Supporting Information

MRI/Fluorescence bimodal amplification system for cellular GSH detection and tumor cell imaging based on manganese dioxide nanosheet

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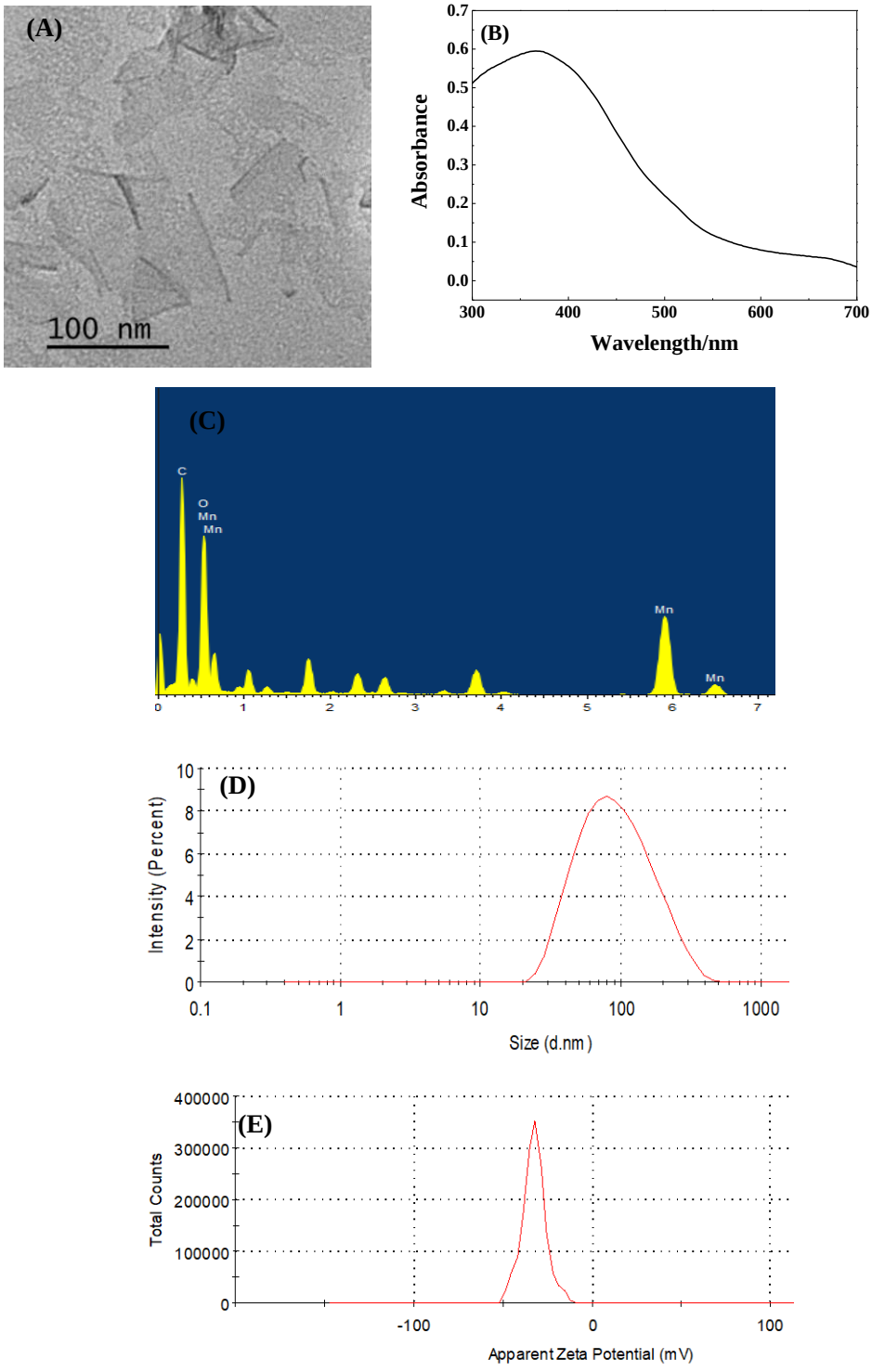


Fig S1 (A) TEM, (B) UV−vis absorption spectrum, (C) EDS, (D) size analysis and (E) zeta potential analysis characterization of MnO_2 nanosheets.

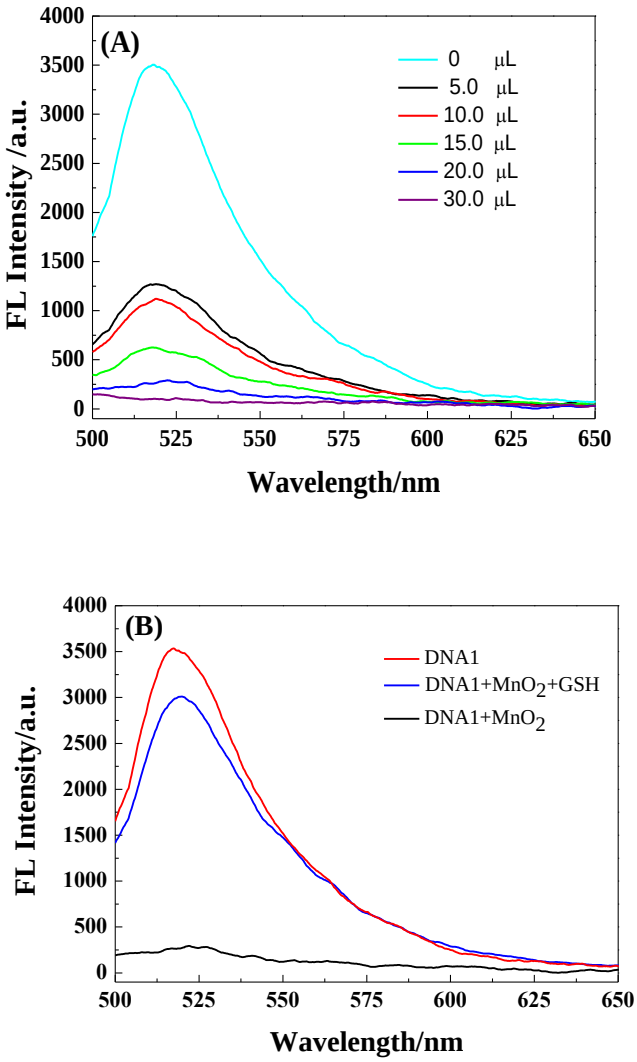


Fig S2 (A) Quenching effect of the MnO_2 nanosheets on 100 nM ssDNA. (B) Fluorescence intensities of the ssDNA (100 nM) with MnO_2 nanosheets and GSH (excitation at 488nm).

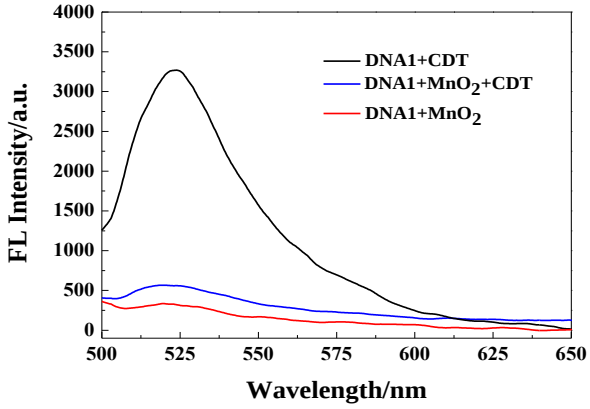
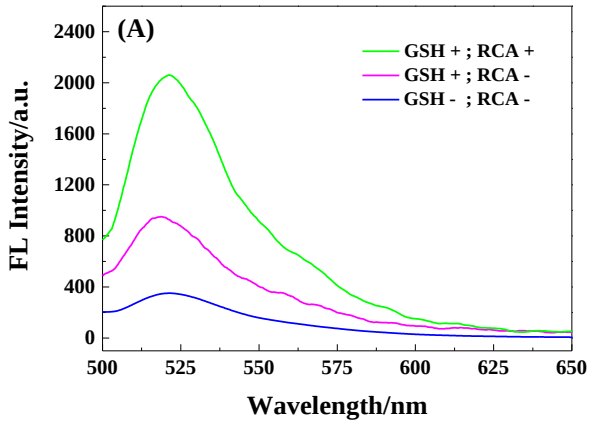


Fig S3 The protection of the MnO_2 nanosheets to the ssDNA (excitation at 488nm).



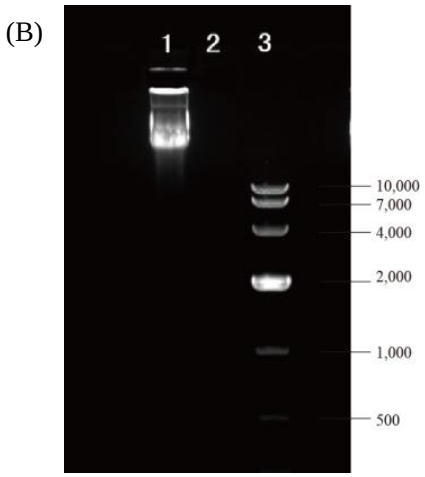


Fig S4 (A) FL spectra of DNA1 obtained from RCA detection of GSH. (B) The image of gel electrophoresis experiment. Lane (1): the RCA product, lane (2): RCA reaction without CDT, and lane (3): DL10000bp DNA markers.

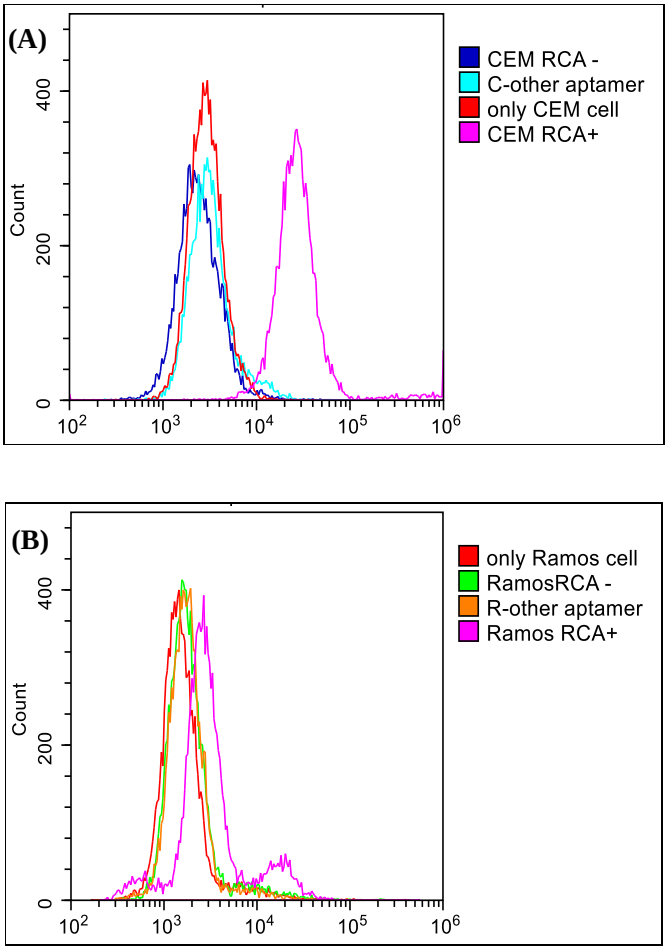


Fig S5 Flowcytometric results of the MnO_2-nanoprobe in CEM (A) and Ramos cells (B).

Table S1 DNA sequences used in the present experimental.

Name	Sequences
Aptamer-Sgc8	5'-ATTAT TATTA TTATT ATTAT TCTAA CTGCT GCGCC GCCGG GAAAA TACTG TACGG TTAGA-3'
Primer	5'-CAGTC AGT CA GTAAA GGAAG-3'
Signal DNA	5'-FAM-CGCTCCTTTC GTTTC CTTGA AACTTGAGCG-Dabcyl-3'
DNA 1	5'-FAM-CAGTC AGTCA GTAAA GGAAG-3'
Circular-DNAtemplate (CDT)	5'-ACTGA CTGCC TTCTT CTTTC GTTTC CTTGA AACTT TTTCC CTTCC TTTAC TGACT GACTG-3'
Aptamer	5'-FAM-ACCTGGGGGAGTATTGCGGAGGAAGGT-3'