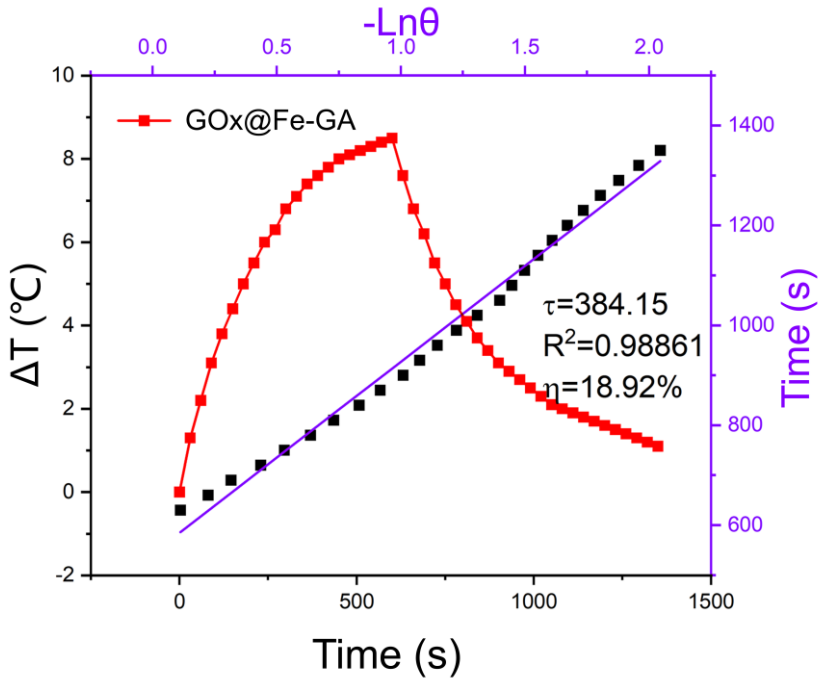

Fig. S14 Calculate the photothermal conversion efficiency by fitting -Lnθ to time.

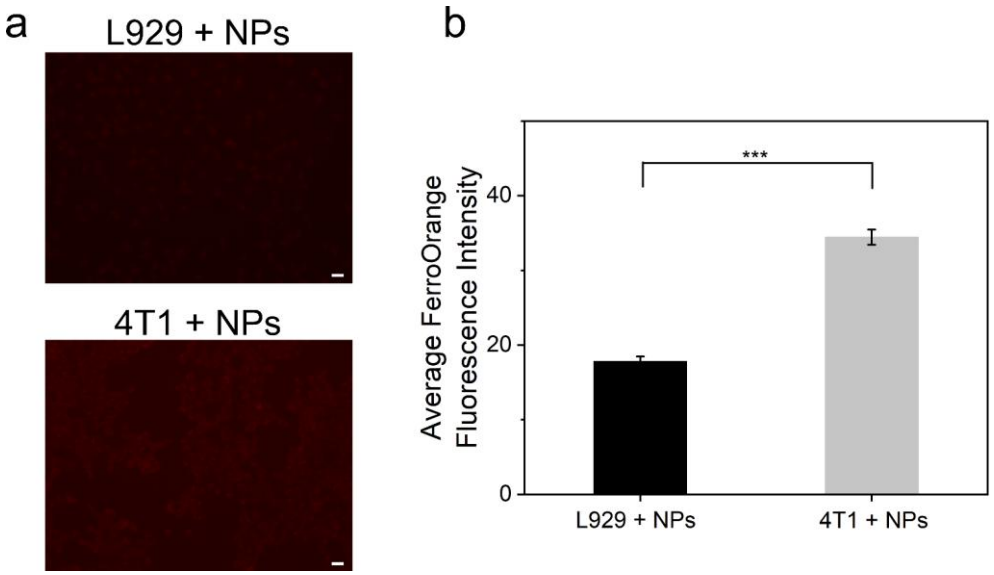

Fig. S15 The immunofluorescent image (a) and the histogram of FerroOrange level (b) in 4T1 cells and L929 cells.

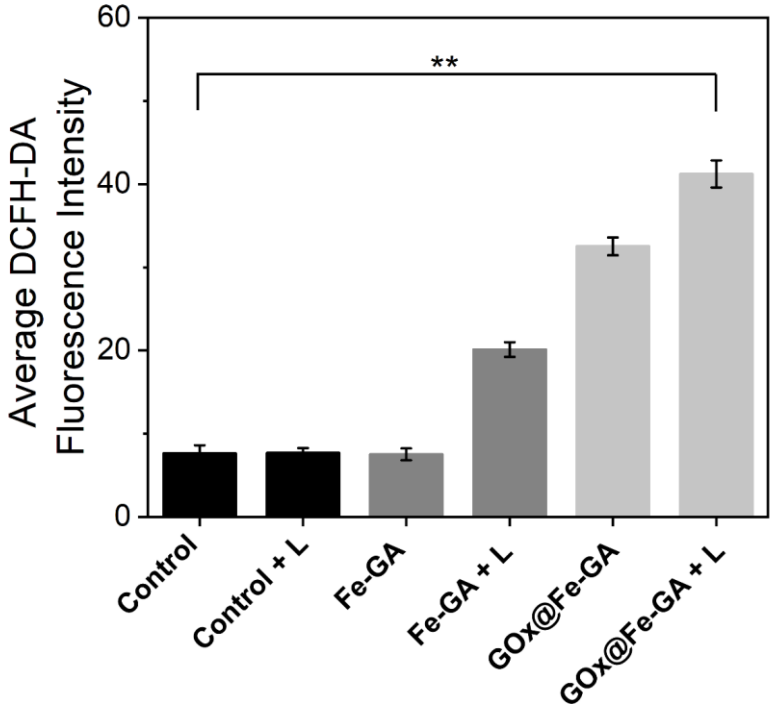

Fig. S16 Quantitative fluorescence (green fluorescence) analysis of ROS production of different groups (n = 3, mean ± s.d., **p < 0.01).

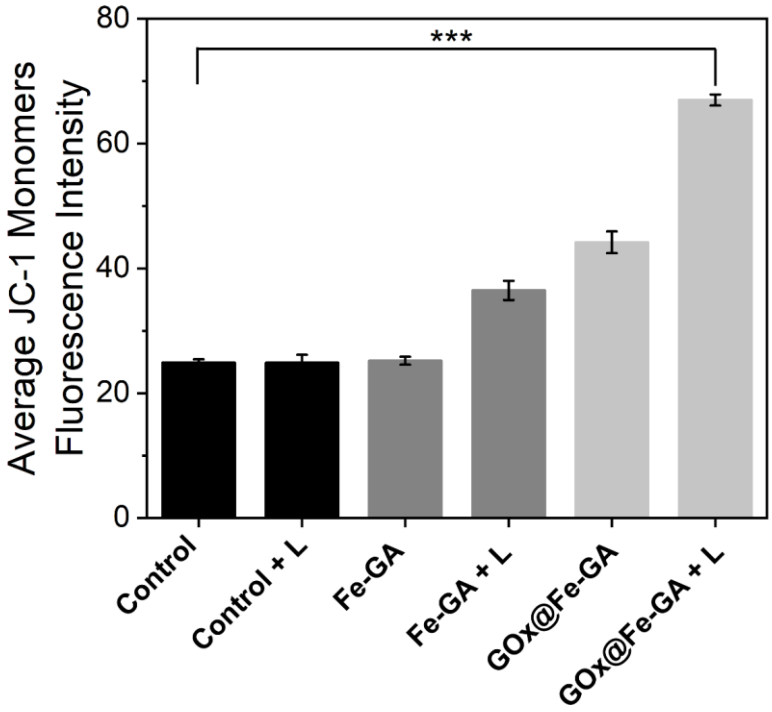

Fig. S17 Quantitative fluorescence (green fluorescence) analysis of JC-1 monomers production of different groups (n = 3, mean ± s.d., ***p < 0.001).

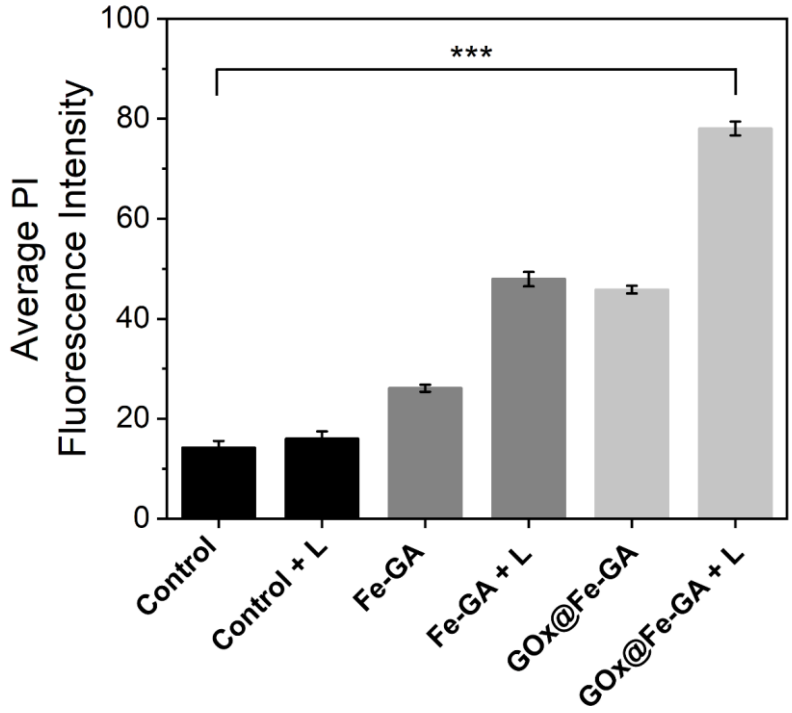

Fig. S18 Quantitative fluorescence (red fluorescence) analysis of PI production of different groups (n = 3, mean ± s.d., ***p < 0.001).

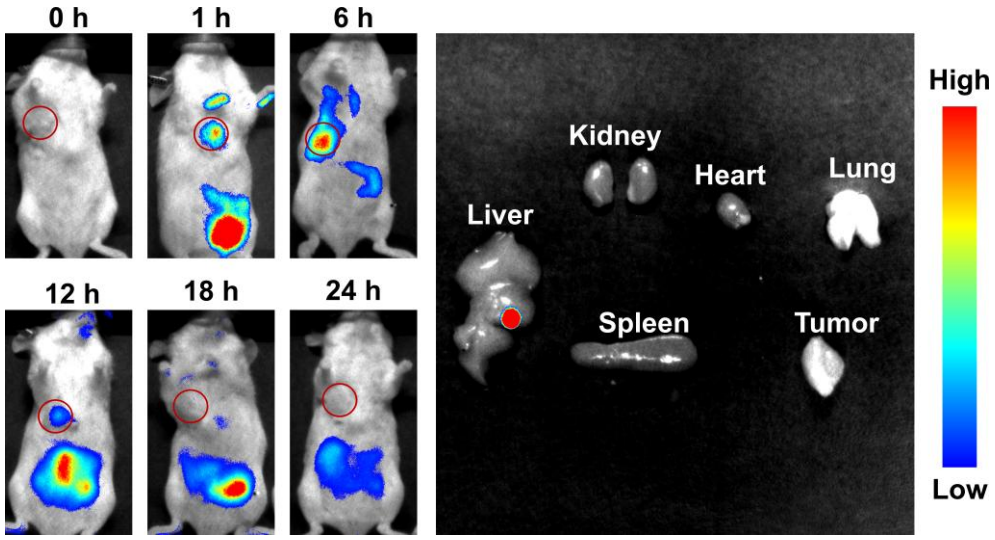

Fig. S19 Fluorescence images of tumor sites at different times of GOx@Fe-GA/Cy5 and in vitro fluorescence images of major organs and tumors of mice 24 h after injection.

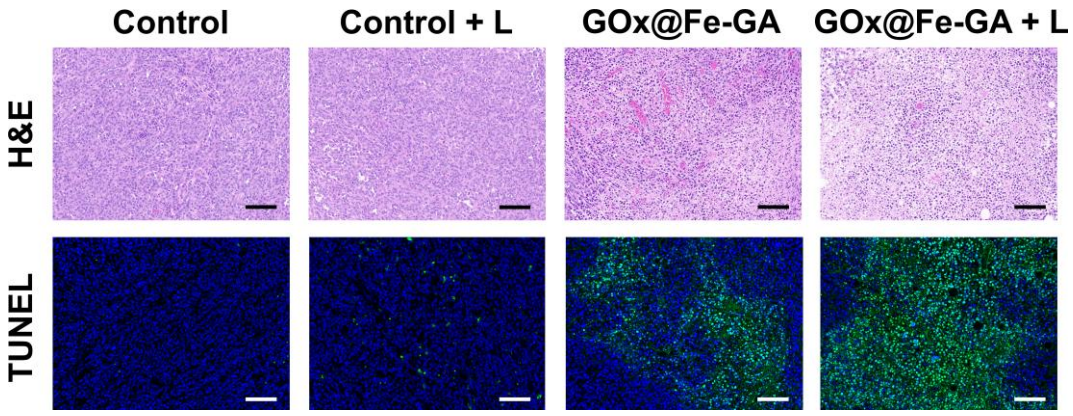

Fig. S20 H&E and TUNEL staining of 4T1 tumor sections in each group; scale bar: 100 nm.