



Charles Shaughnessy

Final Doctoral Dissertation Defense
Chemical Engineering



Electroreduction of CO₂: Catalyst and Catalytic System Development

Abstract

Electrocatalytic CO₂ reduction to fuels and chemicals could improve industrial sustainability, as the process is readily powered by renewable energy sources. However, significant challenges, including increasing catalyst selectivity, increasing catalyst activity, and gaining a better fundamental understanding of the reaction kinetics for CO₂ reduction, remain before industrial relevance is achieved. The main objective of this thesis is addressing these concerns through the use of novel catalyst synthesis and the development of Gas eXpanded Electrolytes as a reaction medium.



Committee Chair:
Prof. Kevin Leonard

Thursday, April 18th
Starts at 2:00pm
CEBC, Building A,
Conference Room