

## Supplementary data

### Highly Exposed Surface Area of {001} Facets Dominated BiOBr Nanosheets with Enhanced Visible Light Photocatalytic Activity

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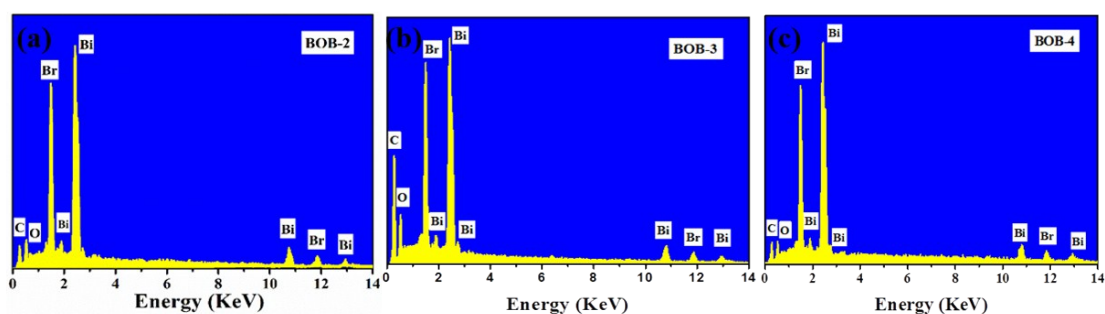


Fig. S1 The energy dispersive X-ray (EDX) spectroscopies of BOB-2, BOB-3 and BOB-4 samples

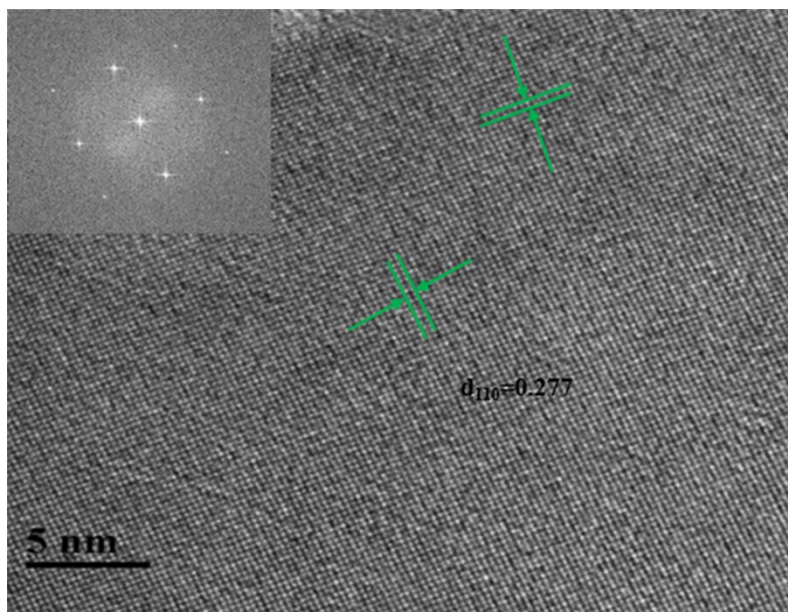


Fig. S2 HRTEM image and the corresponding fast Fourier transform pattern (FFT) of BOB-4 sample

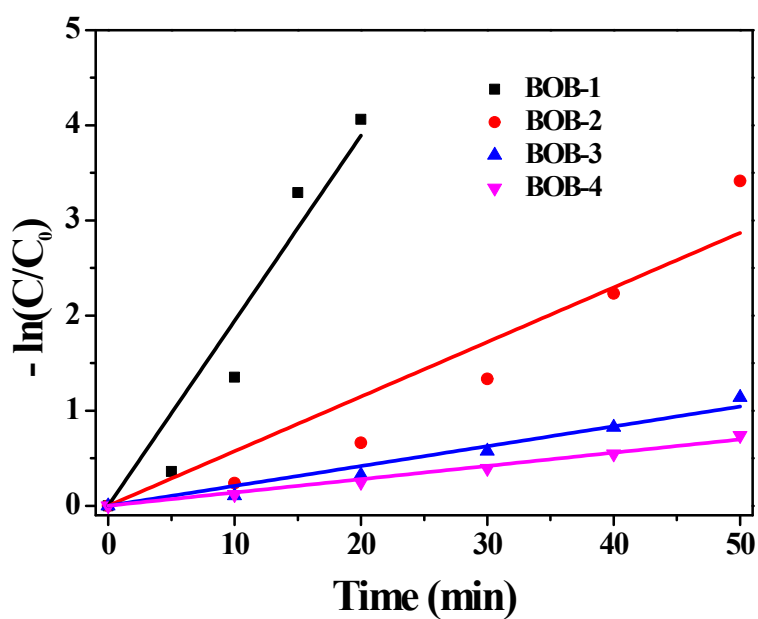


Fig. S3 Photodegradation of RhB over BiOBr samples with the pseudo-first order model.

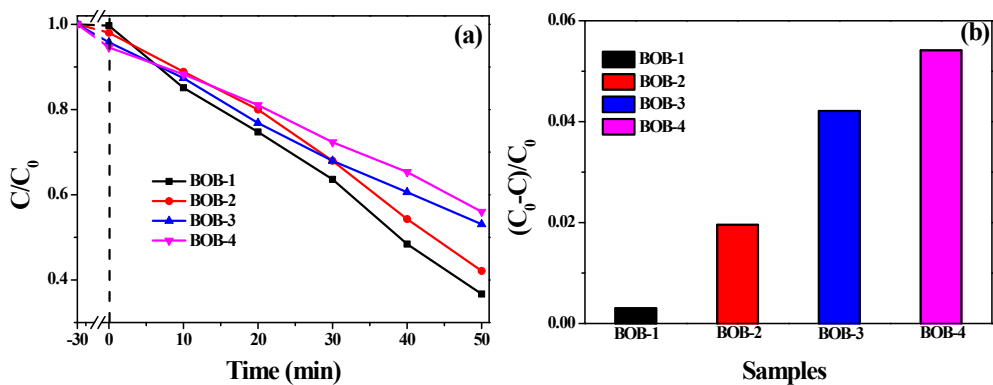


Fig. S4 (a) Photocatalytic degradation of MO (10 mg/L) solution over BOB-1, BOB-2, BOB-3, and BOB-4 samples under visible light irradiation, and (b) Adsorption capacity of MO on different BiOBr samples.

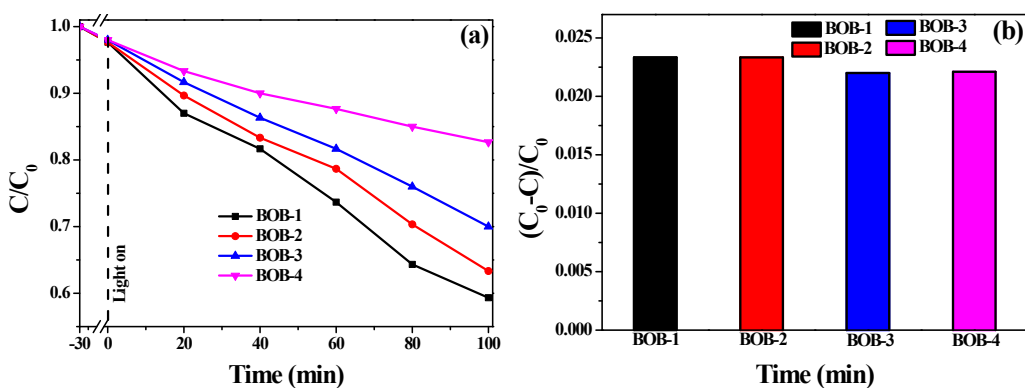
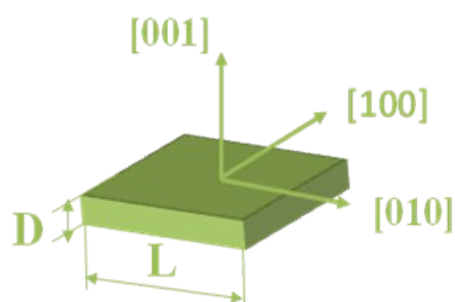


Fig. S5 (a) Photocatalytic degradation of phenol (10 mg/L) over BOB-1, BOB-2, BOB-3, and BOB-4 samples under visible light irradiation, and (b) Adsorption capacity of phenol on different BiOBr samples.



Scheme S1 Schematic illustration of BiOBr nanosheets.

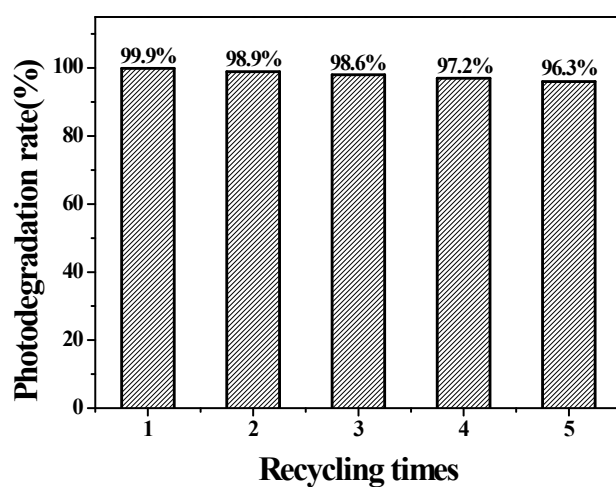


Fig. S6 Cycling runs of photocatalytic degradation of Rh B by BOB-4 sample.

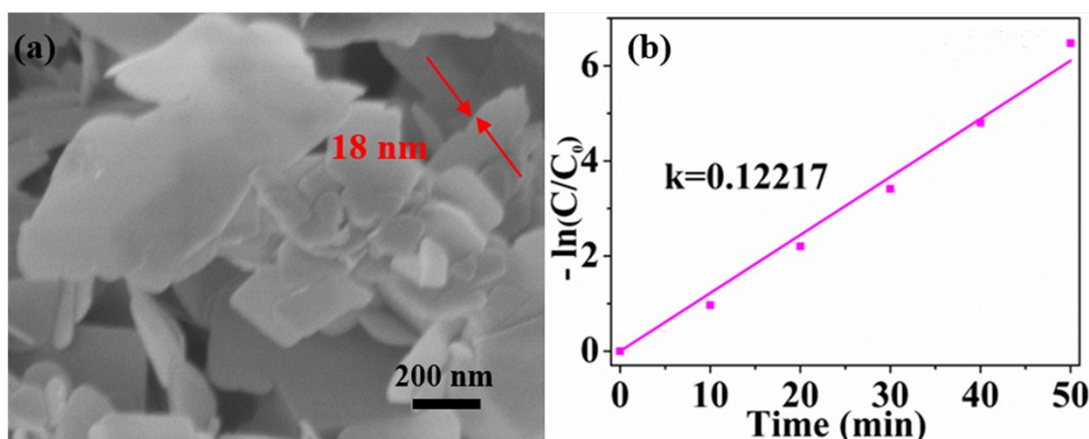


Fig. S7 The thickness of BOB-7 sample estimated from SEM image and the pseudo-first-order rate constant  $k$ .

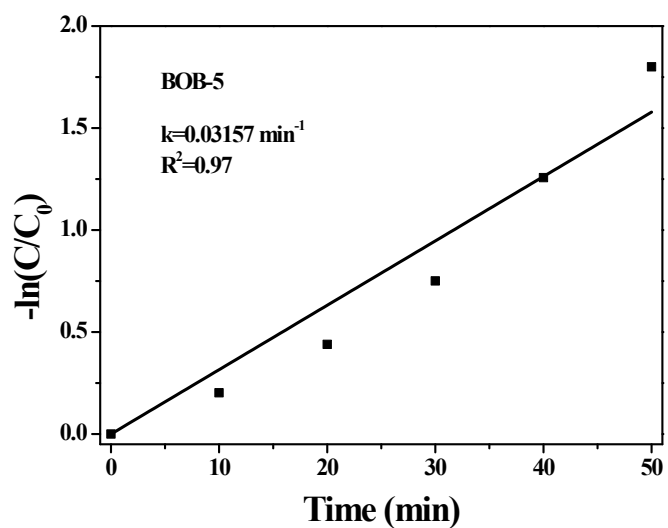


Fig. S8 Photodegradation of RhB over BOB-5 sample with the pseudo-first order model fitting result

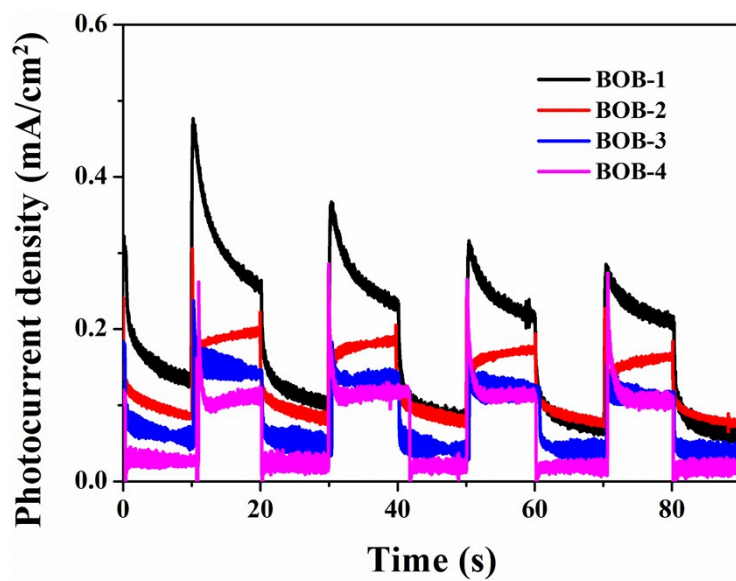


Fig. S9 Photocurrent responses of the BiOBr samples