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

Supporting Information

Core-shell TaOx@MnO_2 Nanoparticles as A Nano-radiosensitizer for Highly Effective Cancer Radiotherapy

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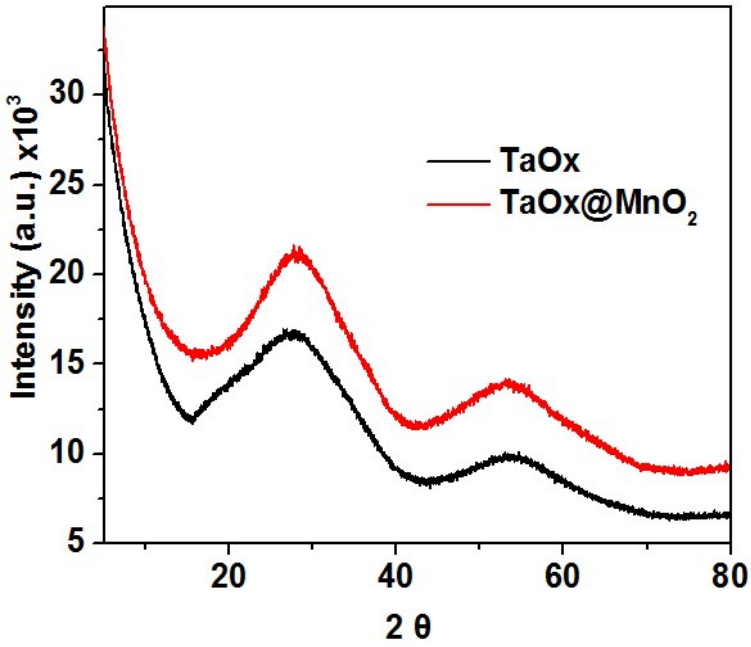

Figure S1. X-ray diffraction (XRD) spectra of TaOx and TaOx@MnO_2 nanoparticles.

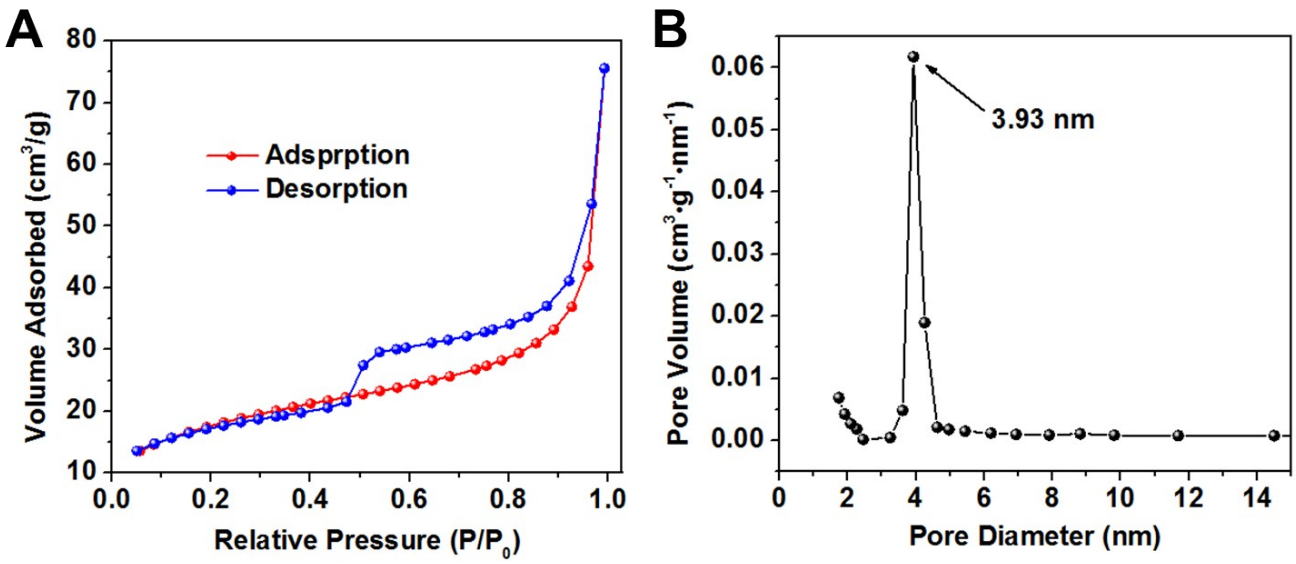

Figure S2. N_2 adsorption/desorption isotherm and corresponding pore-size distribution curves of TaOx nanoparticles.

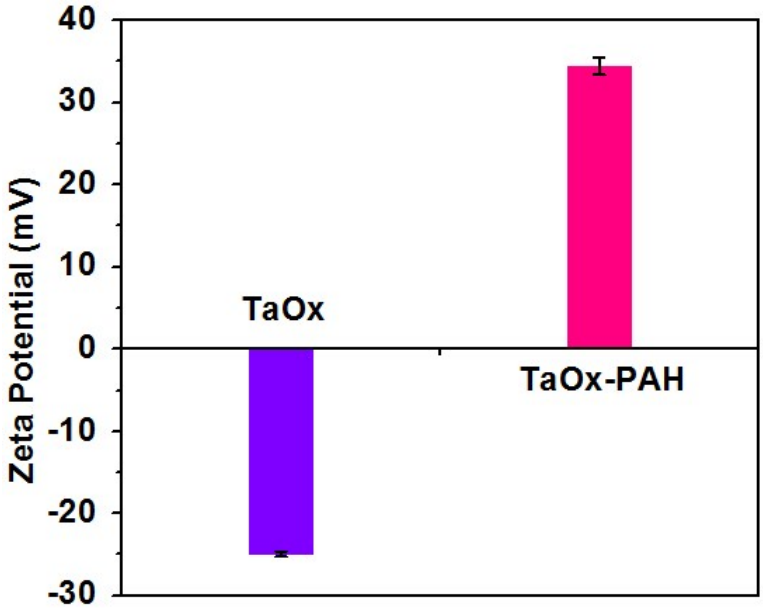

Figure S3. Zeta potentials of TaOx and TaOx-PAH nanoparticles.

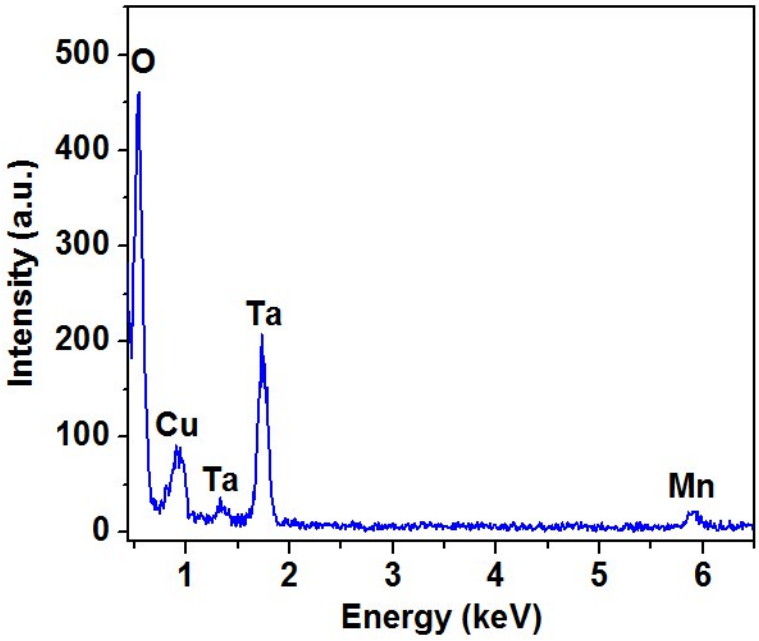

Figure S4. Energy dispersive spectra (EDX) of TaOx@MnO_2 nanoparticles.

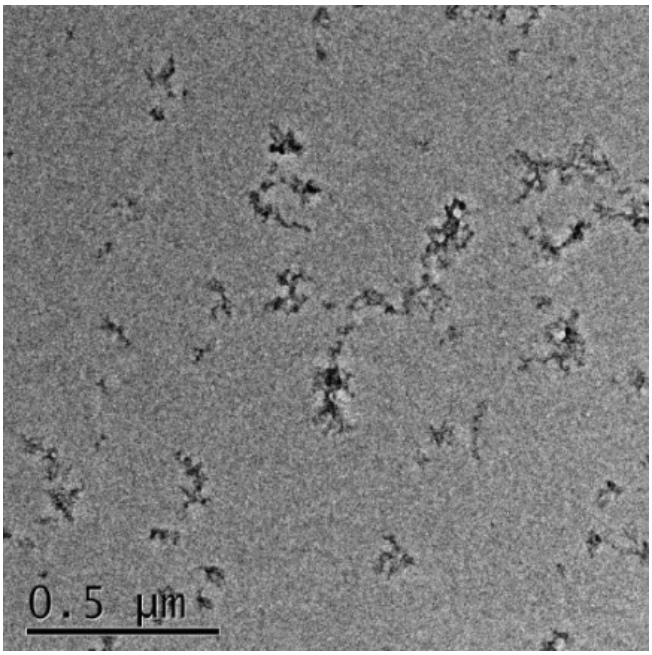

Figure S5. TEM image of MnO_2 nanoparticles.

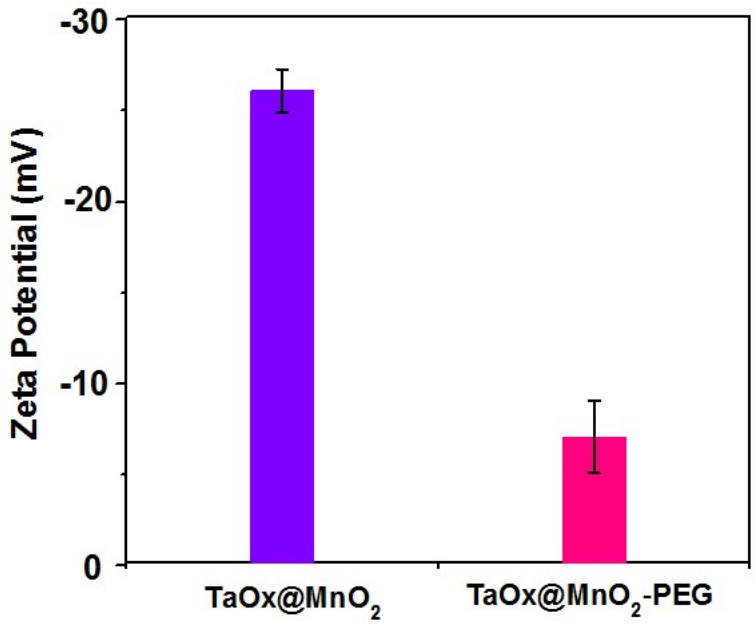

Figure S6. Zeta potentials of TaOx@MnO_2 and TaOx@MnO_2-PEG nanoparticles.

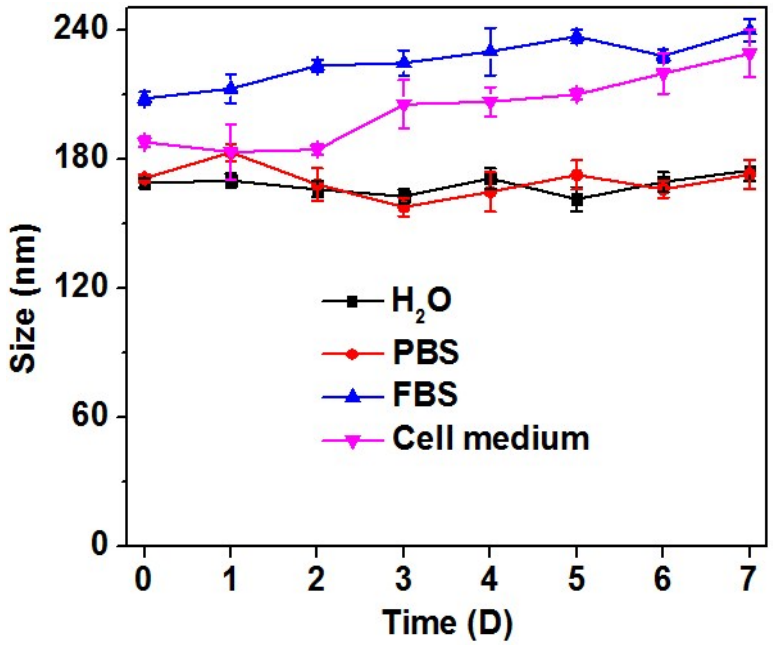

Figure S7. Hydrodynamic diameters of TaOx@MnO_2-PEG nanoparticles in different solutions including H_2O, PBS, FBS, and RPMI 1640 cell culture medium (containing 10% serum) for 7 days.

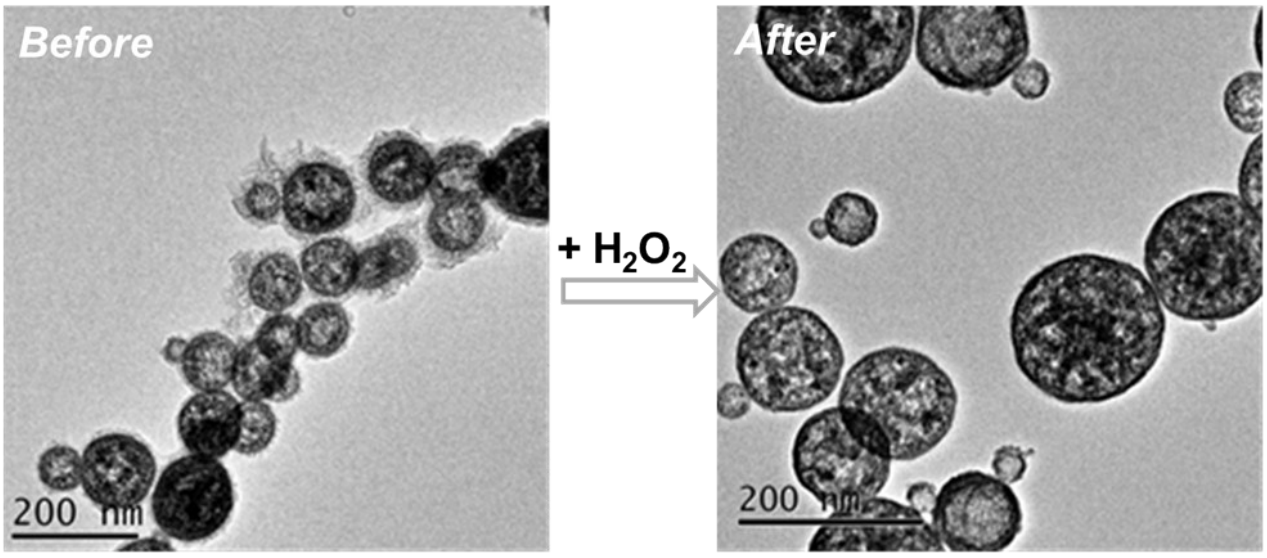

Figure S8. TEM images of TaOx@MnO_2 nanoparticles before and after the reaction with H_2O_2 at acidic conditions.

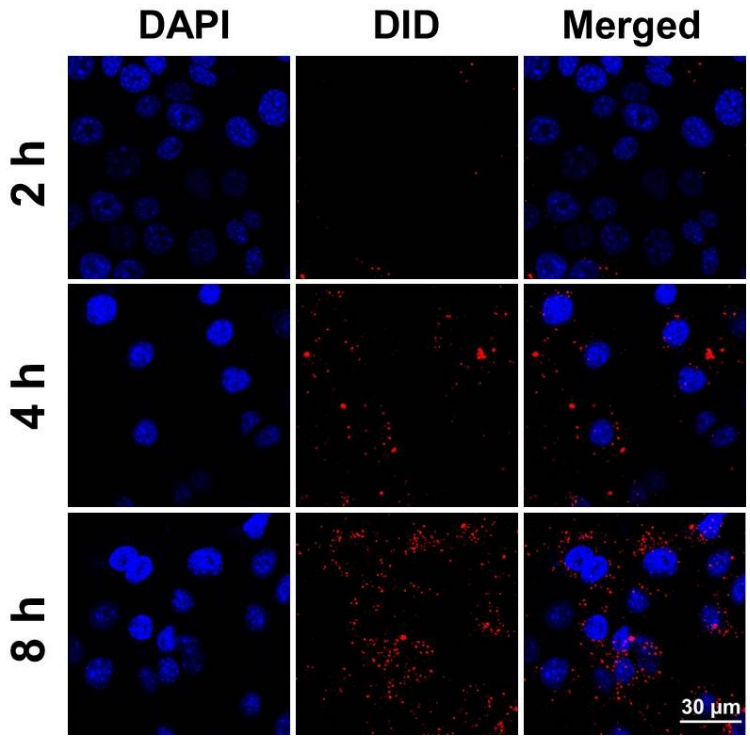

Figure S9. Confocal fluorescence images of 4T1 cells incubated with TaOx@MnO_2-PEG for different periods of time. The red and blue colors represent DID fluorescence and DAPI-stained cell nuclei, respectively.

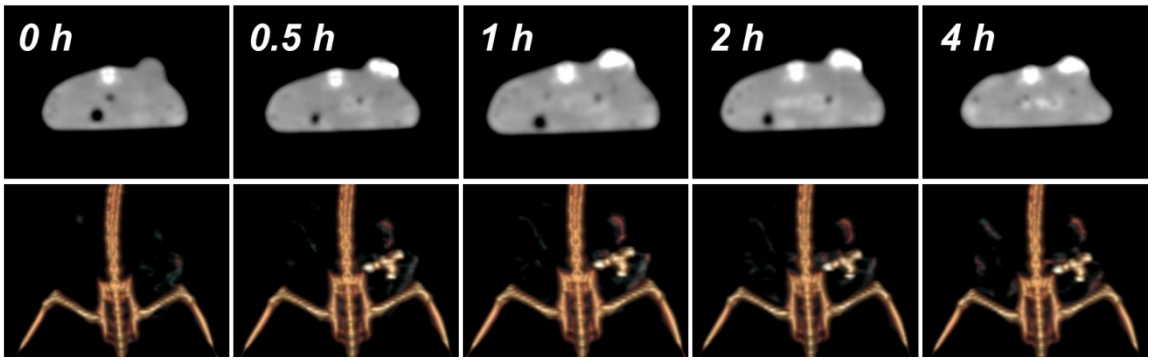

Figure S10. *In vivo* CT imaging of 4T1 tumor bearing mice at different time points (0 h, 0.5 h, 1h, 2 h, and 4 h).

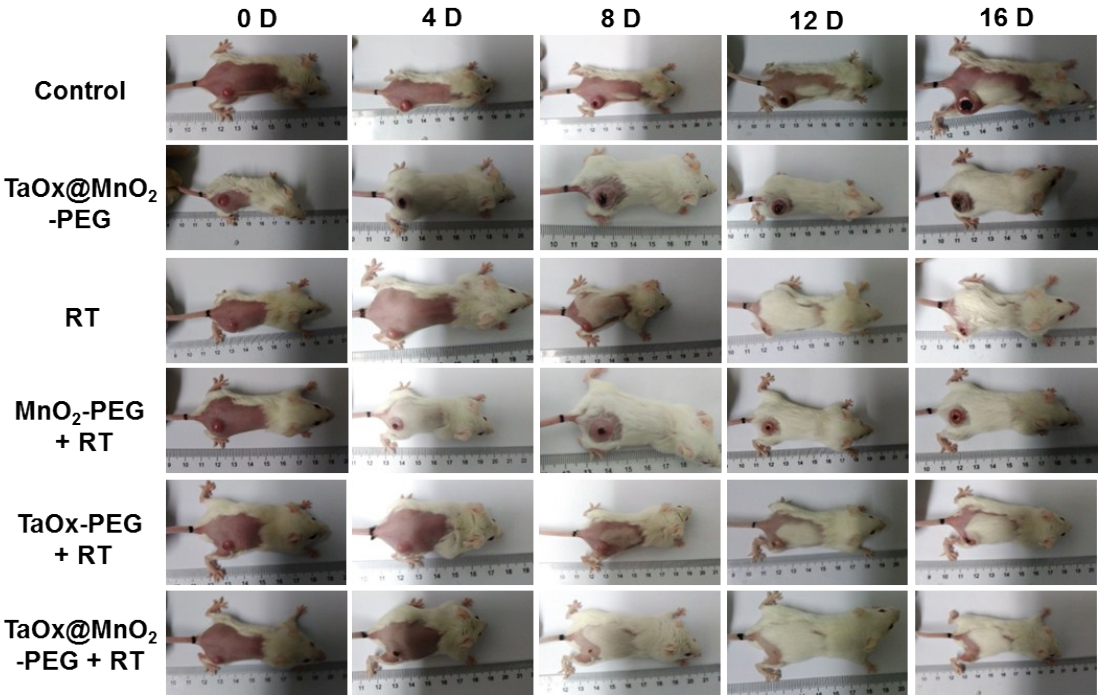

Figure S11. Photos of representative mice taken at every four days after various treatments.

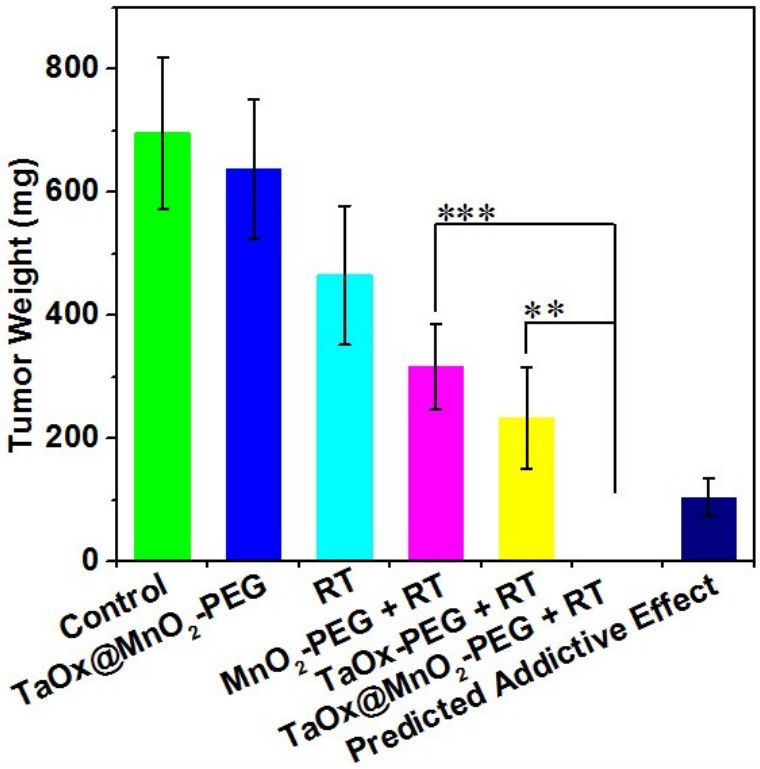

Figure S12. Averaged weights of tumors collected from different groups of mice at the 16th day post treatments.

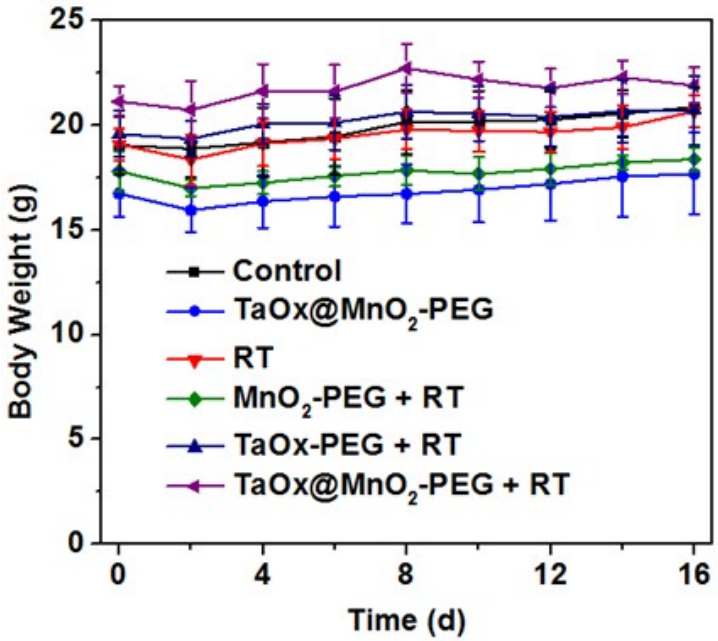

Figure S13. The body weight variation of 4T1 tumor-bearing mice during various treatments.

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