Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

A pH−Activated Autocatalytic Nanoreactor for Self−Boosted Fenton−like Chemodynamic Therapy

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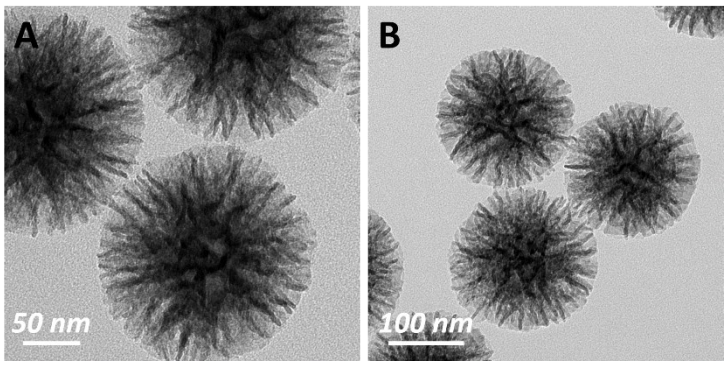

Figure S1. TEM images of (A) DMONs and (B) NH_2−DMONs.

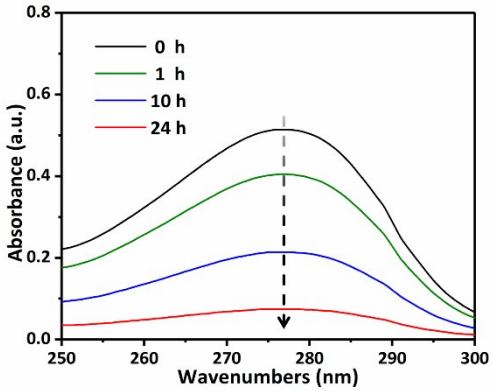

Figure S2. UV−vis spectra of GOx supernatant after incubation with COOH−DMONs for different time.

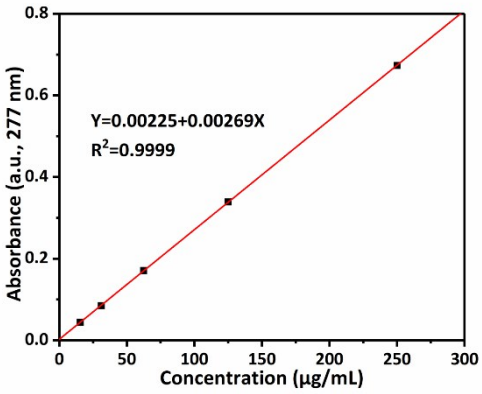

Figure S3. The standard curve of GOx.

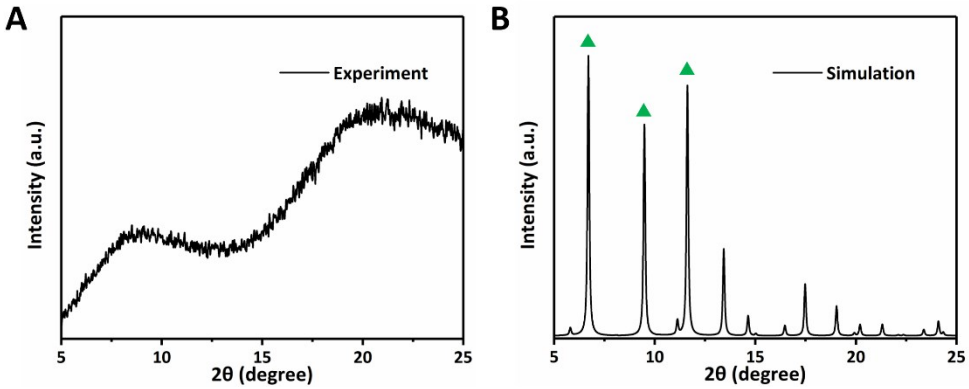

Figure S4. (A) Experimental XRD spectrum of GOx. (B) Simulated XRD spectrum of HKUST−1.

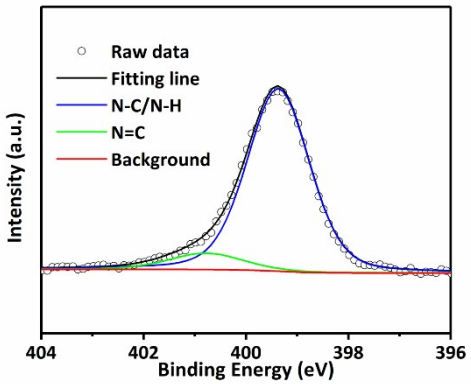

Figure S5. The high−resolution N 1s XPS spectra of HT@GOx−DMONs.

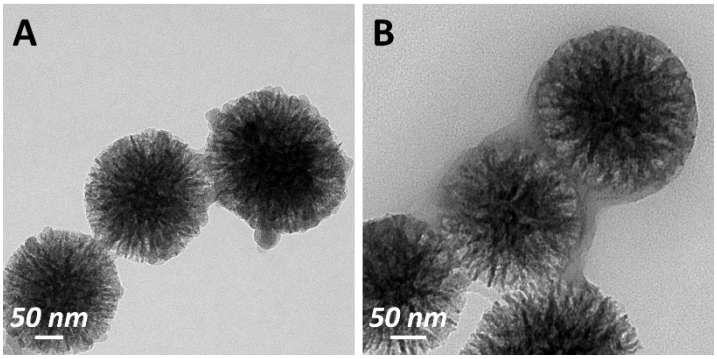

Figure S6. TEM images of HT@GOx−DMONs after 12 h of incubation at pH (A) 7.4 and (B) 5.0.

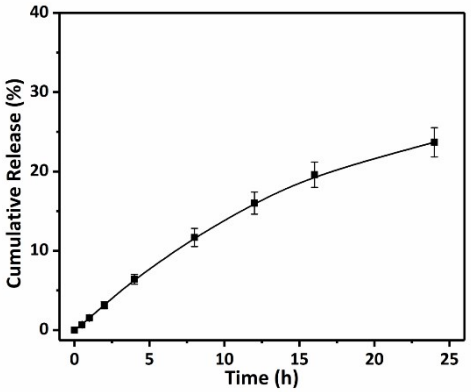

Figure S7. The accumulated release of GOx from GOx−DMONs at pH 7.4.

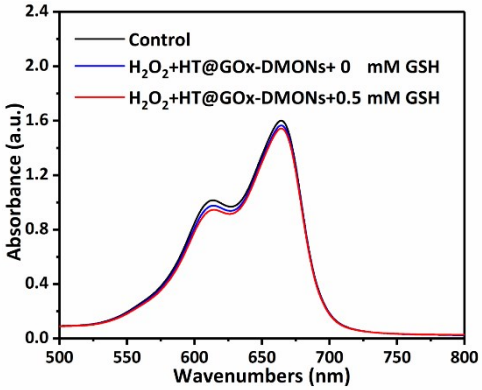

Figure S8. UV/Vis absorption spectra of MB incubated with H_2O_2 plus HT@GOx−DMONs after treatment with pH 7.4 under the presence of GSH.

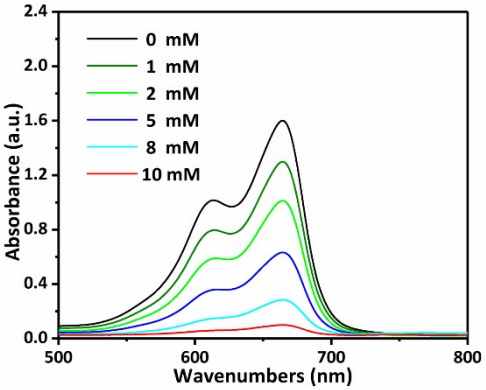

Figure S9. MB degradation by acid−treated HT@GOx−DMONs plus different concentrations of H_2O_2.

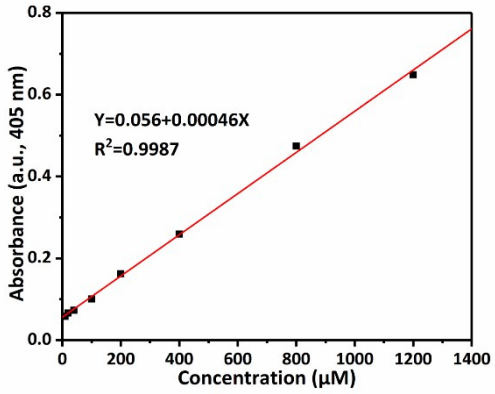

Figure S10. The standard curve of H_2O_2.

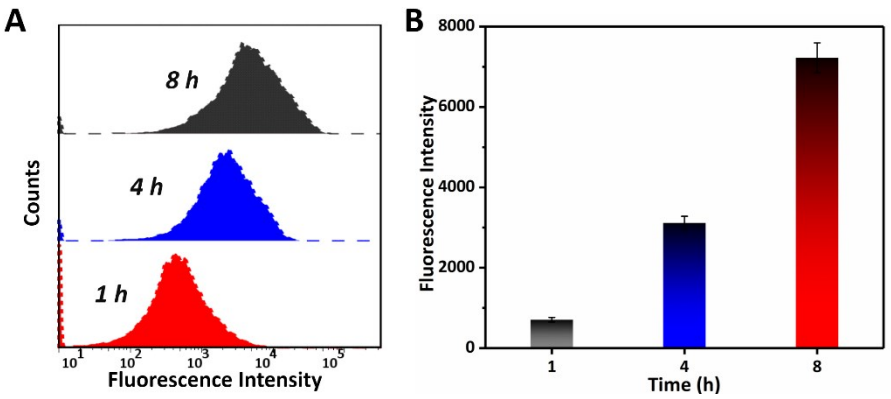

Figure S11. (A) Flow cytometry analysis and (B) corresponding line chart of RhB fluorescence intensity in MCF−7 cells incubated with RhB−doped HT@GOx−DMONs for various time.

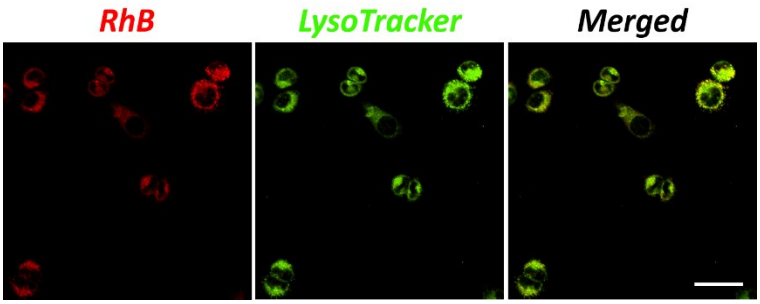

Figure S12. CLSM images of MCF−7 cells incubated with RhB−doped HT@GOx−DMONs for 4 h.

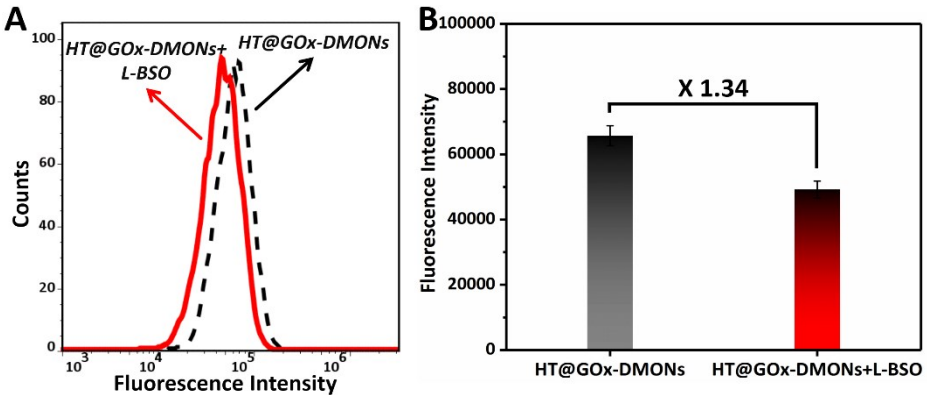

Figure S13. (A) Flow cytometry detection and (B) corresponding bar graph of ROS production under the presence of DCFH−DA in MCF−7 cells treated with HT@GOx−DMONs and HT@GOx−DMONs plus L−BSO for 8 h.

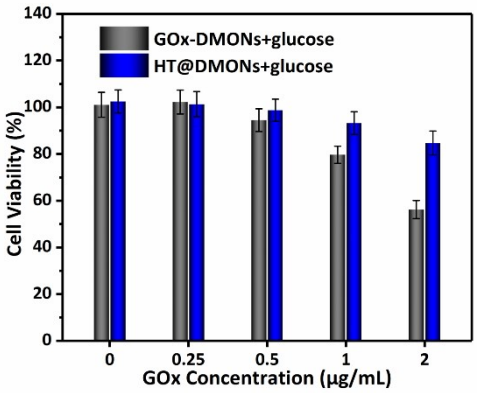

Figure S14. Cell viability of MCF−7 cells treated with GOx−DMONs plus glucose and HT@DMONs plus glucose for 24 h.

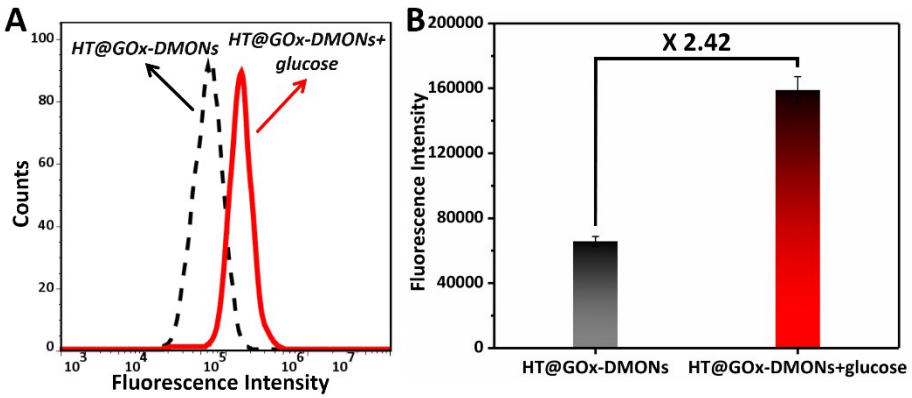

Figure S15. (A) Flow cytometry detection and (B) corresponding bar graph of ROS production under the presence of DCFH−DA in MCF−7 cells treated with HT@GOx−DMONs and HT@GOx−DMONs plus glucose for 8 h.

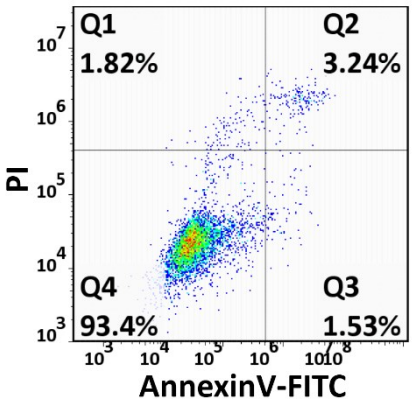

Figure S16. Flow cytometry analysis of apoptosis for MCF−7 cells incubated with L−BSO for 24 h.

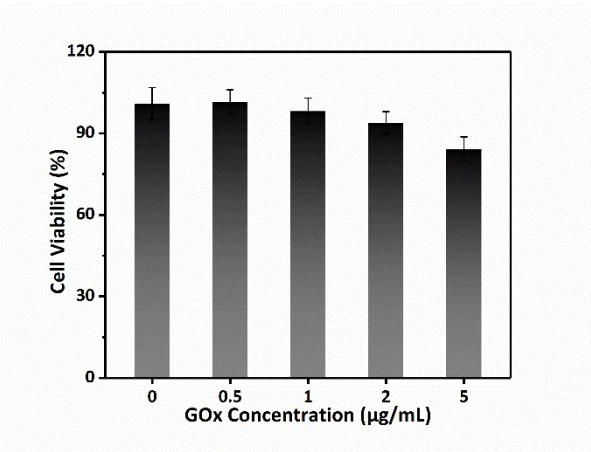

Figure S17. Cell viability of L929 cells incubated with HT@GOx−DMONs for 24 h.

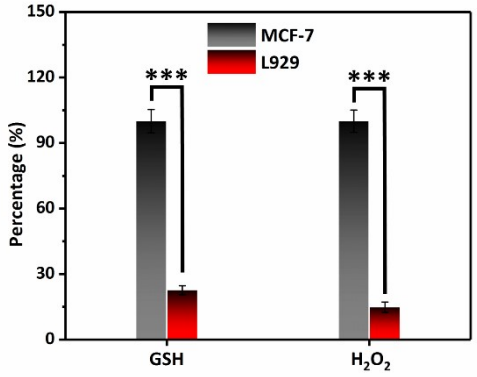

Figure S18. The comparison of GSH and H_2O_2 levels in MCF−7 and L929 cells.

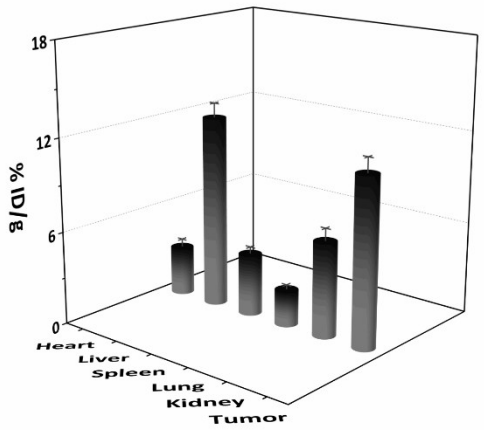

Figure S19. *In vivo* biodistribution of Cu in major organs and tumor after 24 h of post injection with HT@GOx−DMONs.

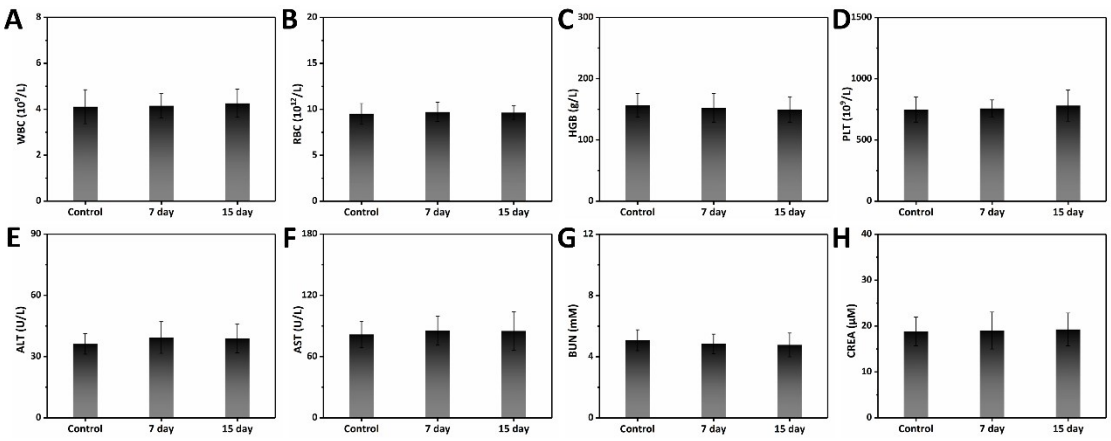

Figure S20. Hematology analysis of mice after 7 and 15 days of post administration with HT@GOx−DMONs. The terms included (A) WBC, (B) RBC, (C) HGB, (D) PLT, (E) ALT, (F) AST, (G) BUN and (H) CREA.

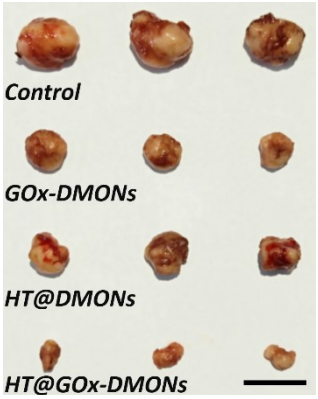

Figure S21. The photographs of all tumors taken from various groups of mice after 15 days of treatments. Scale bar: 1 cm.