



FACULTY OF SCIENCE
Charles University

School of Chemistry, Faculty of Science,
Charles University invites for the lecture

Quo Vadis Chemie

Redox-Active Mesoionic Carbenes for Redox-Switchable Catalysis



which will be delivered by

Professor Biprajit Sarkar

Institut für Chemie und Biochemie,
Freie Universität Berlin

on June 4, 2018 at 15:00

in the Lecture Hall CH2 at the School of Chemistry, Faculty of Science, Hlavova 8

1,2,3-Triazol-5-ylidenes are a prominent mesoionic carbenes that are currently popular as ligands in organometallic chemistry and catalysis. Their synthesis makes the tuning of their steric properties straightforward. However, the tuning of their electronic properties remains a challenge. This contribution will present recent strategies developed for the reversible tuning of the electronic properties of these ligands, which was used to generate the first redox-switchable Au(I) catalyst. Furthermore, it will deal with converting these mesoionic carbenes into chelating redox-active ligands that can act as electron reservoirs and were used to generate complexes that are highly potent electrocatalysts for the reduction of protons to H₂ and for selective reduction of CO₂ to CO.

