

Supplementary Information

Oxidation Stages of Ni electrodes in Solid Oxide Fuel Cell environments

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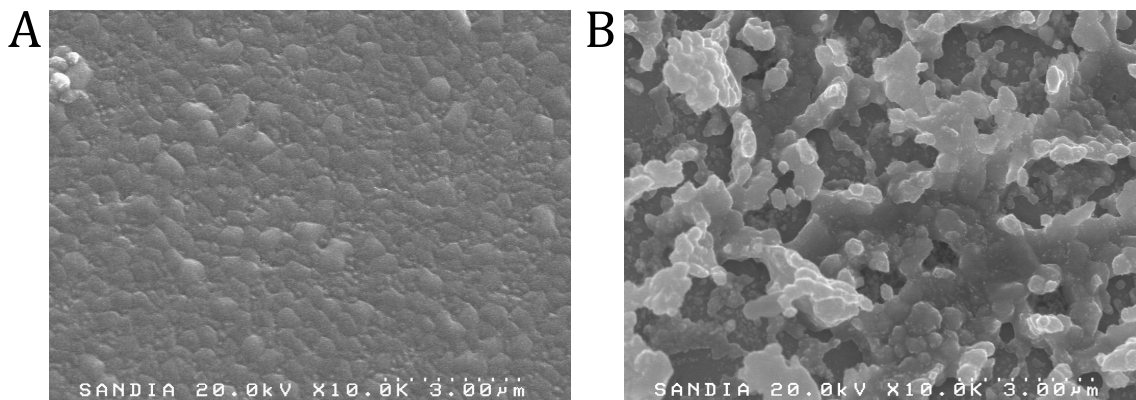


Figure S1: A) SEM micrograph showing the microstructure of the compact Ni (metallic) electrode before the experiment, i.e., as deposited. B) SEM micrograph after the Ni electrode surface has transformed to NiOOH and back to Ni metal. The film is rough and has some porosity.

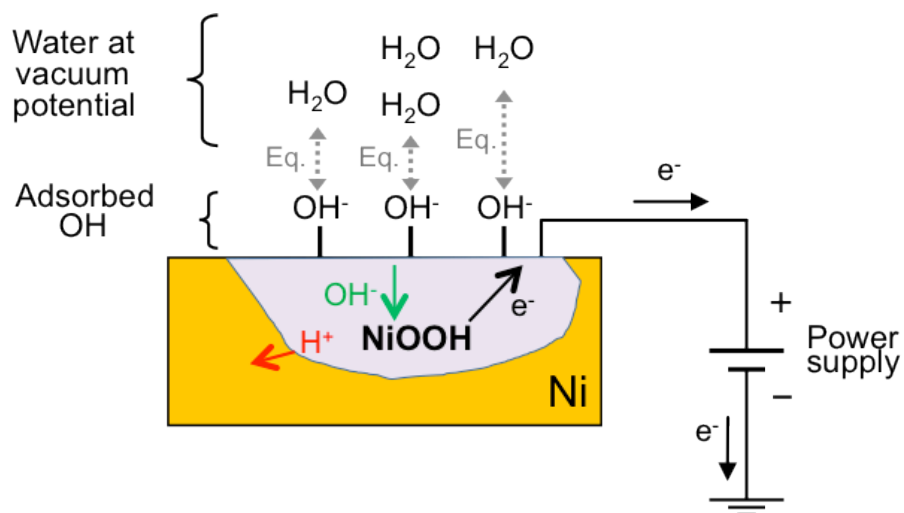


Figure S2: Schematic of the proposed Ni oxidation mechanism (see Fig. 7A in the main text) in a simplified context. We have omitted the fuel cell reactions, counter electrode, and electrolyte to further emphasize the independence between the fuel cell reactions and the NiOOH formation mechanism.