

Fig. S1 The XRD patterns of the obtained samples with different reaction temperature (120, 140, 160 and 180 °C) and standard card of $\text{Bi}_2\text{O}_2\text{CO}_3$ and BiOCl .

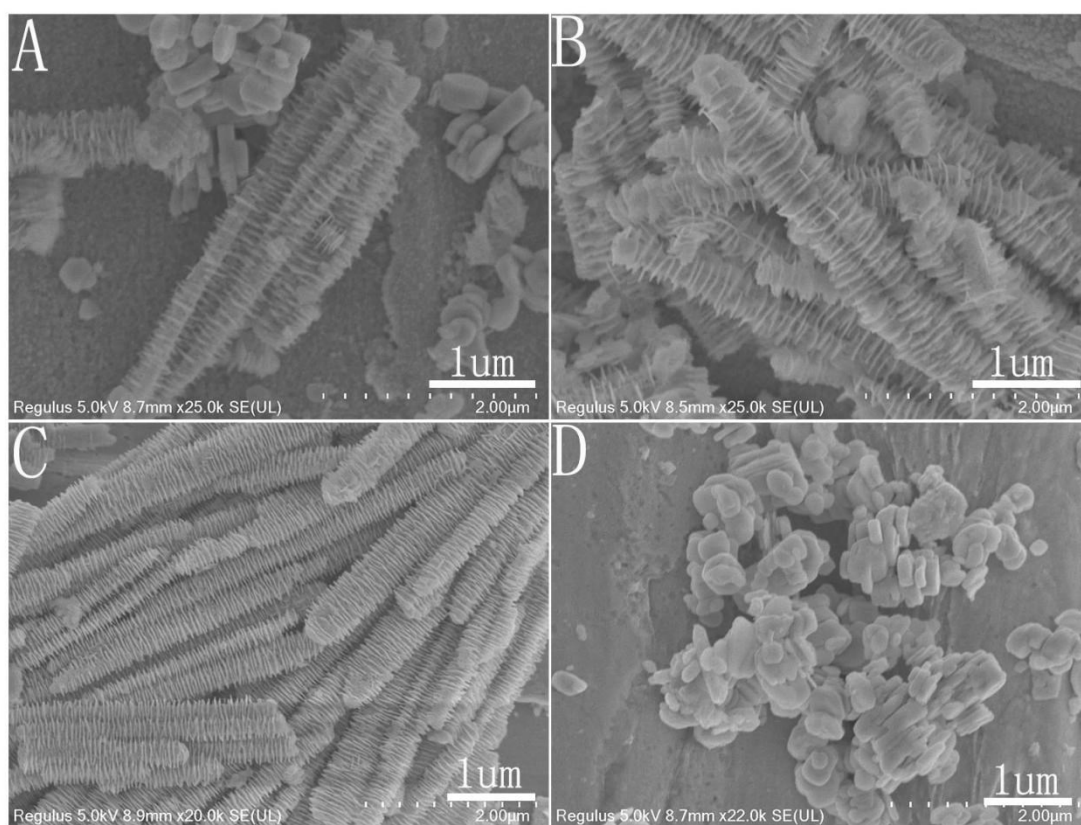


Fig. S2 The SEM images of the obtained samples with different reaction temperature (120, 140, 160 and 180 °C)

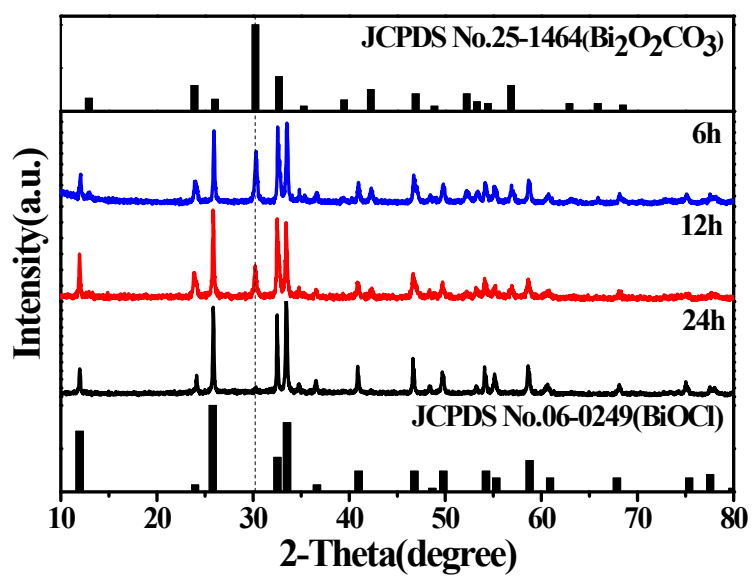


Fig. S3 The XRD patterns of the obtained samples with different reaction time (6, 12 and 24 h) and standard card of $\text{Bi}_2\text{O}_2\text{CO}_3$ and BiOCl .

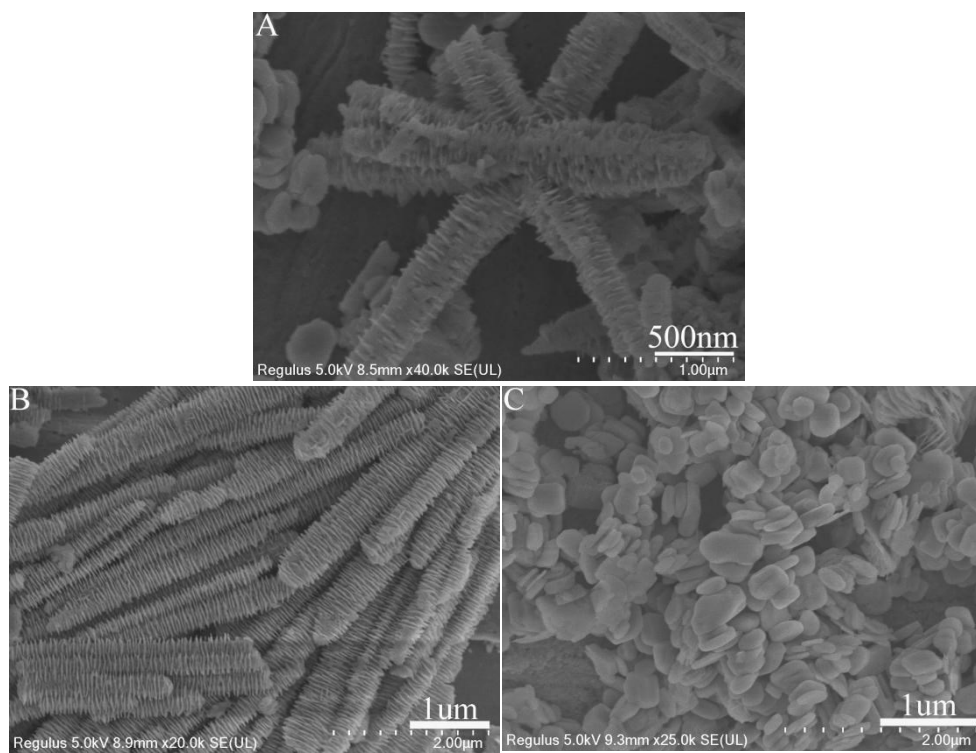


Fig. S4 The SEM images of the obtained samples with different reaction time (6, 12 and 24 h)

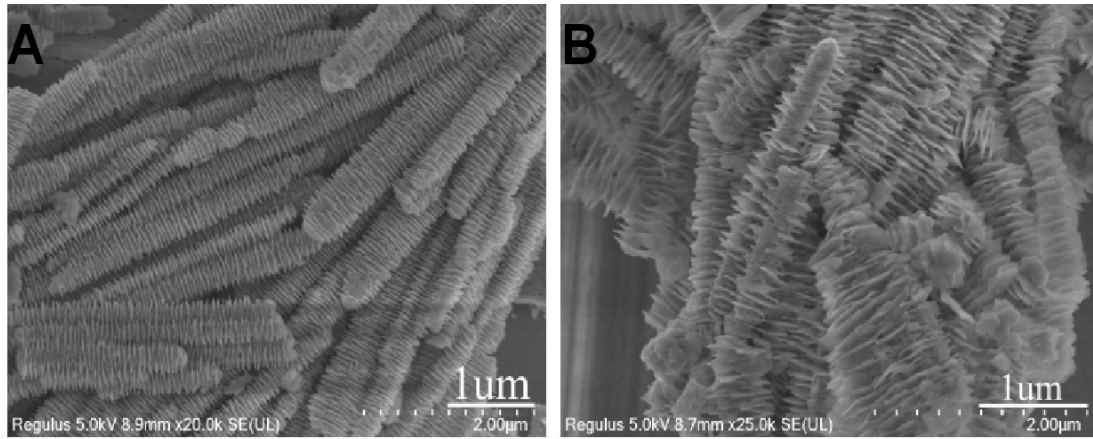


Fig.S5 SEM images of the S2 sample before and after use.

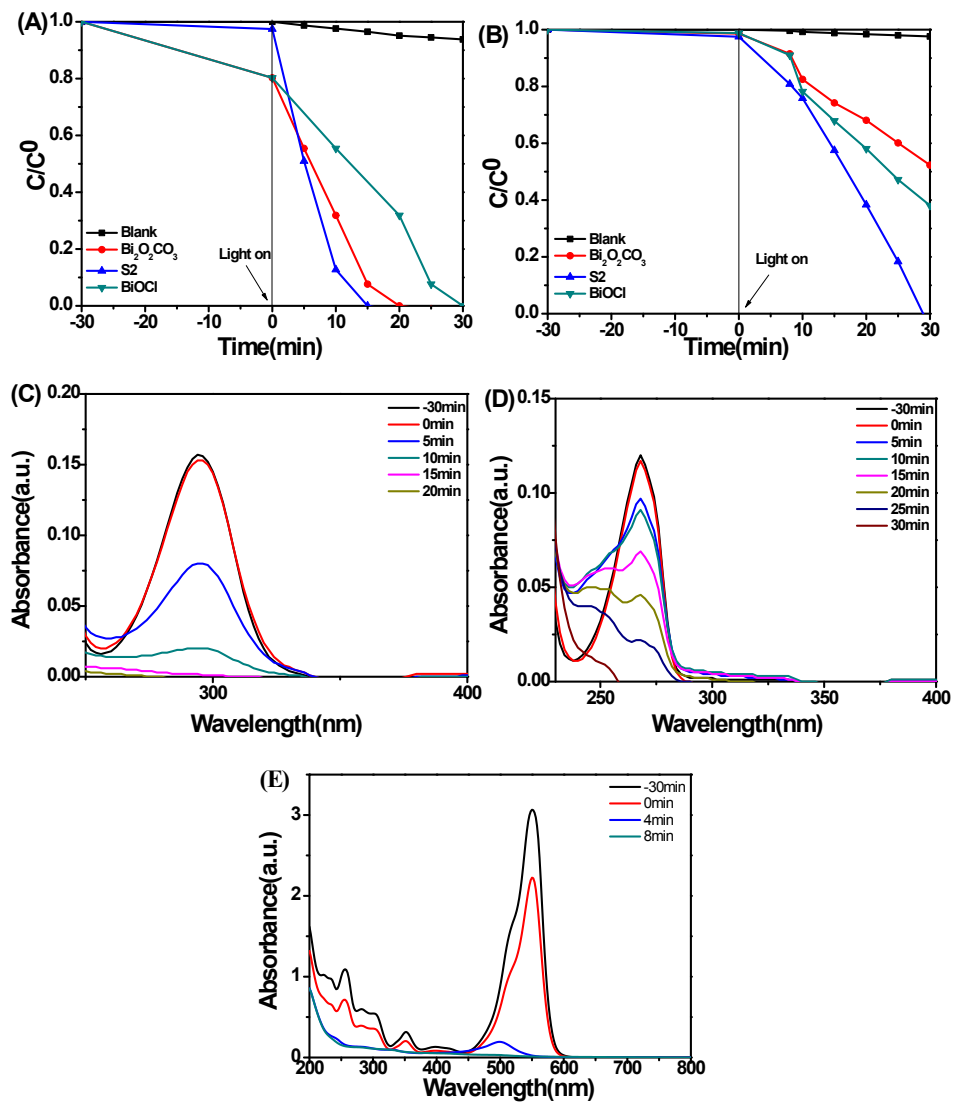


Fig. S6 The photocatalytic degradation curve of SA (10 mg/L) (A) and phenol (10 mg/L) (B) using different photocatalysts; UV-Vis adsorption spectra of SA (10 mg/L) (C), phenol (10 mg/L) (D) and RhB (20 mg/L) ϵ using S2 as photocatalyst.

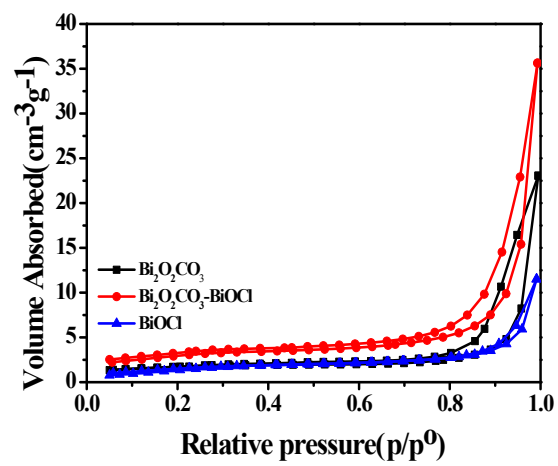


Fig. S7 Nitrogen gas adsorption/desorption isotherm