



Univerzita Karlova v Praze, Přírodovědecká fakulta

Department of Inorganic Chemistry, Faculty of Science, Charles University
invites for a lecture from the lecture series

Quo Vadis Chemie

Vibrant Spectroelectrochemistry



which will be delivered by

Prof. František Hartl

from:

University of Reading, United Kingdom

Monday, November 14, 2016 at 15:00

**Lecture Hall CH2, Department of Chemistry, Faculty
of Science, Charles University, Hlavova 8, Prague 2**

Abstract: Vibrational circular dichroism (VCD) is a powerful tool for the determination of absolute configuration and conformation of a (chiral) molecule. However, the differences in absorption are extremely low, typically 10^{-5} of the parent absorption. We have shown that different redox states of the same compound can exhibit enhancement of the VCD signal by an order of magnitude and it appears to be a general phenomenon for electrochemically generated low-lying electronic states. As such, electrochemical VCD has a great potential to be a valuable tool for amplifying signals in molecules with small VCD amplitudes and probing local environments of redox active centres.

The lecture will also focus on recent applications of spectroelectrochemistry in combination with epifluorescence microscopy, ultrafast and conventional IR spectroscopy or STM to probe redox switching phenomena in organometallic molecular bridges.

