



**CHEMISTRY &
BIOCHEMISTRY**

DATE **TIME** **LOCATION**
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CHEMISTRY & BIOCHEMISTRY SEMINAR SERIES

Sustainable Catalysis: Harnessing earth abundant metals for a greener future

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Abstract:

The path towards a greener and more sustainable future relies on the efforts and research we conduct now. As an organometallic chemist, my role is to study and develop catalysis based on earth abundant metals. In recent years there have been great strides in the field, the only problem being that this is only in recent years. For commercial purposes and most large-scale commercial applications rely on high cost and limited supply metals like platinum, iridium, and ruthenium. Not to mention the environmental impact of extracting these precious metals from the earth. Iron and nickel are attractive metals for catalysis because of their abundance and cost. Iron has some unique challenges requiring special preparation to activate the catalysts as well as being highly sensitive. In my research I focus on studying iron and nickel as a possible starting points by focusing on low valence metal complexes that are stable in air. Benchtop stability being a key aspect, widespread industrial use has slowed down because of challenges in scalability and robustness. By researching earth abundant metals, I hope to open the door to a broader use of iron and nickel in chemical synthesis for a greener and brighter future

About the Speaker:

Second year chemist part of the Findlater lab with a dream and some hope :)

For more info, contact: Michael Findlater michaelfindlater@ucmerced.edu.