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Solar-powered bioelectrochemical system for efficient cadmium remediation and recovery of reusable solids

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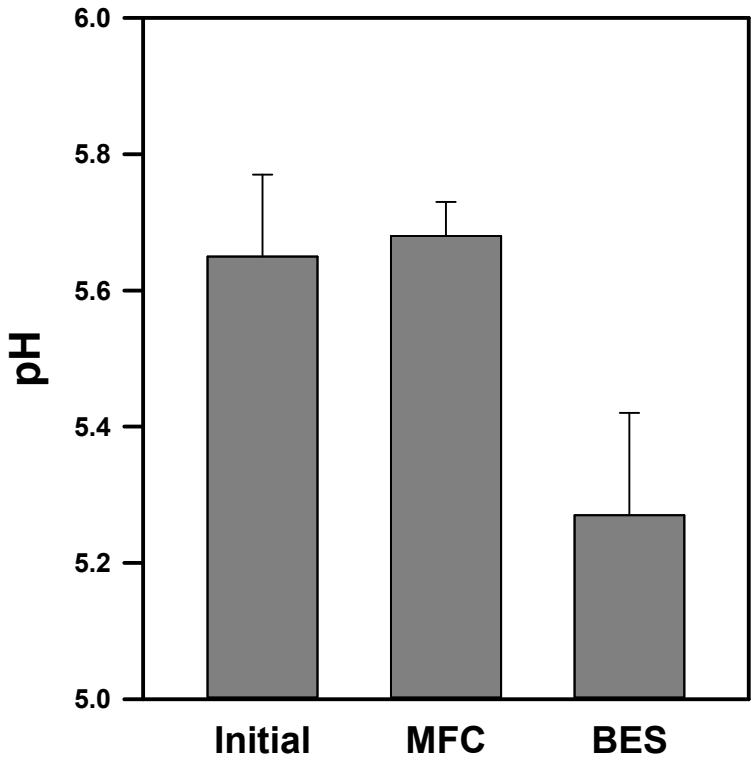

Fig. S1. Bulk pH of the catholyte before operation (Initial) and after 7 days under self-biased MFC and PV-assisted BES conditions (mean ± SD, n = 3).

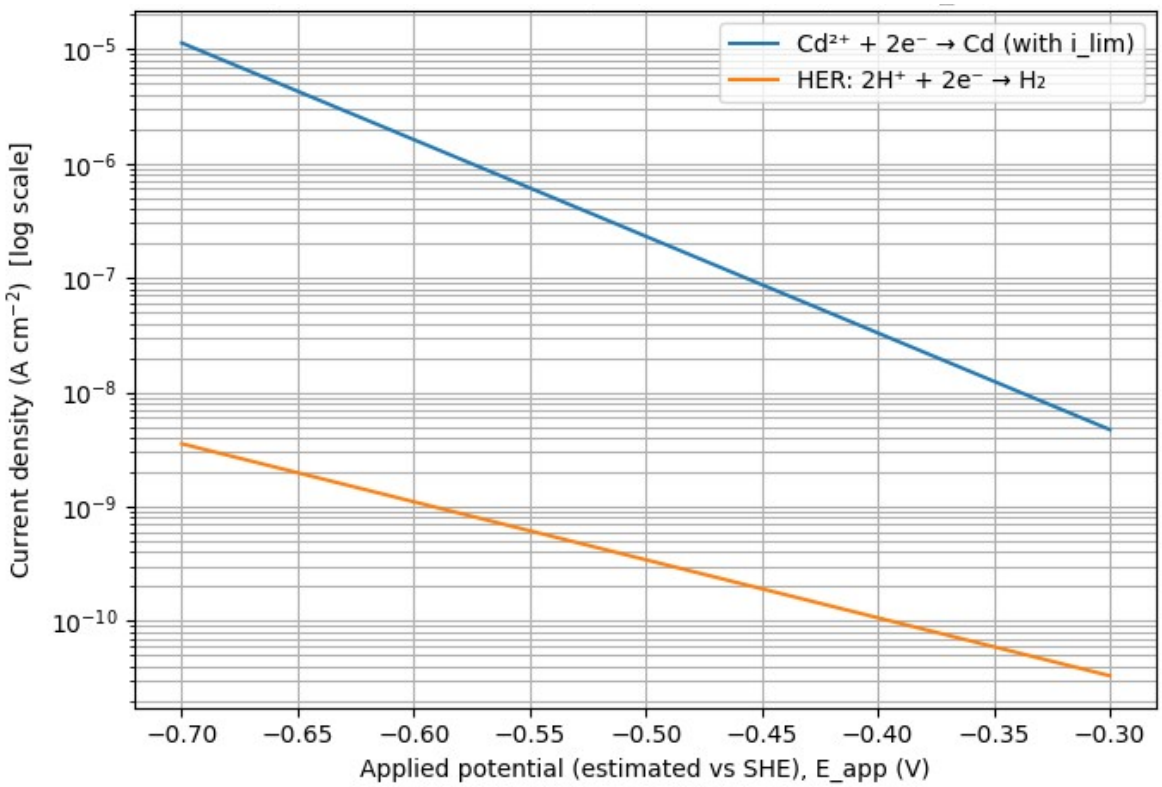

Fig. S2. Butler–Volmer estimates of cathodic competition between Cd^{2+} reduction ($Cd^{2+} + 2e^- \rightarrow Cd$, blue) and the hydrogen evolution reaction (HER, orange) at 25 °C. Calculations assume representative kinetic parameters for indium tin oxide (ITO) electrodes in mildly acidic conditions and include a diffusion-limited current density for Cd^{2+} reduction.