

Science Frontier Seminar (Chemistry Seminar 3)

Prof. Heinz-Bernhard Kraatz

University of Toronto

Title : Beyond Peptide Materials: Aerogel Composites for the Electrochemical Reduction of CO₂

Time & Date : 16:00, November 6, 2024

Venue : G101 Science Hall



Abstract: The electrochemical reduction of CO₂ is an attractive method to produce renewable fuel and chemical feedstock using clean energy sources. Formate represents one of the most economical target products from this reaction but is primarily produced using post-transition metal catalysts that require comparatively high overpotentials. This lecture will provide details of work by members of the Kraatz team to use different materials to address high onset potentials and formate and CO formation. In addition to metal aerogels and nanoparticles, examples will be presented by describing the use of composite materials and their properties.



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Science Frontier Lecture (Chemistry Lecture 3)

Prof. Heinz-Bernhard Kraatz

University of Toronto

Title : Biological Inorganic Chemistry
– The Basics

Time & Date : 13:15 -14:45,
November 8 and 15, 2024

Venue : G310 Meeting Room



Lecture Contents: Biological inorganic chemistry is at the intersection of biological and inorganic chemistry. Research in this area has contributed to a significant understanding of biological systems, their mechanisms and functions, but has also contributed to the development of new diagnostic methods, analytical techniques, and even functional materials. This course will cover both fundamental and applied aspects of bioinorganic chemistry and will provide a broad overview of the field, covering topics from biological ligands, such as metalloporphyrin and peptides, their interactions with metal ions and how such systems can be used for modern applications. When appropriate, this course will also provide examples of recent research from my group.



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