Supporting Information

Manganese/iron-based nanoprobes for photodynamic/chemotherapy combination therapy of tumor guided by multimodal imaging Shanshan Fan, Yu Zhang, Haisong Tan, Cuili Xue, Yiqian Zha, Jiaqi Niu, Yanlei Liu, Yingsheng Cheng, Daxiang Cui.



Fig.S1 (a-b) TEM images of $Fe_3O_4@MnO_2$ synthesized with 5uL Fe_3O_4 NPs; (c-d) TEM images of $Fe_3O_4@MnO_2$ synthesized with 20uL Fe_3O_4 NPs.



Fig.S2 (a-b) UV-vis absorption of Ce6 with different concentrations and the calibration cure of Ce6. (c-d) HPLC of CSL with different concentrations and the calibration cure of CSL.



Fig.S3 (a-b) UV-vis absorption of Ce6 released by nanoplatforms in various PBS (pH=5.0 and 7.4) solution at different points in time. (c-d) HPLC of CSL released by nanoplatforms in various PBS (pH=5.0 and 7.4) solution at different points in time.



Fig.S4 Cell viability of Bel-7402 cells treated with various concentrations of $Fe_3O_4@MnO_2$ nanoplatforms for 24h in the dark, respectively.



Fig.S5 XPS spectrum of $Fe_3O_4@MnO_2$ nanoplatforms: (a) Fe, (b) Mn, (c) C, (d) N, (e) O elements, together with their binding energy curves.



Fig.S6 (a) Ex vivo fluorescence images of major organs and tissue dissected from mice at 24 h post-injection. (b) Quantitative analysis of the fluorescence signals.



Fig.S7 Photographs of tumor-bearing mice in each group after treatment.



Fig.S8 (a) UV-Vis absorption spectra of water, medium, normal saline and UV-Vis absorption spectra of $Fe_3O_4@MnO_2$ -Ce6/CSL in water, saline and medium. (b) SOSG fluorescence for determination of 1O_2 generation of free Ce6 and Fe₃O₄@MnO₂-Ce6/CSL under laser irradiation.