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## **Electronic Supplementary material**

## Morphological evolution of hierarchical Bi<sub>2</sub>Se<sub>3</sub>/BiOBr nanostructures and enhanced activity for p-nitrophenol reduction by NaBH<sub>4</sub>

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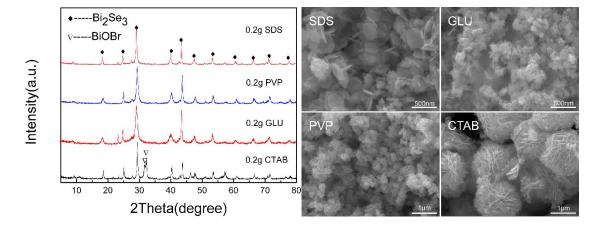


Figure.S1 XRD patterns and SEM images of different additives

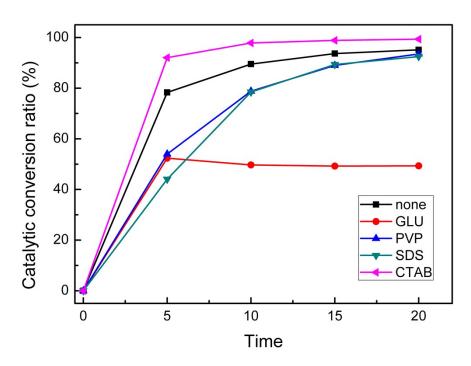


Figure.S2 catalytic performance of different additives

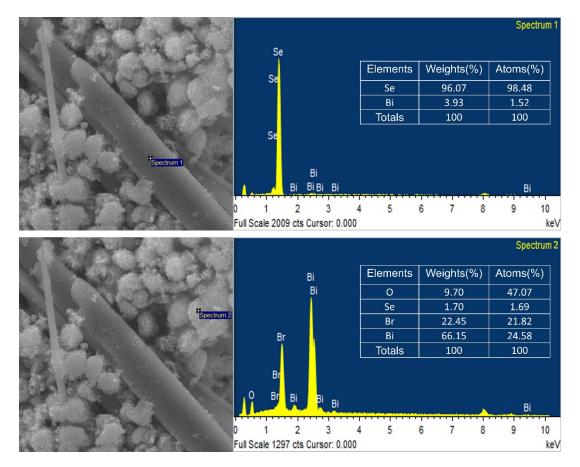


Figure.S3 SEM and EDS spectra of the products obtained at 0.5 h

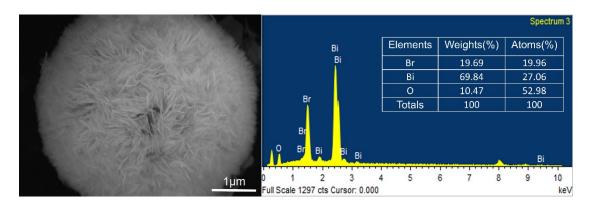


Figure.S4 SEM and EDS of BiOBr

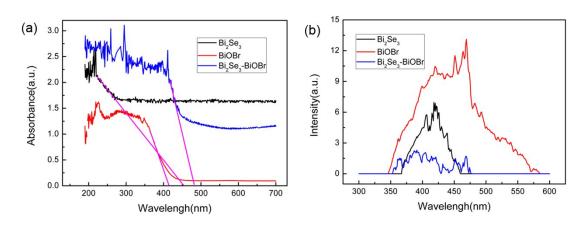


Figure.S5 (a) UV-vis DRS spectra of three samples; (b) PL spectra of three samples with an excitation wavelength of 325 nm.