

## **Diagnostic and Therapeutic Nanoenzyme for Enhanced Chemotherapy and Photodynamic Therapy**

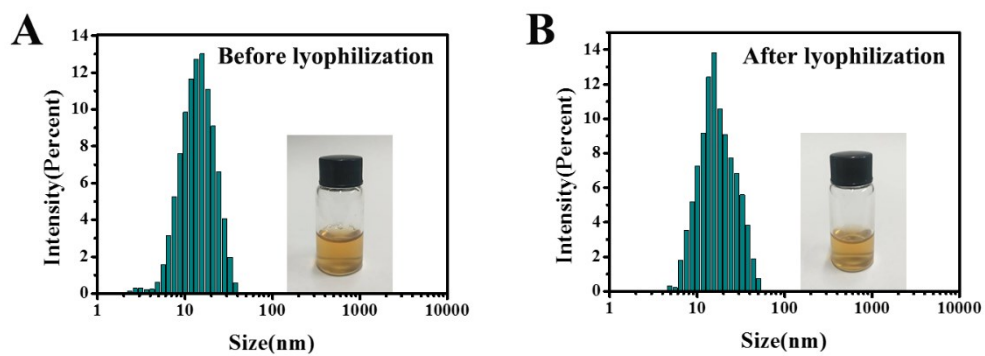
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#: Cong Cong, Yuchu He and Shuxian Zhao have the same contribution to this work.



**Figure S1** Pictures and size distribution of MnO<sub>2</sub> NPs before lyophilization and after lyophilization.

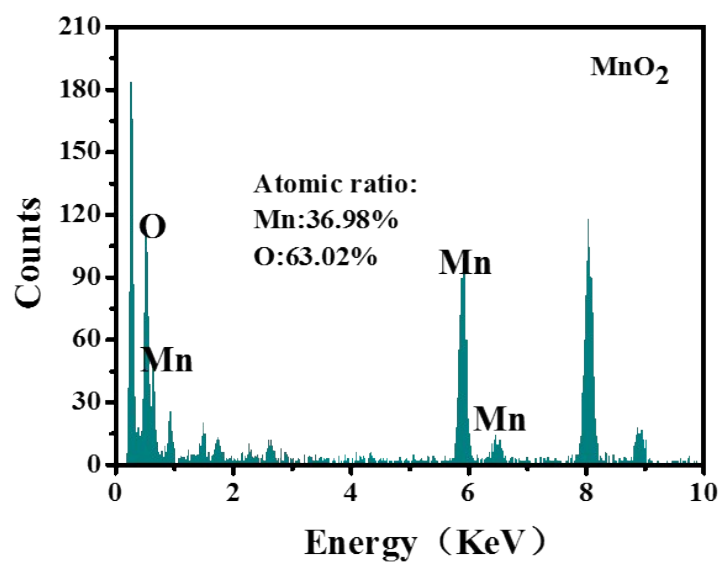
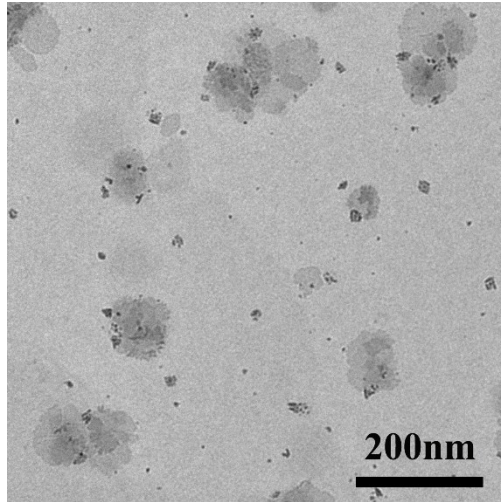
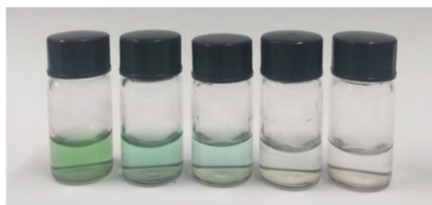
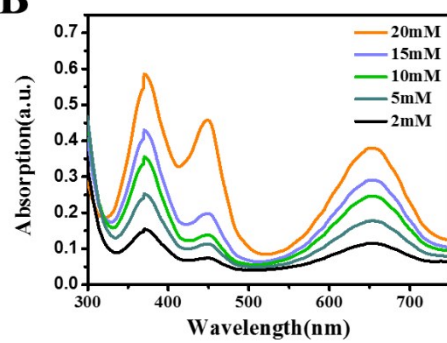


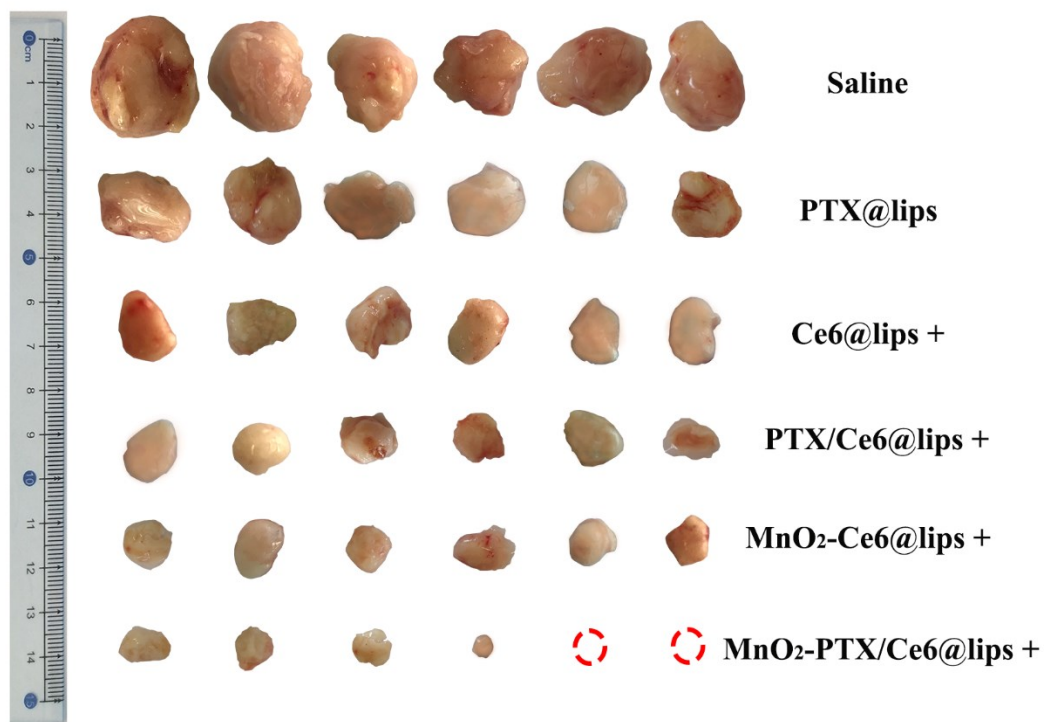
Figure S2 EDS of MnO<sub>2</sub> NPs.



**Figure S3** TEM image of MnO<sub>2</sub>-PTX/Ce6@lips incubated at pH5.5 for 12 h.

**A****B**

**Figure S4** Corresponding photo (A) and evolution of TMB oxidation catalysis by MnO<sub>2</sub>-PTX/Ce6@lips with different concentration (B).



**Figure S5** Tumor pictures of U14 tumor-bearing mice after 14 days of treatments.