

Supporting Information

Electrooxidation of Ethanol to Acetate on Mixed-Phase Nickel-Manganese

Composites in Alkaline Environment

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SEM-EDS characterization

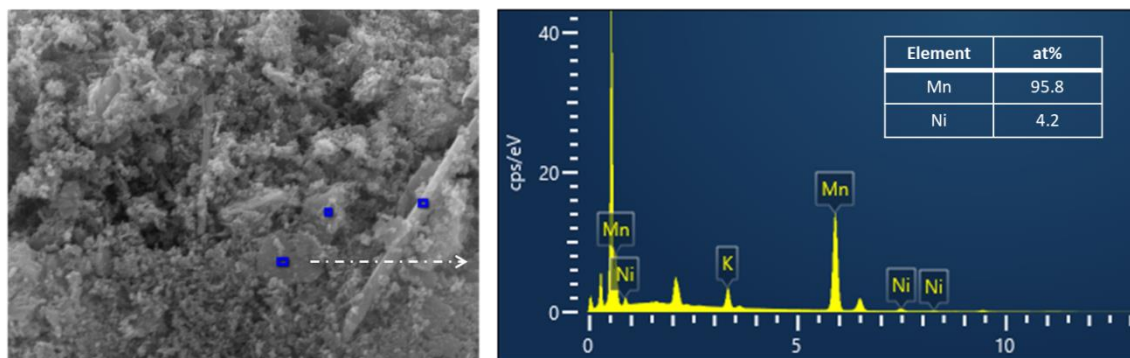


Figure S1. SEM-EDS measurement for the NiMnO_x samples that were produced with Ni/Mn precursor ratio of 5/95.

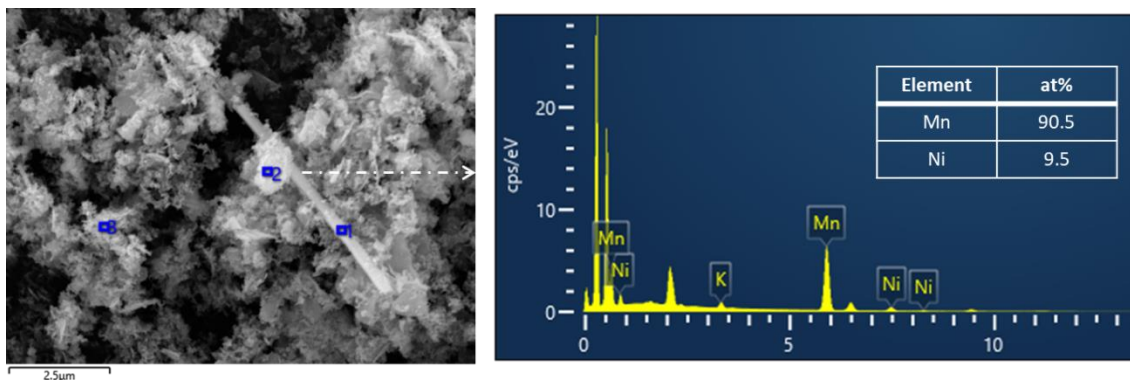


Figure S2. SEM-EDS measurement for the NiMnO_x samples that were produced with Ni/Mn precursor ratio of 10/90.

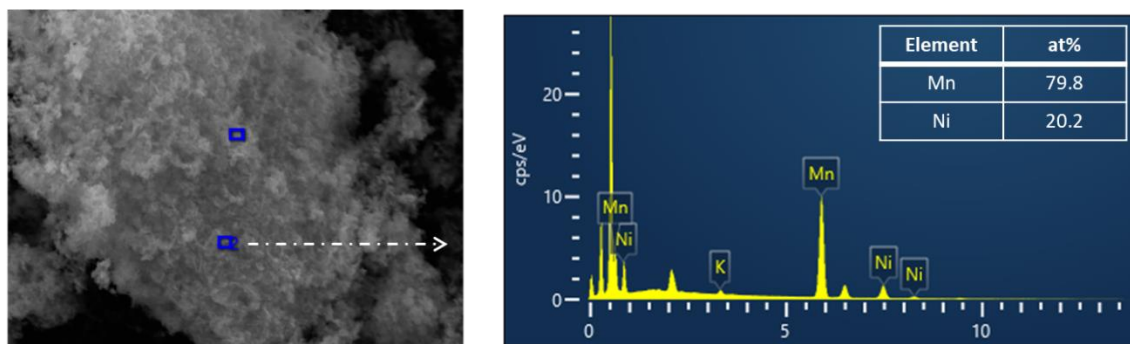


Figure S3. SEM-EDS measurement for the NiMnO_x samples that were produced with Ni/Mn precursor ratio of 25/75.

NMR spectra

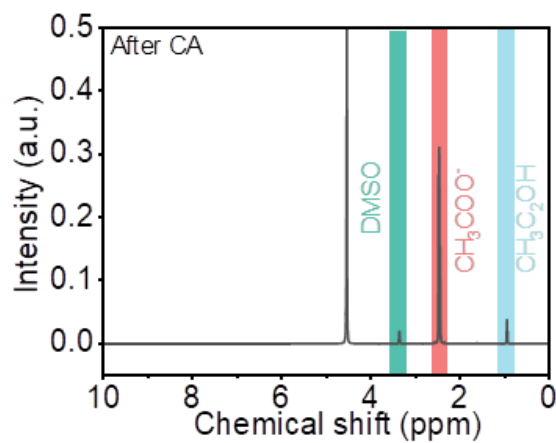


Figure S4. NMR spectra of the electrolyte after 12 h CA in 1 M KOH with the presence of 1 M ethanol.

Post-EOR characterization

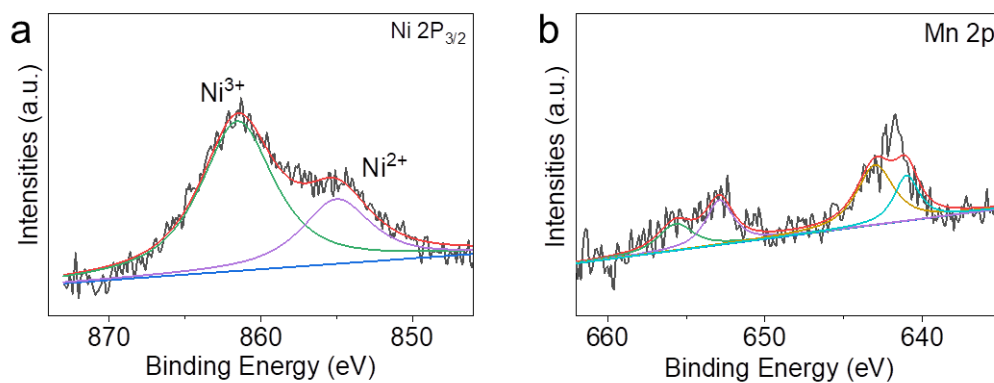


Figure S5. XPS spectra in the (a) Ni 2P_{3/2}, and (b) Mn 2P region of the 5NiMnO_x electrocatalyst after 12 h CA operation in 1 M KOH with the presence of 1 M ethanol.

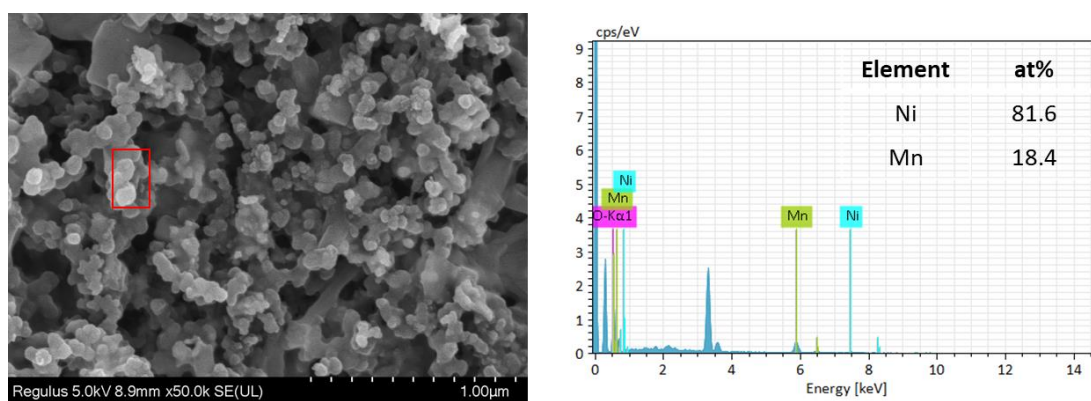


Figure S6. SEM-EDS results of the 5NiMnO_x electrocatalyst after 12 h CA operation in 1 M KOH with the presence of 1 M ethanol.