

Supporting Information

Fig. S1 (a) Top-view SEM images of Bi_2WO_6 , (b) $\text{Bi}_2\text{WO}_6\text{-F}_{0.5}$, (c) $\text{Bi}_2\text{WO}_6\text{-F}_{1.0}$ and (d) $\text{Bi}_2\text{WO}_6\text{-F}_{1.5}$

Fig. S2 (a), (b) TEM images of $\text{Bi}_2\text{WO}_6/\text{CoB-2}$ sample

Fig. S3 The full spectrum diagram of (a) Bi_2WO_6 and (b) $\text{Bi}_2\text{WO}_6/\text{CoB-2}$

Fig. S4 The equivalent circuit model used to stimulate the Nyquist plots in Fig. 10 (a), (b) and Fig. S5

Fig. S5 (a) Electrochemical impedance spectroscopy (EIS) of Bi_2WO_6 , $\text{Bi}_2\text{WO}_6/\text{CoB-1}$, $\text{Bi}_2\text{WO}_6/\text{CoB-2}$ and $\text{Bi}_2\text{WO}_6/\text{CoB-3}$ samples in dark and (b) under ultrasound condition

Fig. S6 (a) LSV curves of Bi_2WO_6 , $\text{Bi}_2\text{WO}_6/\text{CoB-1}$, $\text{Bi}_2\text{WO}_6/\text{CoB-2}$ and $\text{Bi}_2\text{WO}_6/\text{CoB-3}$ measured in 0.5 M Na_2SO_4 electrolyte solution with the addition of 0.25 M Na_2SO_3 and (b) under ultrasound condition

Fig. S7 Stability of Bi_2WO_6 , $\text{Bi}_2\text{WO}_6/\text{CoB-1}$, $\text{Bi}_2\text{WO}_6/\text{CoB-2}$ and $\text{Bi}_2\text{WO}_6/\text{CoB-3}$ in the light and ultrasound condition

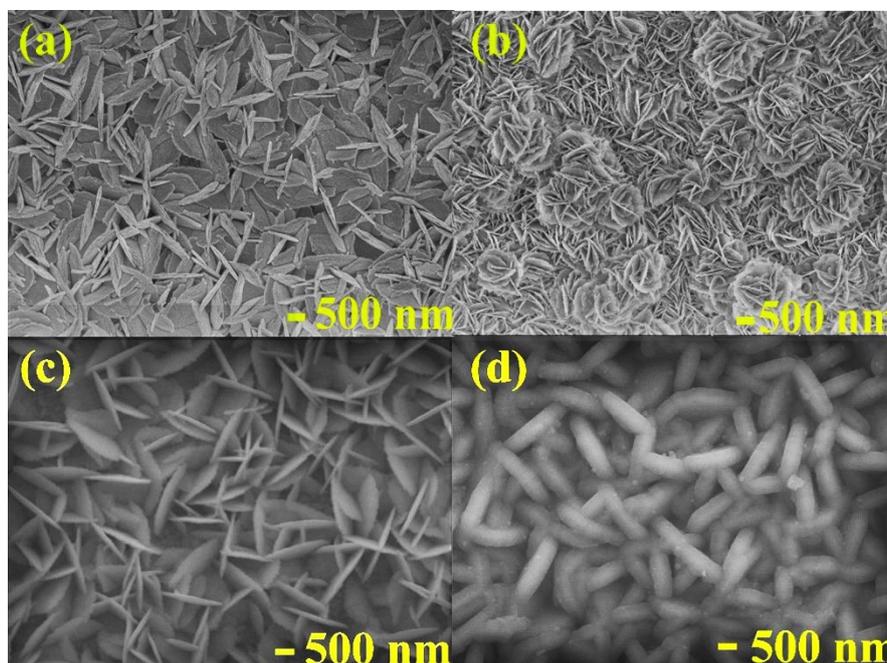


Fig. S1 (a) Top-view SEM images of Bi_2WO_6 , (b) $\text{Bi}_2\text{WO}_6\text{-F}_{0.5}$, (c) $\text{Bi}_2\text{WO}_6\text{-F}_{1.0}$ and (d) $\text{Bi}_2\text{WO}_6\text{-F}_{1.5}$

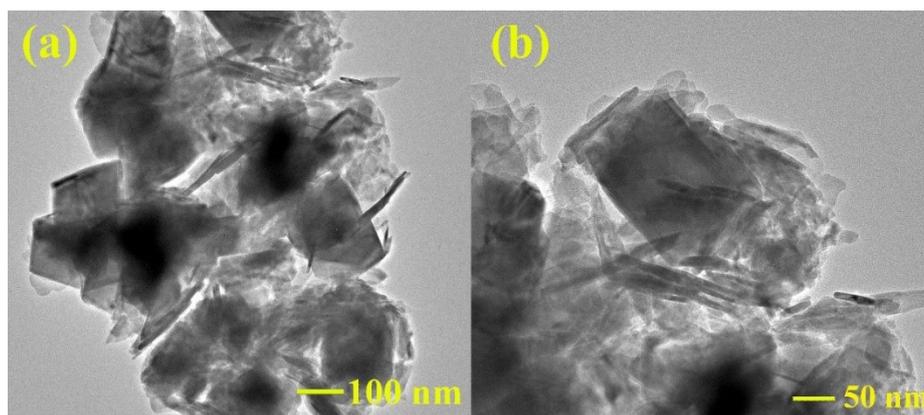


Fig. S2 (a), (b) TEM images of $\text{Bi}_2\text{WO}_6/\text{CoB-2}$ sample

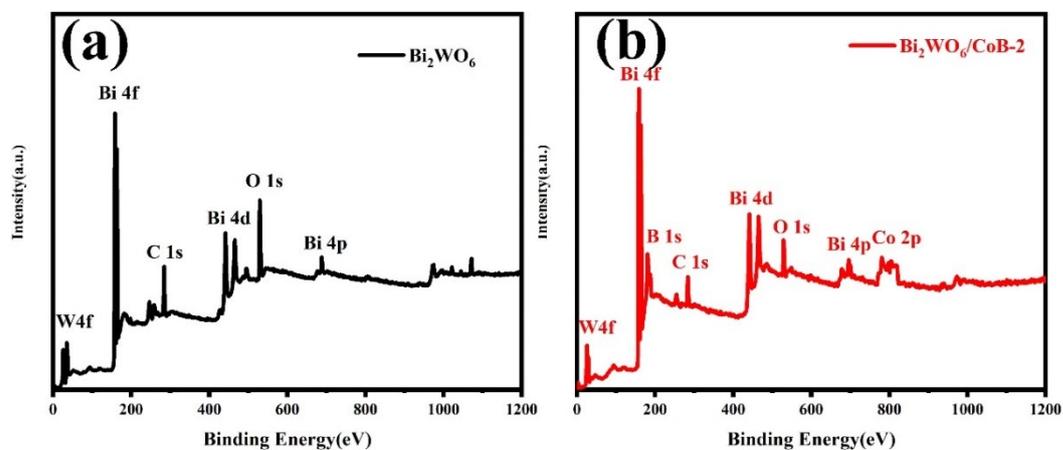


Fig. S3 The full spectrum diagram of (a) Bi_2WO_6 and (b) $\text{Bi}_2\text{WO}_6/\text{CoB-2}$

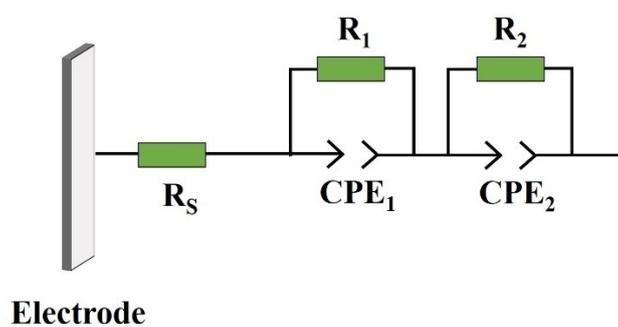


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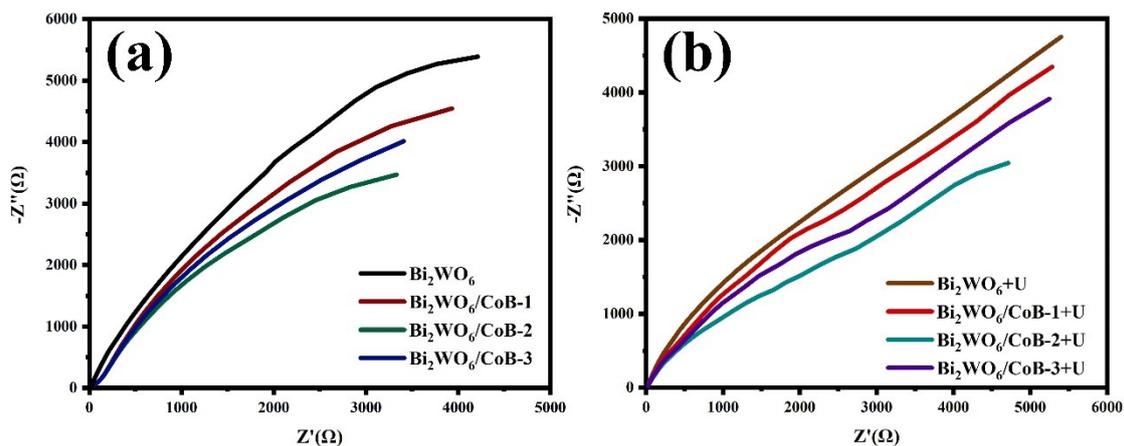


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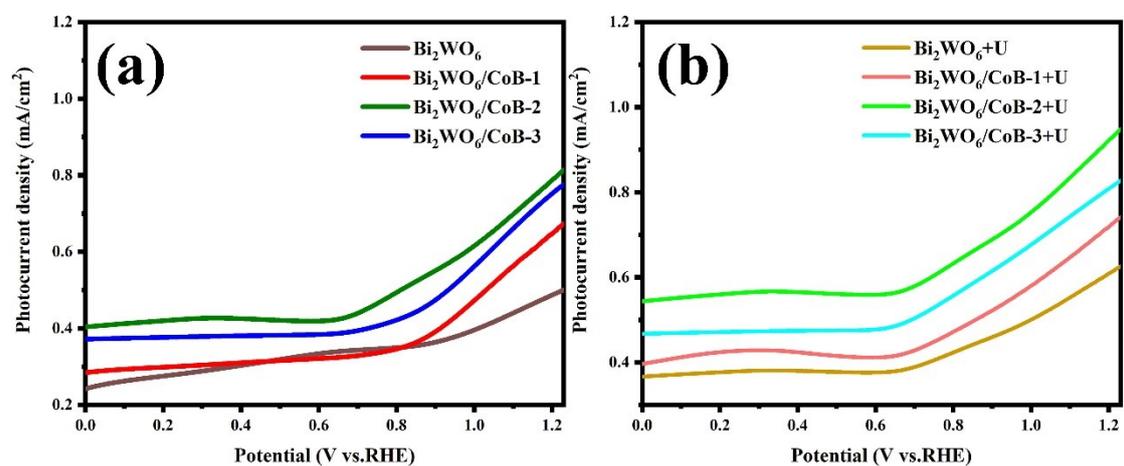


Fig. S6 (a) LSV curves of Bi_2WO_6 , $\text{Bi}_2\text{WO}_6/\text{CoB-1}$, $\text{Bi}_2\text{WO}_6/\text{CoB-2}$ and $\text{Bi}_2\text{WO}_6/\text{CoB-3}$ measured in 0.5 M Na_2SO_4 electrolyte solution with the addition of 0.25 M Na_2SO_3 and (b) under ultrasound condition

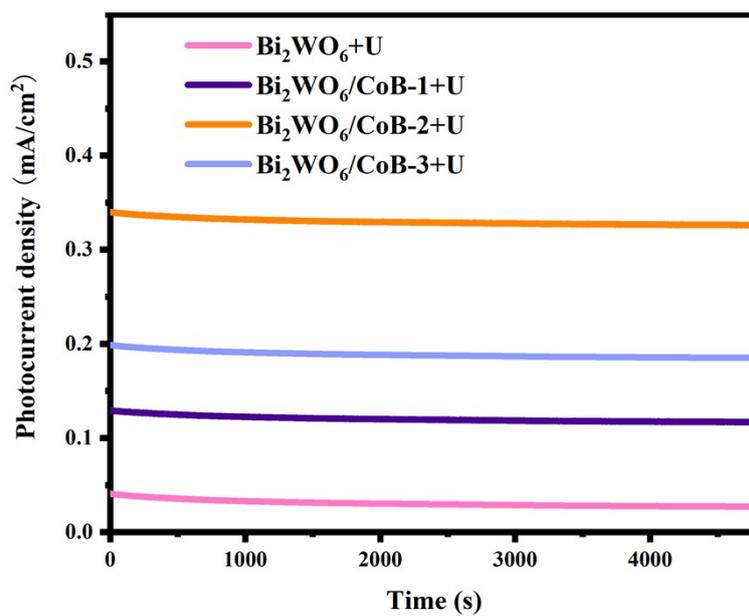


Fig. S7 Stability of Bi₂WO₆, Bi₂WO₆/CoB-1, Bi₂WO₆/CoB-2 and Bi₂WO₆/CoB-3 in the light and ultrasound condition