

Spontaneous reduction of KMnO₄ with MoS₂ quantum dots for glutathione sensing in tumor

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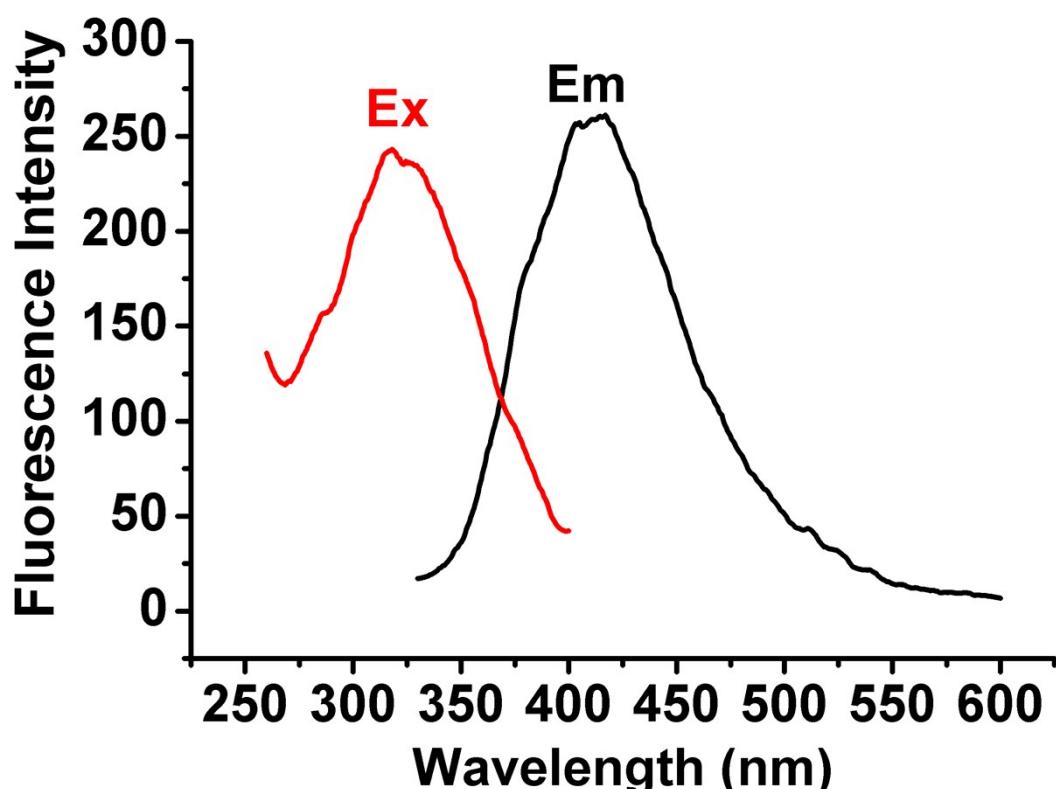


Fig. S1 The excitation and emission fluorescence spectra of MoS₂ QDs.

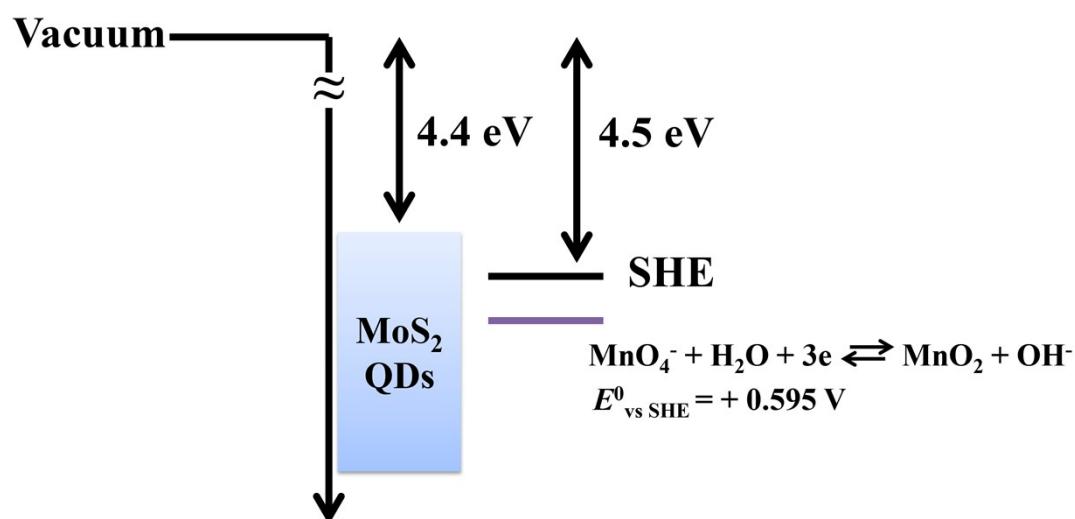


Fig. S2 An energy diagram showing the Fermi level of MoS₂ QDs lies above the reduction potential of MnO₄⁻ (+ 0.595 V versus SHE).

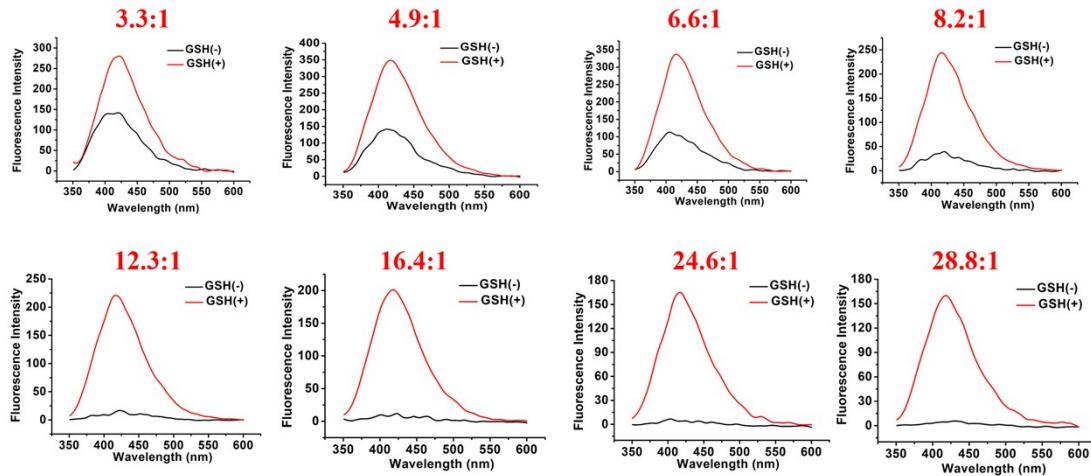


Fig. S3 Fluorescence spectra of MnO₂/MoS₂ nanocomplex with different KMnO₄-to-MoS₂ molar ratio in the presence or absence of GSH.

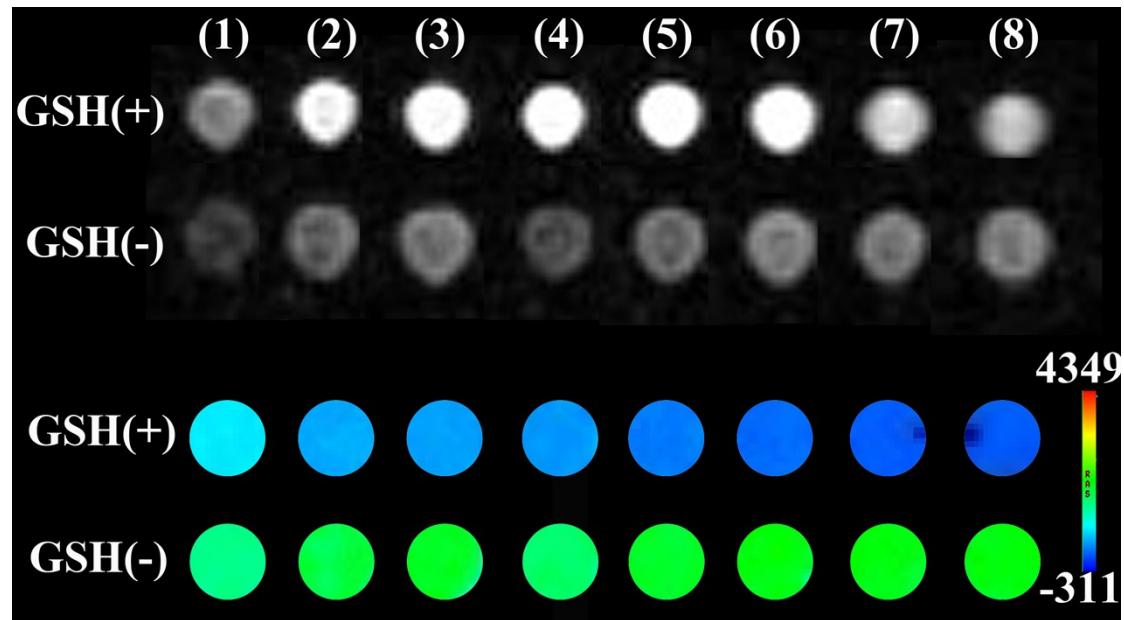


Fig. S4 T₁-weighted MR images and T₁-mapping images of MnO₂/MoS₂ nanocomplex with different KMnO₄-to-MoS₂ molar ratio in the presence or absence of GSH. (1)-(8): 3.3:1, 4.9:1, 6.6:1, 8.2:1, 12.3:1, 16.4:1, 24.6:1, and 28.8:1.

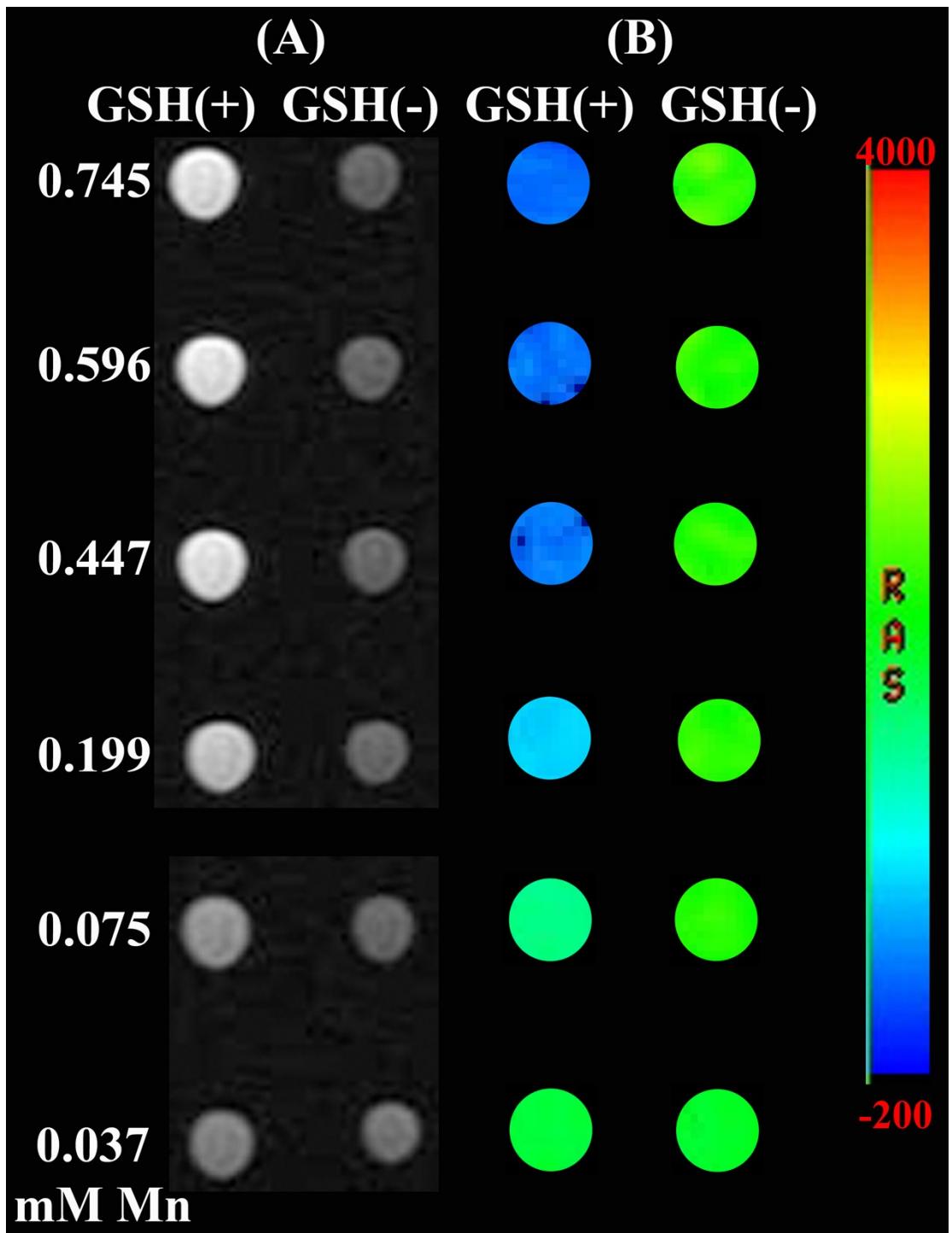


Fig. S5 T₁-weighted MR images (A) and T₁-mapping images (B) of MnO₂/MoS₂ nanocomplex with different concentrations of Mn in the absence and presence of GSH.

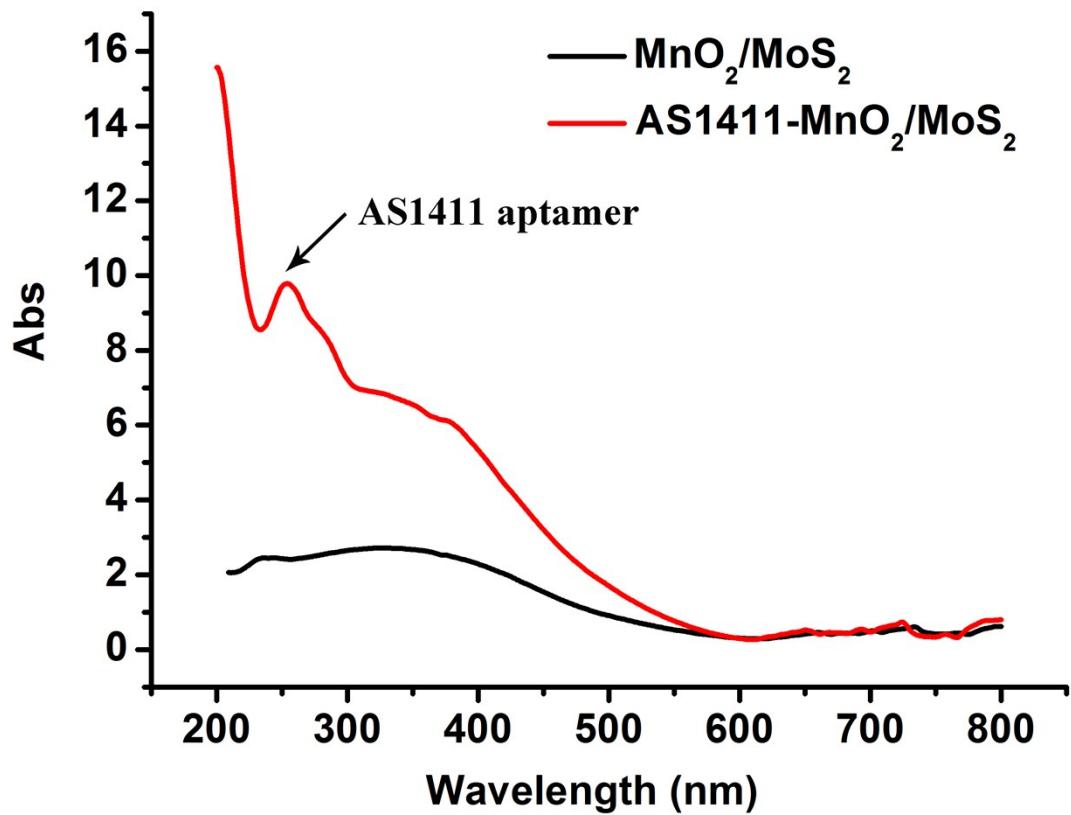


Fig. S6 UV-vis spectra of the $\text{MnO}_2/\text{MoS}_2$ nanocomplex and $\text{AS1411}-\text{MnO}_2/\text{MoS}_2$ nanoprobe.

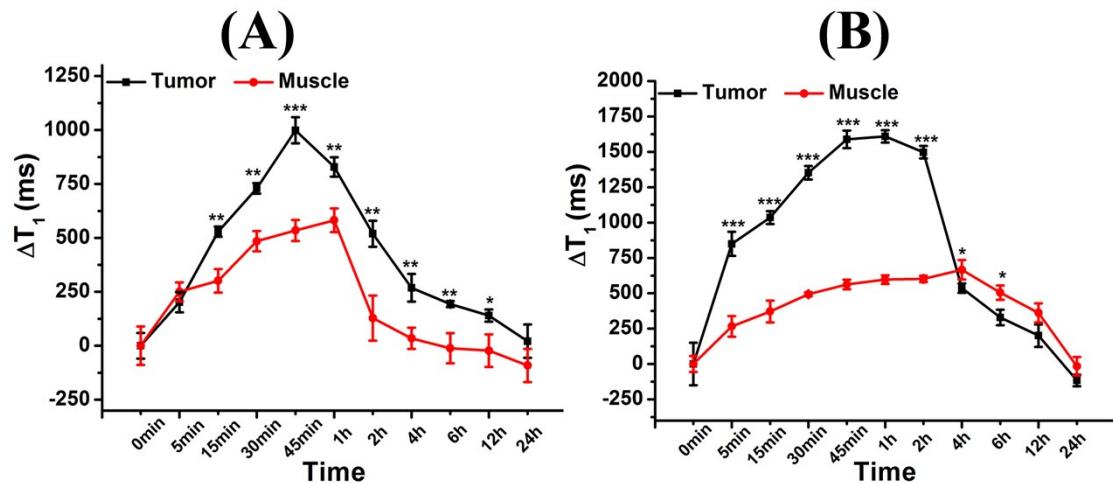


Fig. S7 T_1 MR signal changes of tumor and muscle post-injection of $\text{MnO}_2/\text{MoS}_2$ nanocomplex (A) and $\text{AS1411}-\text{MnO}_2/\text{MoS}_2$ nanoprobe (B) with the time passing by.