

Supporting Information

In-Situ Induced Crystalline-Amorphous Heterophase Junction by K⁺ to Improve Photoelectrochemical Water Oxidation of BiVO₄

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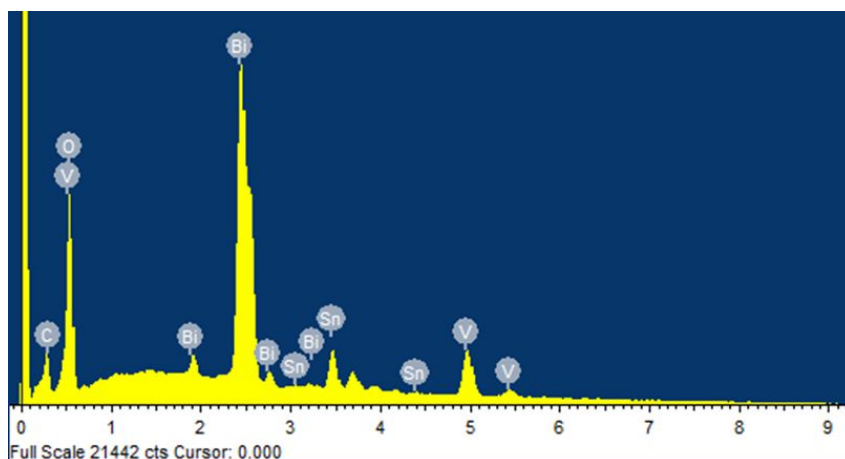


Figure S1. The original sum spectrum of EDS in SEM for K-BiVO₄.

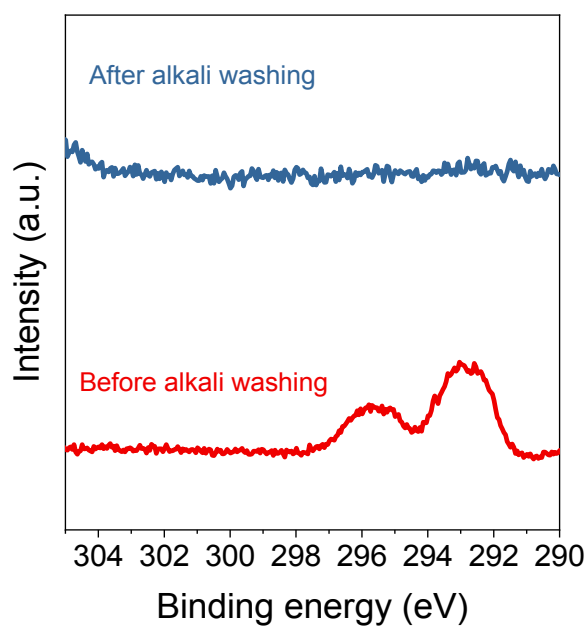


Figure S2. the XPS of K 2p for K-BiVO₄ samples before and after alkali washing.

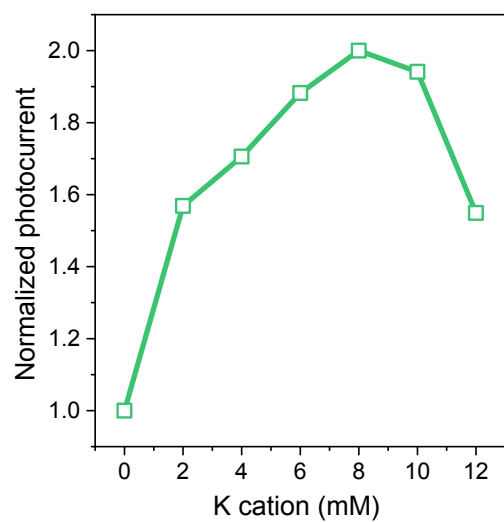


Figure S3. Effect of the K cation addition in the precursor solution on the photocurrent of BiVO_4 photoanodes (at 1.23 V vs. RHE).

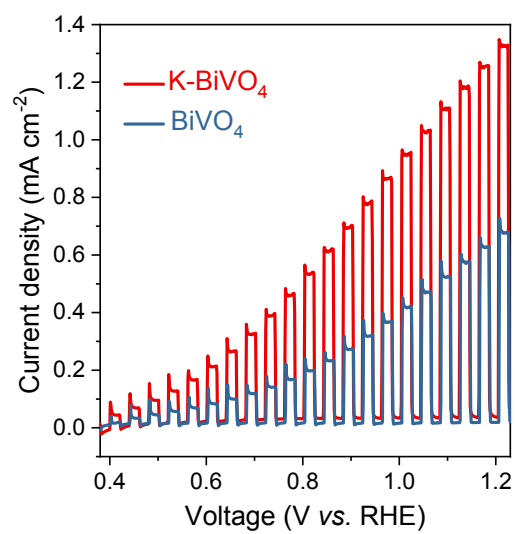


Figure S4. LSV curves with the chopped-light illumination.

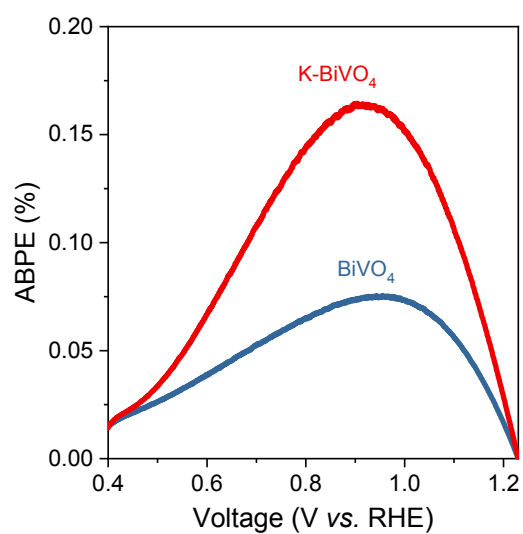


Figure S5. ABPE of the photoelectrodes

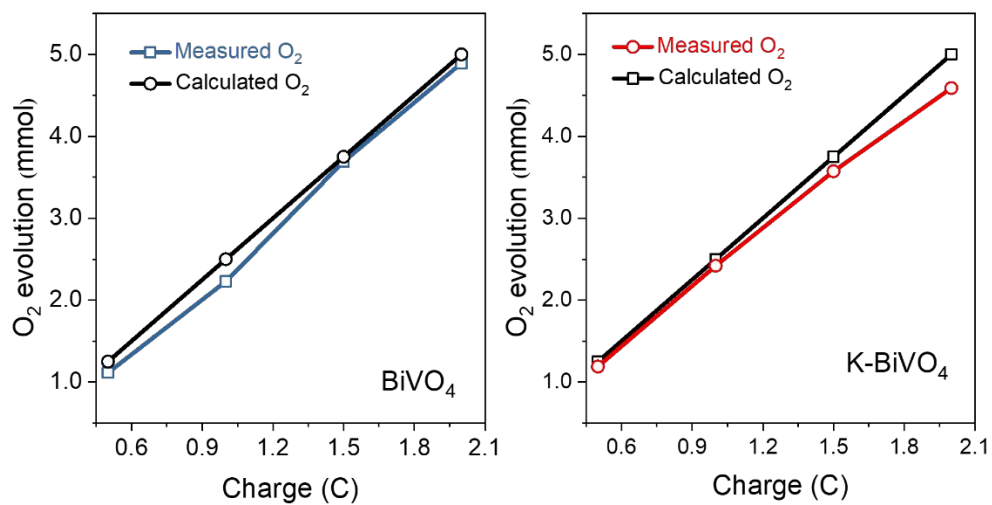


Figure S6. Measurement of O₂ evolution of the photoanodes for the determination of Faradaic efficiency

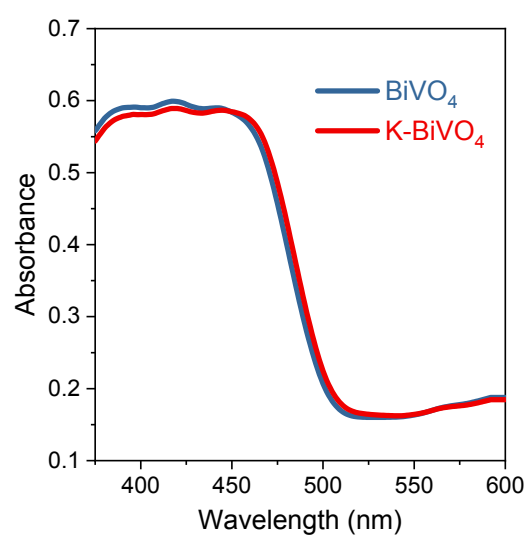


Figure S7. UV-Vis absorption spectra of the photoanodes.

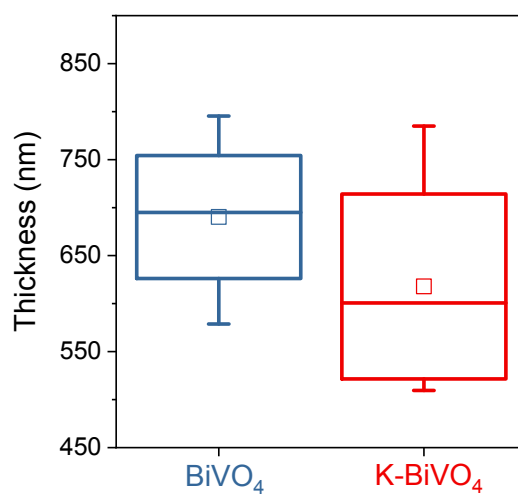


Figure S8. Film thickness of the photoanodes. Data are based on 15 samples for each photoanode.

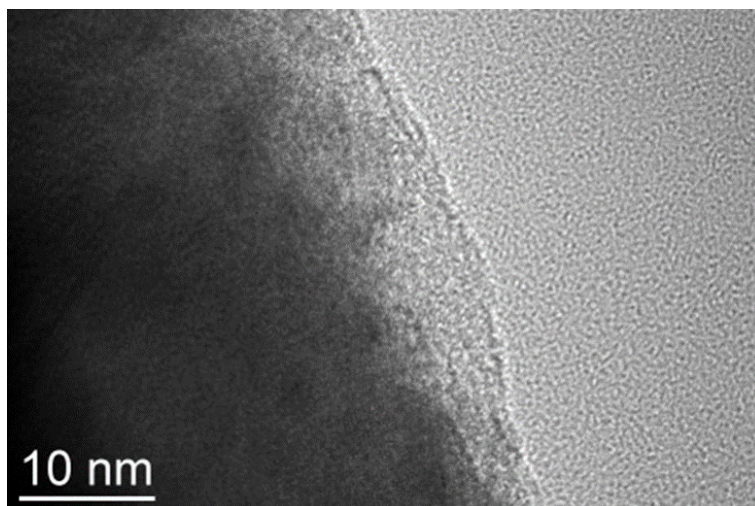


Figure S9. TEM image of K-BiVO₄ after a long-term test.

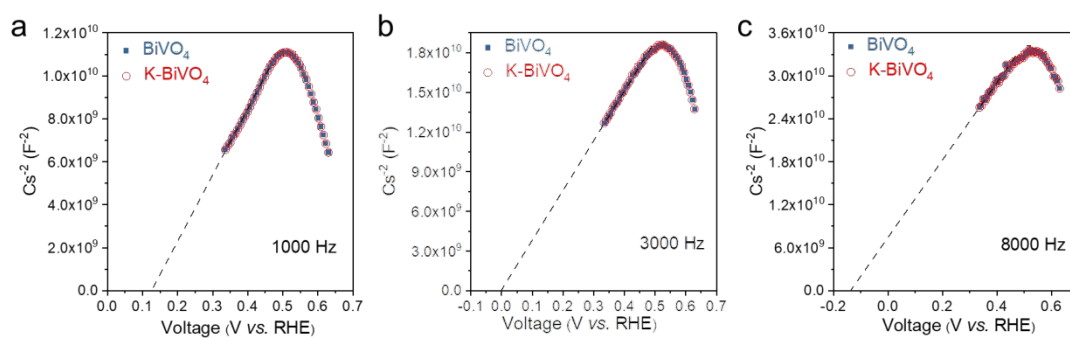


Figure S10. Mott-Schottky plots of the photoanodes under different frequencies.

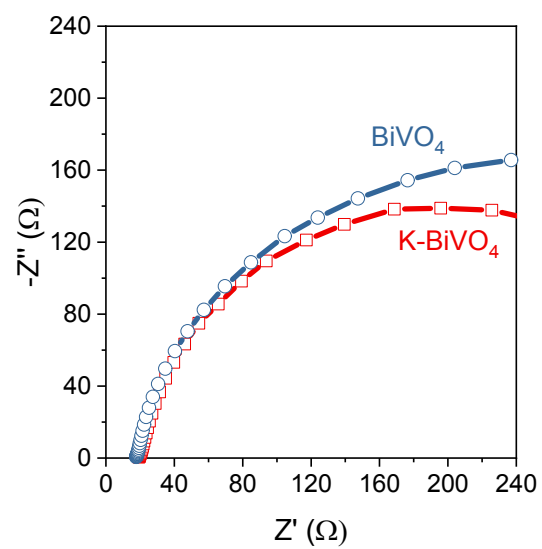


Figure S11. Nyquist plots of the photoanodes under 1.23 V vs. RHE with illumination.