

Electronic Supplementary Information

**Formation of Hollow Porous TiO₂ Nanospheres via
Encapsulation of CO₂ Nanobubbles for High-Performance
of Adsorption and Photocatalysis**

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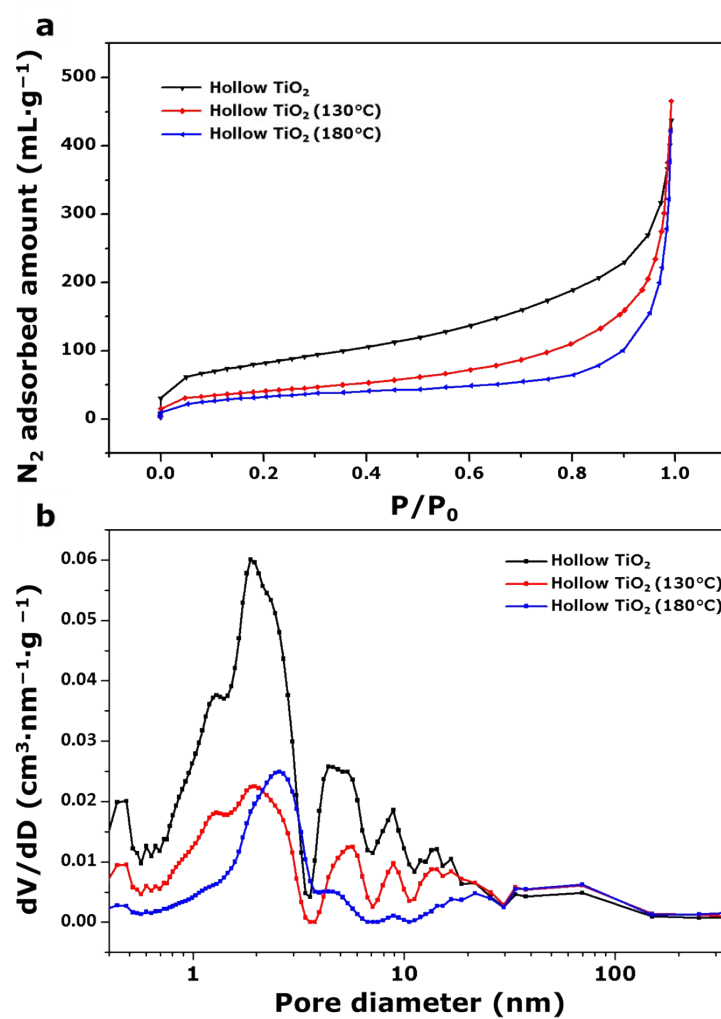


Fig. S1. (a) Nitrogen adsorption isotherms and pore size distribution of hollow porous TiO_2 nanospheres prepared at 90°C and additional hydrothermally treated sample at 130°C and 180°C .

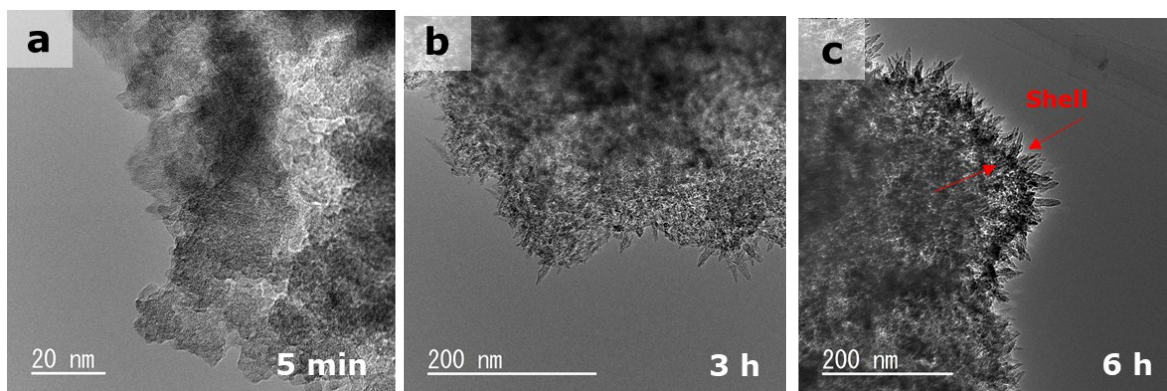


Fig. S2. TEM images of TiO_2 samples obtained according to the reaction time by mixing $[\text{NH}_4]_2\text{TiF}_6$ and NaHCO_3 solution at 90°C .

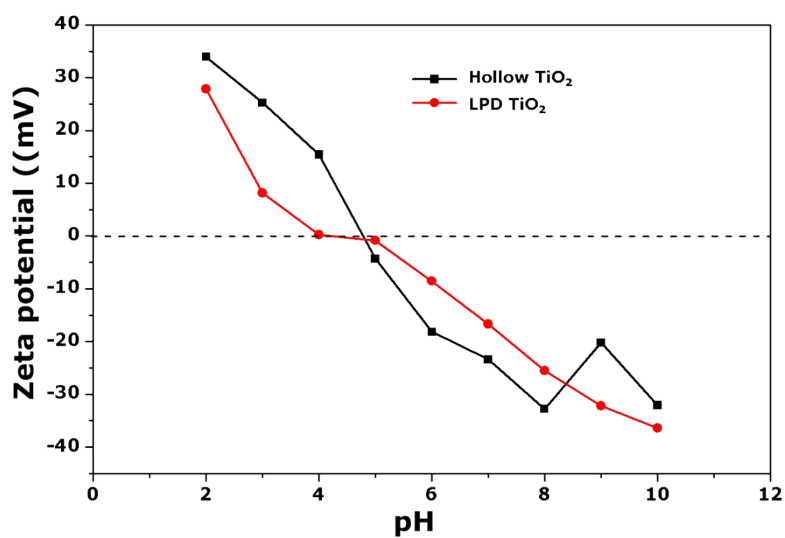


Fig. S3. pH dependence of the zeta potential of hollow porous TiO_2 nanospheres and conventional LPD TiO_2 nanoparticles.

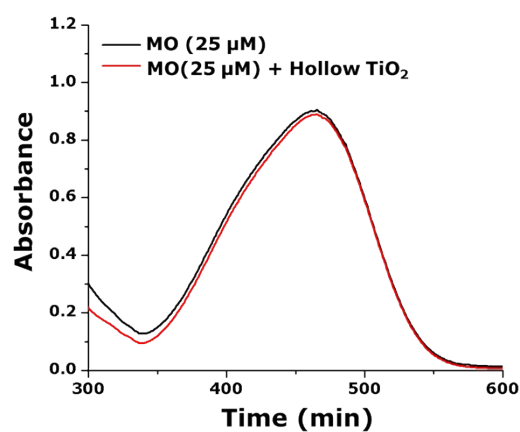


Fig. S4. UV-vis absorption spectra of 25 μM MO solutions in the presence of hollow porous TiO₂ nanospheres.

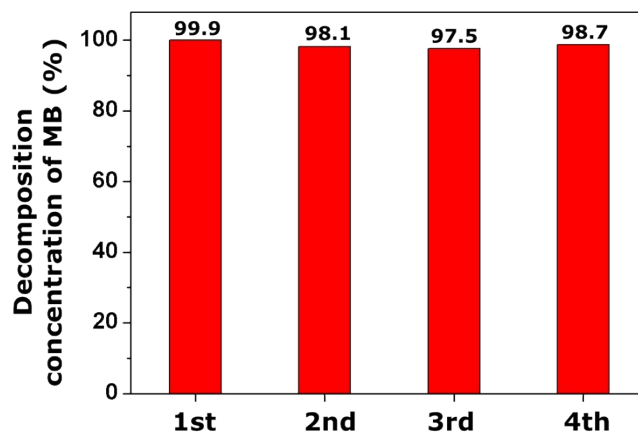


Fig. S5. Photocatalytic degradation of MB with hollow porous TiO₂ treated at 180°C in different recycling time. The reaction were conducted for 60 min.

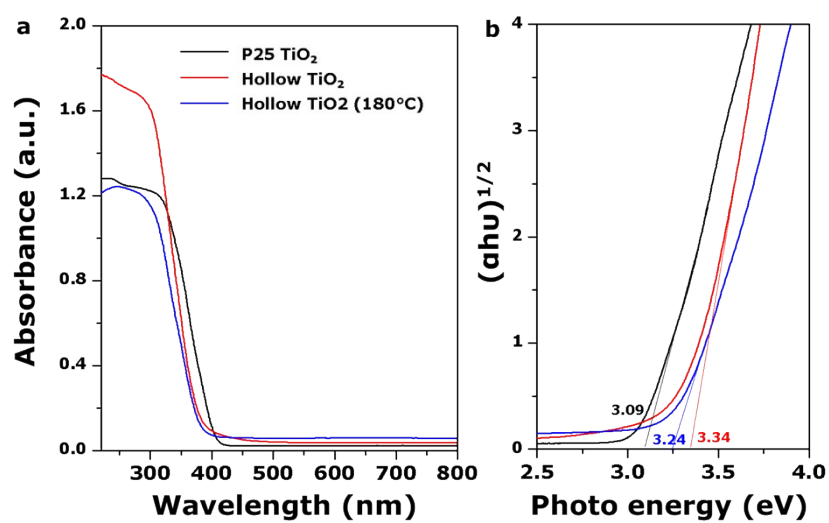


Fig. S6. (a) Comparative UV-visible diffuse absorbance spectra and (b) plots of $(\alpha h\nu)^{1/2}$ vs. the energy of absorbed light of commercial P25 TiO₂ nanoparticles, and pristine and hydrothermally treated (180°C) hollow porous TiO₂ nanospheres