

Supporting Information

A Dual-Modal Therapeutic Role of Lactate Oxidase-Embedded Hierarchical Porous Zeolitic Imidazolate Framework as Nanocatalyst for Effective Tumor Suppression

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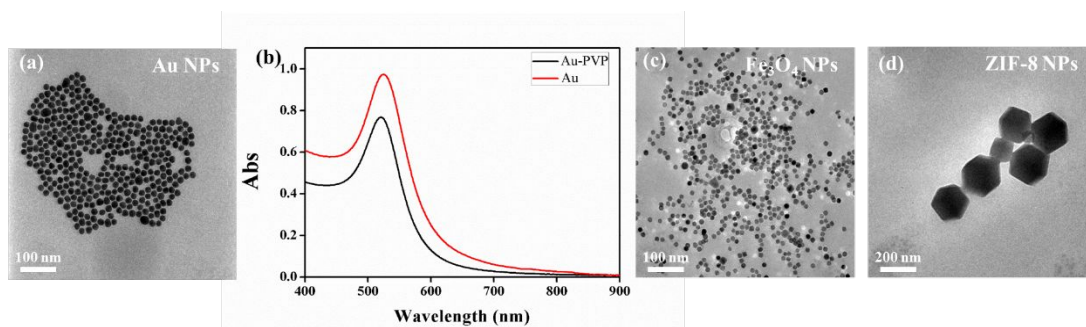


Figure S1. The TEM imaging of Au (a), Fe₃O₄ (c) and ZIF-8 (d) nanoparticles. (b) The UV-Vis-NIR absorption spectra of Au nanoparticles before and after modification.

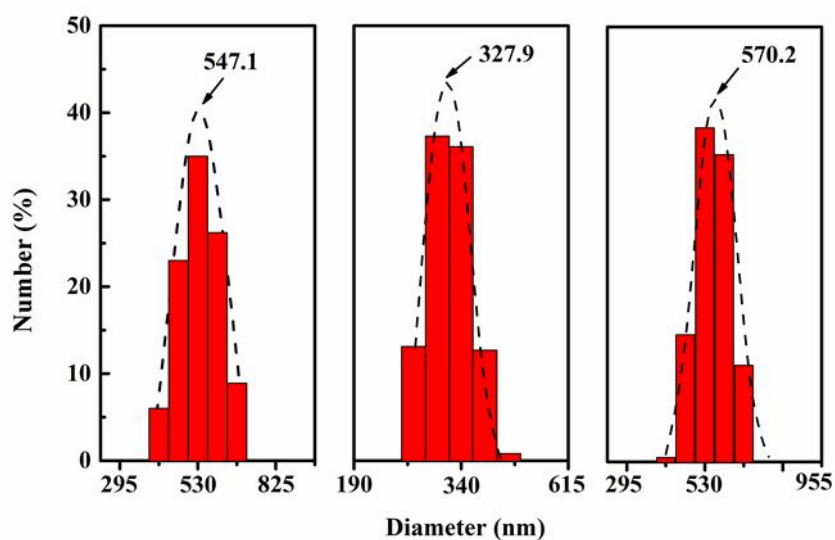


Figure S2. The hydrodynamic diameters of Au&Fe₃O₄@ZIF-8, meso-Fe₃O₄@ZIF-8, and LFZ NPs in methanol solution respectively.

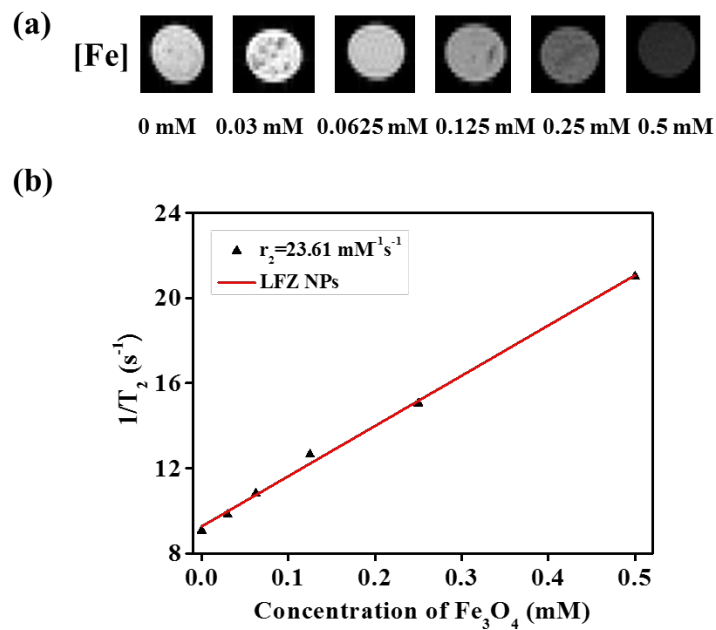


Figure S3. T_2 -weighted MRI images of LFZ NPs (a) and plot of $1/T_2$ of LFZ NPs (b) with different concentrations of Fe_3O_4 .

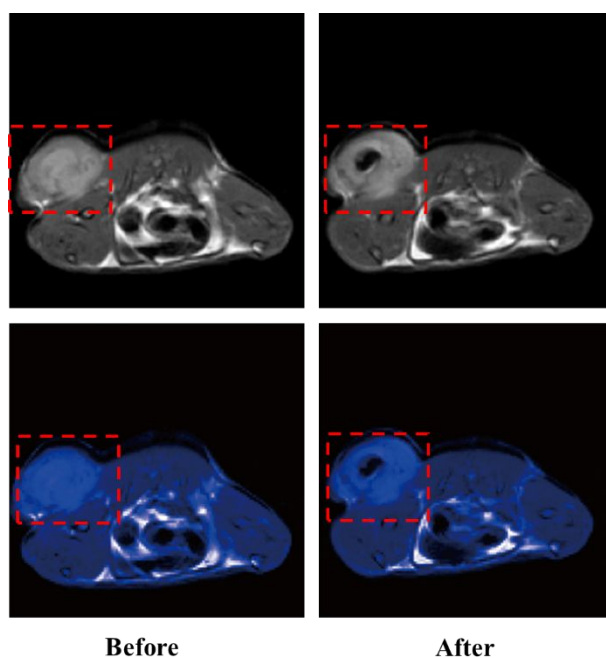


Figure S4. The T_2 -weighted MRI images of tumor-bearing mice before and after the injection of LFZ NPs in vivo (The tumor site is circled by the red rectangle).

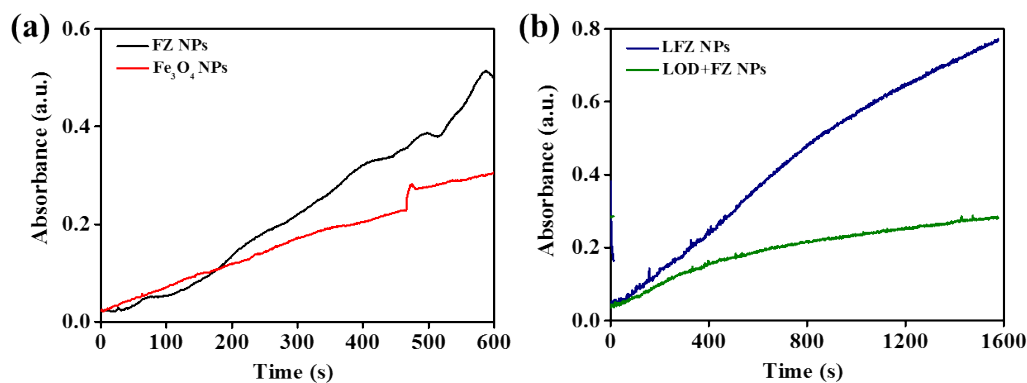


Figure S5. The comparison of the catalytic performances of $\text{Fe}_3\text{O}_4@\text{ZIF-8}$ NPs with Fe_3O_4 NPs (a), and the comparison of the catalytic performances of LOD immobilized by ZIF-8 NPs with free LOD (b).

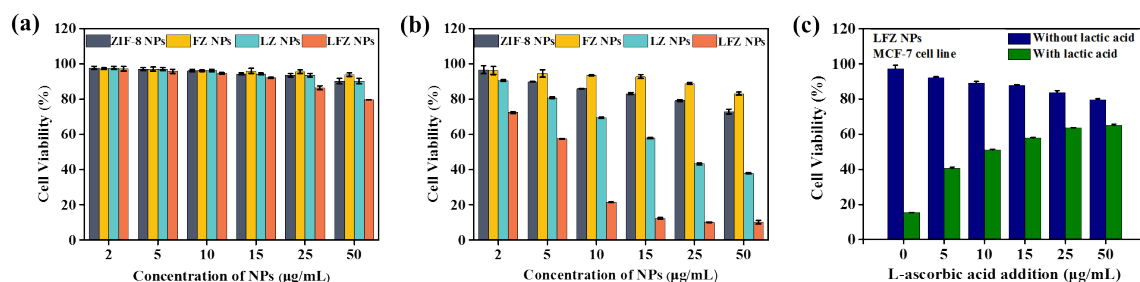


Figure S6. (a) The cell viability of MCF-7 incubated with ZIF-8, FZ, LZ, and LFZ NPs without lactic acid. (b) The cell viability of MCF-7 incubated with ZIF-8, FZ, LZ and LFZ NPs with lactic acid. (c) l-ascorbic acid-assisted cell rescue profiles of MCF-7 cells' cytotoxicity induced by LFZ NPs.