

# O-I-M Seminar Series

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## Professor Mir Bowring

Reed College

**November 3, 2023 • 3:00 pm, WIL 110**

Hosted by:



## Overcoming Barriers in Organometallic Chemistry

Our undergraduate research lab investigates mechanisms of organometallic catalysts for generating and storing alternative liquid fuels. In this talk, organometallic systems related to methane activation and hydrogen storage are established as case studies to investigate the causes of anomalously large observed isotope effects. We use kinetic studies to understand unusual behavior that has been attributed to proton tunneling, and generate mechanistic insights for improved catalyst design. In addition, we are pursuing reclamation of automotive palladium pollution for organometallic catalysis. We have also developed a quantitative method for comparing the relative efficacy of common air-free synthetic techniques.

Kinetic barriers in chemical reactions are not the only barriers we interrogate in our work: we also tackle social barriers limiting equal access to science. The second part of this talk will describe work to overcome and minimize such barriers through personal and institutional change.

