

New insight into photoelectrochemical hydrogen production and photocorrosion inhibition by ascorbic acid

Gabrijela Radić¹, Tena Krnić¹, Marija Lovrić¹, Klara Perović¹, Floren Radovanović Perić¹, Boštjan Genorio², Hrvoje Kušić¹, Željka Petrović³, Marijana Kraljić Roković^{1*}

¹*Faculty of Chemical Engineering and Technology, University of Zagreb, Zagreb, Croatia*

²*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Vecna pot 113, 1000 Ljubljana, Slovenia*

³*Division of Materials Chemistry, Ruđer Bošković Institute, P.O. Box 180, 10002 Zagreb, Croatia*

Corresponding author: *mkralj@fkit.unizg.hr

SUPPLEMENTARY MATERIALS

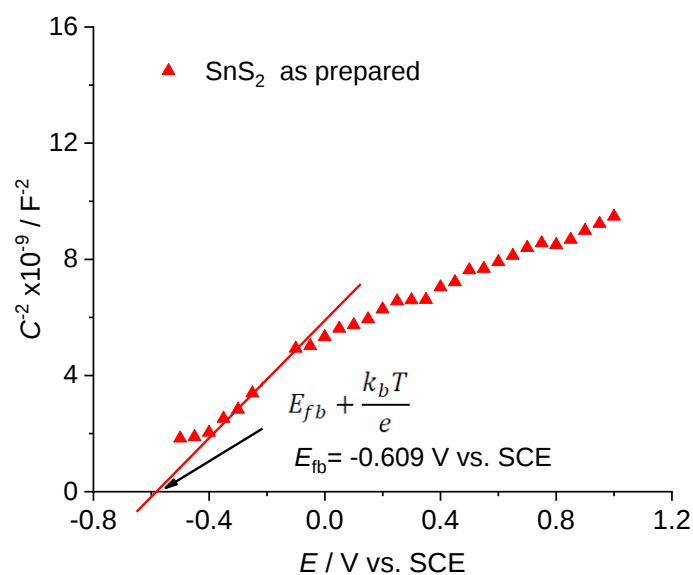


Figure S1. Mott Schottky plot of SnS_2 photoanode recorded in 0.1 M NaCl at a frequency of 1 kHz.

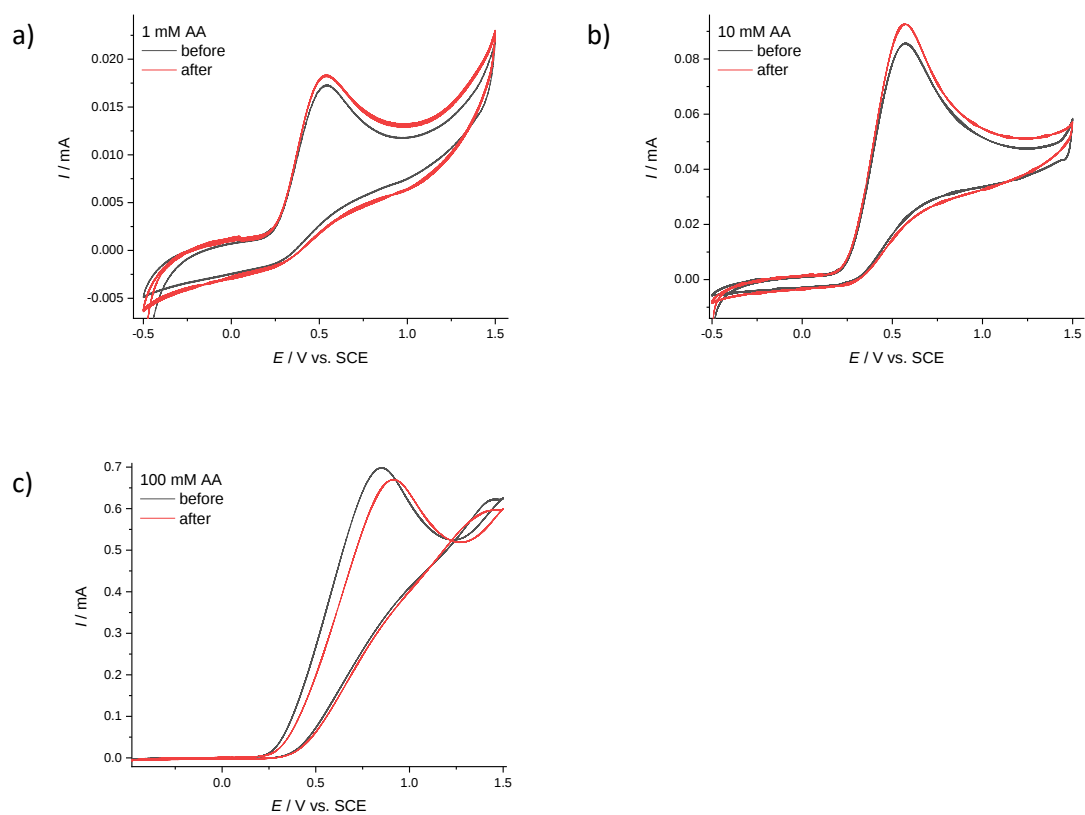


Figure S2. Cyclic voltammetry plots of GC electrode recorded in 0.1 M NaCl solution containing a) 1, b) 10 and c) 100 mM AA before and after PEC hydrogen evolution.

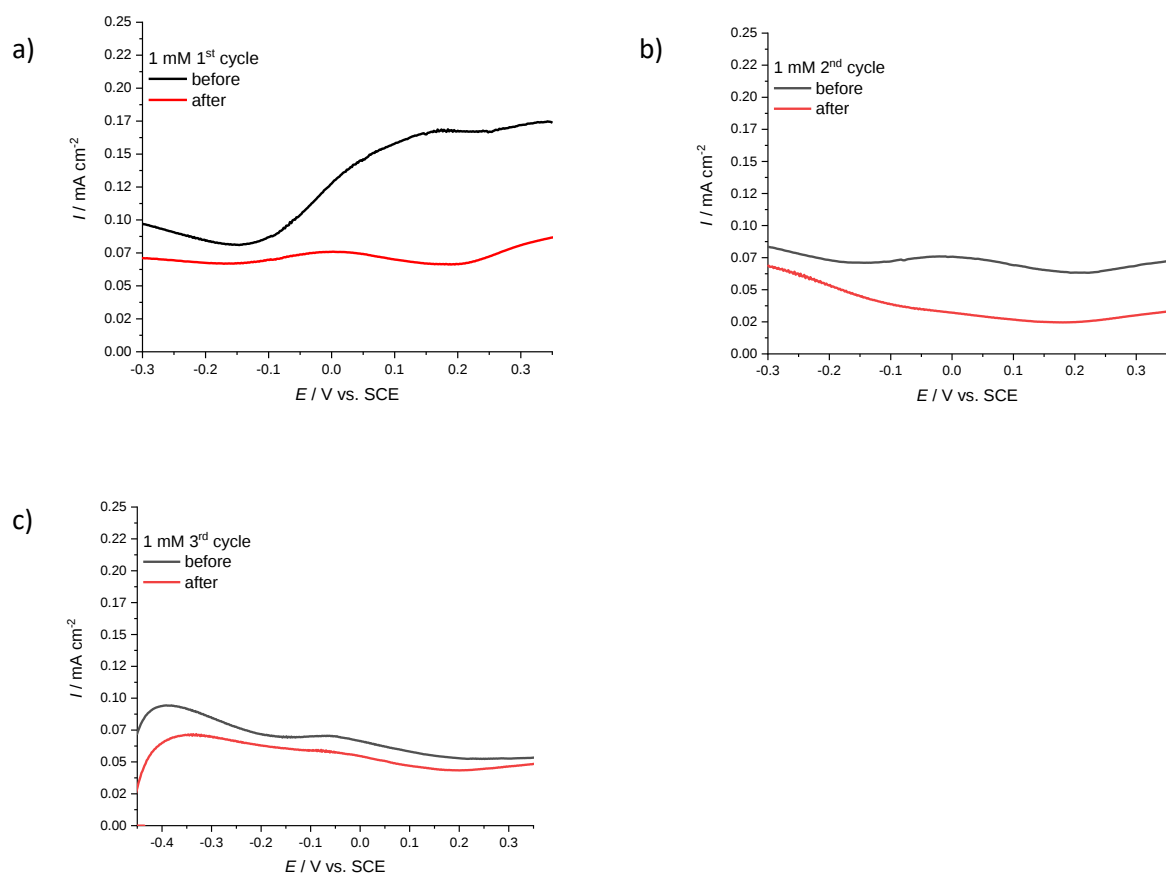


Figure S3. Linear sweep voltammetry plots of illuminated SnS_2 photoanode, recorded in 0.1 M NaCl containing 1 mM AA, before and after a) first, b) second, and c) third cycle of PEC hydrogen evolution.

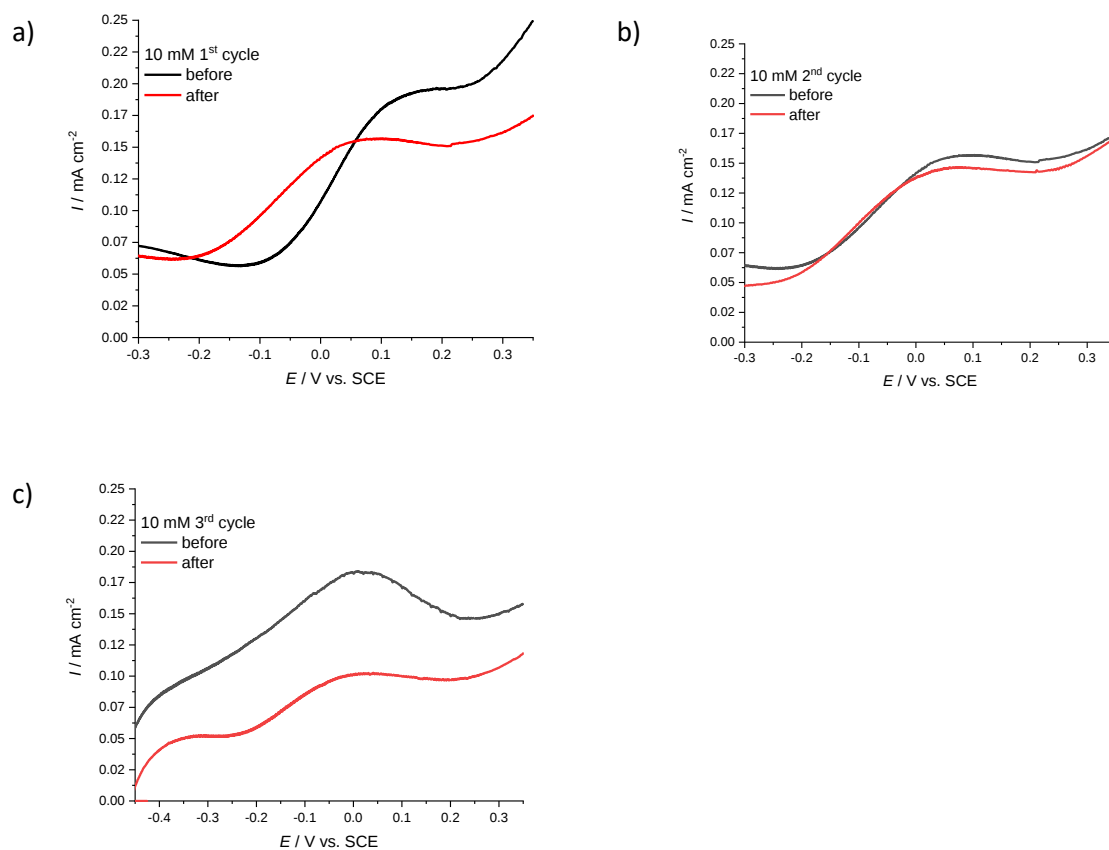


Figure S4. Linear sweep voltammetry plots of illuminated SnS₂ photoanode, recorded in 0.1 M NaCl containing 10 mM AA, before and after a) first, b) second, and c) third cycle of PEC hydrogen evolution.

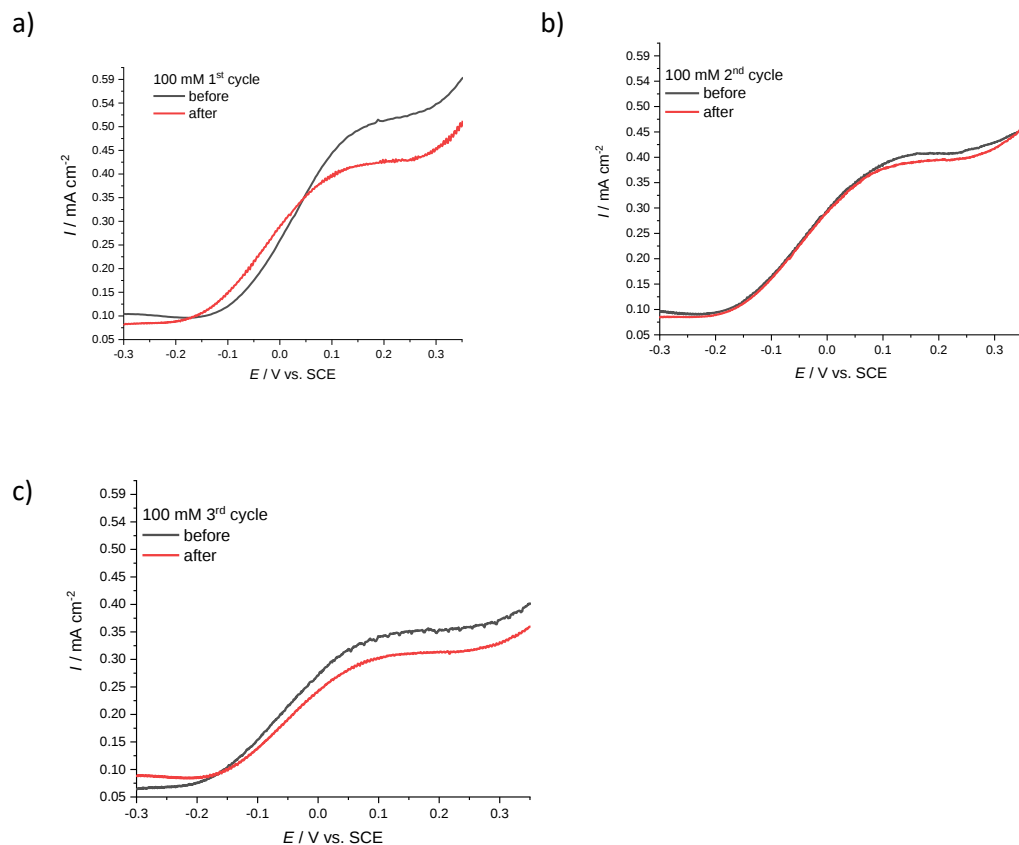


Figure S5. Linear sweep voltammetry plots of illuminated SnS₂ photoanode, recorded in 0.1 M NaCl containing 100 mM AA, before and after a) first, b) second, and c) third cycle of PEC hydrogen evolution.

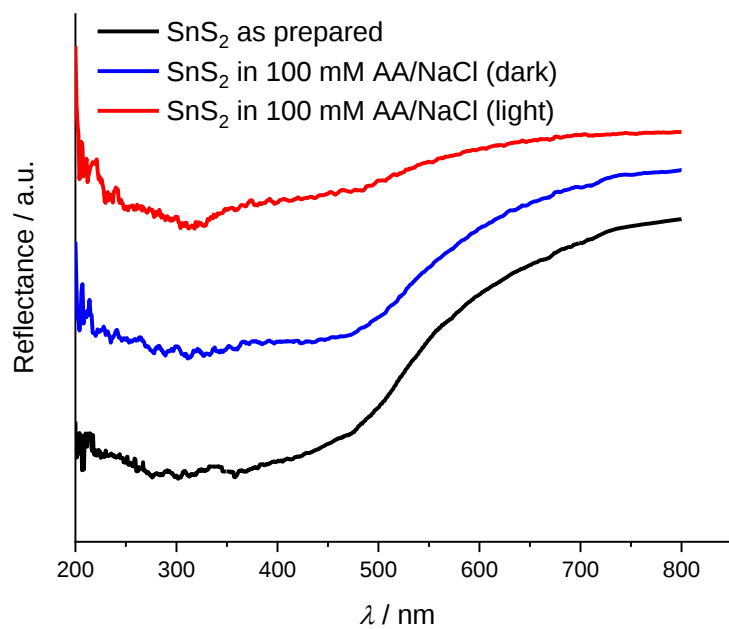


Fig S6. UV/Vis reflectance spectra of SnS₂ powder as prepared and SnS₂ powder treated in 100 mM AA under the light or dark conditions.