JAMES MADISON UNIVERSITY

SEMINAR
Friday, February 28

Dr. Caroline T Saouma

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Virginia Tech

The importance of controlling metal hydride reactivity for future energy schemes

Abstract. The increase in global energy demands, coupled with growing environmental concerns, necessitates the development of viable technologies to store solar energy. Given the role that metal hydrides play in many energy-relevant processes, my group is focused on understanding how to control the reactivity of metal hydride intermediates. My talk will describe how to tune the reactivity of electrocatalysts, that can reduce protons to water, or CO_2 to formic acid or CO.

About Dr. Saouma. Caroline Saouma was born in Pittsburgh, PA and grew up between Boulder, Colorado and Lausanne, Switzerland. After visiting NIST as a second grader, she was hooked on science. She went to MIT to complete her bachelor's degree (chemistry, 2005), where she did research with Steve Lippard on developing cisplatin analogues that target specific malignancies. She then went to Caltech to complete her PhD under the supervision of Jonas Peters, where she investigated iron-mediated reductions of CO_2 and N_2. Her postdoctoral work with Jim Mayer focused on PCET reactions of synthetic FeS clusters and MOFs. She joined the faculty at the University of Utah as an assistant professor in 2014, where her research is focused on mechanistic studies and catalyst design for CO_2 reduction. She is the recipient of the NSF CAREER (2020) and is a *Chemical Communications* Emerging Investigator (2020). She enjoys the outdoors and is an avid cyclist and cross-country skier. She is a strong advocate to promote equity in the sciences, and has given COACh workshops. For this and her contributions to education, she was named a Utah Jazz "Most Valuable Educator" in 2022, one of only 21 educators selected from the entire state (and the first non-K-12). In 2023, she moved to Virginia Tech as an associate professor.

Group webpage: https://www2.chem.utah.edu/saouma

Meet the Speaker **2:00 pm, PCB 3144**
Seminar **3:30 pm, King 159**