

Supporting Information for

ORIGINAL ARTICLE

A smart O₂-generating nanocarrier optimizes drug transportation comprehensively for chemotherapy improving

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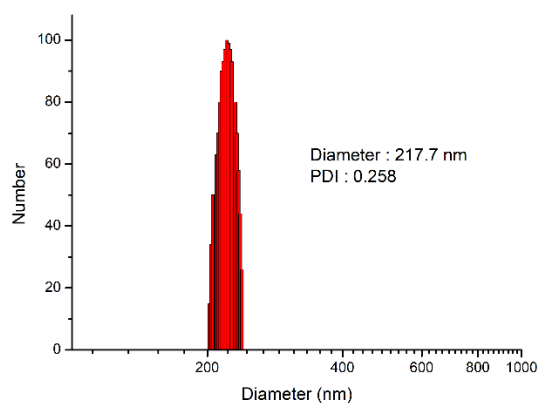


Figure S1 DLS results of DOX-CaO₂/MnO₂-MS NPs in PBS.

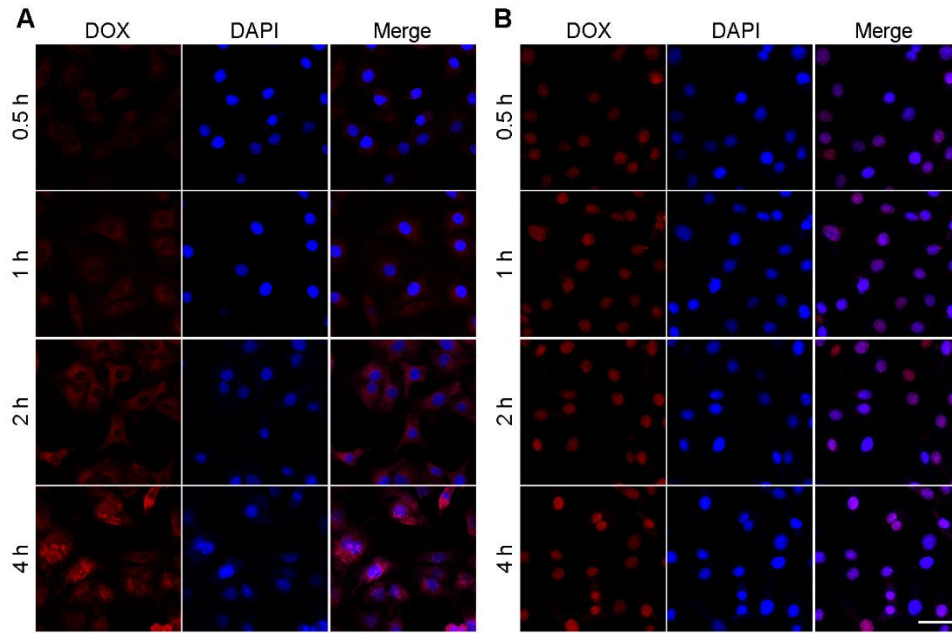


Figure S2 Cellular uptake of DOX-CaO₂/MnO₂-MS NPs (A) and free DOX (B) in SKOV3 cells. Cell nuclei was stained with DAPI (blue fluorescence), DOX concentration: 1 μmol/L, scale bar=50 μm.

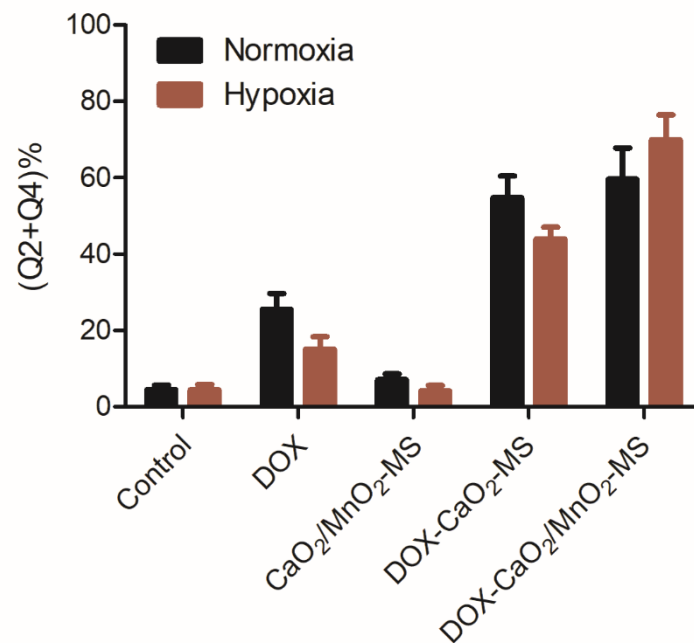


Figure S3 The Annexin V-APC/7-AAD apoptosis assay of SKOV3 cells after the treatments under normoxia and hypoxia. DOX concentration: 4 μmol/L. Data are presented as mean±SD, *n*=3.

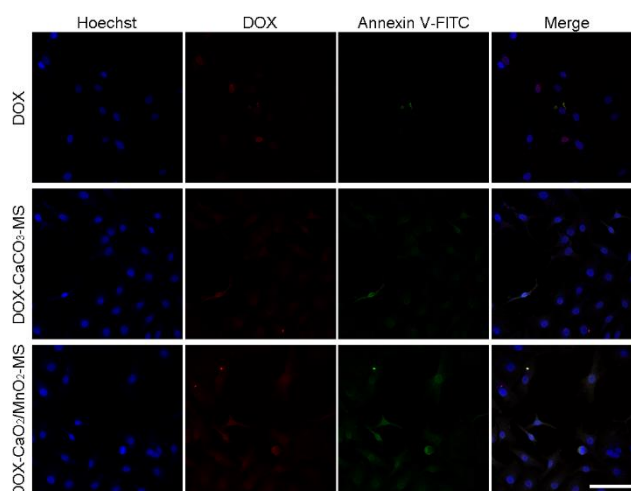


Figure S4 SKOV3 cells were incubated with different groups (DOX concentration: 4 $\mu\text{mol/L}$) for 8 h. The neighboring effect was illustrated by coculturing infected cells with untreated cells at a 1:10 ratio for 24 h. The cell nuclei were stained with Hoechst 33342 (blue), apoptotic cells were detected by Annexin V-FITC (green); scale bar=200 μm .

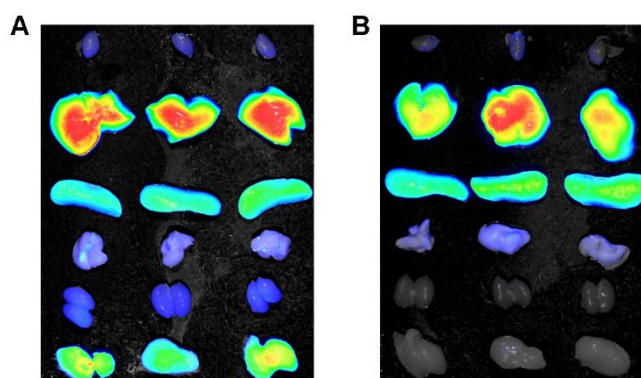


Figure S5 *Ex vivo* fluorescence images after treatment with CaO₂/MnO₂-DiR/MS NPs (A) and free DiR (B) at 48 h post-injection. From up to bottom: heart, liver, spleen, lung, kidney, and tumor, $n=3$.

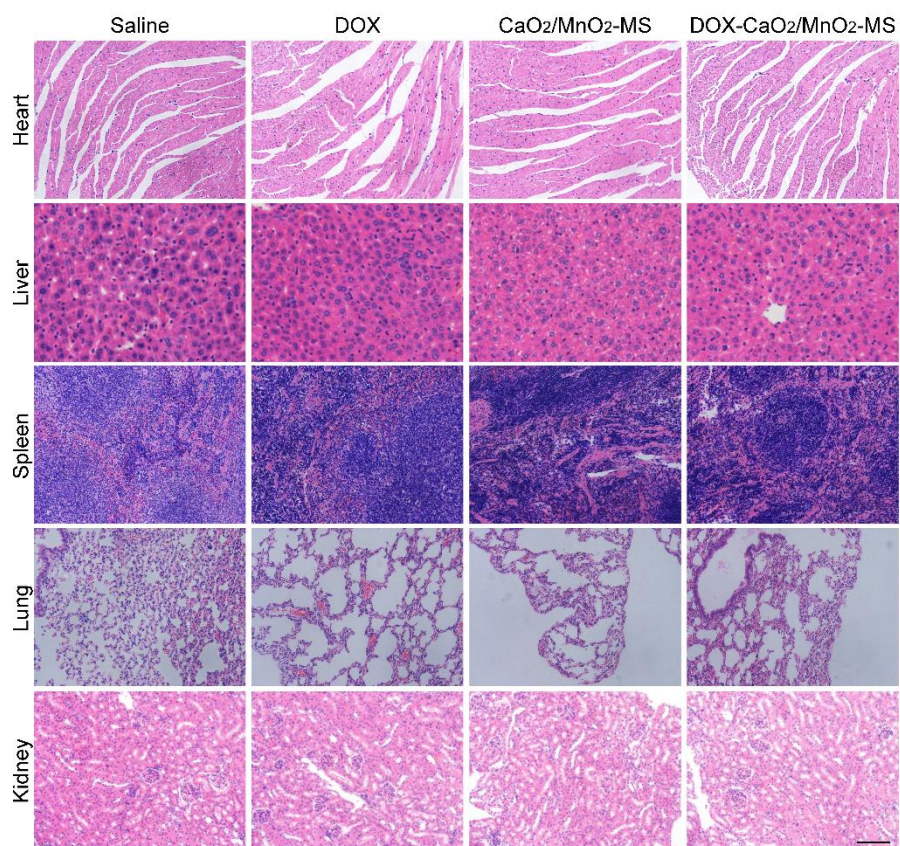


Figure S6 H&E staining images of the normal tissues after treatment with saline, DOX, CaO₂/MnO₂-MS and DOX-CaO₂/MnO₂-MS NPs. Scale bar=200 μ m.