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CALL FOR APPLICATIONS 2025 – FELLOWS

Supervisor	Oumaïma Gharbi
Supervisor page	https://lrs.sorbonne-universite.fr/personnes-lrs/oumaïma-gharbi
Host Institution	Centre National de la Recherche Scientifique (CNRS) https://www.cnrs.fr/en
Research Lab	Laboratoire de Réactivité de Surface https://lrs.sorbonne-universite.fr/en
Research Team	Surface science and solid-liquid interfaces https://lrs.sorbonne-universite.fr/en/node/1908

Project Title

Understanding the reactivity of metals with ecofriendly ionic liquids for corrosion protection applications

Project Description

Chromates have long been used in surface treatment for their versatility and cost-effectiveness. Since the REACH legislation, industries are compelled to seek for ecofriendly alternatives. This project aims to explore ecofriendly ionic liquids as inhibitors with a focus on interfacial mechanisms and synergies between the cation and anion, down to the molecular scale. The approach will combine electrochemical and in situ surface science techniques to decipher their inhibition mechanisms.

Keywords

corrosion science, X-ray photoelectron spectroscopy, vibrational spectroscopy

Description of the Host Research Lab

Research at the Laboratoire de Réactivité de Surface is focused on developing and controlling the surface of inorganic materials (such as metal oxides) for applications in heterogeneous catalysis (pollution control, “green” processes, upgrading of bio-sourced molecules or pollutants) and biointerfaces (biosensors, anti-biofilm surfaces, biopiles, prebiotic chemistry).

To submit your application, please send an email with the required documents to
msca-pf@sorbonne-universite.fr