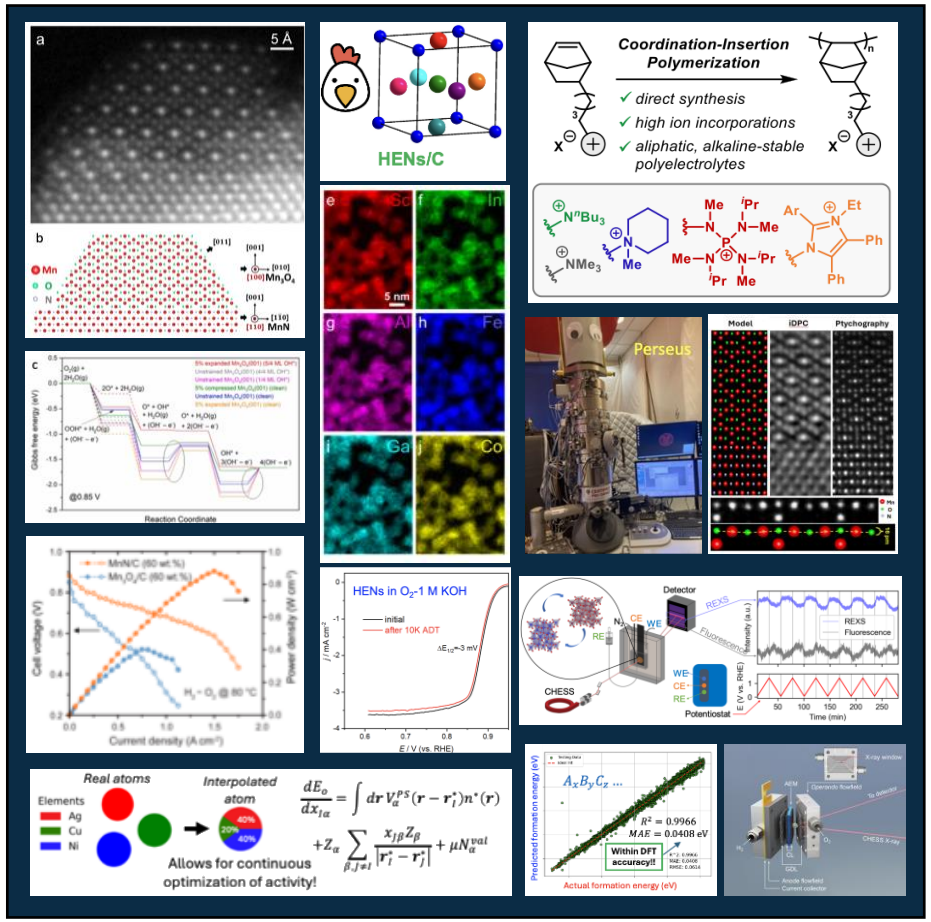
Center for Alkaline Based Energy Solutions (CABES)

Héctor D. Abruña (Cornell University); Class: 2018-2026

MISSION: To advance the scientific understanding of the fundamental factors governing electrocatalysis and electrochemical energy conversion in alkaline media.

RESEARCH PLAN: Alkaline media enables electrochemical energy conversion technologies that can employ only abundant elements. ***CABES*** is establishing, via three ***Fundamental Science Drivers,*** (1.What factors govern electrocatalysis in alkaline media? 2.How do we understand and control transport in alkaline media? 3.What makes energy materials durable in alkaline media?) a comprehensive description of the nature, structure, and dynamics of electrocatalysis in alkaline media. Our work is enabled by a synergistic research approach that integrates theory, computational methods, machine learning and artificial intelligence, synthesis of electrocatalysts and novel membrane materials and the development and use of novel experimental tools to provide *in situ/operando*, spatiotemporal characterization of systems under operation.



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CABES Center for Alkaline-based Energy Solutions

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