

Supporting Information

Synthesis and characterization of ytterbium doped TiO₂ hollow spheres with enhanced visible-light photocatalytic activity

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1. Reaction device of photocatalytic evaluation

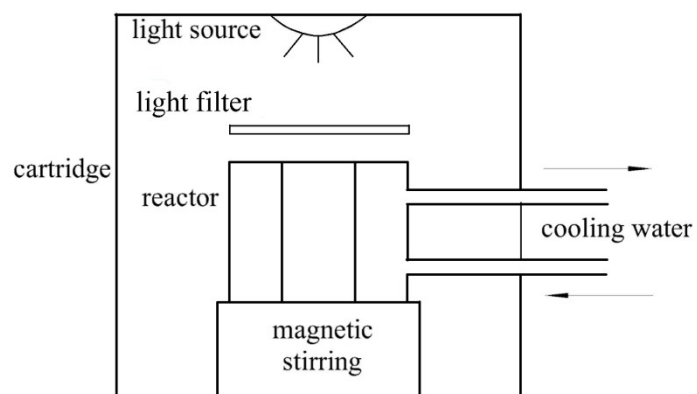


Fig. S1 Reaction device of photocatalytic evaluation

2. (101) diffraction peak of samples

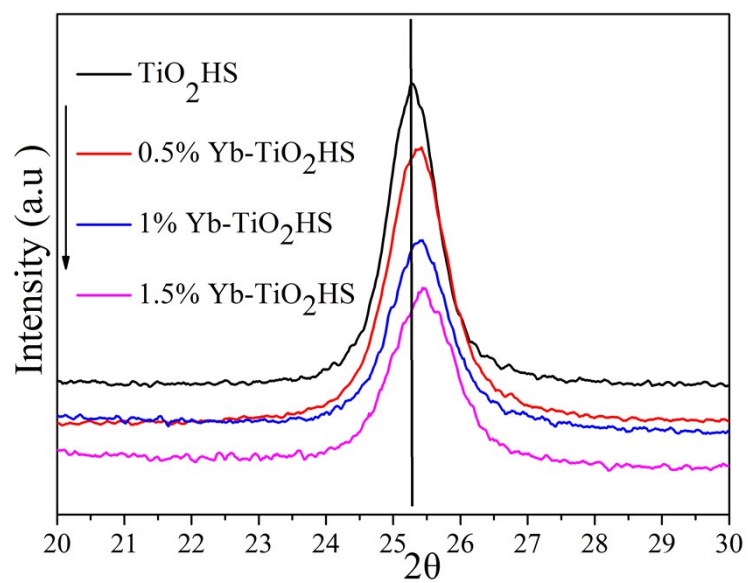


Fig. S2. (101) diffraction peak of each samples

3. Crystalline grain sizes of Yb-TiO₂HS with difference Yb doped ratios

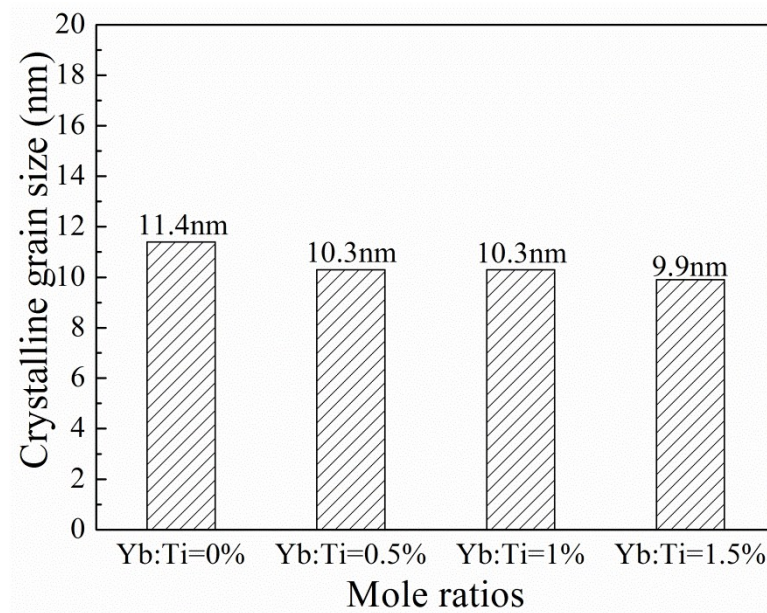


Fig. S3 Crystalline grain sizes of Yb-TiO₂HS with difference Yb doped ratios

4. FT-IR spectra of samples

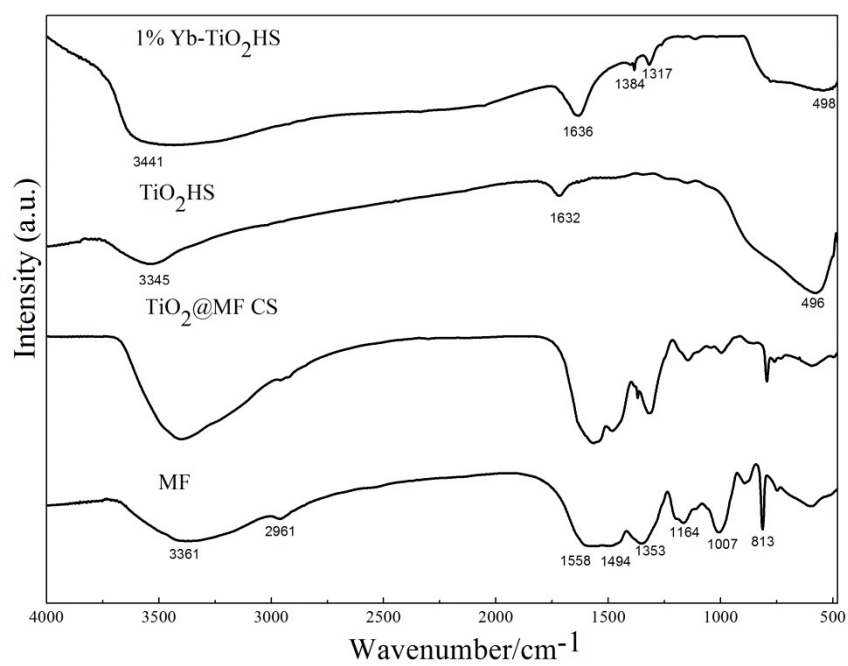


Fig. S4 FT-IR spectra of samples

5. N₂ adsorption–desorption (a, b) and the pore size distribution (c, d) curves of samples

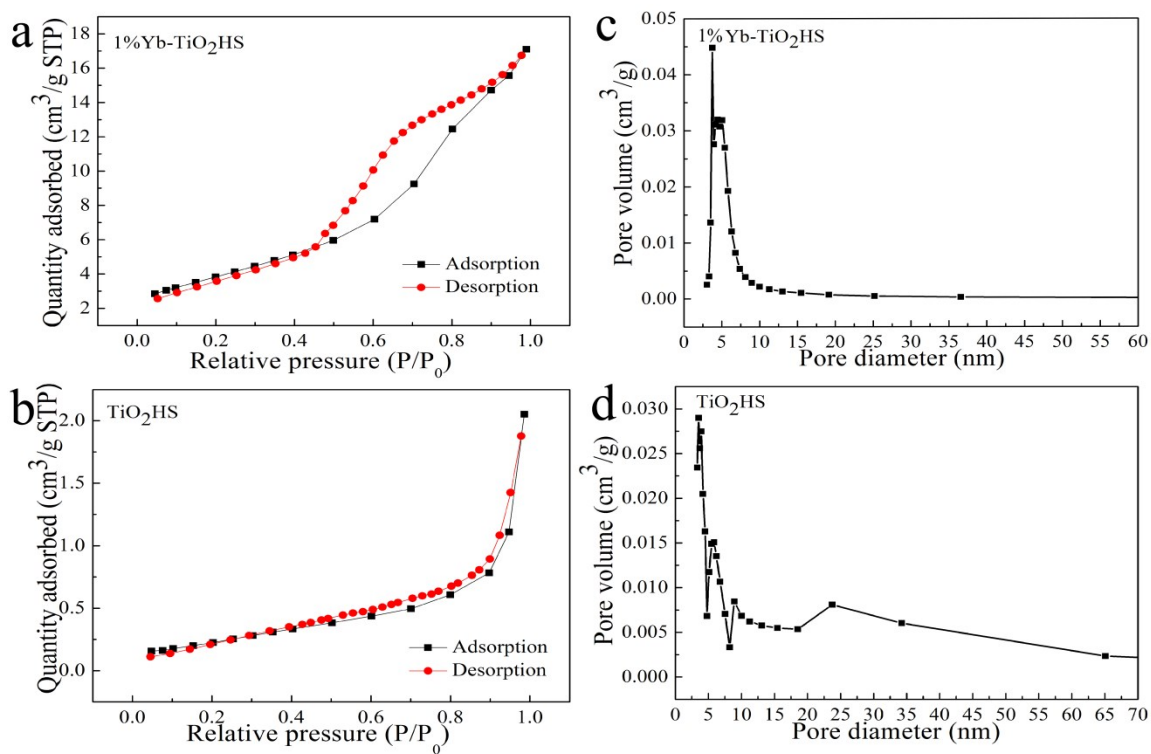


Fig. S5 N₂ adsorption–desorption (a, b) and the pore size distribution (c, d) curves of samples

6. UV-DRS spectra of samples

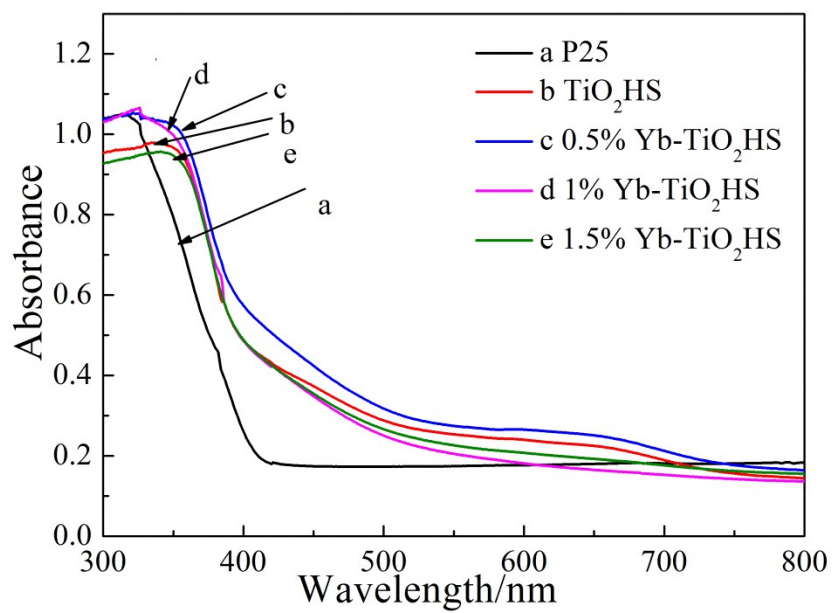


Fig. S6 UV-DRS spectra of samples

7. K-M function transformed spectra of samples

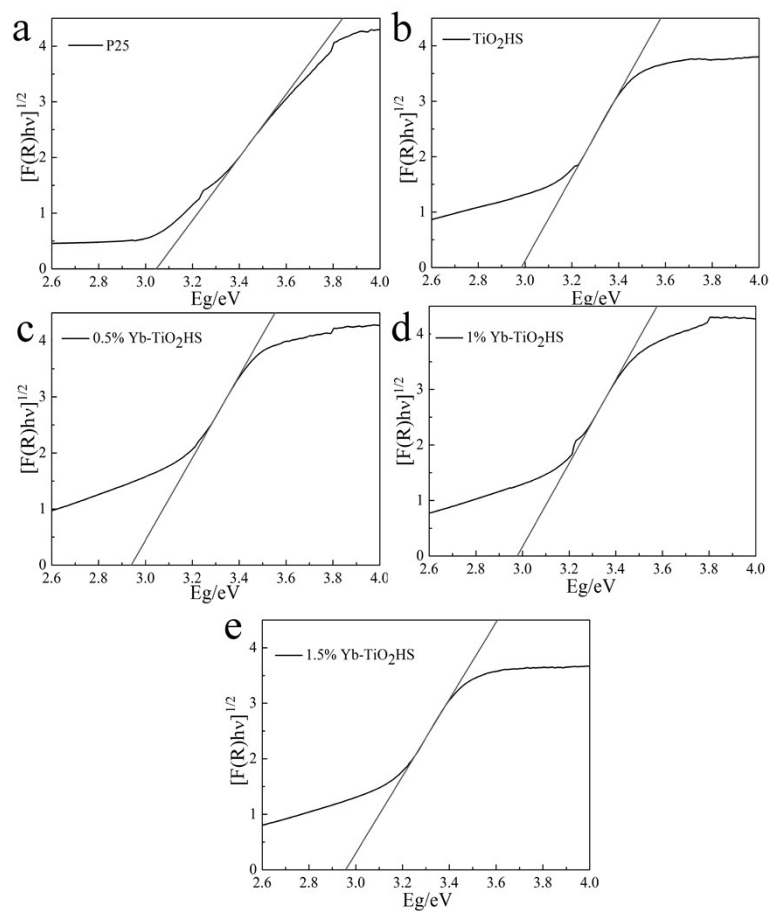


Fig. S7. K-M function transformed spectra of each samples are calculated by Kubelka–Munk

Function (K-M Function) method.

8. Luminescence spectra of samples

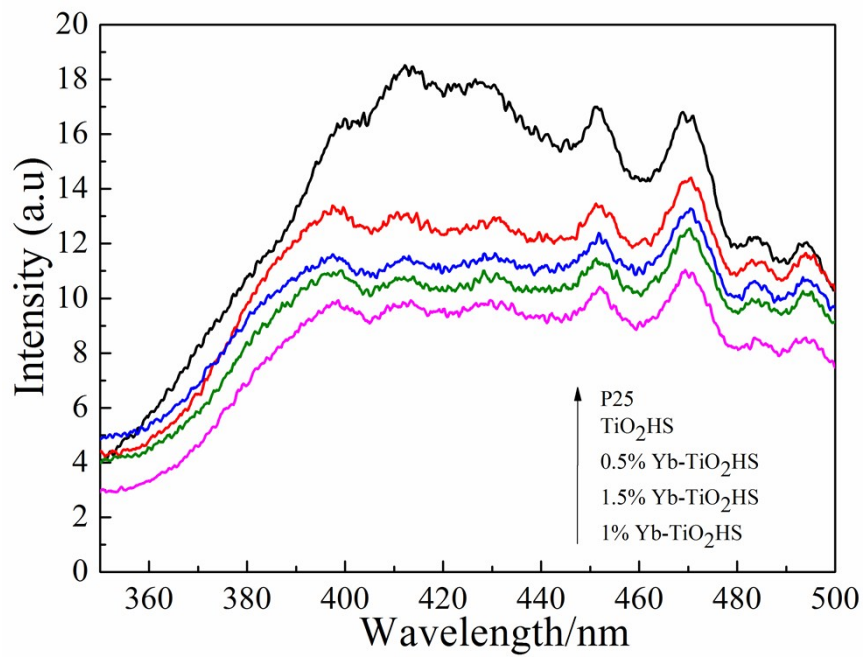


Fig. S8 Luminescence spectra of samples

9. Cycles of the photocatalytic activity of MO in the presence of 1%Yb-TiO₂HS

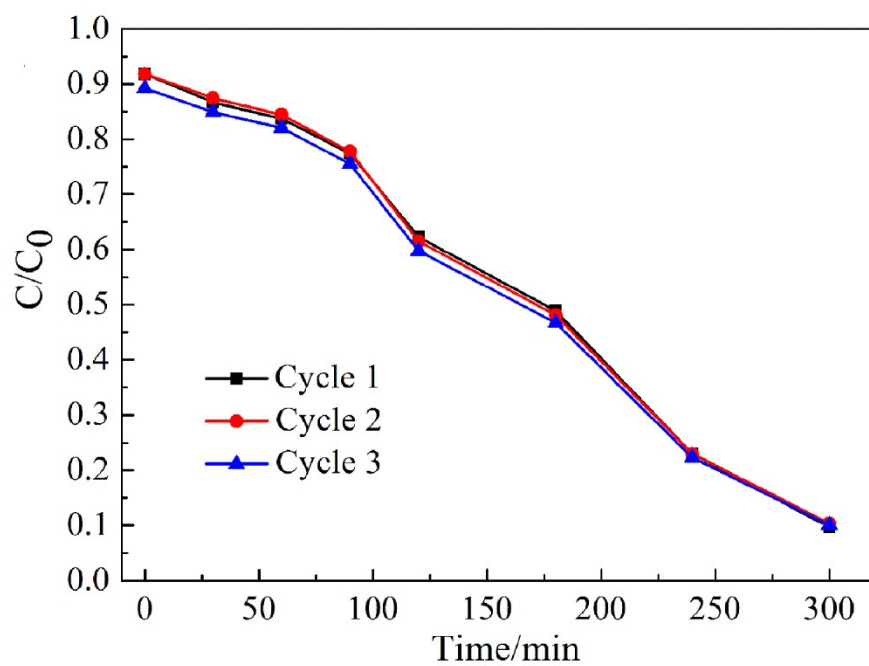


Fig. S9 Cycles of the photocatalytic activity of MO in the presence of 1%Yb-TiO₂HS