FACULTY OF SCIENCE
Charles University

School of Chemistry, Faculty of Science (FoS) would like to invite you to attend the lecture

Quo Vadis Chemie

Steering Asymmetric Catalysis with Metal-Centered Chirality

which will be presented by

Prof. Eric MEGGERS

Philipps University Marburg,
Marburg, Germany

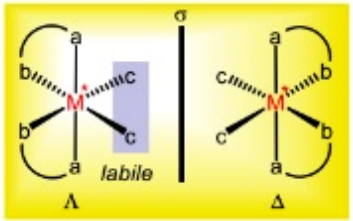
on 06.03. at 14:50

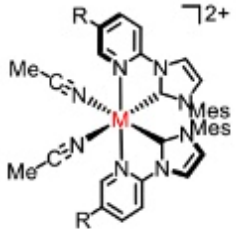
the Lecture Hall CH2, the School of Chemistry Building, FoS CU, Hlavova 8, Praha 2

Abstract: Over the past few years, our laboratory has advanced the design and application of a novel class of powerful asymmetric catalysts in which the required overall chirality originates solely from a stereogenic metal. Such chiral-at-metal catalysts are of interest due to their intrinsic structural simplicity (only achiral ligands) and provide untapped opportunities with respect to novel catalyst architectures and properties. Our initial design consisted of bis-cyclometalated Ir(III) complexes. More, recently, we expanded the family of chiral-at-metal catalysts to Ru(II) bis-(pyridyl-NHC) complexes. Most of these propeller-type complexes feature C_2-symmetry with either Λ- (left-handed screw) or Δ-configuration (right-handed screw).

The presentation will provide insight into the design, synthesis, and applications of such chiral-at-metal catalysts including asymmetric photocatalysis, electrochemistry, and enantioselective C(sp^3)-H aminations.

Rhodium & Iridium





Iron & Ruthenium

Newest application: Expedite synthesis of α-amino acids