Supporting Information

One-Pot Fabrication of Polydopamine-Based Nanoplatform for GSH Triggered Trimodal ROS Amplification Cancer Therapy

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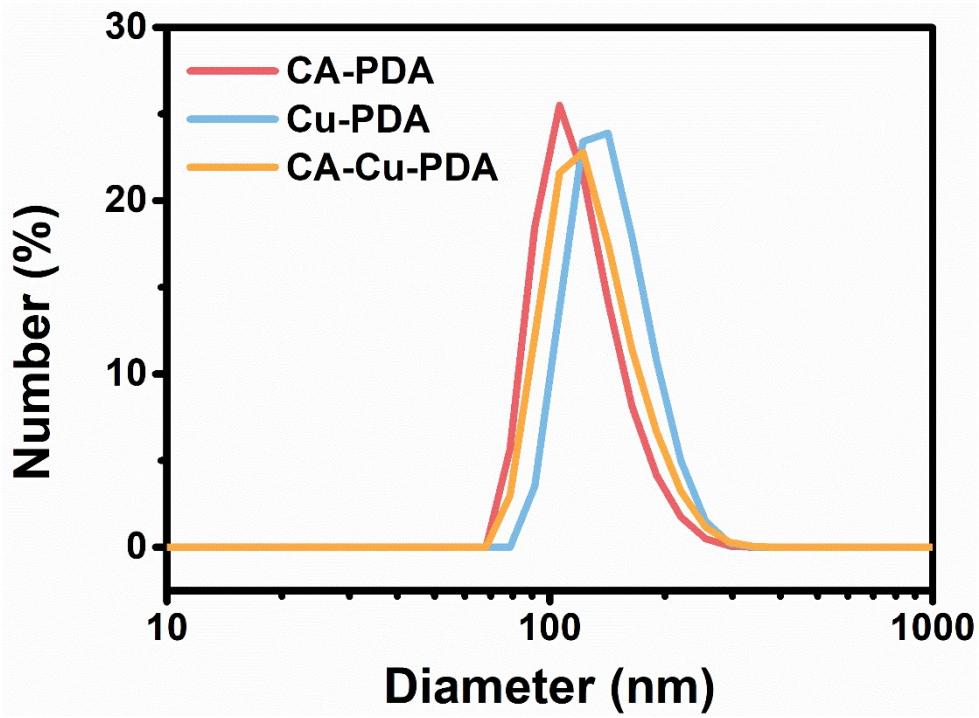

Figure S1. The hydrodynamic size distributions of CA-PDA, Cu-PDA and CA-Cu-PDA.

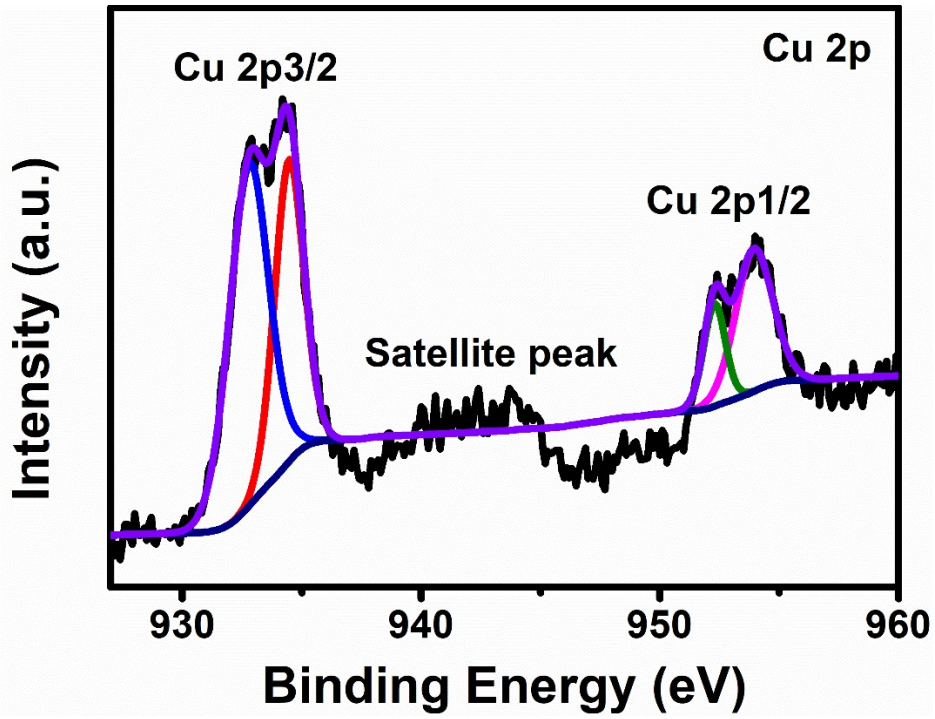

Figure S2. Cu 2p XPS spectra of CA-Cu-PDA.

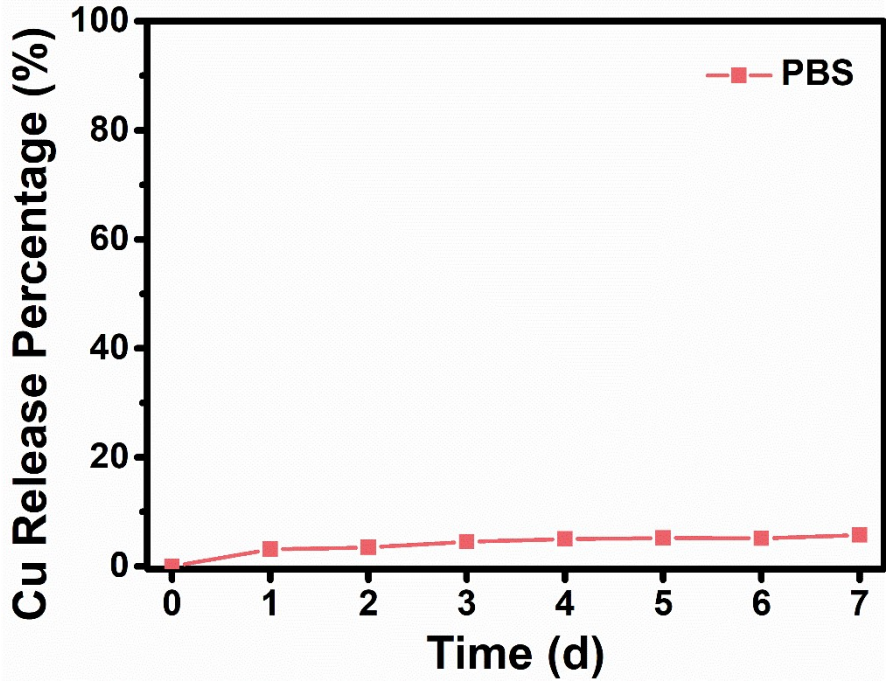

Figure S3. Time-dependent release of copper ions from the CA-CuPDA nanoparticles in PBS solution.

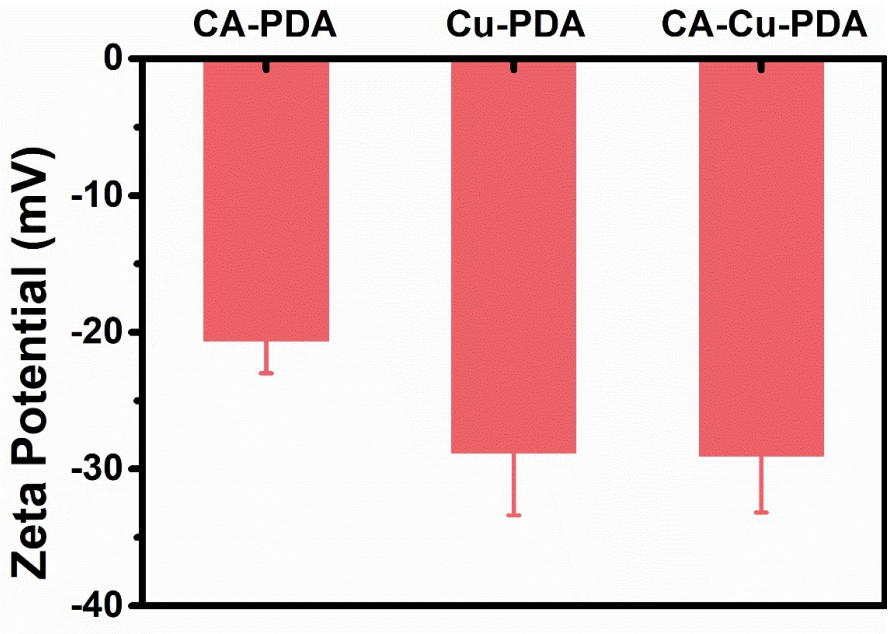

Figure S4. Zeta potentials of CA-PDA, Cu-PDA and CA-Cu-PDA.

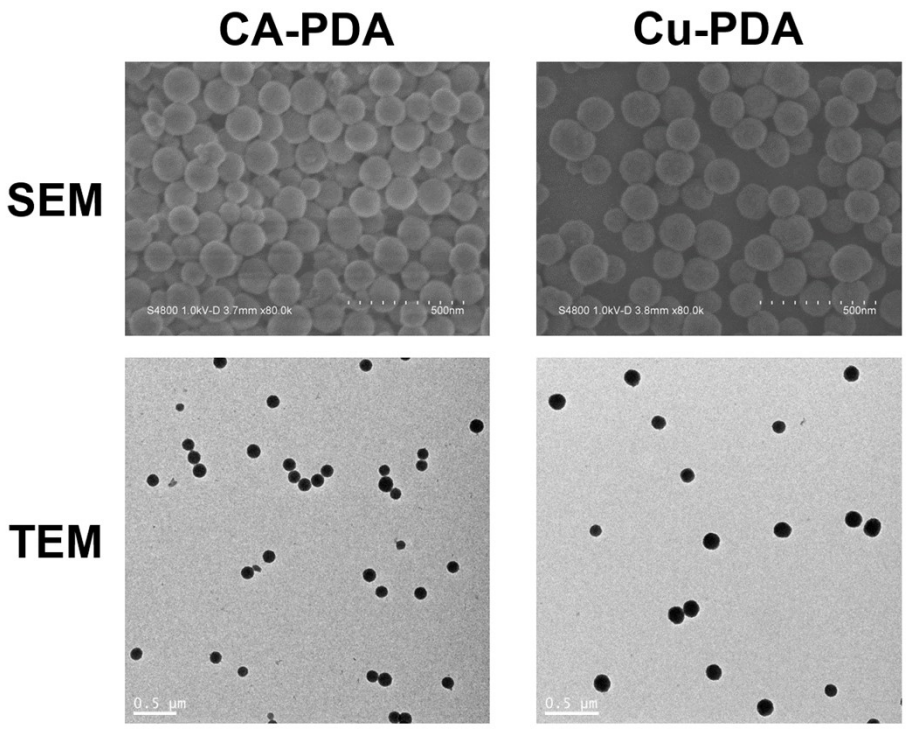

Figure S5. SEM and TEM images of CA-PDA and Cu-PDA

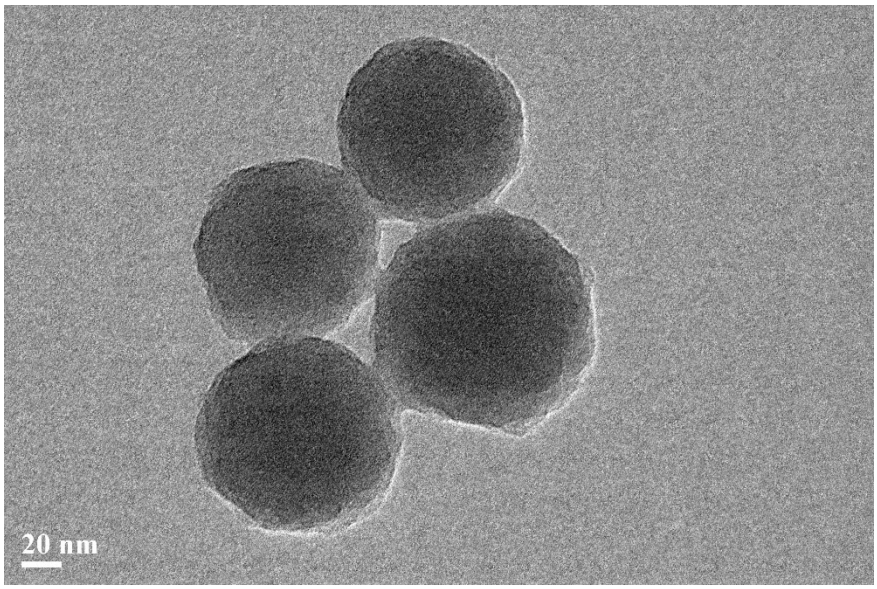

Figure S6. TEM image of CA-PDA after GSH treatment (10 mM).

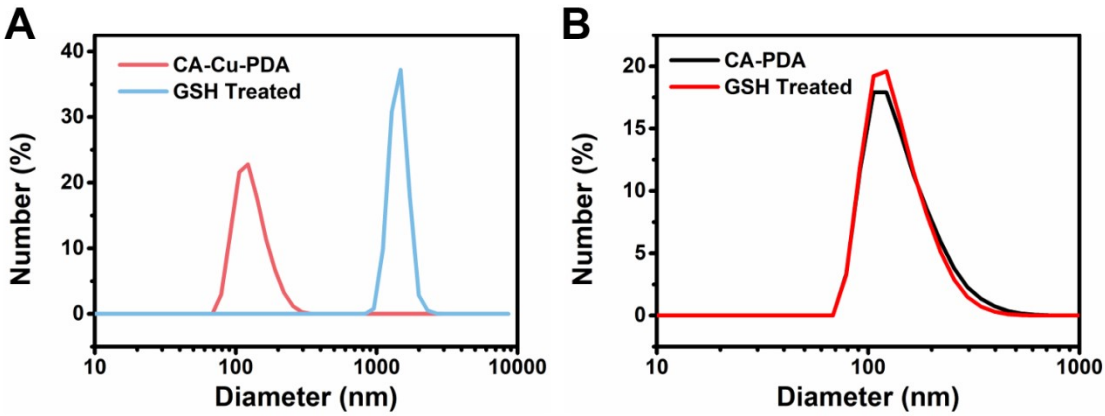

Figure S7. Hydrodynamic size distributions of (A) CA-Cu-PDA and (B) CA-PDA before and after GSH (10mM) treatment.

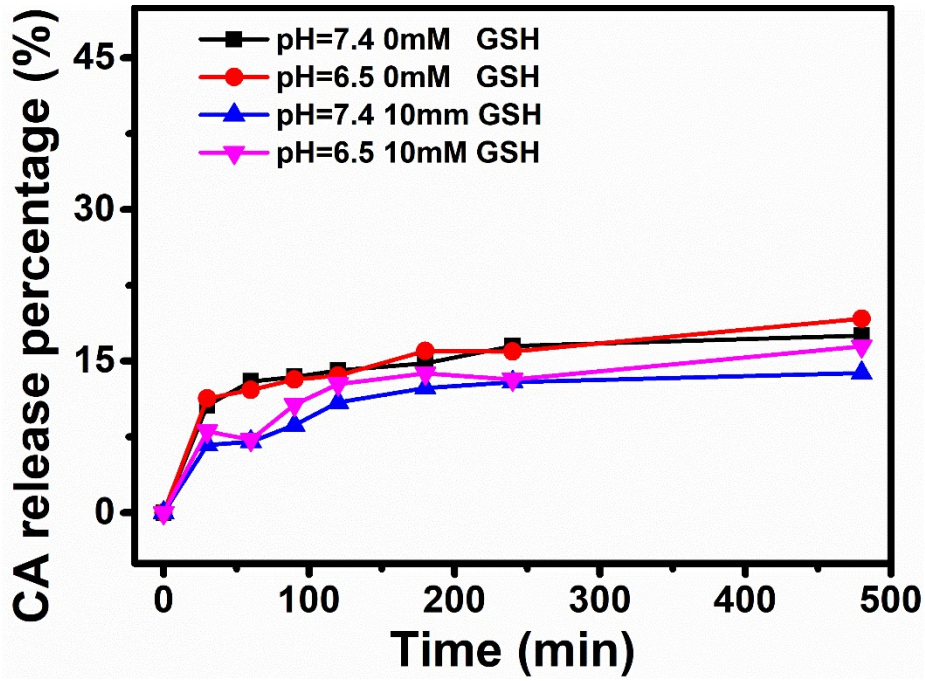

Figure S8. Time-dependent release of CA from CA-PDA in the presence of different concentrations of GSH (0 or 10mM) and different pH (6.5 or 7.4).

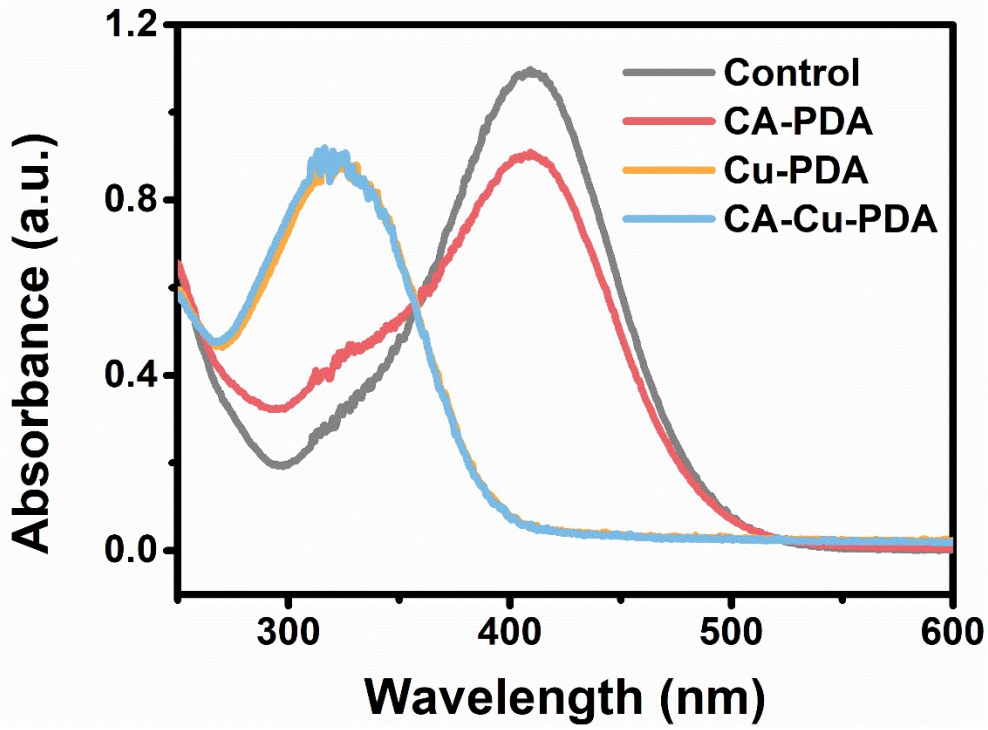

Figure S9. UV-Vis spectra of residual GSH content in different groups with DTNB as an indicator.

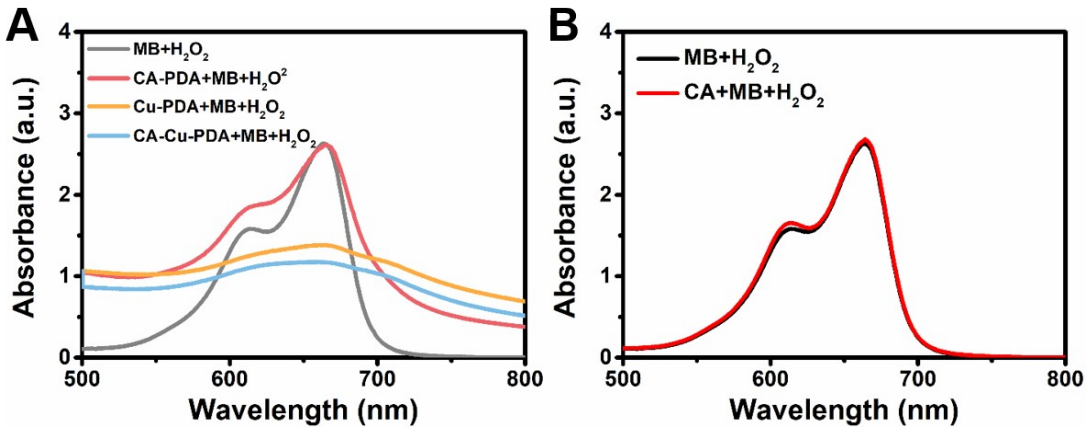

Figure S10. (A) UV-Vis spectra of MB degradation in different groups after 180 min. (B) UV-Vis spectra of MB degradation in the presence or absence of CA.

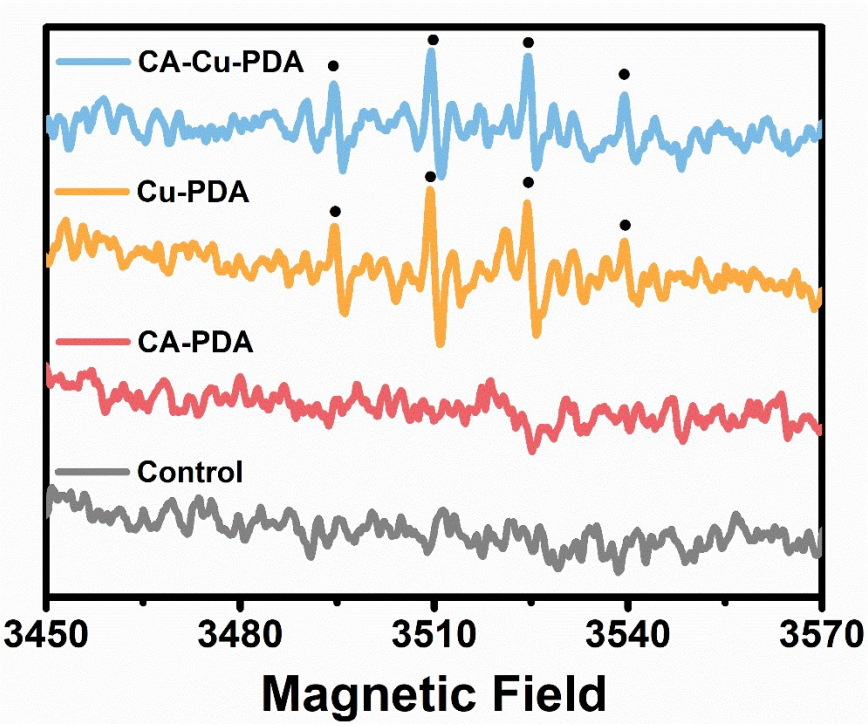

Figure S11. ESR spectra of the DMPO solution after treated with different samples and H_2O_2.

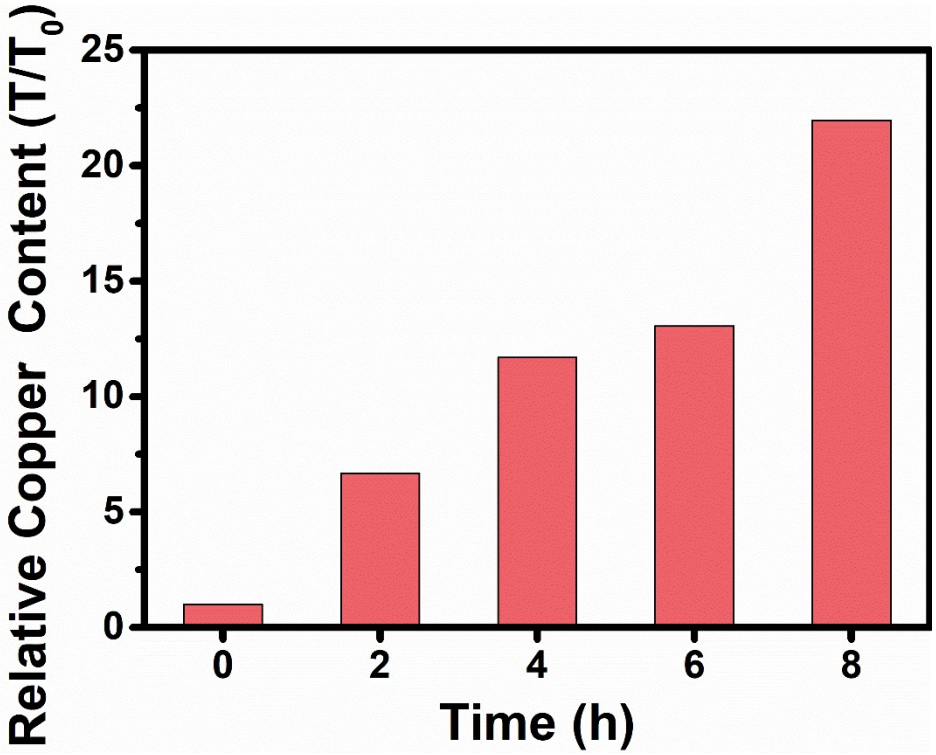

Figure S12. The intracellular copper contents of SMMC-7721 cells after incubation with CA-Cu-PDA for different hours.

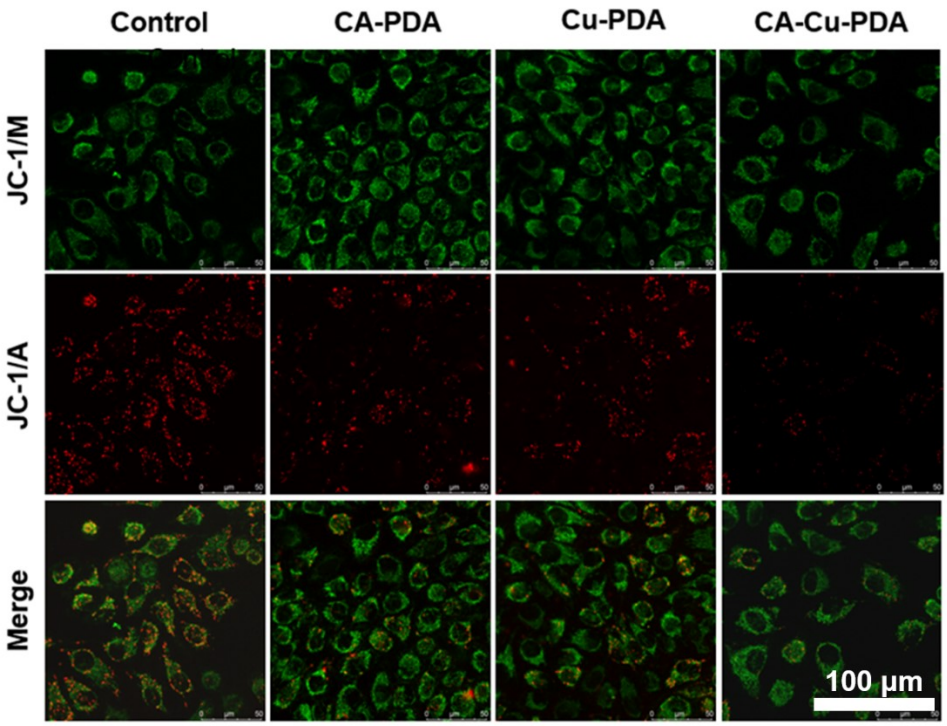

Figure S13. Mitochondrial membrane potential of SMMC-7721 cells after 24h of incubation with different samples and indicated by JC-1 staining. The red fluorescence is the monomers of JC-1 and the green fluorescence is the aggregates of JC-1.

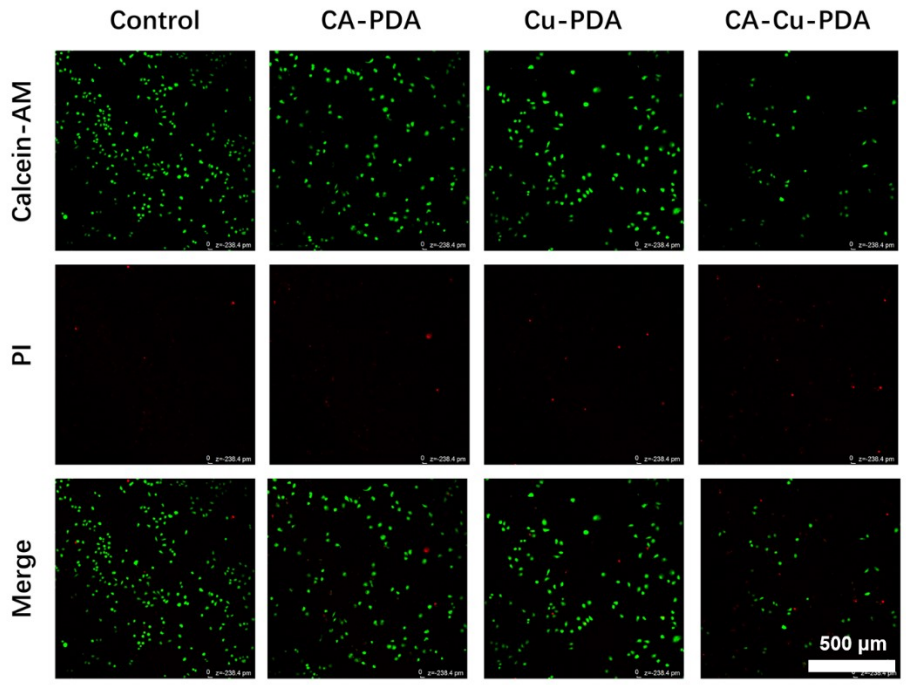

Figure S14. Fluorescence images of calcein-AM (green, live cells) and PI (red, dead cells) co-stained SMMC-7721 cells after incubation with different samples for 24h.

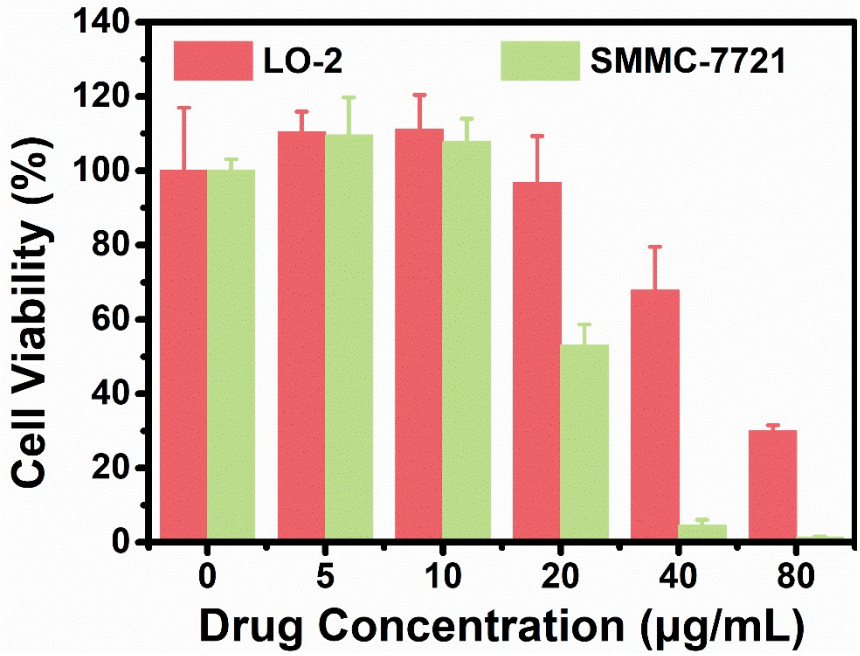

Figure S15. Cytotoxicity of CA towards normal cells (LO-2) and cancer cells (SMMC-7721).

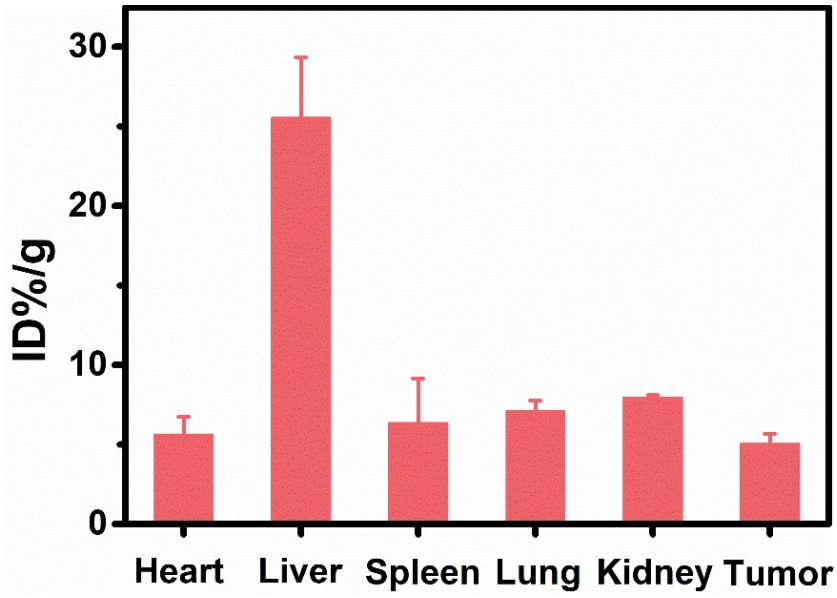

Figure S16. Biodistributions of CA-Cu-PDA revealed by the Cu amounts within major organs and tumor after intravenous injection for 8h.

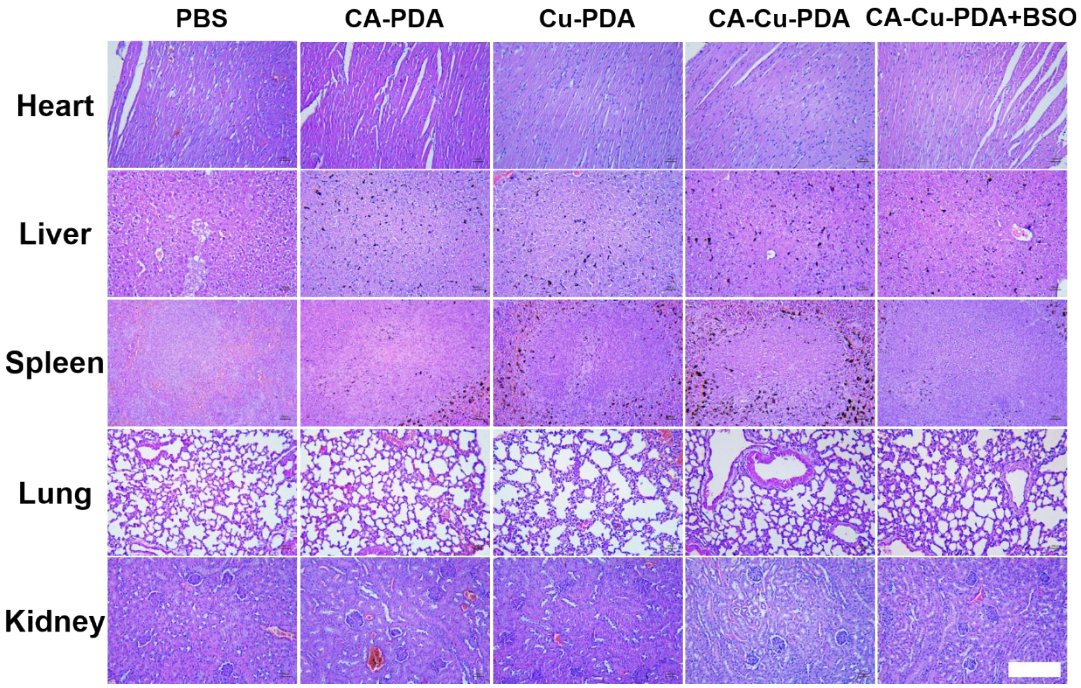

Figure S17. H&E staining of major organs in different groups (scale bar = 500 μm).