



Université Paris Cité

LABORATOIRE ELECTROCHIMIE MOLECULAIRE

Unité Mixte de Recherche CNRS 7591



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Post-Doctoral Researcher Position Opportunities in U Paris Cité, Paris, France

Electrochemical reduction of CO₂ to CO and CH₃OH with heterogenized molecular complexes. From mechanistic studies to optimization of catalytic electrodes and lab-scale electrolyzer

CO₂ conversion into valuable molecules has emerged as a field of intensive investigation, with the aim of ultimately developing scalable technologies for making fuels using renewable sources of energy. Molecular catalysts heterogenized at conductive electrodes have recently been shown to give very promising performances, including upon implementation in lab-scale electrolyzers. Notably, porphyrins and phthalocyanines give excellent catalytic activity for CO and more reduced products, e.g. methanol. However, fundamental and technological challenges still need to be solved before such catalysts could be inserted in devices. These challenges include mechanistic and spectroscopic (in situ/operando) studies, optimization of electrode formulation and engineering of lab-scale CO₂ electrolyzers (electrodes from 1 to 100 cm²). We seek to enrol 3 PDRA that will work as a team to solve these challenges.

Starting date: 01/10/2023, at the earliest
3 positions are opened
Duration: from 12 to 36 months,
Status: Post-doctoral researcher
Salary: depending on seniority, from 2200 to 3000 euros (monthly net)

Profile

Candidates should hold a PhD in chemistry or material science (or prove equivalent research experience) and have experience in CO₂ electrocatalysis, along with knowledge of catalytic performance characterization and lab-scale device performance assessments.

Application

The candidates are requested to send their application by e-mail to robert@u-paris.fr as soon as possible. The application should include an updated CV, a motivation letter, an electronic copy of master and doctoral degrees and the name of two relevant persons (academics) that can be contacted for any further references. Candidates will be selected based on their scientific excellence and achievements in research.

Additional information

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