

Supplementary Material

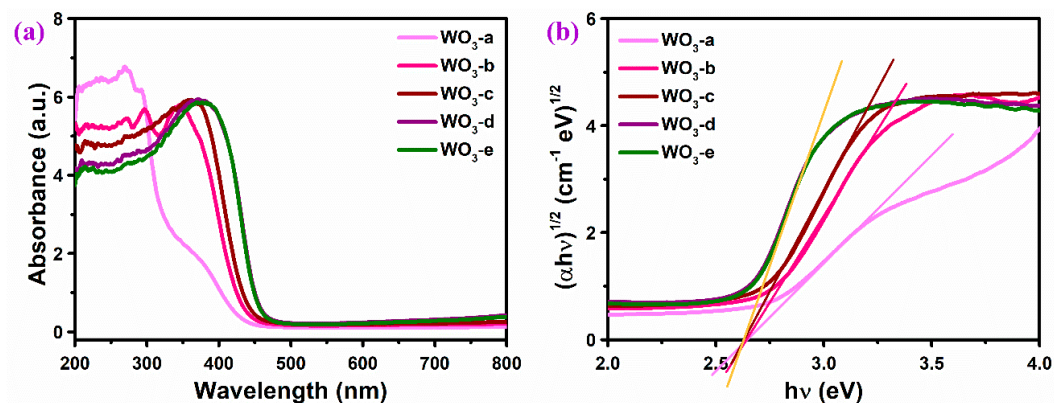


Figure S1 (a) UV-vis absorption spectra and (b) Tauc plots of WO₃ arrays.

The UV-visible light absorption performance of different WO₃ nanoflake arrays is shown in Figure S1. As the coverage of nanoflakes on FTO substrate increases, the light absorption is significantly enhanced. Specially, although the thickness of WO₃-e is obviously higher than that of WO₃-d, the light absorption properties of WO₃-e and WO₃-d are similar, indicating that WO₃-d with the thickness of 3.2 μm can ensure adequate light absorption. According to the corresponding Tauc curve in Figure S1b, the band gap of all the WO₃ arrays is estimated to be the same, about 2.64 eV.

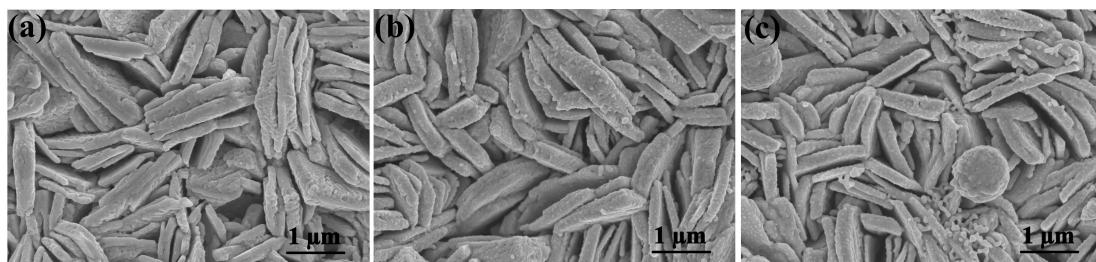


Figure S2 SEM images of $\text{WO}_3/\text{BiVO}_4$ composite arrays, (a) $\text{WO}_3/\text{BiVO}_4$ -5, (b) $\text{WO}_3/\text{BiVO}_4$ -10, (c) $\text{WO}_3/\text{BiVO}_4$ -20.

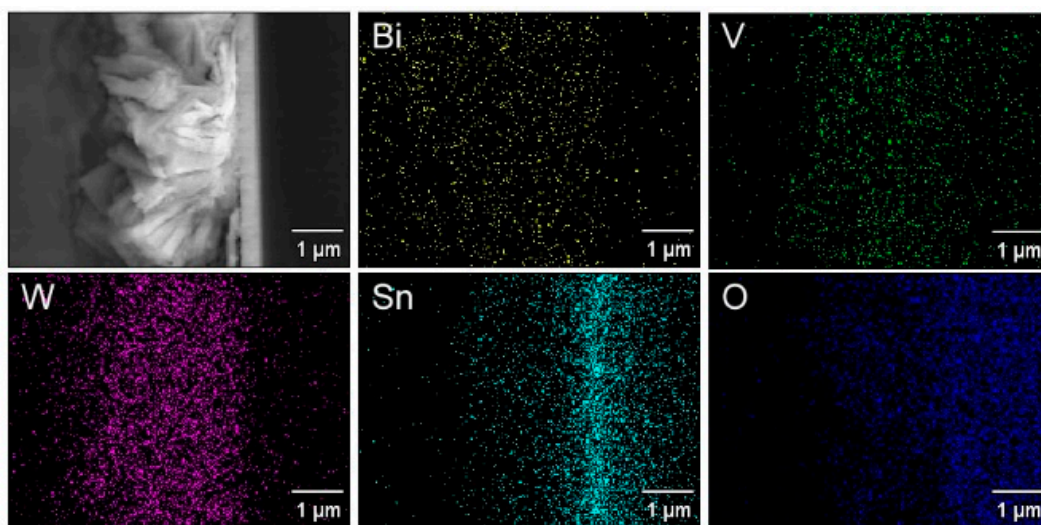


Figure S3 Cross-sectional view SEM image of $\text{WO}_3/\text{BiVO}_4$ -10 and the corresponding elemental mapping.

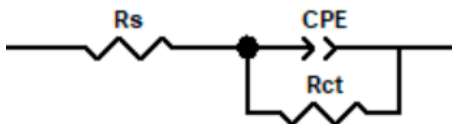


Figure S4 The equivalent circuit of the electrochemical impedance spectra