

Supporting Information for

Photoelectrochemical Behavior of n-type Si(100) Electrodes Coated with Thin Films of Manganese Oxide Grown by Atomic Layer Deposition

Nicholas C. Strandwitz,^A David J. Comstock,[†] Ronald L. Grimm,^A Adam C. Nichols-Nielander,^A Jeffrey Elam,[†] and Nathan S. Lewis^{A*}

[†]Argonne National Laboratory
Energy Systems Division
Argonne, IL 60439

^A*Beckman Institute and Kavli Nanoscience Institute
Division of Chemistry and Chemical Engineering
210 Noyes Laboratory
California Institute of Technology
Pasadena, CA 91125*

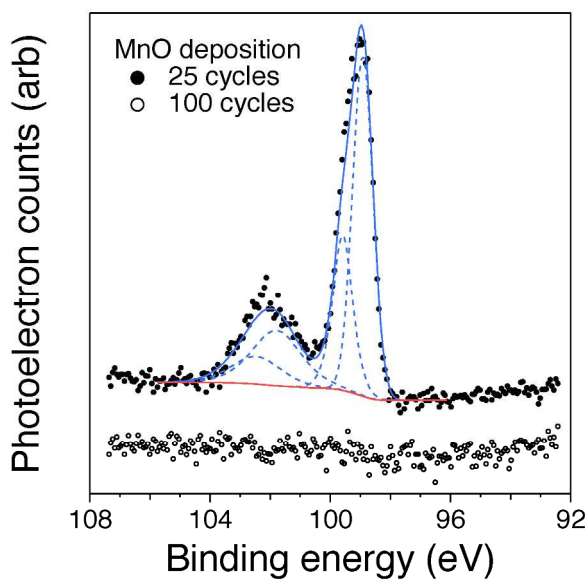


Figure S1. XP spectra of the Si 2p region of MnO|Si photoelectrodes with 100 cycles (~10 nm) of MnO (filled circles and blue line) and 25 cycles (~2.5 nm) of MnO (open circles).

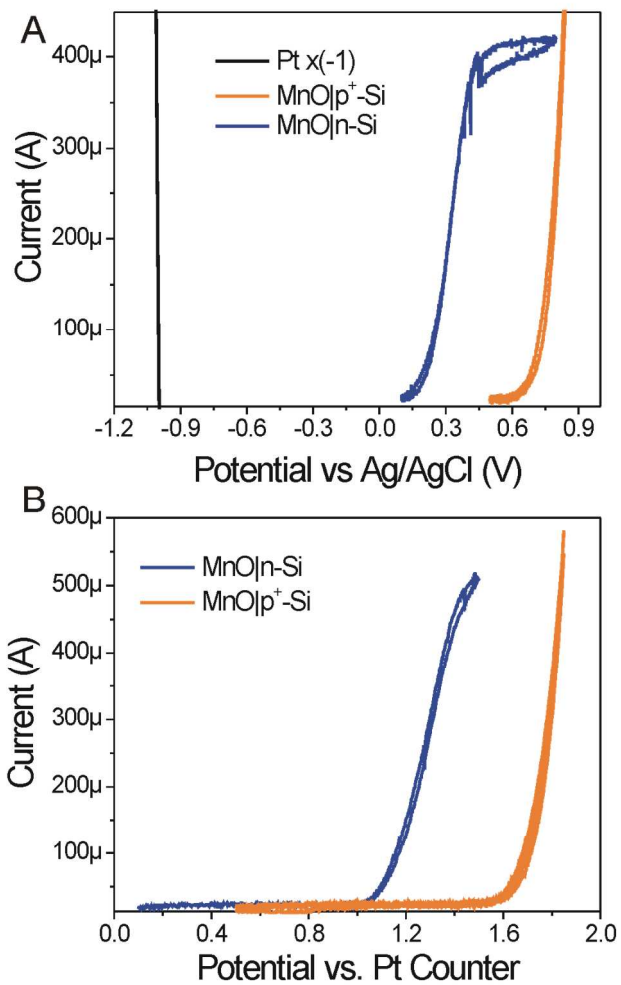


Figure S2. (A) Three electrode current vs potential data for MnO-modified n and p⁺ Si electrodes and the dark Pt cathode measured in 1 M KOH. The current for the dark Pt electrode was cathodic but was multiplied by -1 so all currents were plotted as positive. (B) Two electrode current vs. potential data for the same photoelectrodes where the dark Pt electrode was used as the counter electrode. For clarity, both plots depict current, rather than current density, on the ordinate.