

Electronic Supplementary Information

**Near Infrared Light Triggered Reactive Oxygen Species
Responsive Nanoparticles for Chemo-Photodynamic Combined
Therapy**

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Fig. S1 Schematic illustration of the preparation of mTiO₂-BCBL@ZnPc NPs.

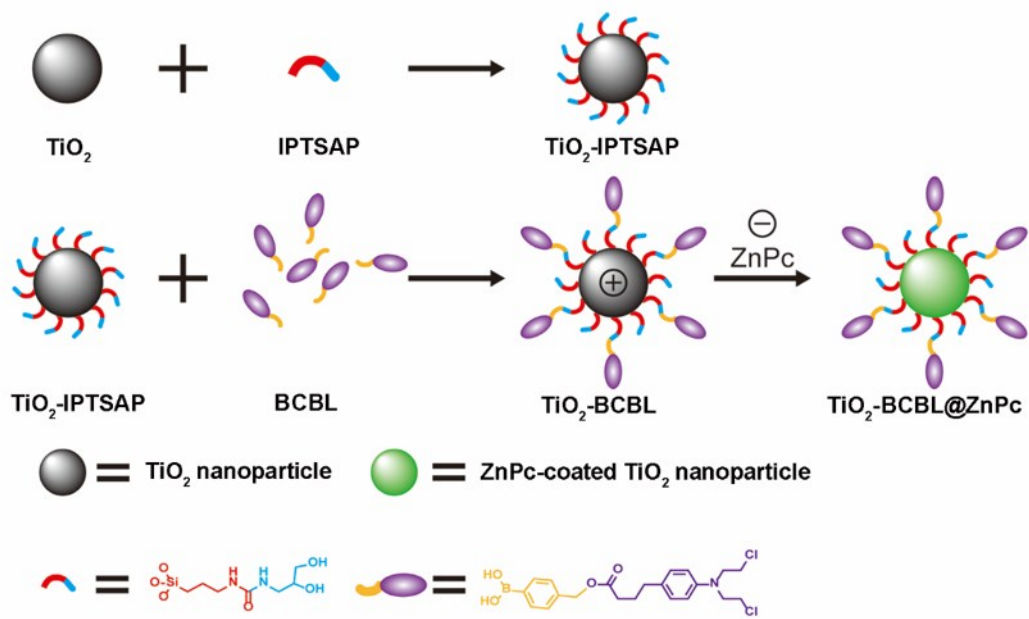


Fig. S2 The ^1H NMR of IPTSAP. The structure of IPTSAP was confirmed via NMR (400 MHz, DMSO-d_6). There were the following parameters: ^1H NMR δ 6.04 (s, 1H), 5.81 (s, 1H), 4.78 (s, 1H), 4.55 (s, 1H), 3.73 (d, $J = 6.9$ Hz, 6H), 3.44 (dd, $J = 15.6, 8.5$ Hz, 2H), 3.01 – 2.84 (m, 4H), 1.43 – 1.36 (m, 2H), 1.14 (t, $J = 6.8$ Hz, 9H), 0.55 – 0.48 (m, 2H). ^{13}C NMR δ 158.68, 71.17, 63.49, 57.65.

IPTES-AP-0910_10.fid

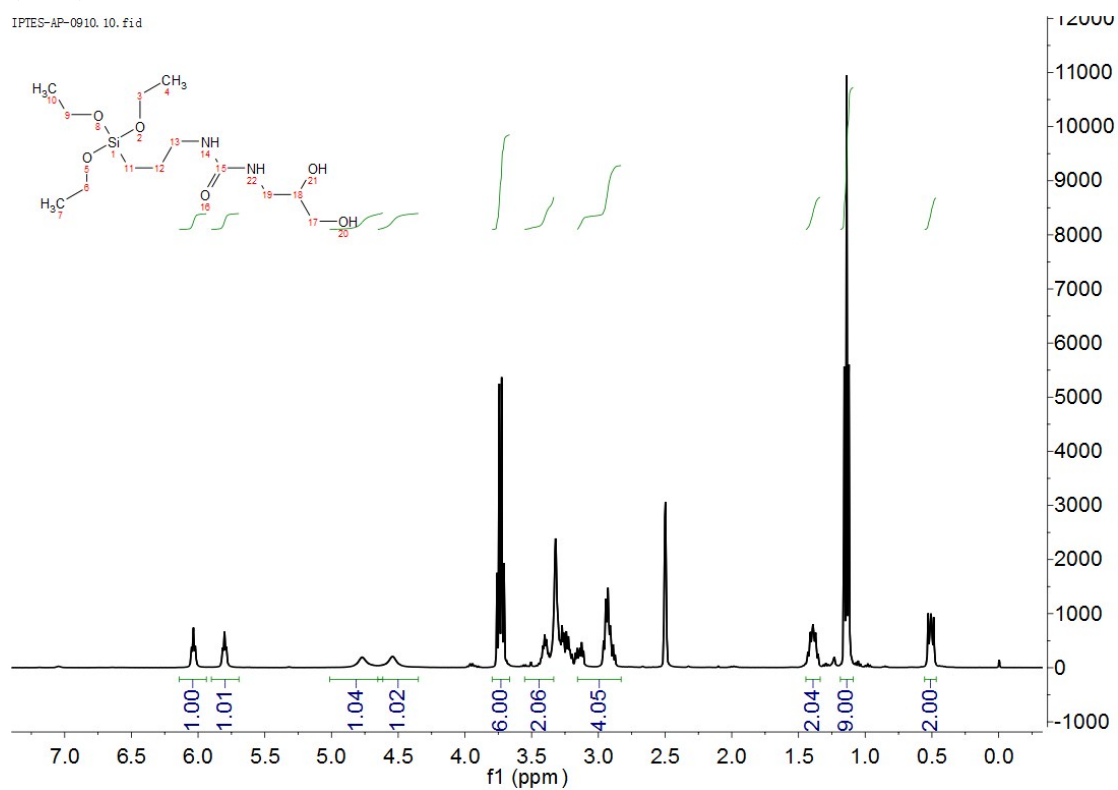


Fig. S3 The ^{13}C NMR of IPTSAP.

IPTSAP-C13/10

^{13}C NMR (101 MHz, $\text{DMSO}-d_6$) δ 158.68, 71.17, 63.49, 57.65, 42.66, 42.02, 23.53, 18.15 (d, $J = 1.9$ Hz), 14.63.

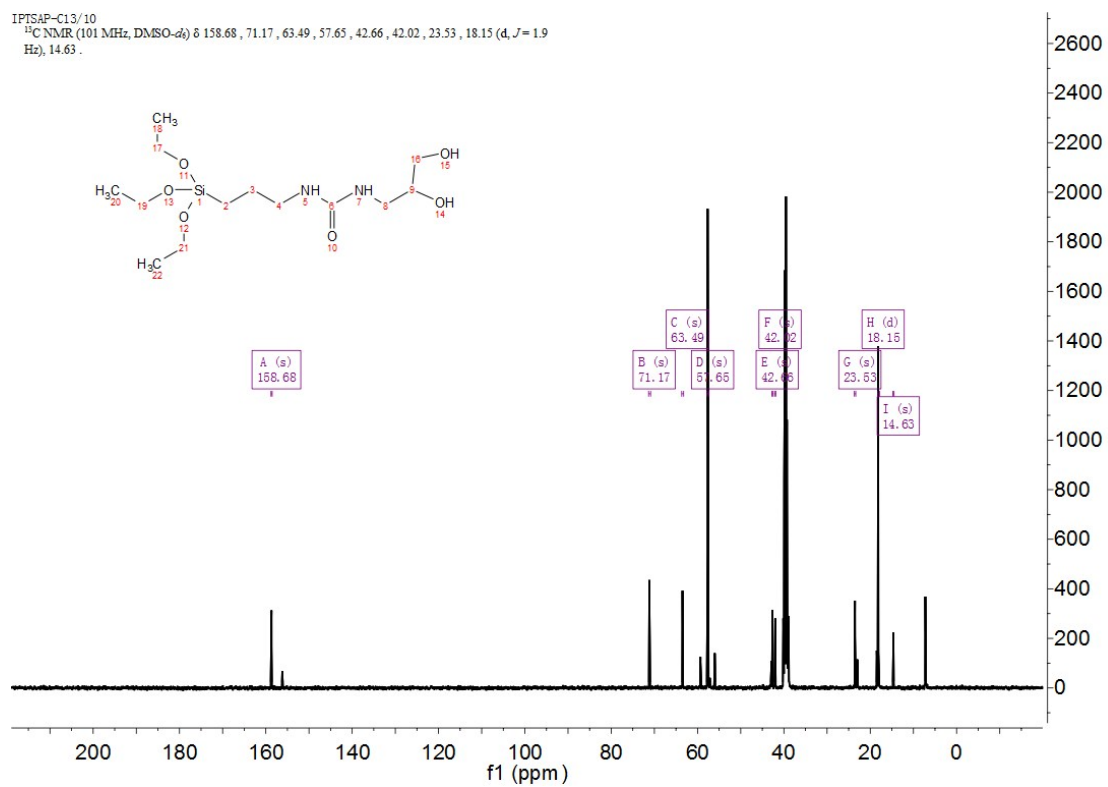


Fig. S4 The ^1H NMR of compound **1**. The structure of compound **1** was confirmed via NMR (400 MHz, Chloroform-d). There were the following parameters: ^1H NMR δ 7.22 (d, 2H), 7.05 (d, 2H), 6.85 (d, 2H), 6.62 (d, 2H), 5.17 (s, 2H), 3.73 – 3.58 (m, 8H), 2.53 (t, 2H), 2.40 (t, 2H), 1.95 (m, 2H). ^{13}C NMR δ 173.49, 144.44, 139.43, 135.21, 130.61, 129.83, 127.46, 112.26, 66.20, 53.73, 40.65, 34.05, 33.73, 26.86.

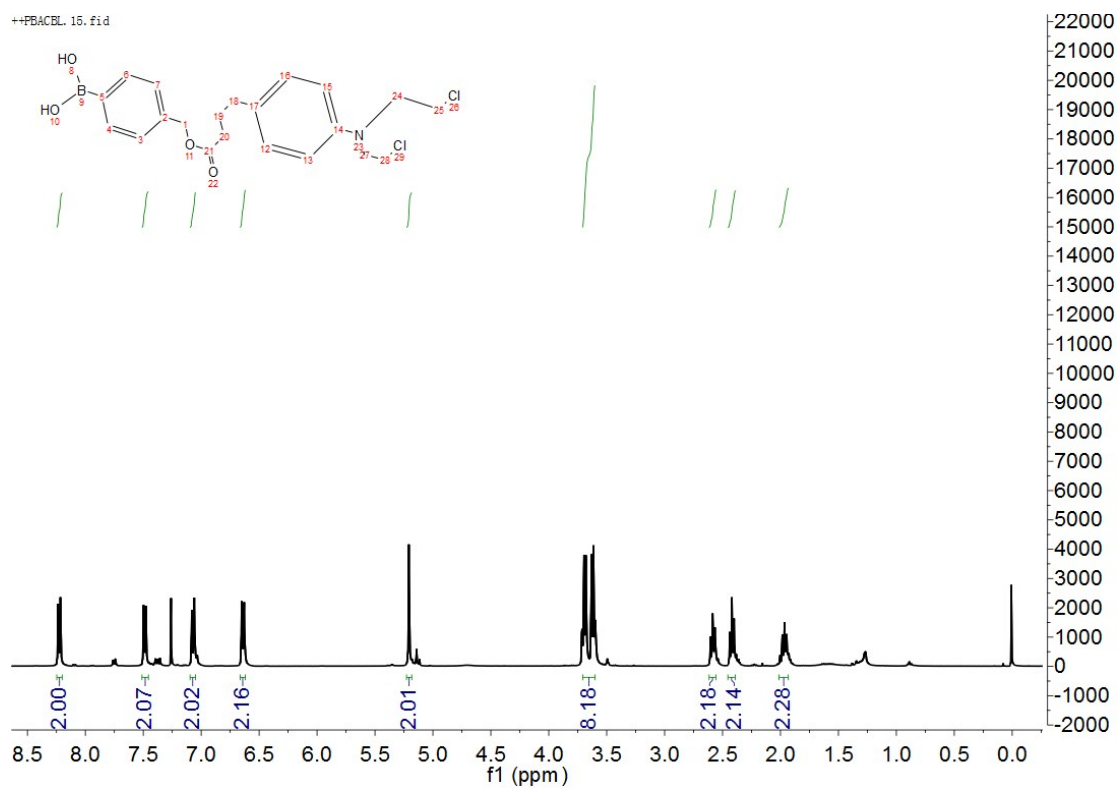


Fig. S5 The ^{13}C NMR of compound 1.

PMACBL-3-CDC13-C13.15.fid

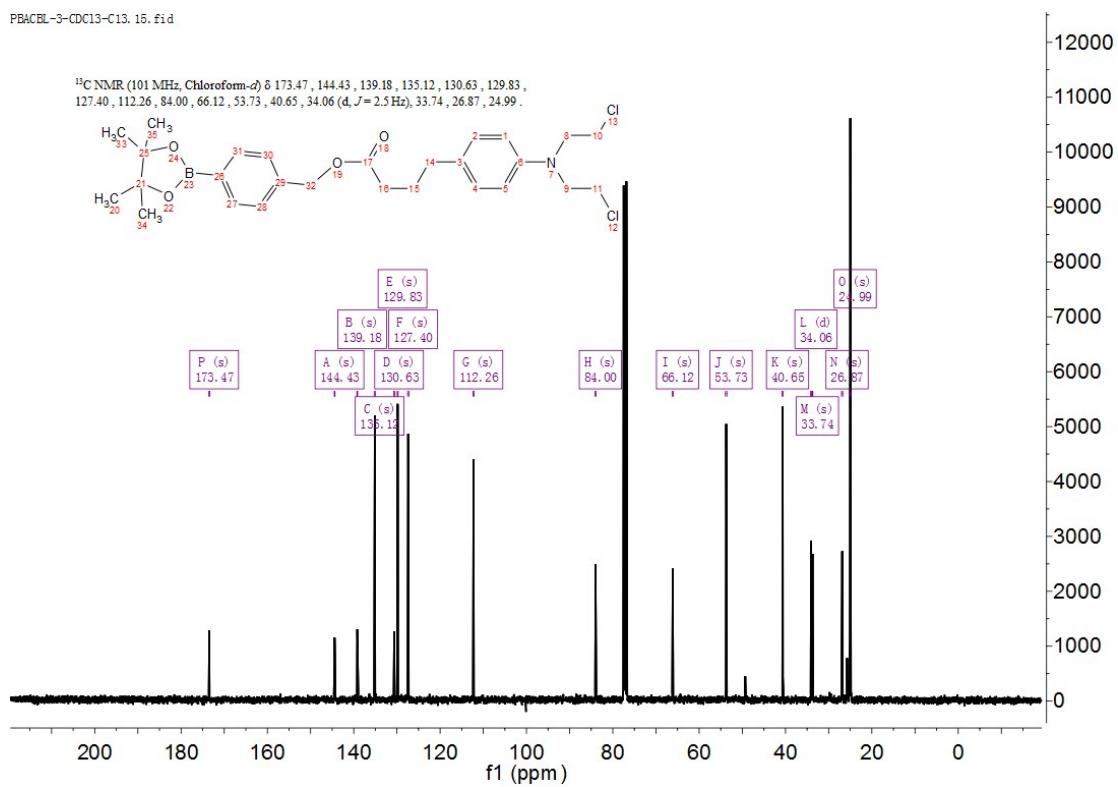


Fig. S6 The characterization of sulfonation zinc phthalocyanine (ZnPc).

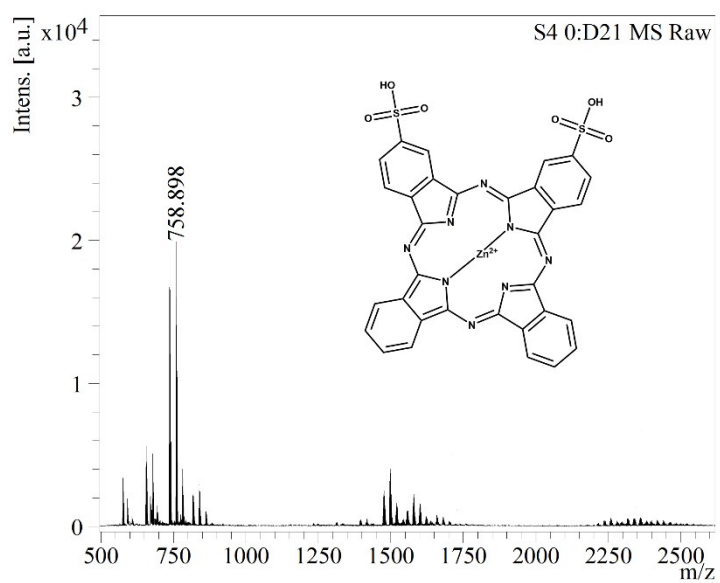
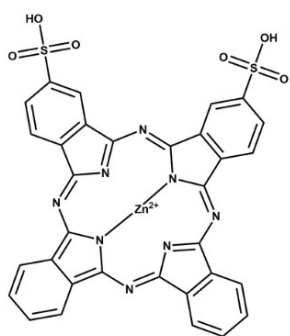


Fig. S7 The stability of mTiO₂-BCBL@ZnPc NPs for different dilution ratios and storage time.

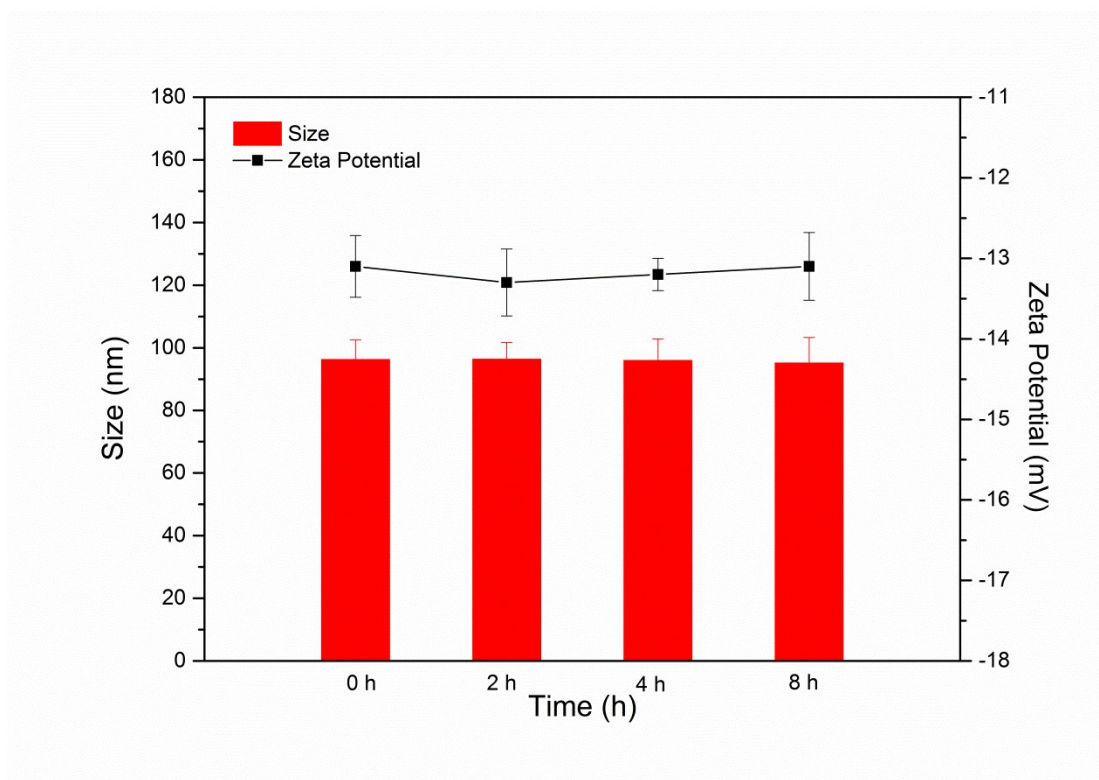
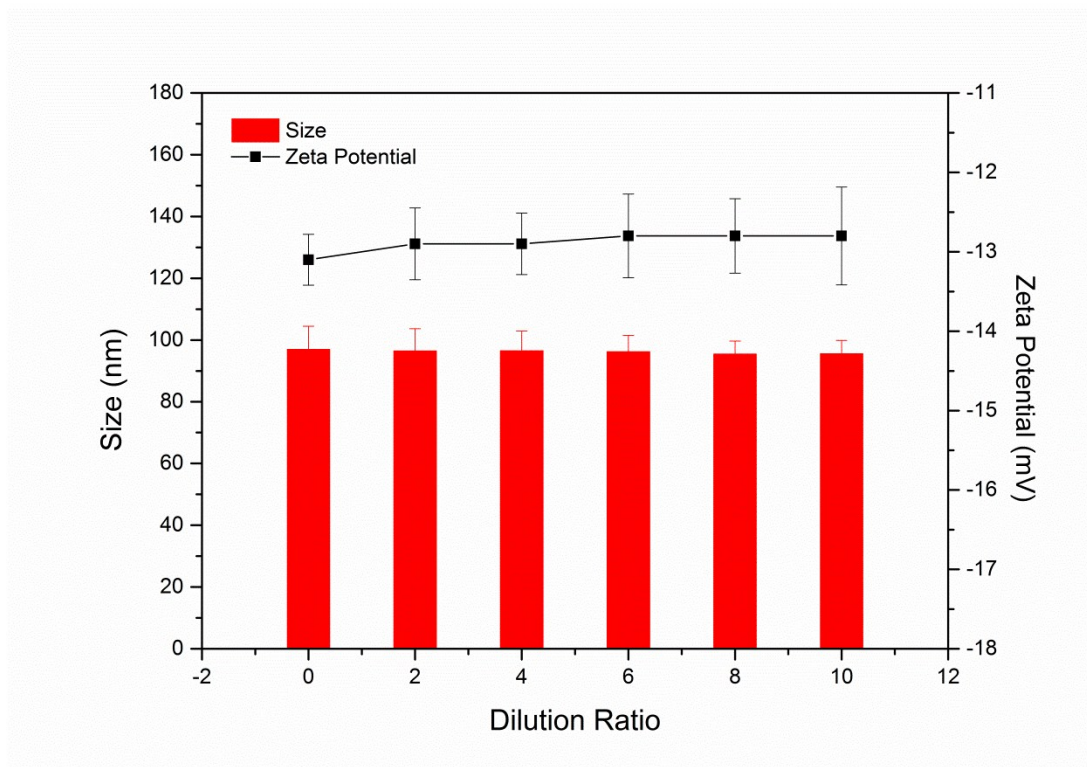


Fig. S8 Determination of H₂O₂ in dark condition for 20min

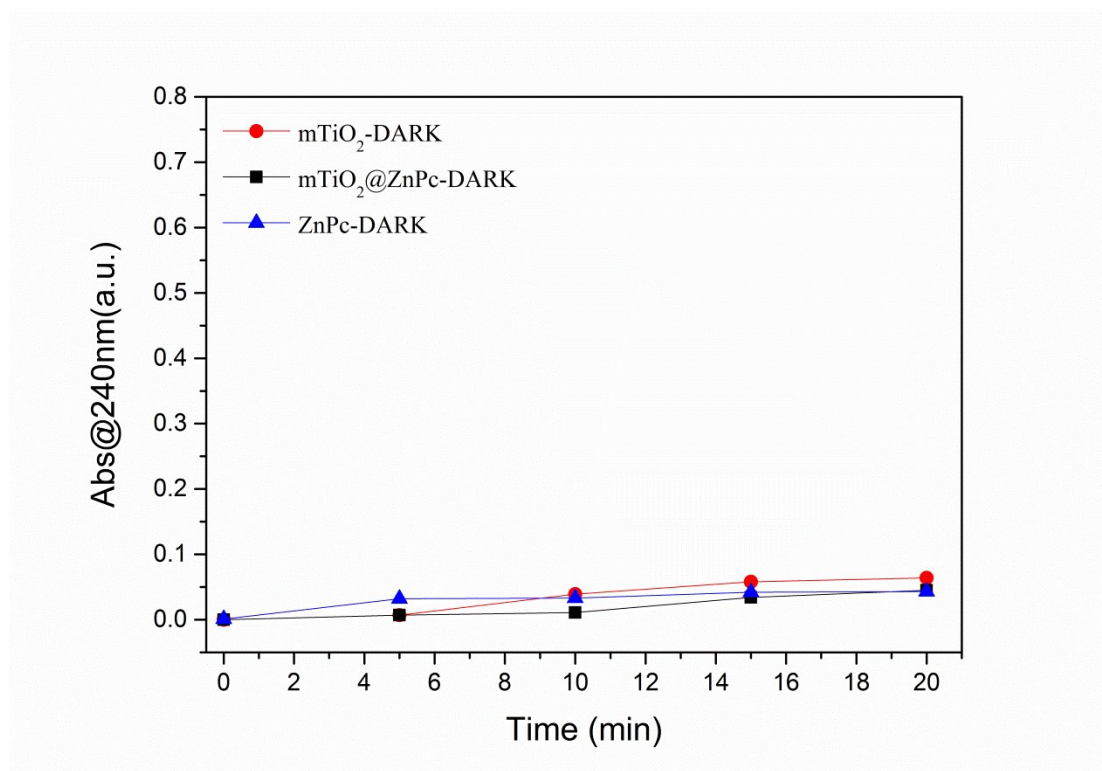


Fig. S9 Determination of DPBF degradation percentage under dark condition for 60 s.

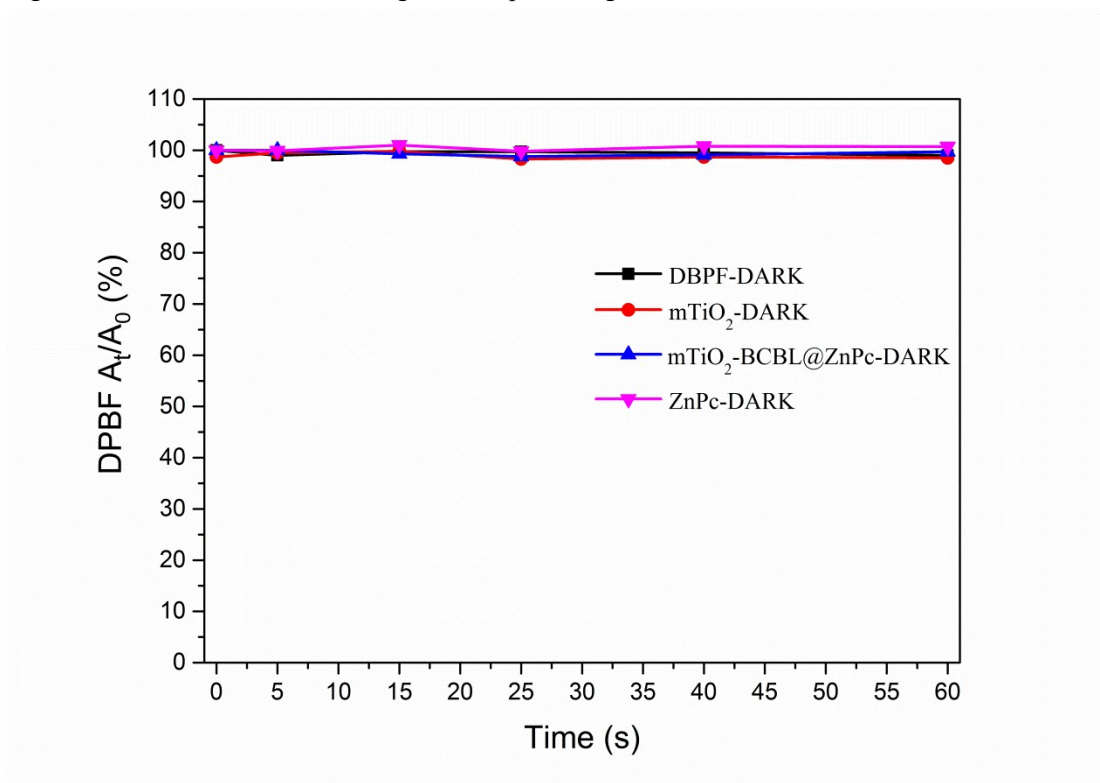


Fig. S10 Determination of MO degradation percentage under dark condition for 20 min.

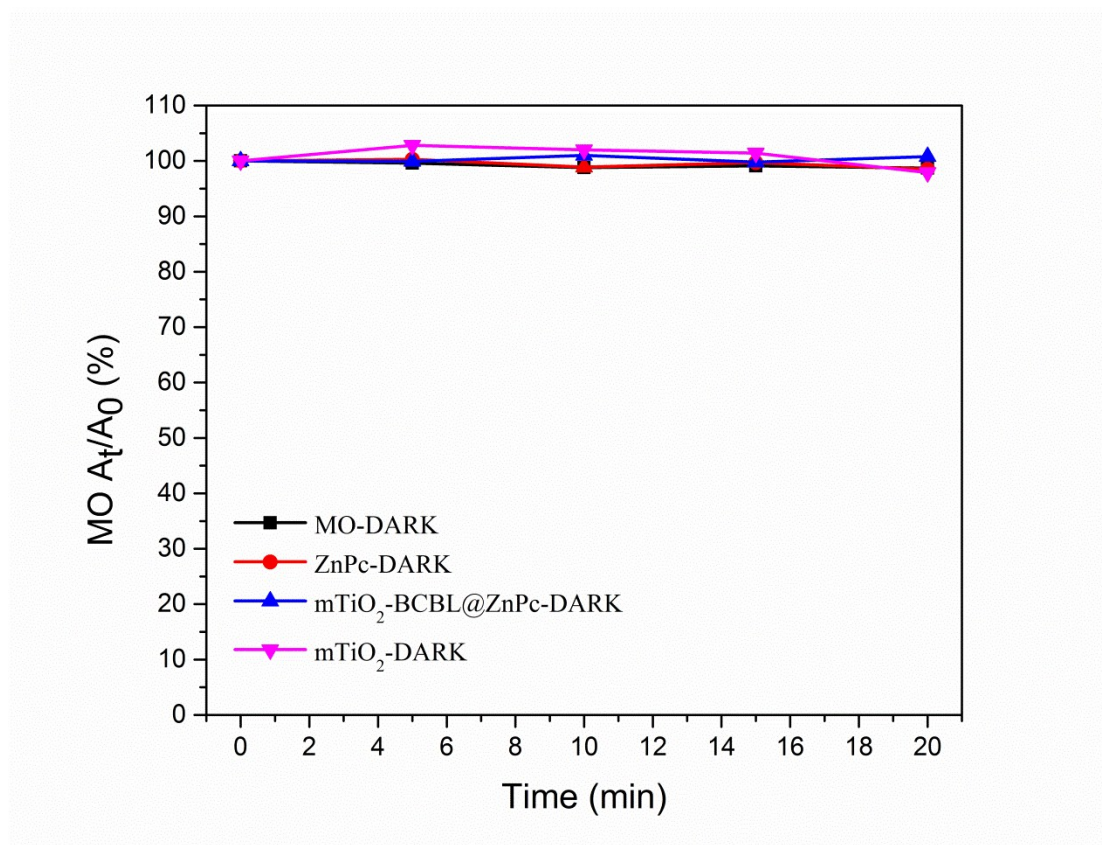


Fig. S11 The uptake of mTiO₂-BCBL@ZnPc NPs characterized by CLSM in 8 h.

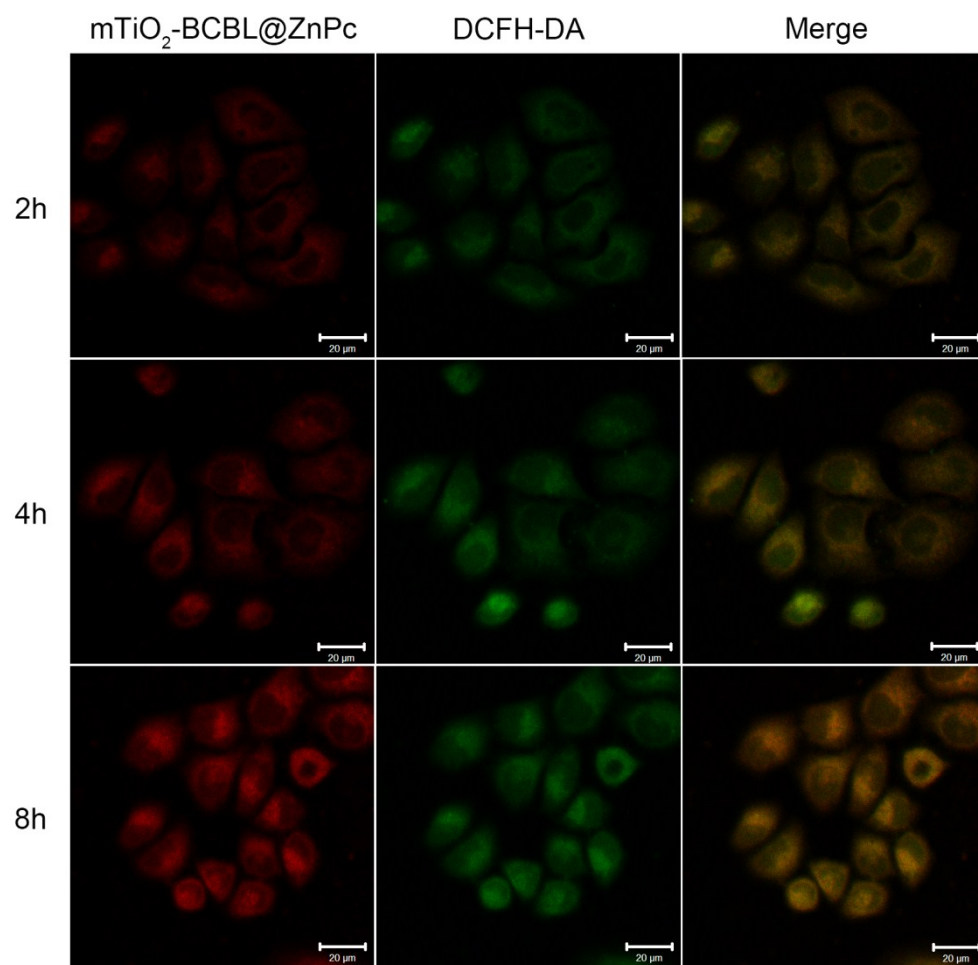


Fig. S12 Generation of ROS in MCF-7 cells treated with mTiO₂-BCBL@ZnPc under different irradiation time were qualitative analysis by CLSM FCM

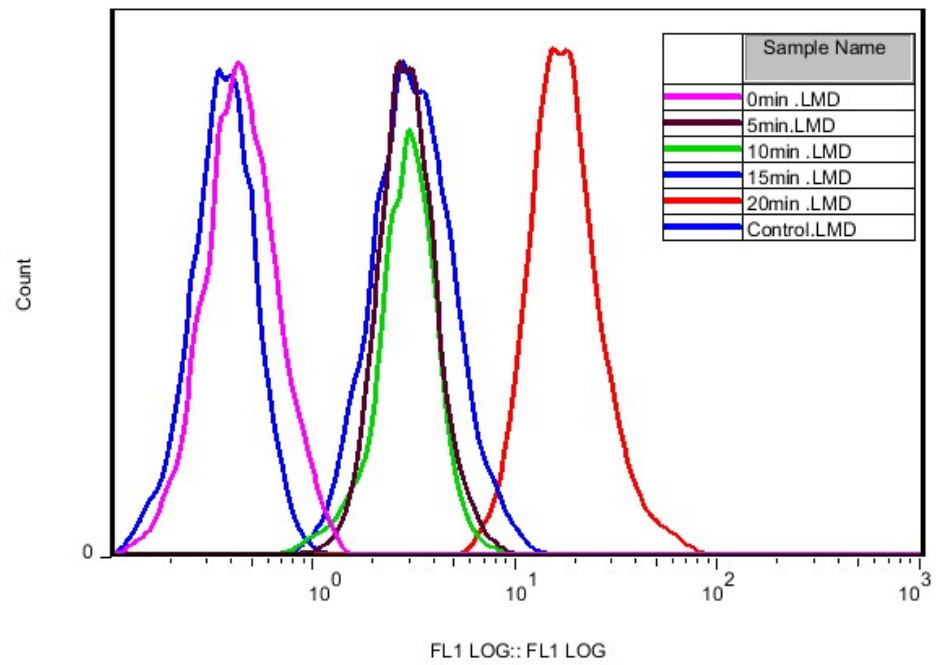


Fig. S13 The cytotoxicity of mTiO₂-BCBL@ZnPc NPs in dark condition.

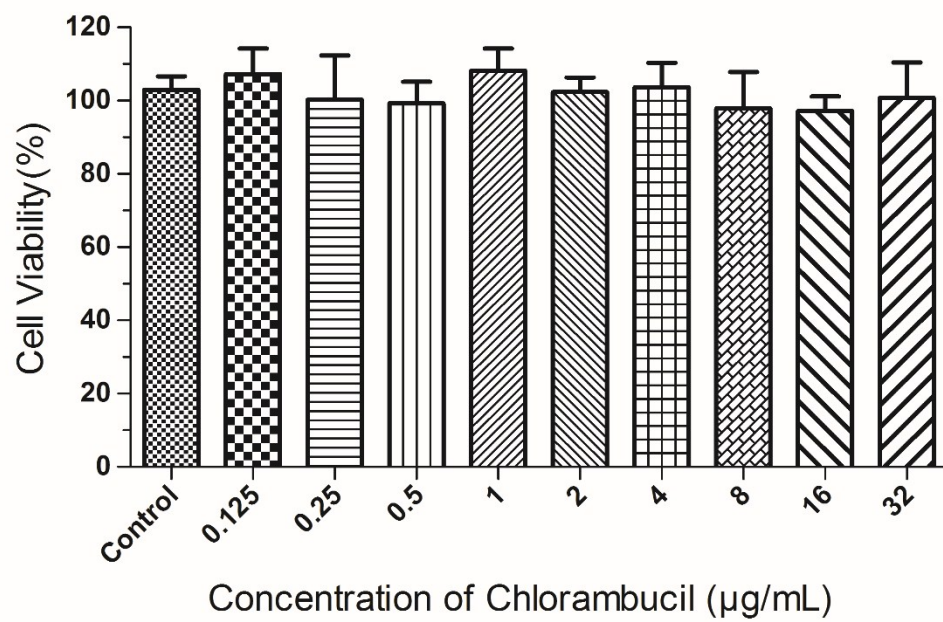


Fig.S14 The effect on Sprague–Dawley rats' RBCs with Different concentration of mTiO₂-BCBL@ZnPc NPs.

