

Supporting information

for

New Insights into Se/BiVO₄ Heterostructures for Photoelectrochemical Water Splitting: A Combined Experimental and DFT Study

Siti Nur Farhana M. Nasir,[†] Habib Ullah,^{*,‡} Mehdi Ebadi,[†] Asif A. Tahir,[‡] Jagdeep S. Sagu,[§] and Mohd Asri Mat Teridi^{*,†}

[†]Solar Energy Research Institute (SERI), National University of Malaysia, 43600 Bangi, Selangor, Malaysia

[‡]Environment and Sustainability Institute (ESI), University of Exeter, Penryn Campus, Penryn, Cornwall TR10 9FE, United Kingdom

[§]Department of Chemistry, Loughborough University, Loughborough, Leicestershire LE11 3TU, United Kingdom

Email address: hu203@exeter.ac.uk (H.U); asri@ukm.edu.my (M.T.A)

Fax: +603 8911 8574; Tel: +603 8911 8519

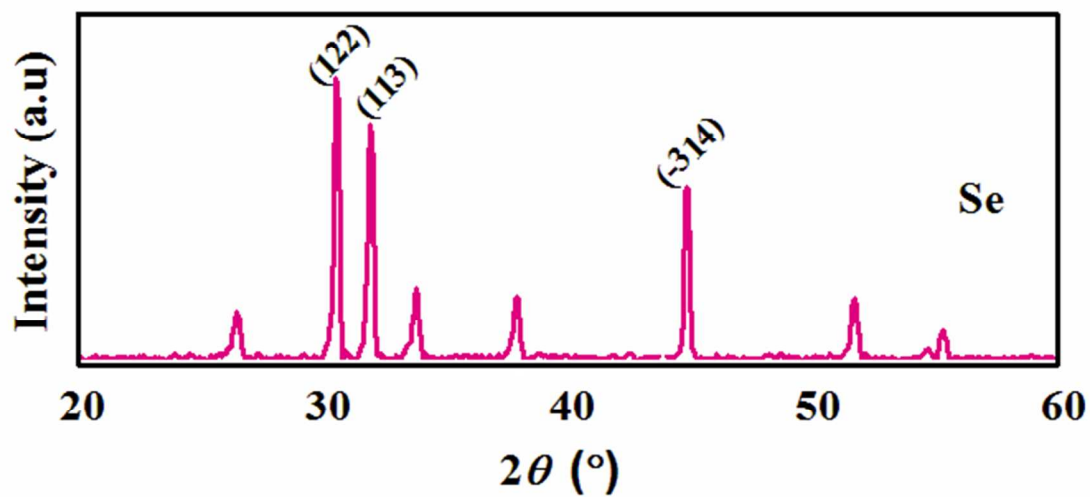


Fig. S1: XRD spectrum of Se thin film.

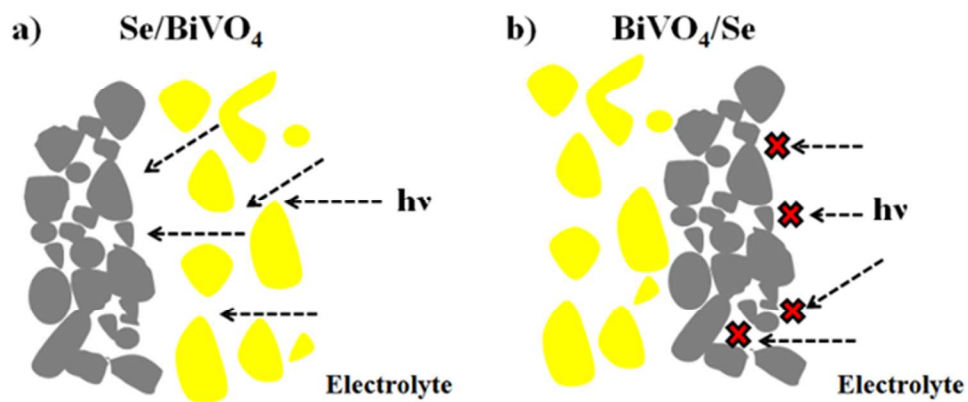


Fig. S2: Schematic diagram of a) Se/BiVO₄ and b) BiVO₄/Se surface structures.

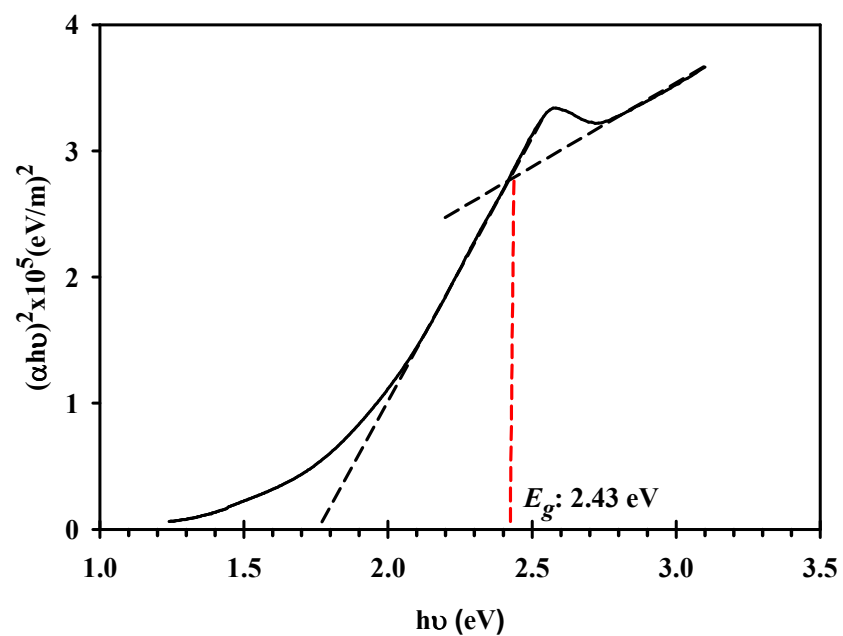


Fig. S3: Band gap of BiVO₄ thin film taken from ref. [41]

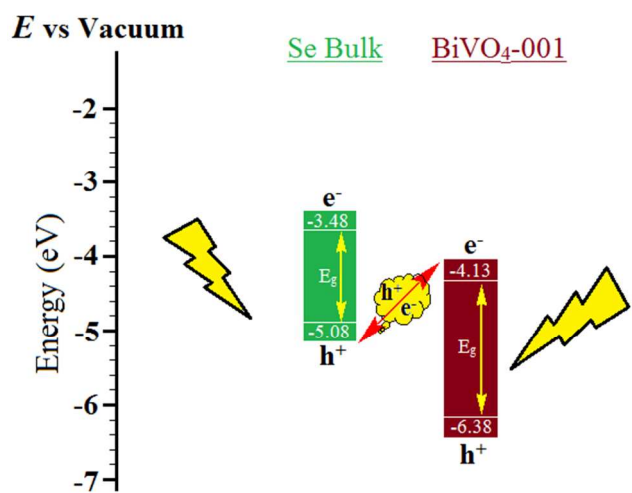


Fig. S4. Energy level diagram of the simulated Se-bulk and BiVO₄(001)

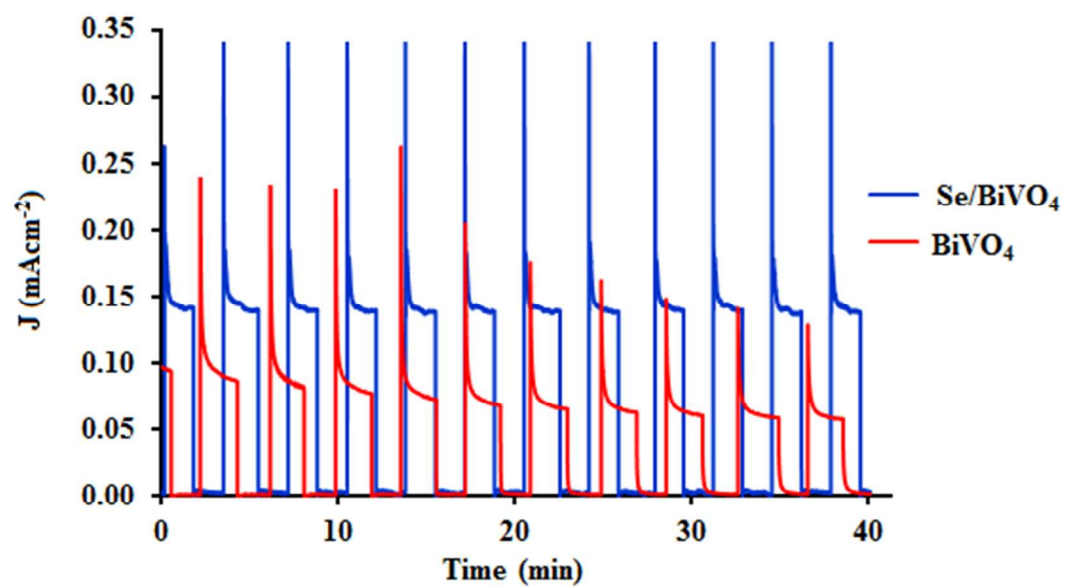


Fig. S5: Photocurrent-time response of the Se/BiVO_4 photoanode.