

Supplemental information for:

Spectroscopic characterization of mixed Fe-Ni oxide electrocatalysts for the oxygen evolution reaction in alkaline electrolytes

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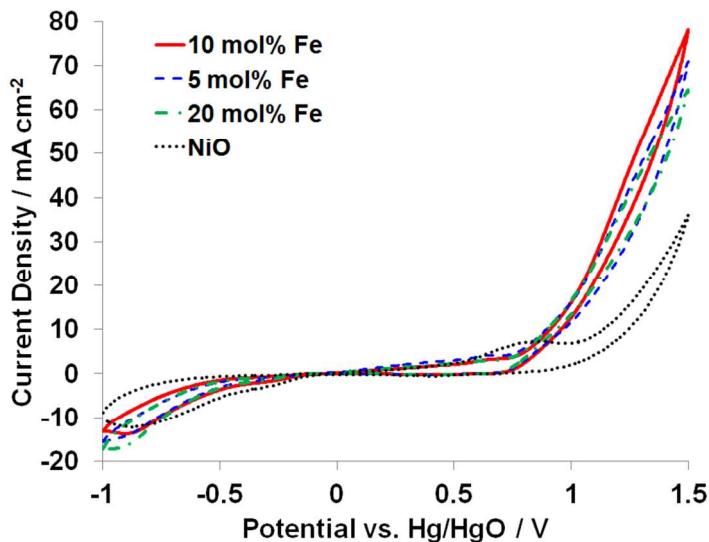


Figure S1: Initial cyclic voltammograms of NiO and 5, 10, and 20 mol% Fe mixed Ni-Fe oxides. The onset of oxygen evolution occurs at a much lower overpotential for the mixed oxides than pure NiO.

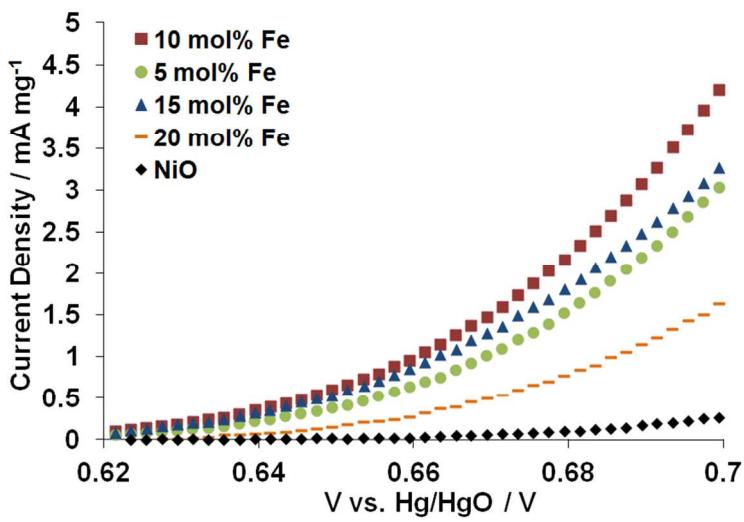


Figure S2: Mass-normalized polarization data for EISA-synthesized electrocatalysts showing the highest activity for the 10 mol% Fe mixed oxide.

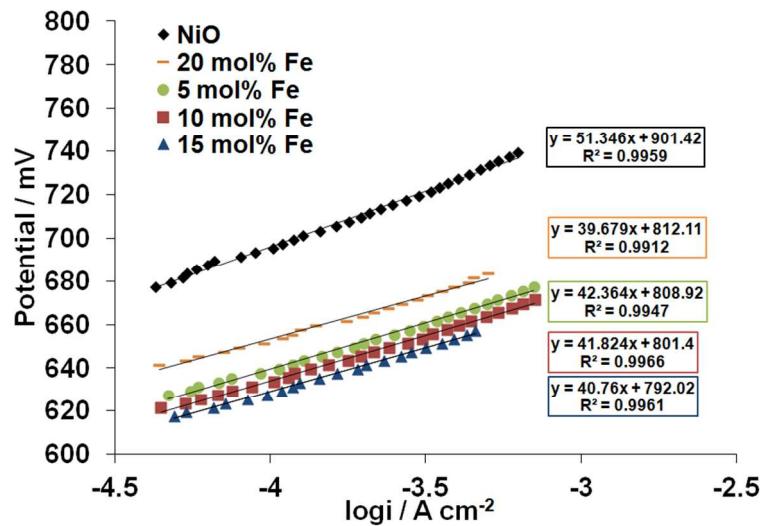


Figure S3: Tafel analysis from the polarization data showing a decrease in the Tafel slope for the mixed oxides, indicative of a change in the rate determining step

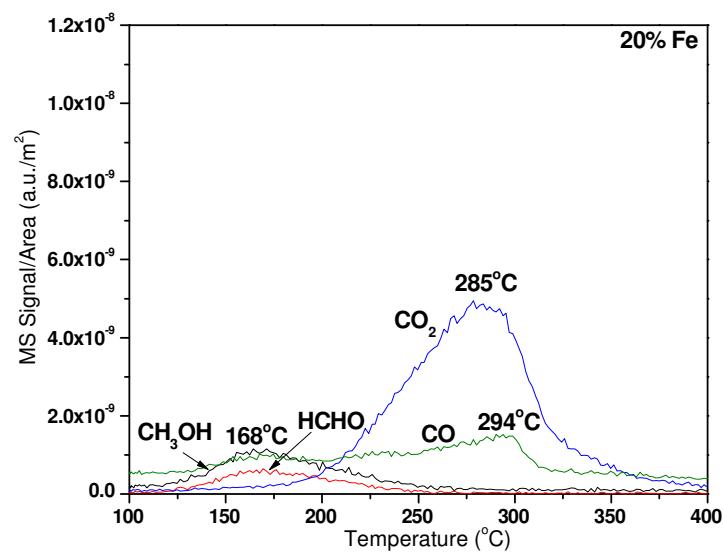
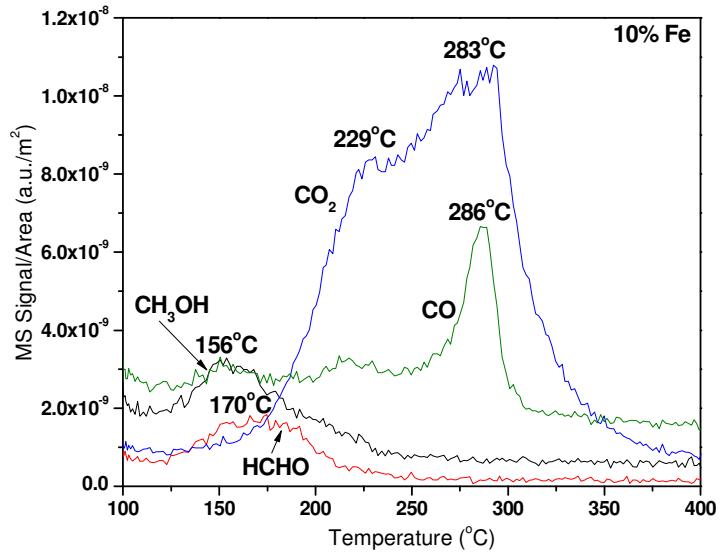
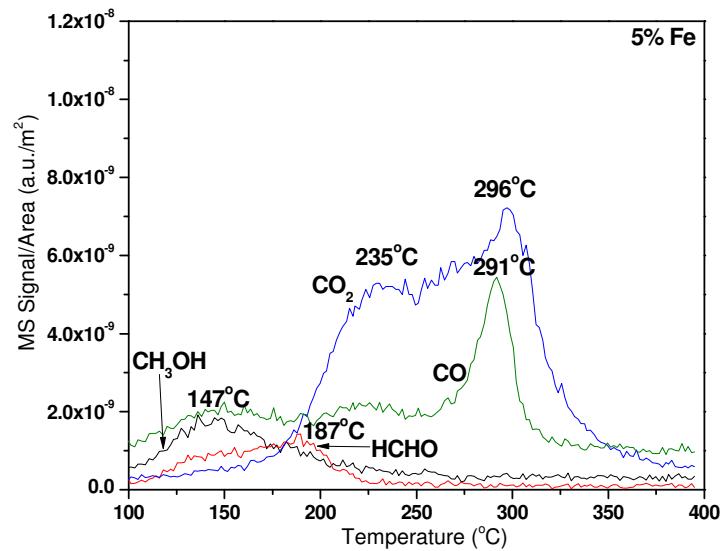
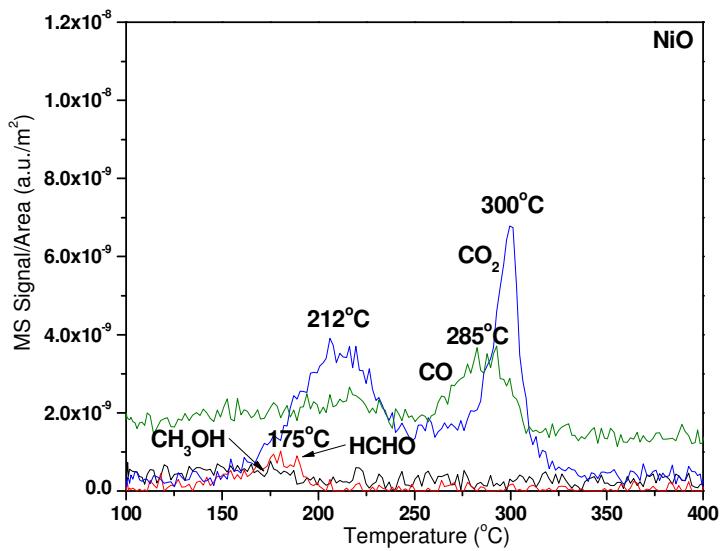


Figure S4: CH₃OH-TPSR of Ni-Fe mixed oxide powders. Note the mass spec signals are normalized by total sample BET area. The DME (dimethoxy methane), DMM (dimethoxy methane) and MF (methyl formate) desorption products were not detected for NiO and Fe-Ni oxides and, thus, are not shown in the above figures.