

Electronic Supplementary Material (ESI) for New Journal of Chemistry.  
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Supporting information

**Microenvironment-mediated Cu<sub>2</sub>O-MoS<sub>2</sub> nanoplatform with enhanced Fenton-like reaction activity for tumor Chemodynamic/photothermal therapy**

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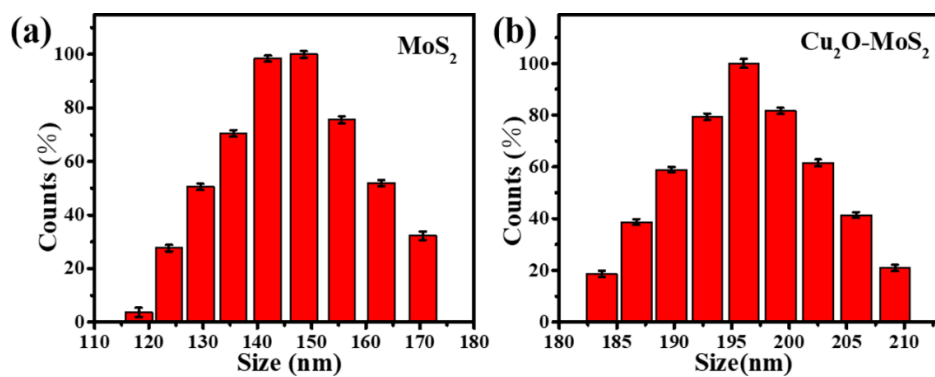


Fig S1. (a, b) Particle size distribution of MoS<sub>2</sub> and Cu<sub>2</sub>O-MoS<sub>2</sub>. (n = 3, mean ± SD).

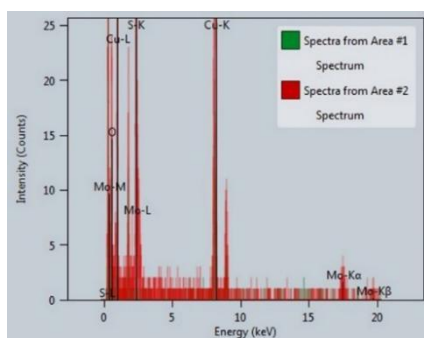


Fig S2. EDS spectrum of Cu<sub>2</sub>O-MoS<sub>2</sub>.

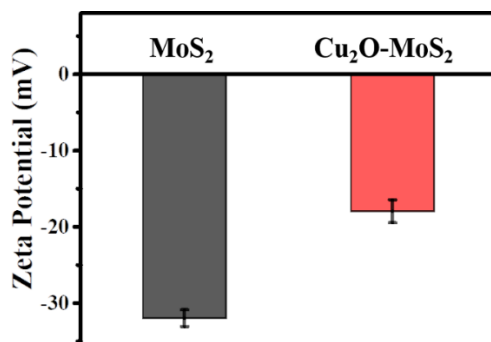


Fig S3. Zeta potential of MoS<sub>2</sub> and Cu<sub>2</sub>O-MoS<sub>2</sub>.

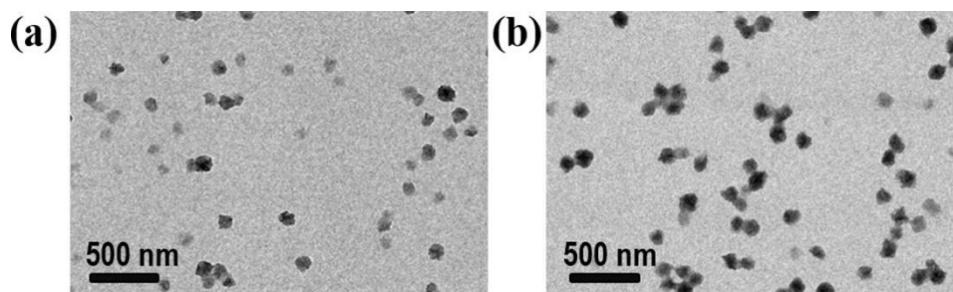


Fig S4. (a) Low-resolution TEM image of MoS<sub>2</sub>. (b) Low-resolution TEM image of Cu<sub>2</sub>O-MoS<sub>2</sub>.

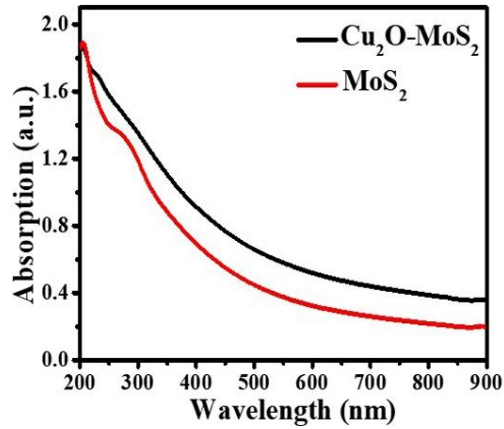


Fig S5. UV-vis absorption spectra of MoS<sub>2</sub> and Cu<sub>2</sub>O-MoS<sub>2</sub>.

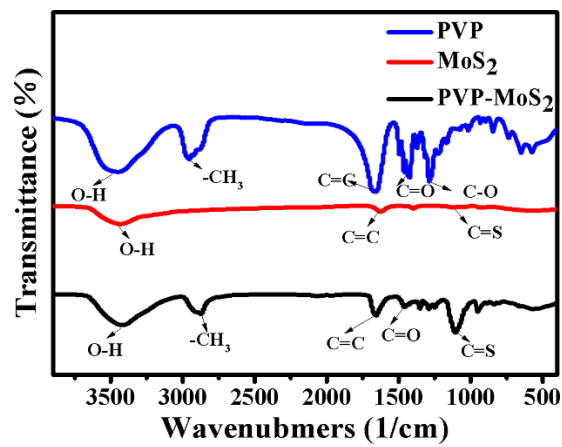


Fig S6. FT-IR spectra of PVP, MoS<sub>2</sub> and PVP-MoS<sub>2</sub>.

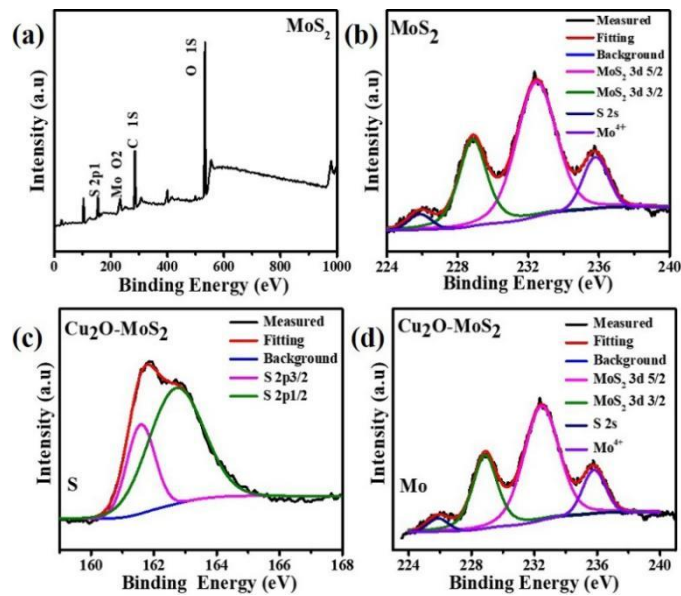


Fig S7. (a) XPS survey spectrum of MoS<sub>2</sub>. (b) High resolution of Mo XPS images of MoS<sub>2</sub>. (c) High resolution of S XPS images of Cu<sub>2</sub>O-MoS<sub>2</sub>. (d) High resolution of Mo XPS images of Cu<sub>2</sub>O-MoS<sub>2</sub>.

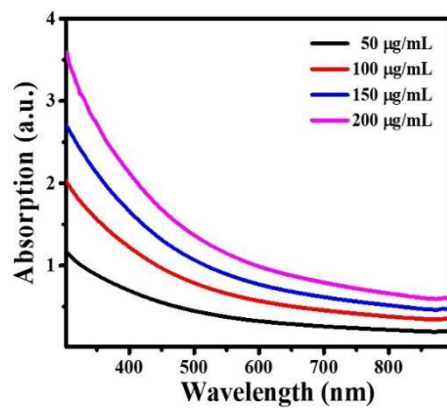


Fig S8. Cu<sub>2</sub>O-MoS<sub>2</sub> UV-vis absorption spectra of different concentrations.

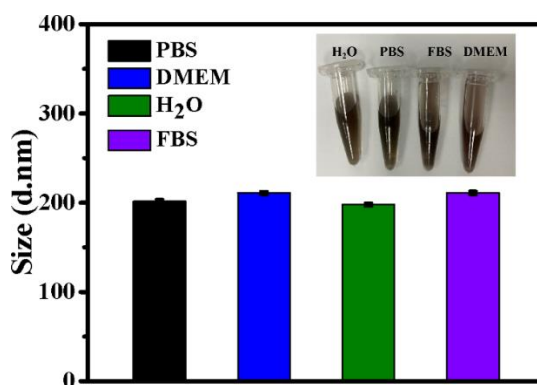


Fig S9. Photographs of Cu<sub>2</sub>O-MoS<sub>2</sub> incubated for 48 h under different physiological conditions.

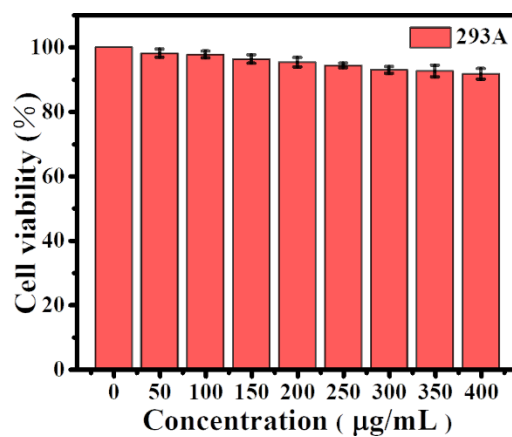
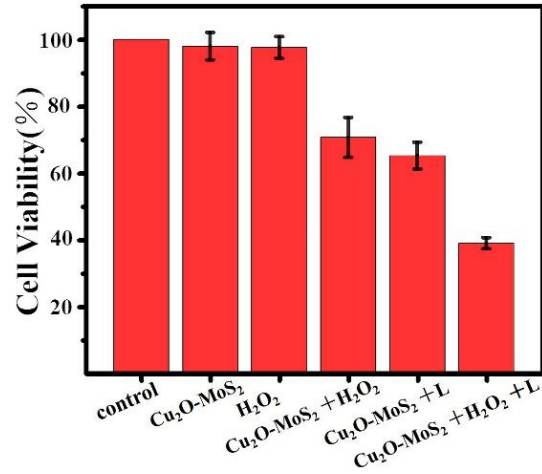
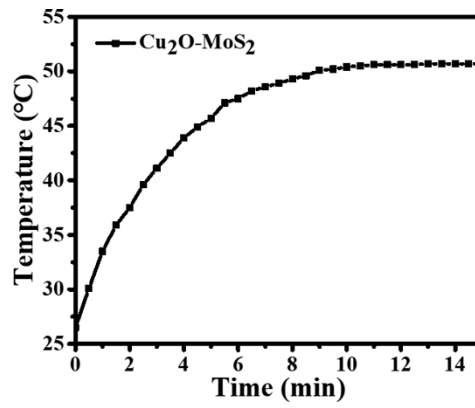


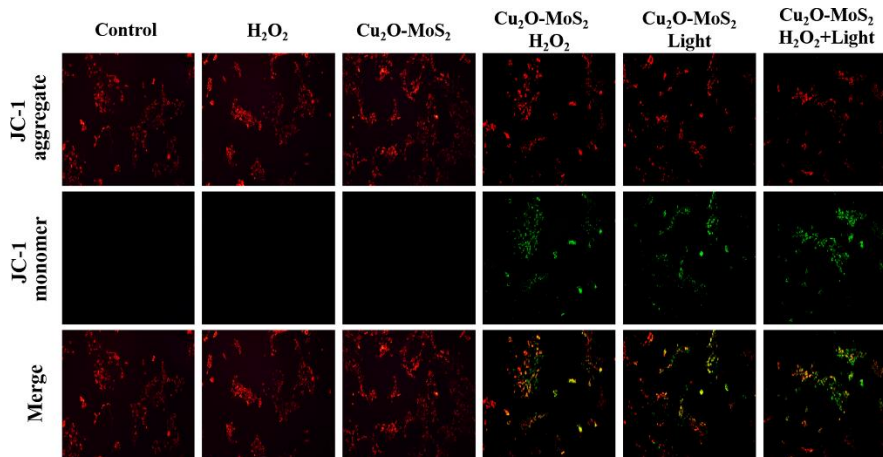
Fig S10. Cell viability of 293A cells exposed to Cu<sub>2</sub>O-MoS<sub>2</sub> at different concentrations.



**Fig S11.** Toxicity of the same concentration of Cu<sub>2</sub>O-MoS<sub>2</sub> to 4T1 breast cancer cells under H<sub>2</sub>O<sub>2</sub> or irradiation.



**Fig S12.** Temperature curves of Cu<sub>2</sub>O-MoS<sub>2</sub> aqueous solution under 808 nm laser.



**Fig S13.** Fluorescence imaging of JC-1 stained 4T1 cells.