Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Supramolecular Catalytic Nanomedicines Based on Coordination Self-Assembly of Amino Acid for Cascade-Activated and -Amplified Synergetic Cancer Therapy

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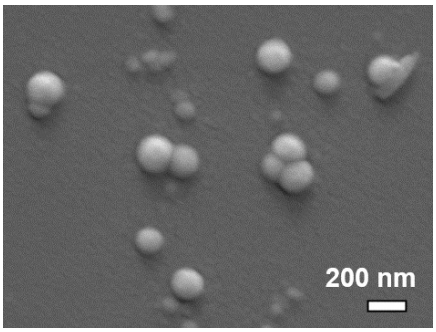

Figure S1. The SEM image of Fmoc-D/Cu.

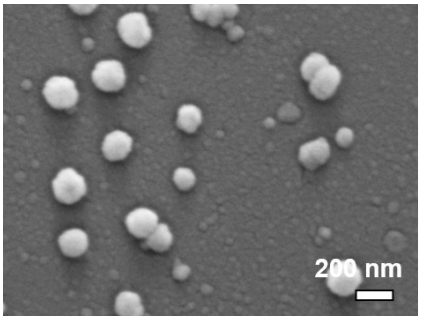

Figure S2. The SEM image of Fmoc-D/Cu/G.

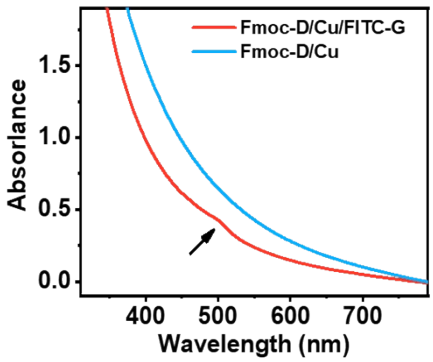

Figure S3. The UV-Vis absorption spectra of Fmoc-D/Cu and Fmoc-D/Cu/FITC-G.

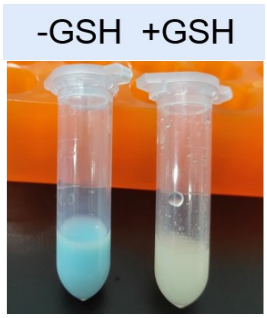

Figure S4. The digital image of Fmoc-D/Cu nanoparticles before and after adding the GSH.

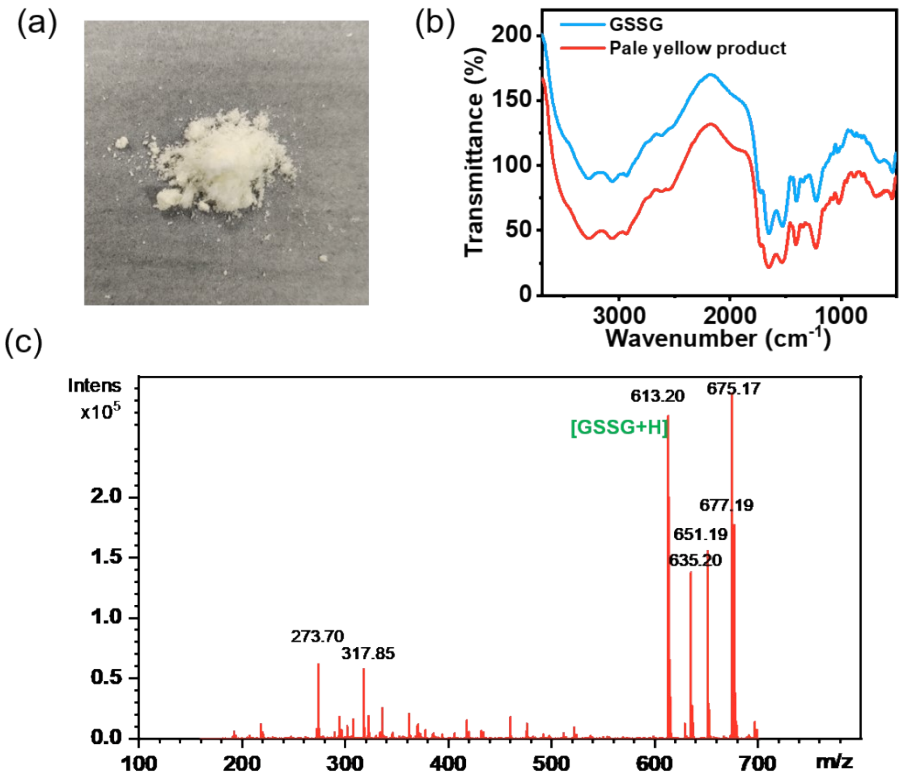

Figure S5. (a) Digital picture of the light-yellow product after lyophilization of the supernatant from the reaction between Fmoc-D/Cu nanoparticles and GSH. (b) FT-IR spectra of commercial GSSG and the light-yellow product. (c) HR-MS of the light-yellow product.

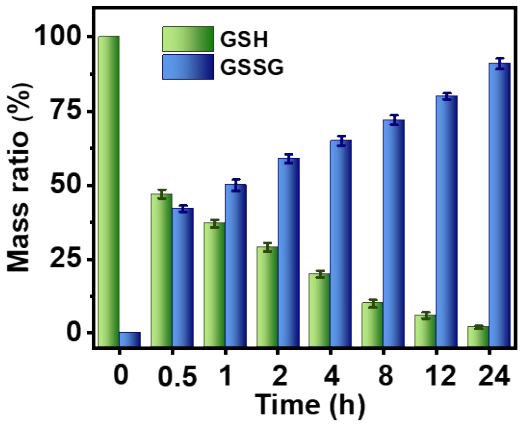

Figure S6. The GSH/GSSG ratio change with time after adding the Fmoc-D/Cu to GSH.

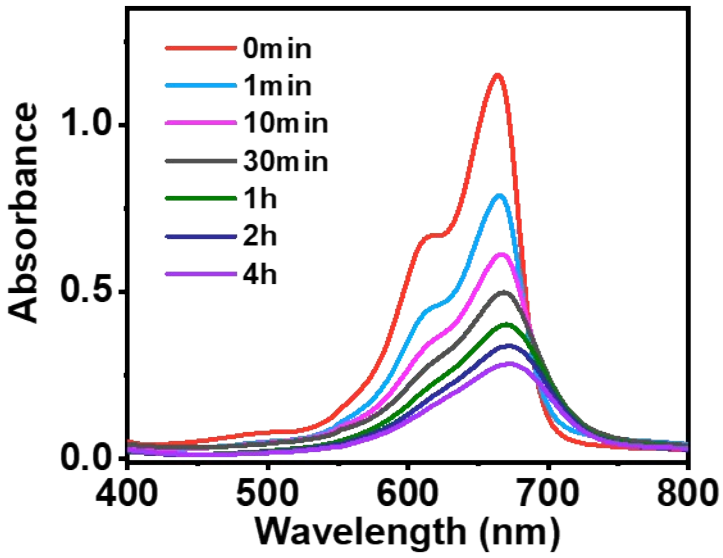

Figure S7. The degradation process of MB after addition of Fmoc-D/Cu nanoparticles at different time points.

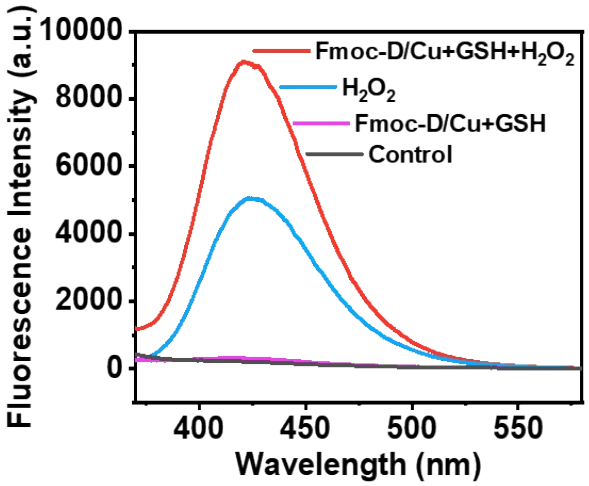

Figure S8. Reaction of TPA with the generated ·OH-induced enhancement of fluorescence.

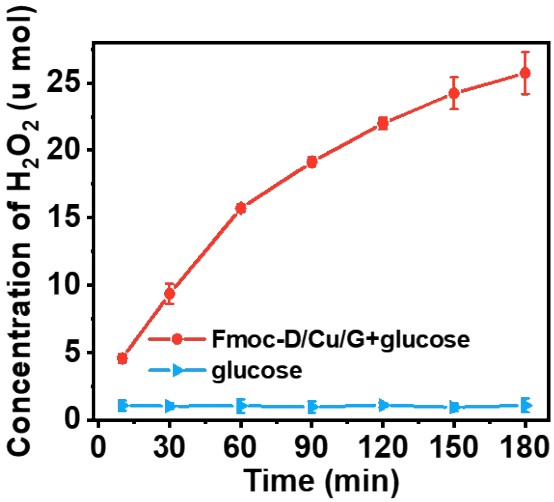

Figure S9. The H_2O_2 generation of Fmoc-D/Cu/G nanoparticles in glucose solution.

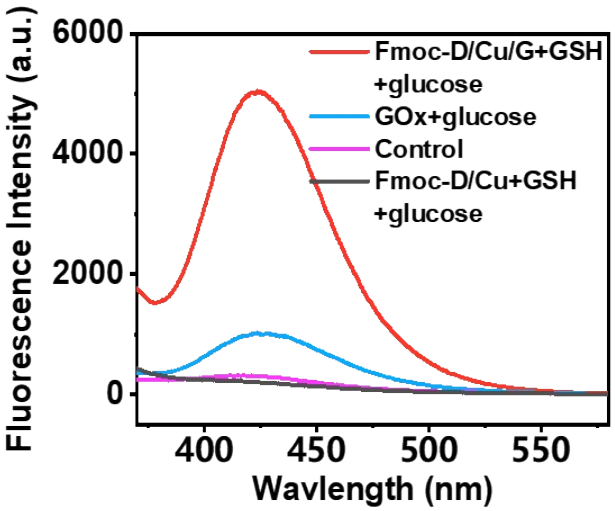

Figure S10. Reaction of TPA with the generated ·OH-induced enhancement of fluorescence.

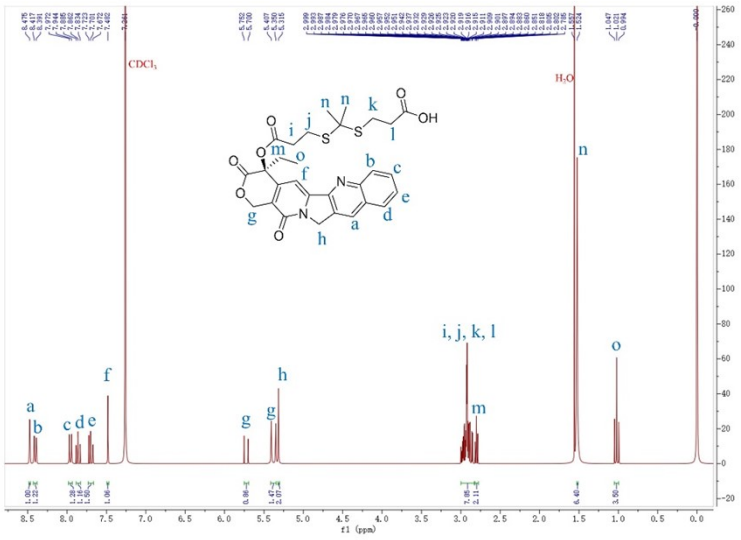

Figure S11. [1]HNMR of CPT-TK in Chloroform-d.

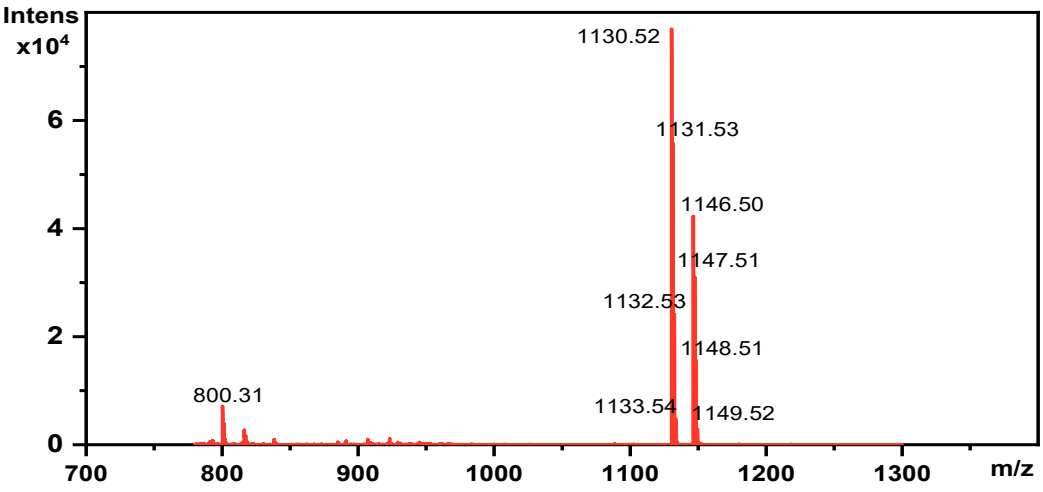

Figure S12. HR-MS spectrum of CPT-TK-DOX.

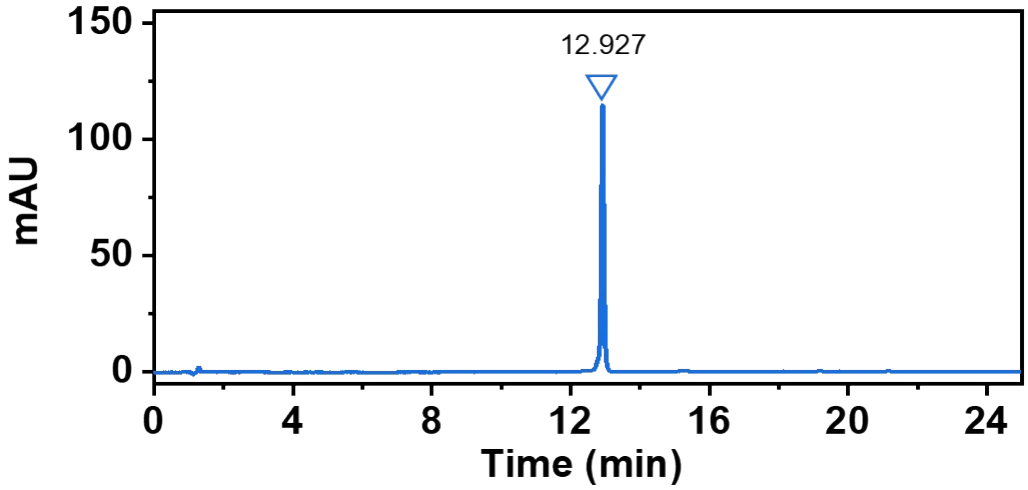

Figure S13. HPLC analysis of CPT-TK-DOX, the purity is over 99%.

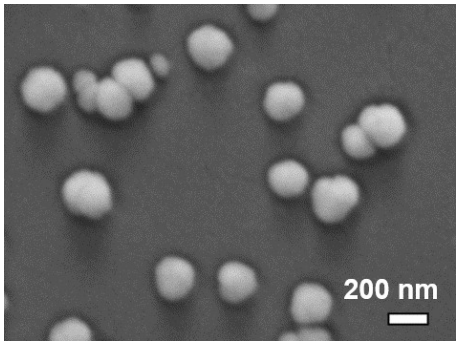

Figure S14. The SEM image of CPT-TK-DOX.

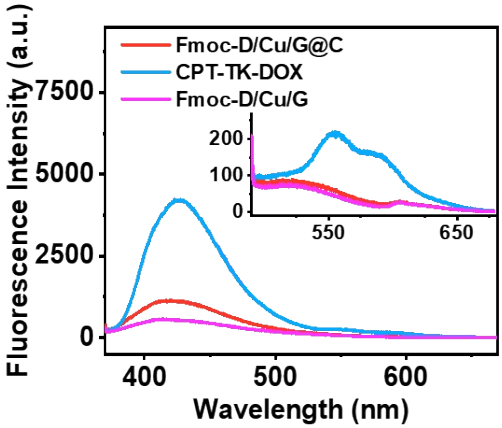

Figure S15. The fluorescence spectra of Fmoc-D/Cu/G@C and CPT-TK-DOX monomer.

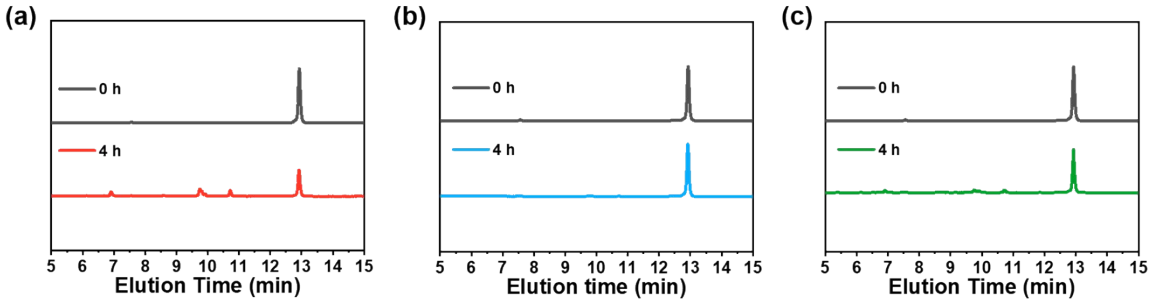

Figure S16. The cleavage of CPT-TK-DOX in Fmoc-D/Cu/G@C nanomedicine after incubated with GSH and H_2O_2 (a), only GSH (b) and only H_2O_2 (c) for 4 h.

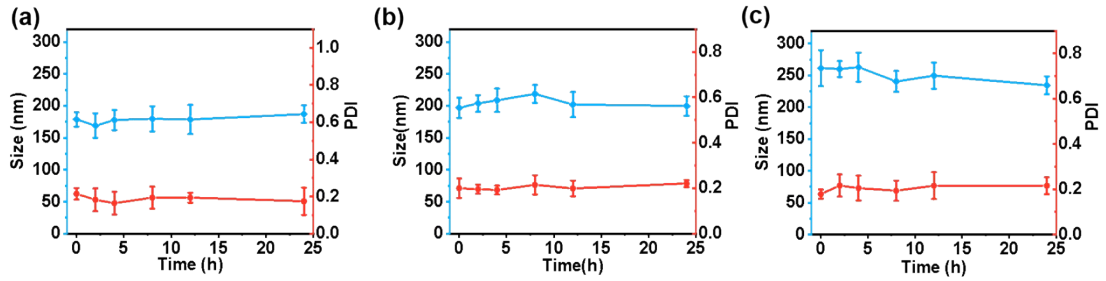

Figure S17. Size and polymer dispersity index (PDI) of (a) Fmoc-D/Cu nanoparticles, (b) Fmoc-D/Cu/G nanoparticles and (c) Fmoc-D/Cu/G@C nanoparticles in culture medium supplemented with 10% (v/v) FBS at 37 °C for 24 h.

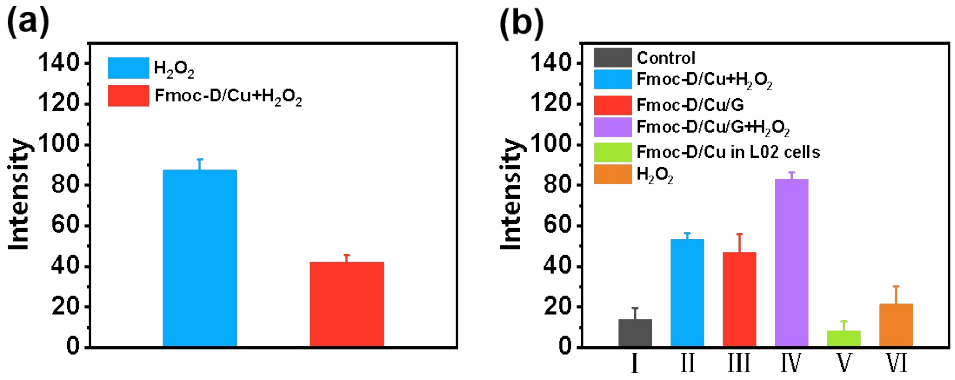

Figure S18. (a) Quantification of fluorescence intensities of H_2O_2. (b) Quantification of fluorescence intensities of generated ·OH.s

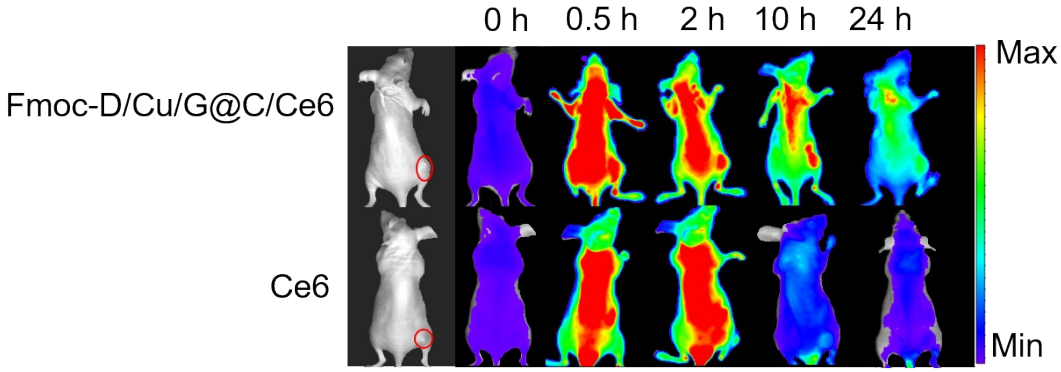

Figure S19. In vivo fluorescent imaging of the tumor-bearing mice after intravenous injection of FL-labeled Fmoc-D/Cu/G@C nanoparticles and free FL.

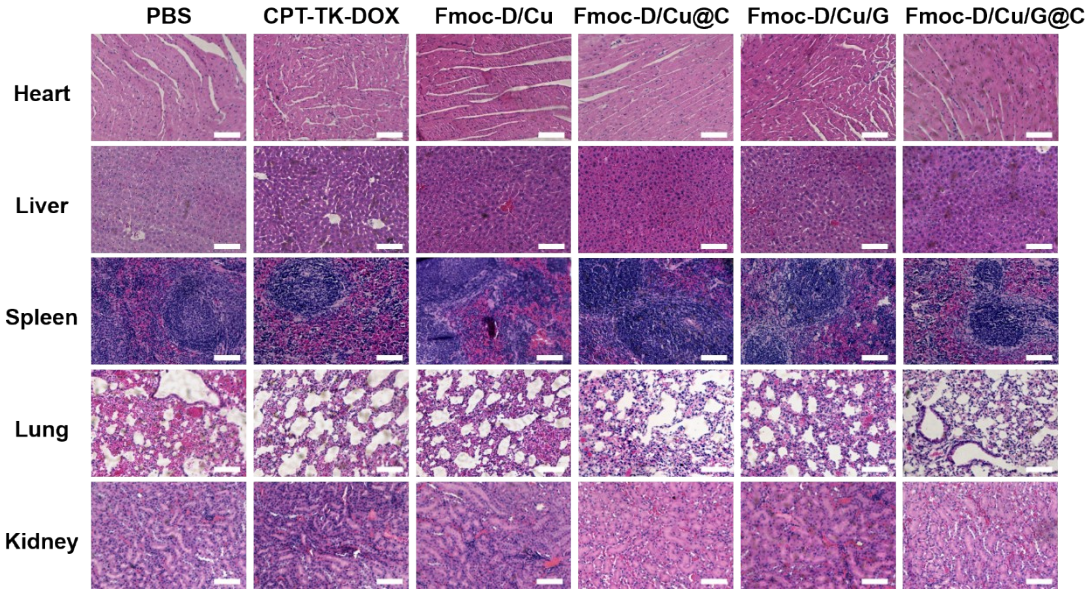

Figure S20. H&E-stained images of major tissues collected from tumor-bearing mice after different treatments. Scale bar, 100 μm.