

Supporting Information

Organic-free synthesis of {001} facets dominated BiOBr nanosheets for selective photoreduction of CO₂ to CO

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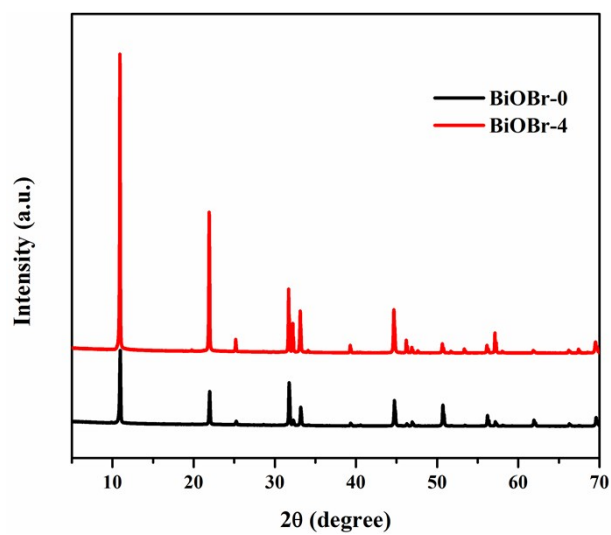


Fig. S1 XRD patterns of BiOBr-0 and BiOBr-4 nanosheets.

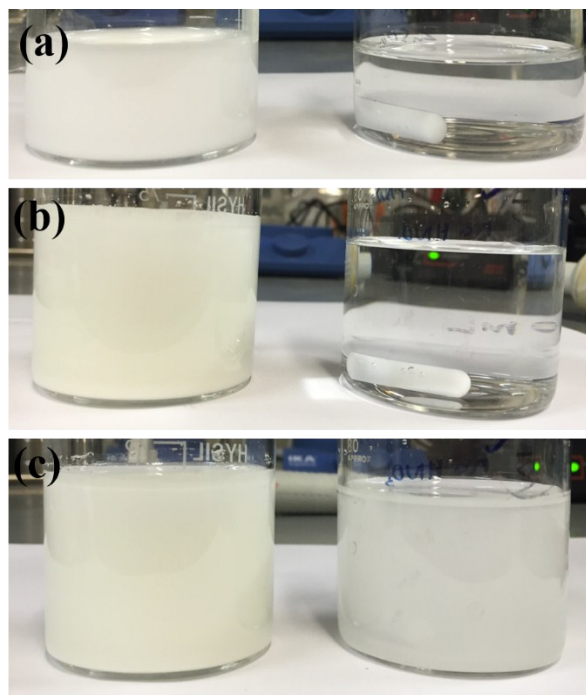


Fig. S2 Reaction solution after (a) Bi^{3+} dissolved in water, (b) adding Br^- and (c) further stirring for 30 min for (left) BiOBr-0 and (right) BiOBr-4 precursors before hydrothermal treatment.

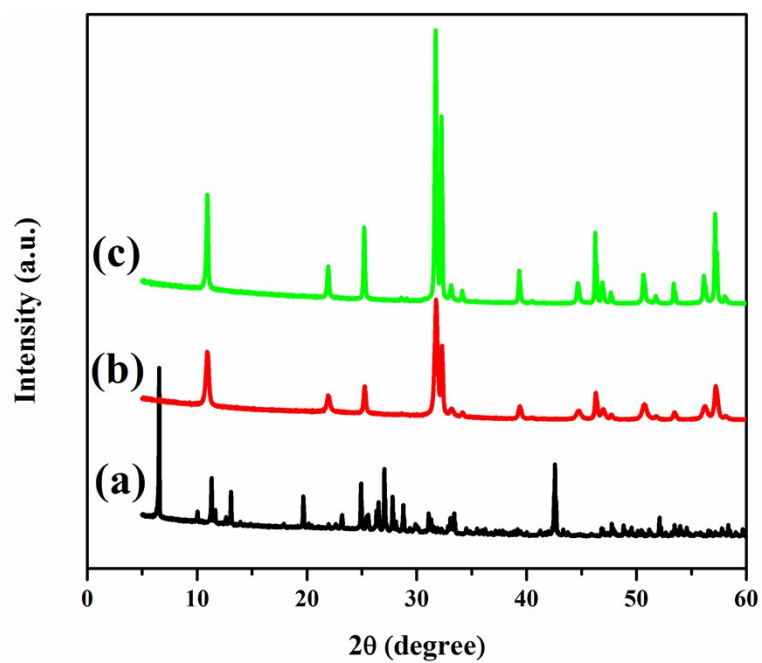


Fig. S3 XRD patterns of (a) white precipitates after Bi^{3+} dissolved in water and yellow precipitates after adding Br^- with further 30 min stirring for (b) BiOBr-0 and (c) BiOBr-4 before hydrothermal treatment.

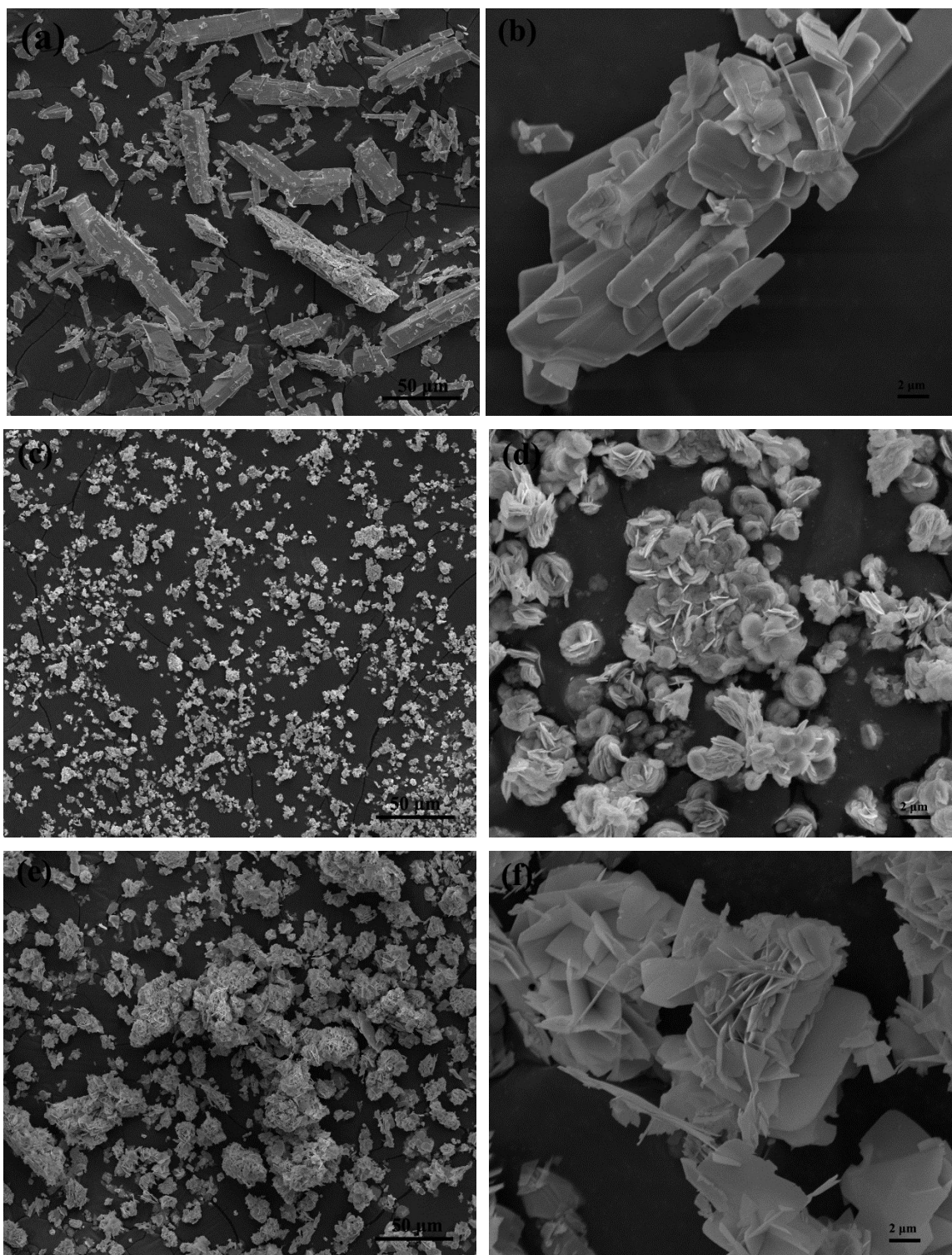


Fig. S4 SEM images of (a, b) white precipitates after Bi^{3+} dissolved in water and yellow precipitates after Br^- with further 30 min stirring for (c, d) BiOBr-0 and (e, f) BiOBr-4 before hydrothermal treatment.

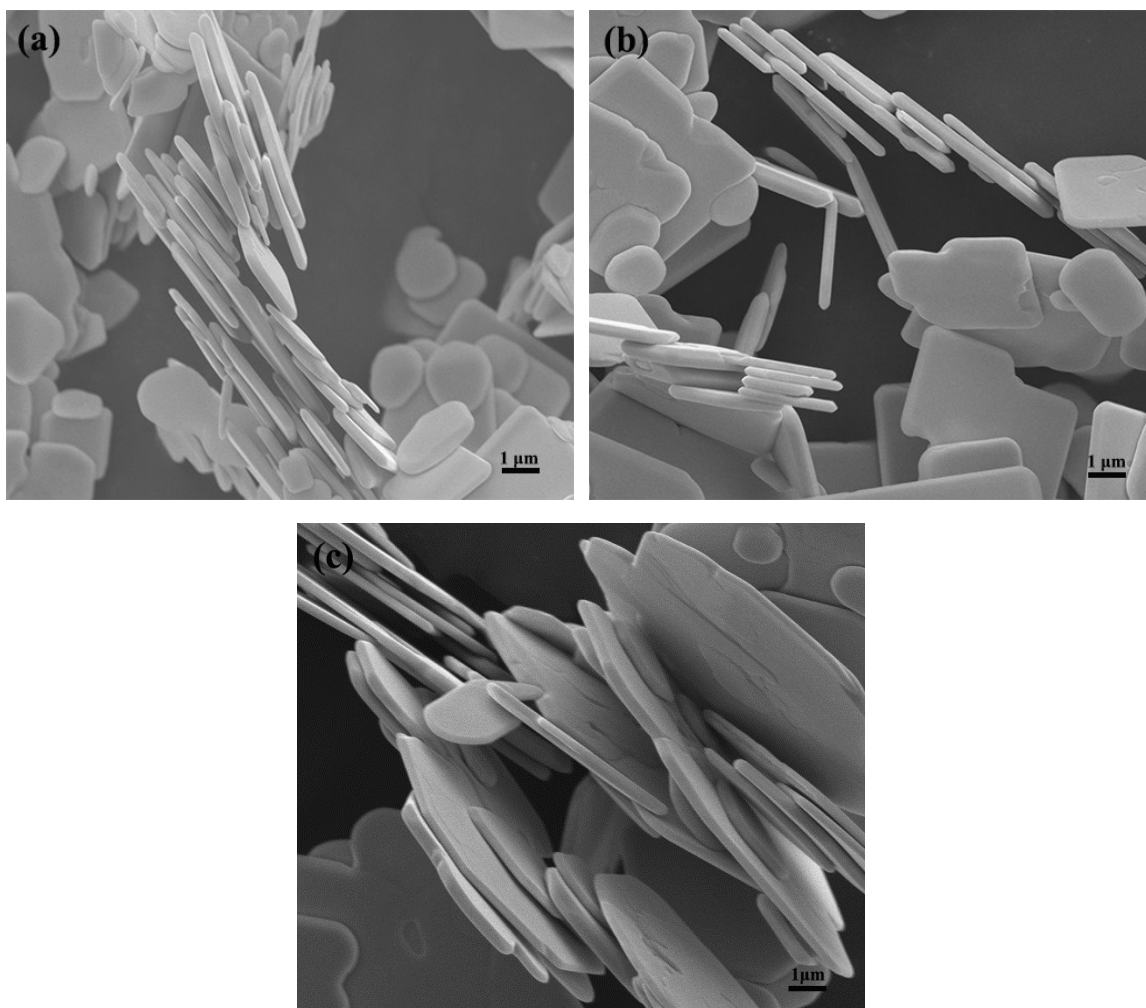


Fig. S5 SEM images of (a) BiOBr-0.1, (b) BiOBr-0.5, (c) BiOBr-1 samples.

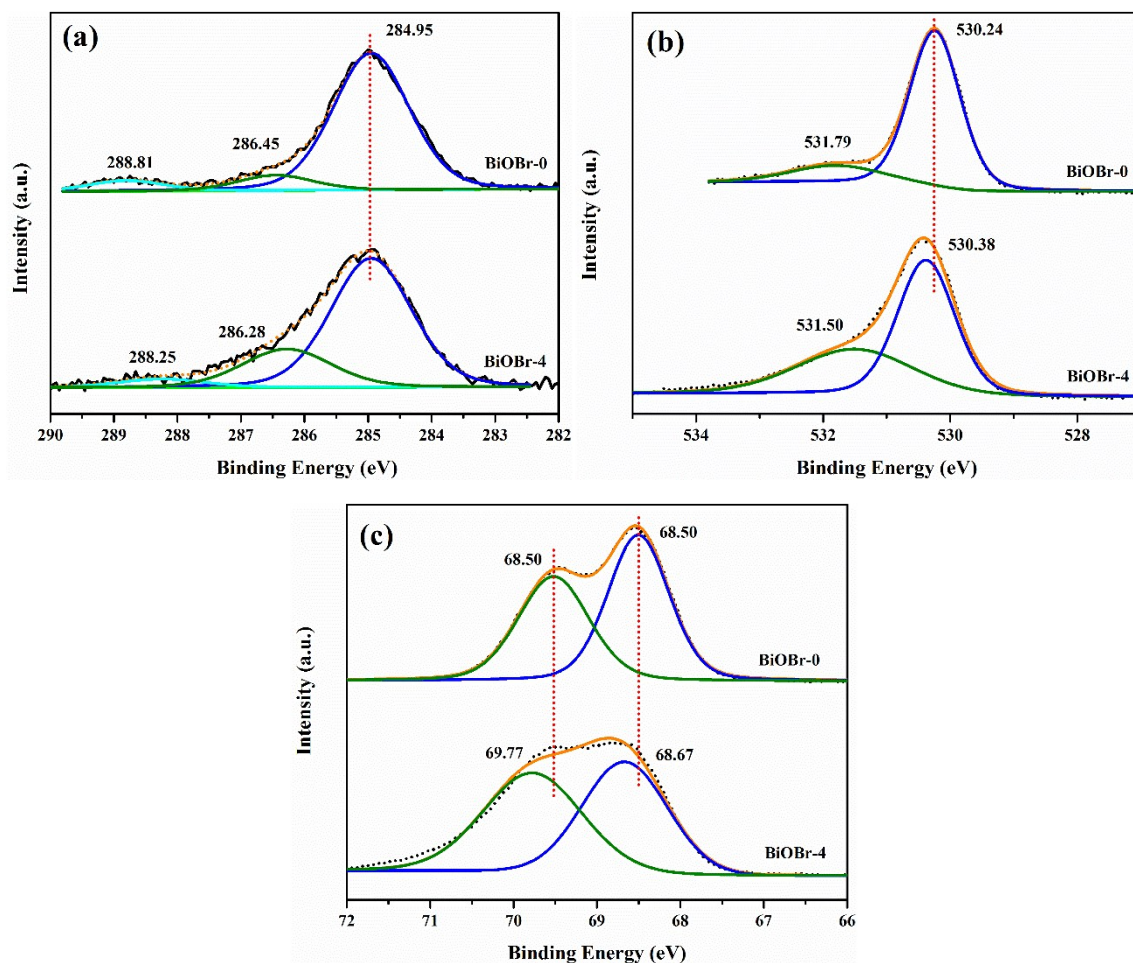


Fig. S6 XPS spectra of (a) C 1s, (b) O 1s and (c) Br 3d for BiOBr-0 and BiOBr-4 nanosheets.

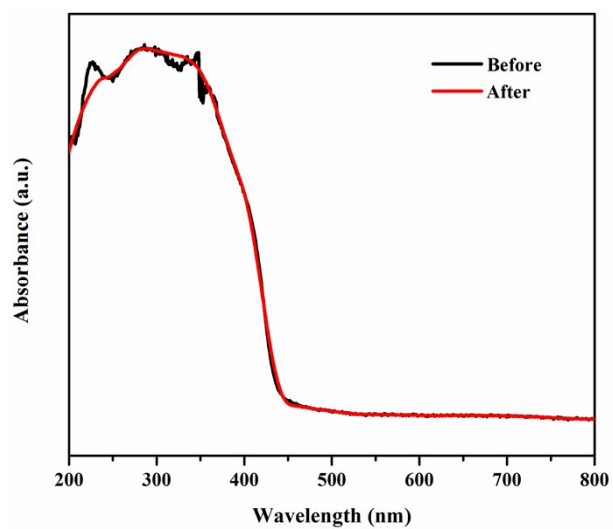


Fig. S7 UV-vis diffuse reflectance spectra of BiOBr-4 nanosheets before and after reaction.

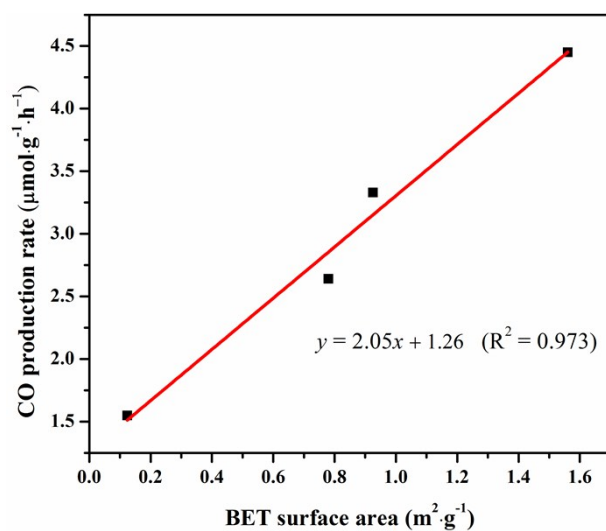


Fig. S8 Linear fitting curve of BET surface area vs CO production rate of BiOBr-0.1, BiOBr-0.5, BiOBr-1 and BiOBr-4 samples.

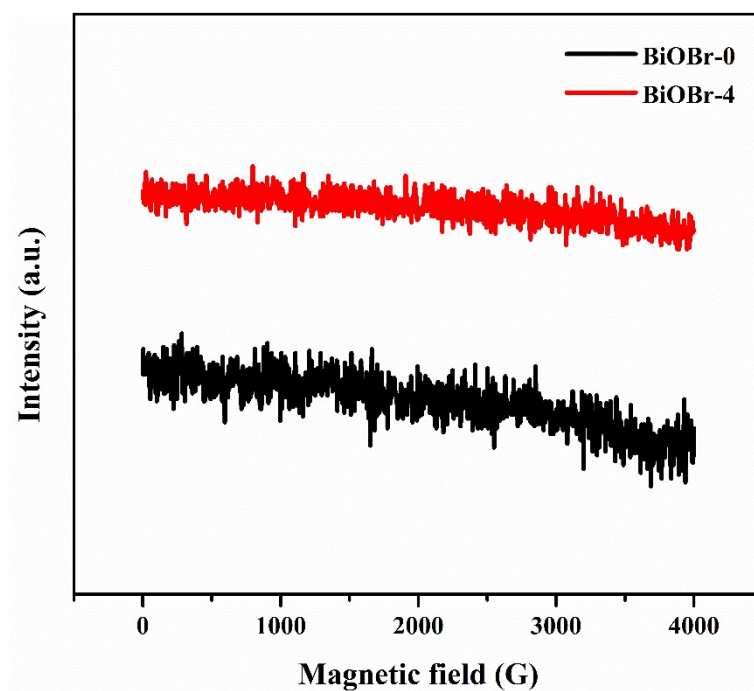


Fig. S9 Powdered EPR spectra of BiOBr-0 and BiOBr-4 samples (77 K).