

**BiOBr/Bi₂MoO₆ Composite in Flower-Like Microspheres with
Enhanced Photocatalytic Activity under Visible Light Irradiation**

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Supporting Information

Figure captions

Fig. S1 EDX pattern of 0.20-BiOBr/Bi₂MoO₆.

Fig. S2 FTIR spectra of X-BiOBr/Bi₂MoO₆, BiOBr, and Bi₂MoO₆.

Fig. S3 The element profiles of 0.20-BiOBr/Bi₂MoO₆.

Fig. S4 TGA patterns of 0.20-BiOBr/Bi₂MoO₆, BiOBr, and Bi₂MoO₆.

Fig. S5 N₂ adsorption/desorption isotherms of BiOBr, 0.20-BiOBr/Bi₂MoO₆ and Bi₂MoO₆.

Fig. S6 UV-vis DRS spectra of 0.20-BiOBr/Bi₂MoO₆, BiOBr, and Bi₂MoO₆.

Fig. S7 (a) Photocurrent responses of different samples. Reaction conditions: 0.10 M Na₂SO₄ aqueous solution with an exposed surface area of 2.0 cm², 300 W Xe lamp ($\lambda > 420$ nm), (b) PL spectra of X-BiOBr/Bi₂MoO₆, BiOBr + Bi₂MoO₆, BiOBr and Bi₂MoO₆.

Fig. S8 Typical Mott-Schottky plots of BiOBr and Bi₂MoO₆. Reaction conditions: 0.10 M Na₂SO₄ aqueous solution with an exposed surface area of 2.0 cm², 1000 Hz, an ac amplitude of 5.0 mV at each potential.

Fig. S9 FESEM images of 0.20-BiOBr/Bi₂MoO₆(G).

Fig. S10 Plots of $(C_0 - C)/C$ vs reaction time during visible light induced photocatalytic degradation of RhB on different catalysts. Reaction conditions are given in Figure 5a.

Fig. S11 The photocatalytic degradation of MO (a) and phenol (b) on the different samples under visible light irradiation. Reaction conditions: 100 mL 10 mg·L⁻¹ MO or phenol aqueous solution, 0.10 g catalyst, 300 W Xe lamp ($\lambda > 420$ nm), T = 30 °C.

Fig. S12 The photocatalytic degradation of RhB (a) and plots of $(C_0 - C)/C_0$ vs reaction time (b) under visible light on X-BiOBr/Bi₂MoO₆ and Bi₂MoO₆. Reaction conditions are given in Fig. 5(a).

Fig. S13 OH-trapping PL spectra of suspensions in 0.20-BiOBr/Bi₂MoO₆ (a), BiOBr (b), and Bi₂MoO₆ (c) under visible light irradiation. Reaction conditions: 100 mL 0.83 g·L⁻¹ terephthalic acid solution, 0.10 g catalyst, 300 W Xe lamp ($\lambda > 420$ nm), T = 30 °C.

Fig. S14 HPLC-MS chromatograms (a) and relative contents of RhB and intermediates vs reaction time (b) during the visible-light-induced RhB photocatalytic degradation on 0.20-BiOBr/Bi₂MoO₆. Reaction conditions are given in Fig. 5(a).

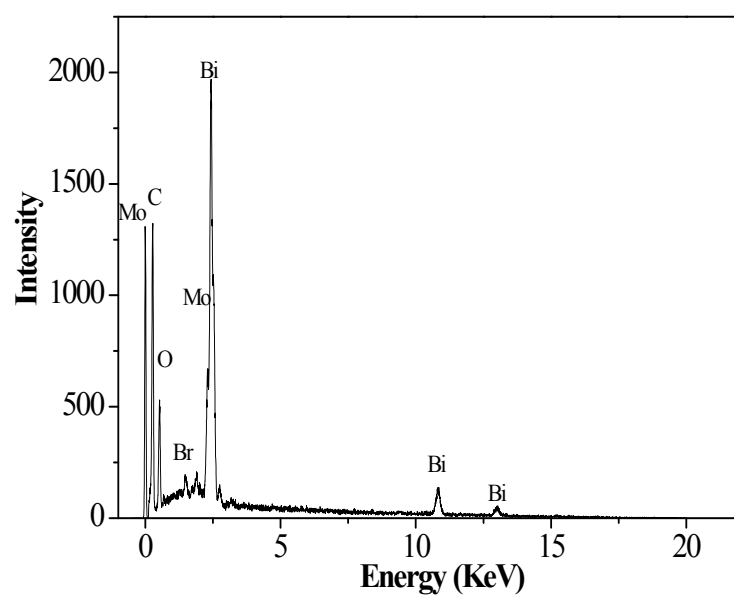


Fig. S1

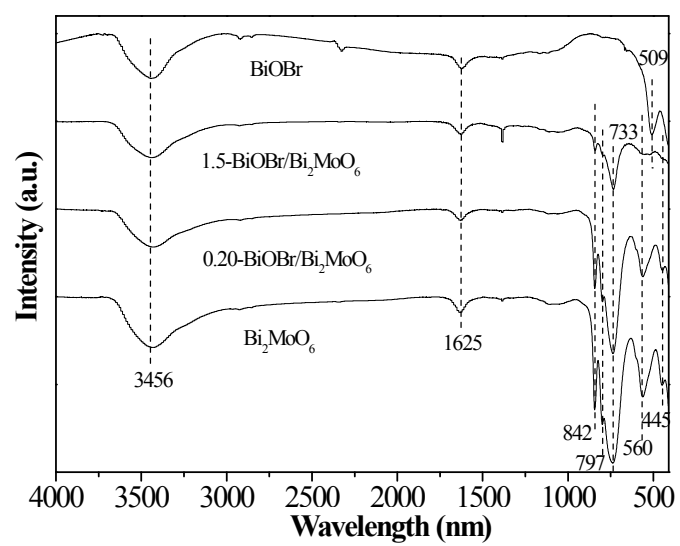


Fig. S2

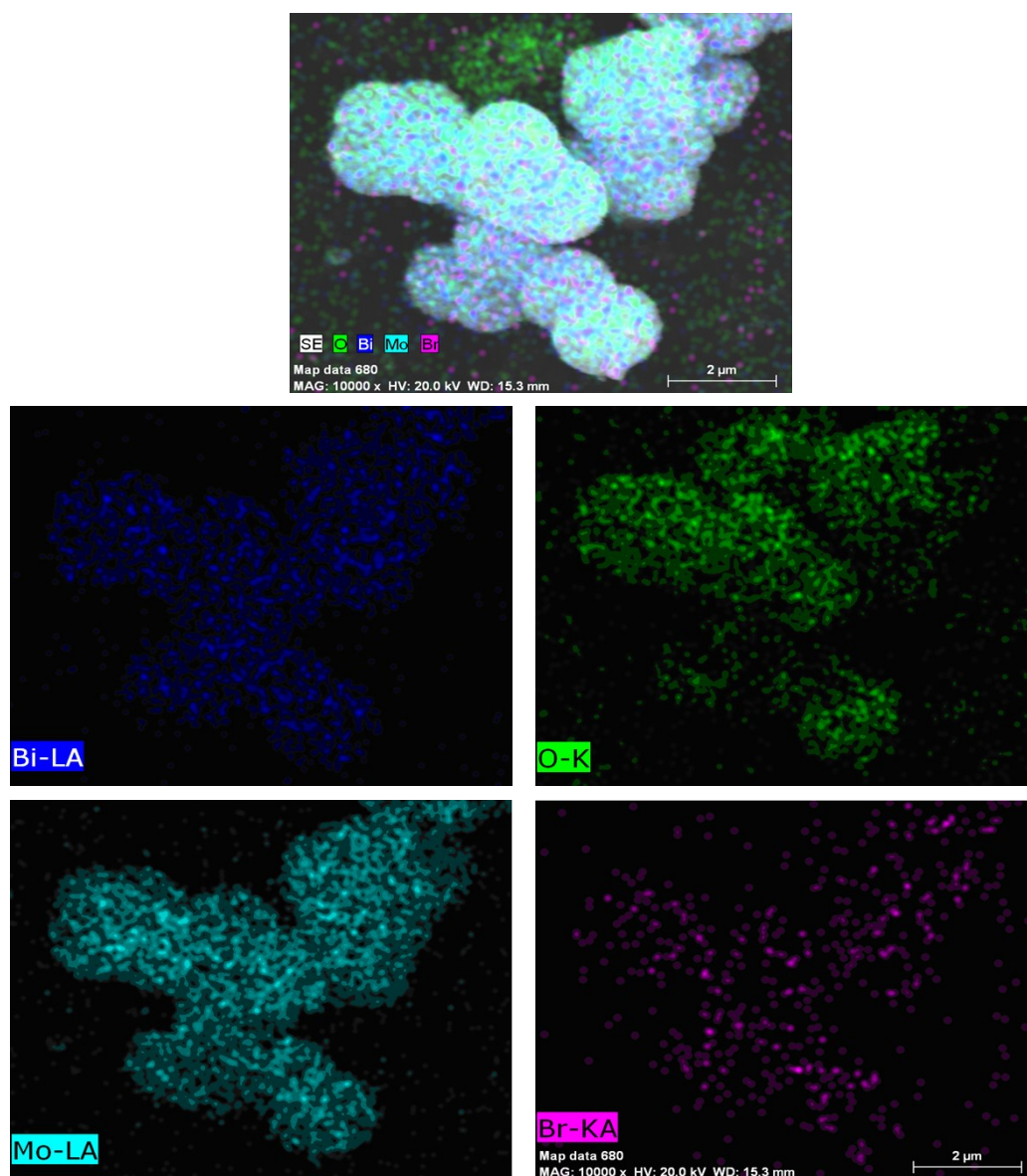


Fig. S3

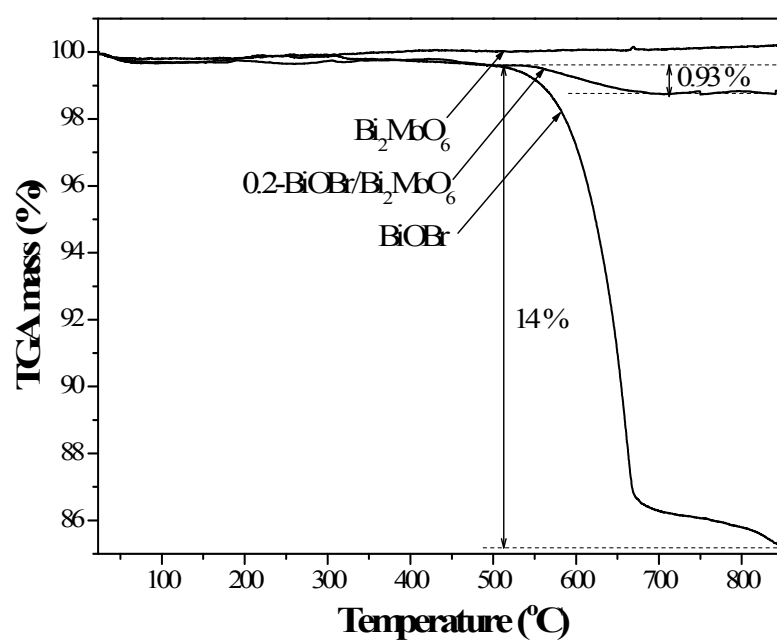


Fig. S4

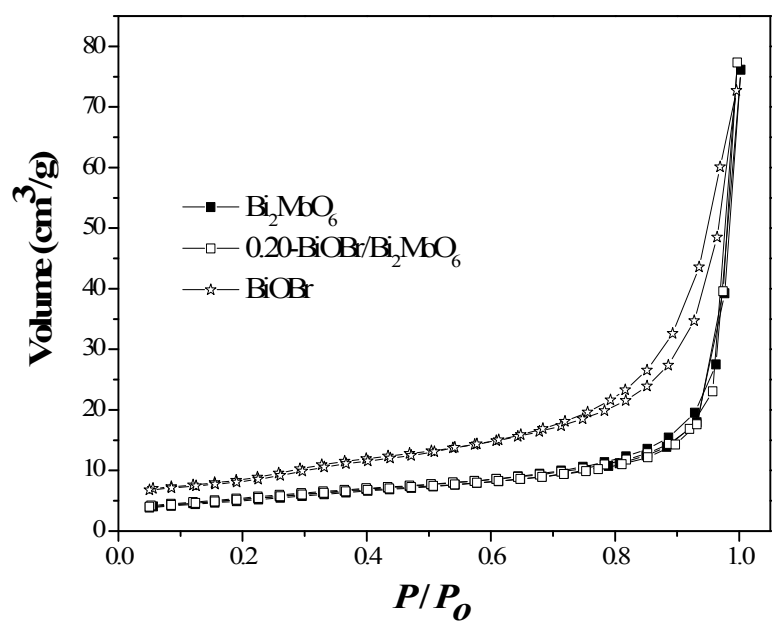


Fig. S5

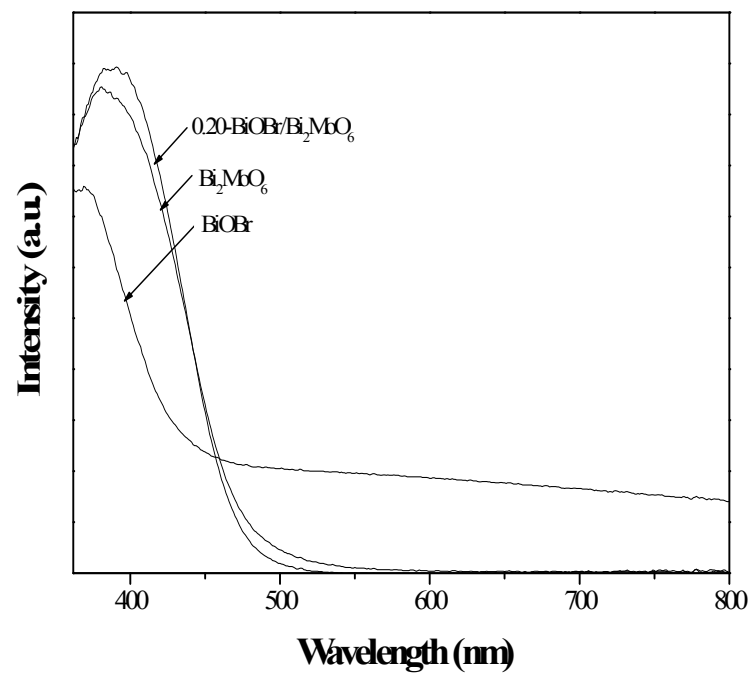


Fig. S6

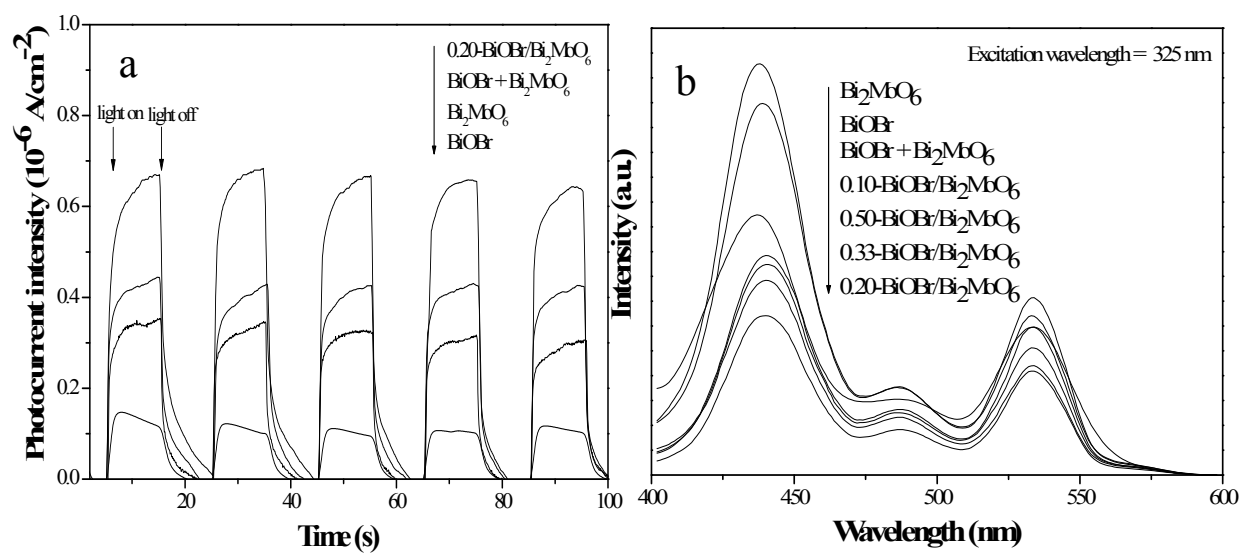


Fig. S7

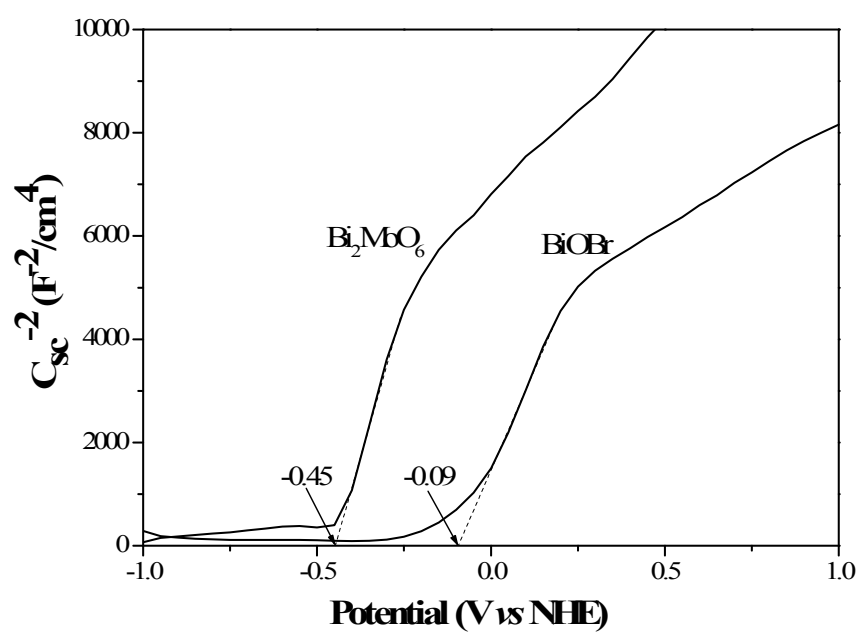


Fig. S8

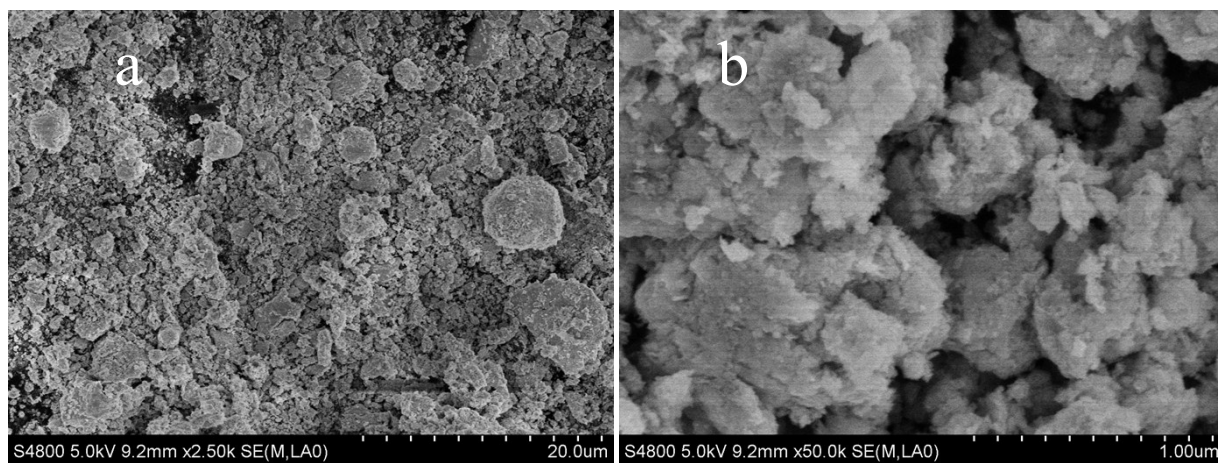


Fig. S9

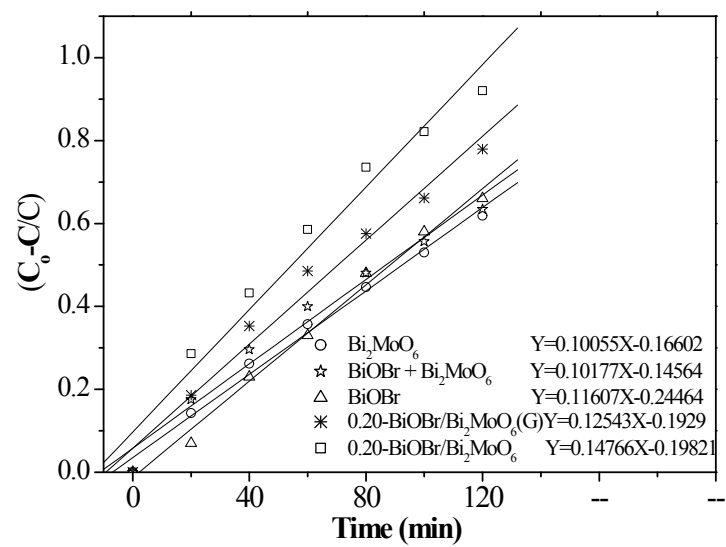


Fig. S10

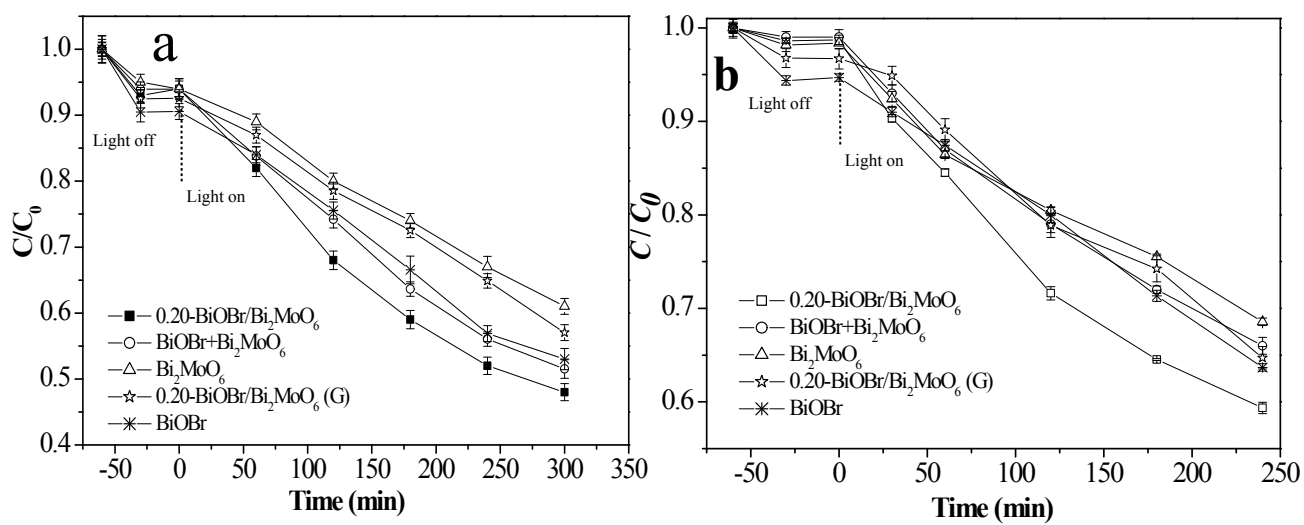


Fig. S11

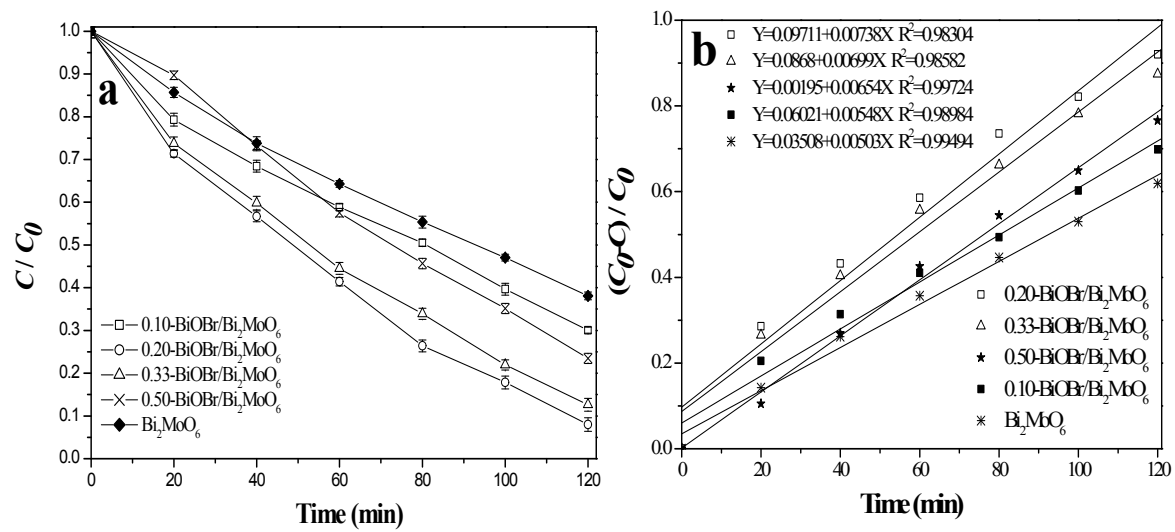


Fig. S12

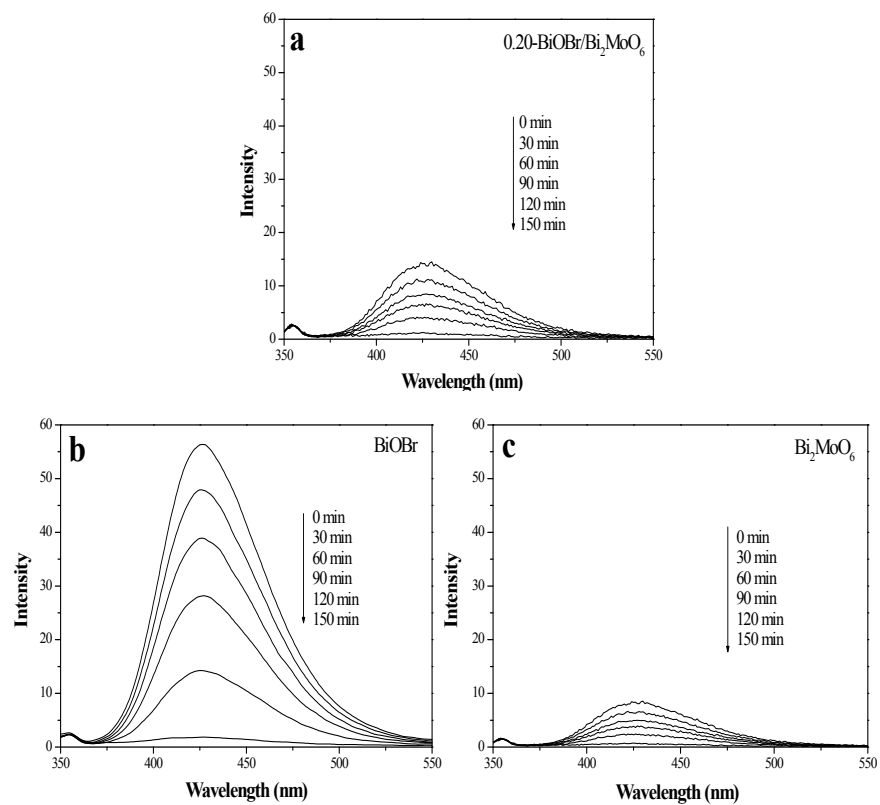


Fig. S13

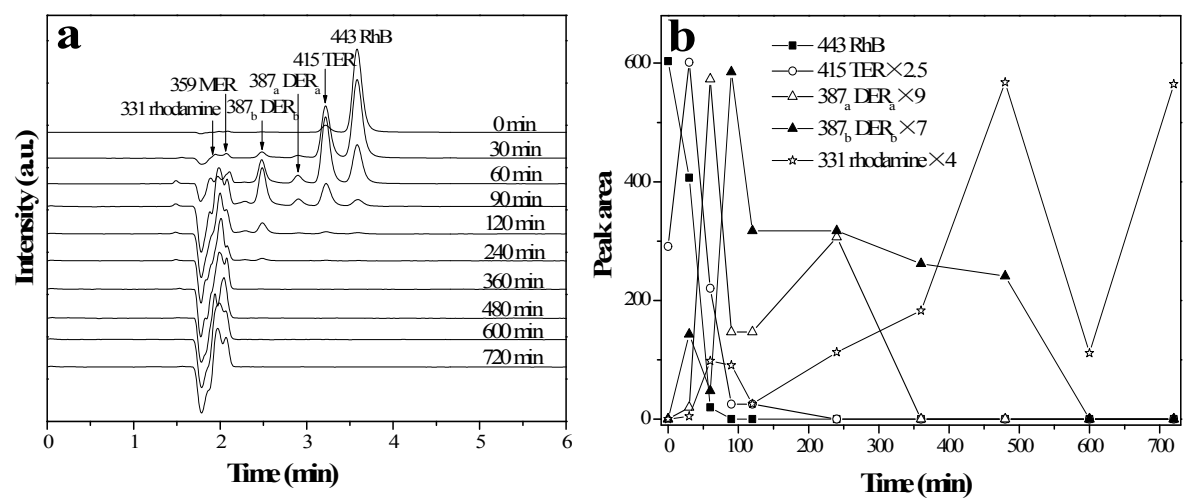


Fig. S14