

PhD position available in the research group of Prof. C. R. Hess

Technical University of Munich (TUM), Germany
Department of Chemistry and Catalysis Research Center

Project Title: 'Earth-abundant macrocyclic metal complexes for photoredoxcatalysis'

Project description:

A research project in our group centers on the development of earth-abundant photoredox catalysts. Photocatalysis has enabled an impressive range of small molecule and carbon functionalization reactions. However, noble metal complexes are commonly used as photosensitizers for these processes. We have developed a series of first-row transition metal complexes based on the macrocyclic Mabiq ligand. These complexes exhibit unique redox and photochemical properties and are promising photoredoxcatalysts. We are currently looking for a student to join our team as a PhD student on this topic. The aim of the project is to explore the scope and opportunities for the mono- and bimetallic Mabiq compounds in photoredox catalysis. The emphasis will be on photocatalysis involving organic transformations.

Throughout the project period, the PhD student will have the opportunity to develop his/her skills in diverse areas that include synthesis, inorganic spectroscopy, photochemistry and catalysis.

Related references:

- 1) Grübel, M., Bosque, I., Bach, T., Hess, C. R. *Chem. Sci.*, **2018**, 9, 3313
- 2) Stark, H. S., Altmann, P. J., Sproules, S., Hess, C. R. *Inorg. Chem.*, **2018**, 57, 6401

Candidate profile & application requirements:

The 3-year position is available starting as soon as possible. Applicants should hold a Diploma/Master's degree (or equivalent) in Chemistry. Previous experience in coordination chemistry or organometallic chemistry is desirable; a solid background in organic chemistry also is advantageous. The application should include a CV, transcripts, a letter of motivation and at least two references. Please send your application materials by email to: corinna.hess@tum.de

For further information, contact:

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<http://www.bioinorganic.ch.tum.de/>