

PhD position in Grenoble

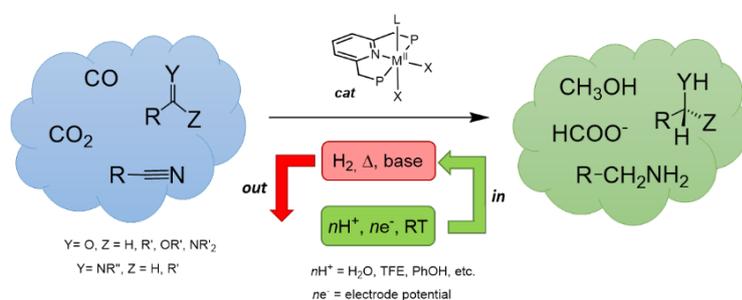
in Sustainable (Photo)Electrocatalysis/CO₂ conversion

Topic: *Electrochemical and photoelectrochemical Hydrogenation of unsaturated C-O/C-N bonds using metal-Pincer complexes; CO₂ conversion*

Organization: Département de Chimie Moléculaire and Laboratoire de Biologie des Métaux.

Project Leaders: Marcello Gennari and Matthieu Koepf.

Project Description: The project aims to develop efficient and selective catalysts for electro driven hydrogenation reactions of unsaturated C-O/C-N bonds using metal-pincer complexes and the integration of the latter into functional photo(electro)catalytic systems. These



reactions offer a pathway to access a variety of value-added chemicals and fuels through environmentally and energetically sustainable processes. The project will target both the conversion of CO₂ and other archetypal small organic substrates.

The successful candidate will work on two main axis: (i) the development of electrochemical hydrogenation reactions, including CO₂ conversion to formate, in a homogeneous medium using metal-pincer complexes and (ii) the immobilization of the most promising catalysts on electrodes and photoelectrodes, allowing for the benefits of homogeneous and heterogeneous catalysis to be combined.

Methods and Materials: Inorganic synthesis, electrochemical and photoelectrochemical characterization, catalytic reaction screening and optimization.

Requirements: Master's degree in chemistry or a related field, background in molecular synthesis and coordination chemistry, including characterization techniques, background/interest in (photo)electrocatalysis, strong motivation to work on sustainable energy research, good written and oral communication skills in English.

Application Process: Interested candidates should submit their CV, motivation letter outlining research interests and relevant experience in the domain, copies of academic transcripts and degrees, and names and contact information of two references to the project leaders: Marcello Gennari (marcello.gennari@univ-grenoble-alpes.fr) and Matthieu Koepf (matthieu.koepf@cea.fr). **APPLICATION DEADLINE: March 26 at 23.59.**