Figure S1. Cross-section SEM image of the BiVO$_4$ film.

Figure S2. UV-Visible absorption spectrum of the pure and modified films.
Figure S3. C 1s XPS spectra BiVO₄/GO, BiVO₄/RGO, W-BiVO₄/GO and W-BiVO₄/RGO.

Figure S4. XRD patterns of BiVO₄/RGO and W-BiVO₄/RGO.
Figure S5. Photoluminescence spectra (PL) of BiVO₄, W-BiVO₄, BiVO₄/RGO and W-BiVO₄/RGO with the excitation wavelength of 325 nm.