

Cobalt—Iron (Oxy)hydroxide Oxygen Evolution Electrocatalysts: The Role of Structure and Composition on Activity, Stability, and Mechanism

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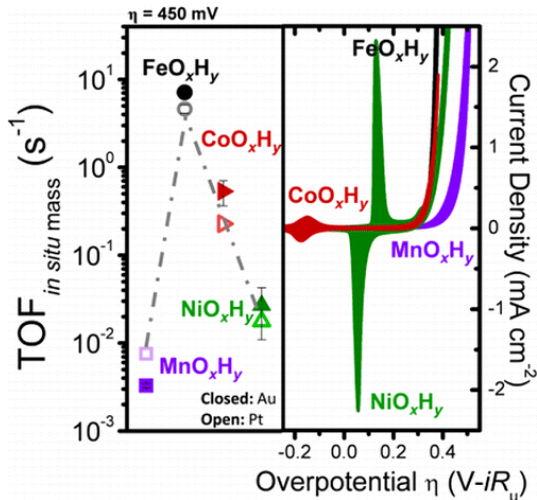
Motivation

Why Co-Fe
(oxy)hydroxide:

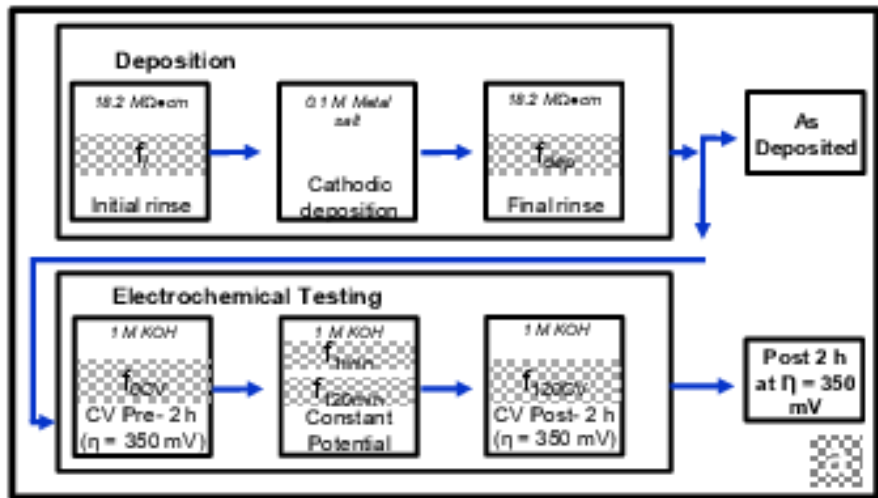
- abundance (price);
- stability;
- conductivity;
- “self-repair”.

Problems:

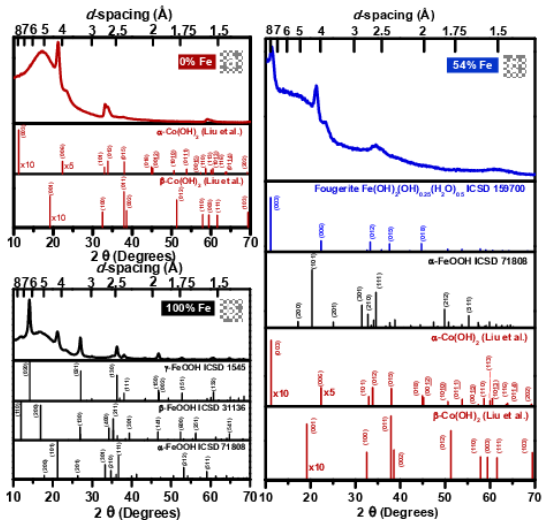
- conflicting reports on activity;
- unknown active sites;
- stability.



Workflow

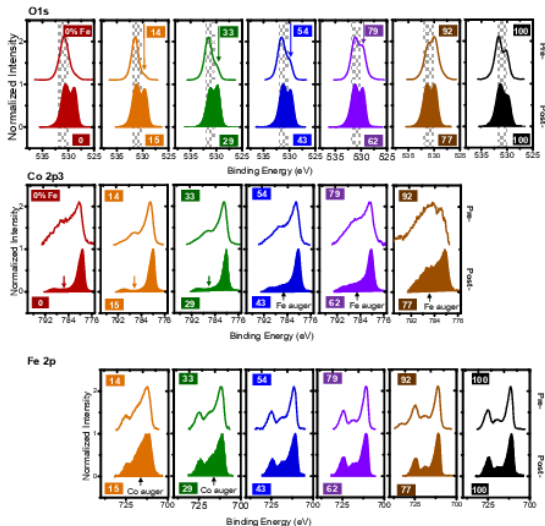


Grazing Incidence X-Ray Diffraction (GIXRD)



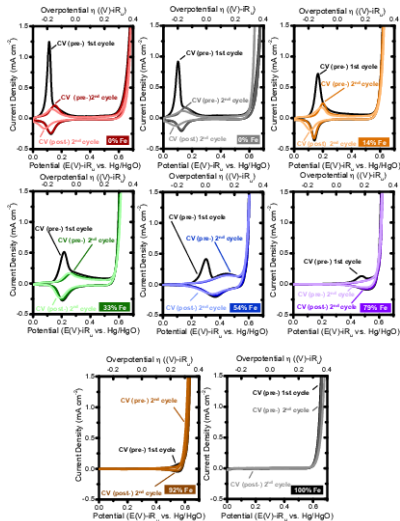
No substrate (Au–Ti) reflections.

X-Ray Photoelectron Spectroscopy (XPS)

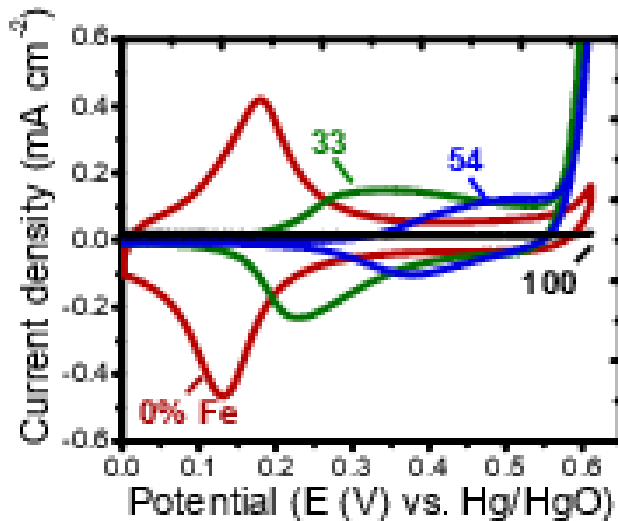


Scanning Electron Microscopy (SEM)

Cyclic Voltammetry (CV)



Cyclic Voltammetry (CV)



Turnover Frequency (TOF)

Conductivity

Dissolution

Conclusion