

Electronic Supporting Information

Seawater Operating Bio-Photovoltaic Cells Coupling Semiconductor Photoanodes and Enzymatic Biocathodes

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Figures

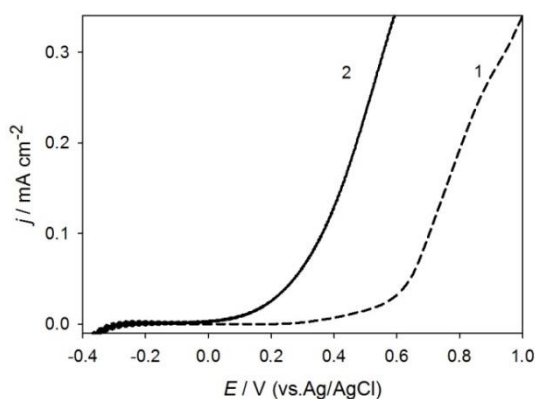


Figure S1. Representative linear sweep voltammograms of photoelectrocatalytic oxidation of water at (1) pristine hematite and (2) Zn-doped hematite in 1 M NaOH under the light illumination (AM 1.5G, 100 mW cm⁻²). Potential scan rate: 5 mV s⁻¹.

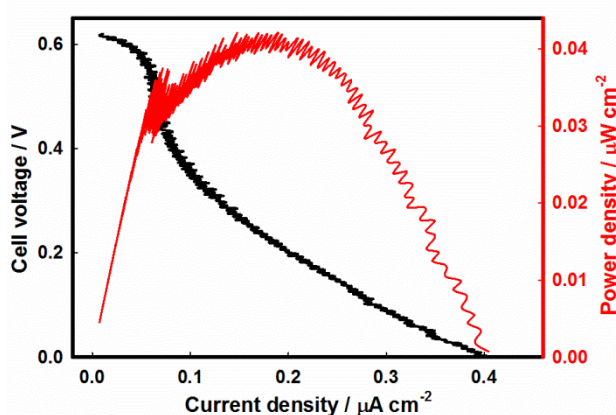


Figure S2. Representative dependencies of the cell voltage and cell power density on the cell current density recorded for the BPV cell comprising Zn-doped hematite and the BOD/GCC biocathode in 1M Tris-HCl, pH 8, dark cell conditions. Maximum power density is 42 nW cm⁻².

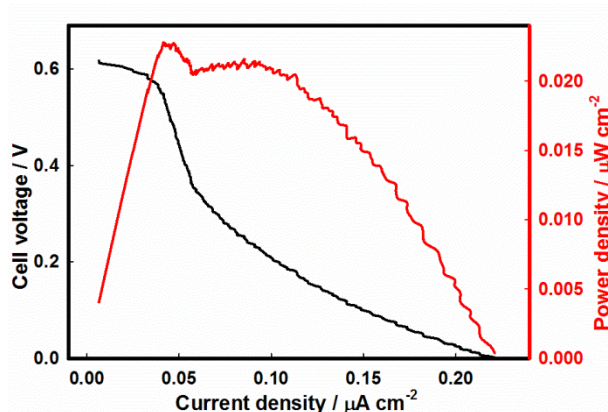


Figure S3. Representative dependencies of the cell voltage and cell power density on the cell current density recorded for the BPV cell comprising Zn-doped hematite and the BOD/GCC biocathode in seawater, dark cell conditions. Maximum power density is 21 nW cm^{-2} .

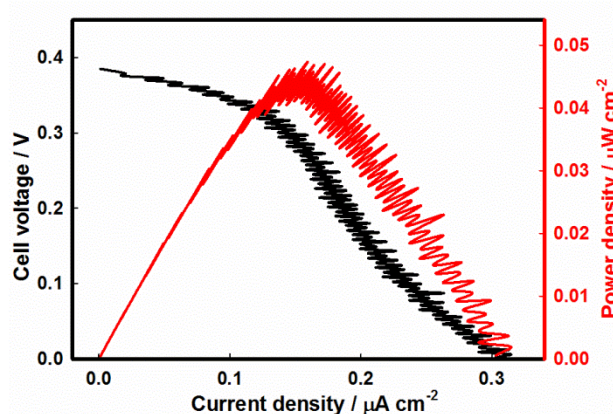


Figure S4. Representative dependencies of the cell voltage and cell power density on the cell current density recorded for the PV cell comprising the Zn-doped hematite photoanode and the Pt mesh cathode in 1 M Tris-HCl, pH 8, dark cell conditions. Maximum power density is 44 nW cm^{-2} .

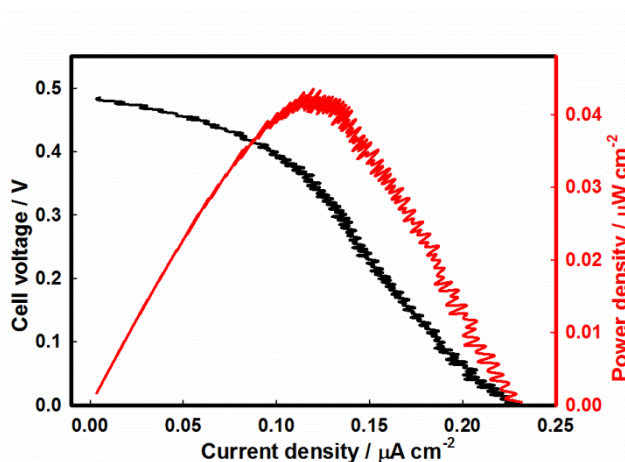


Figure S5. Representative dependencies of the cell voltage and cell power density on the cell current density recorded for the PV cell comprising the Zn-doped hematite photoanode and the Pt mesh cathode in seawater, dark cell conditions. Maximum power density is 42 nW cm^{-2} .