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Marie Skłodowska-Curie Actions

*Developing talents,
advancing research*

Postdoctoral Fellowships



CALL FOR APPLICATIONS 2025 – FELLOWS

Supervisor	Anna Proust
Supervisor page	https://ipcm.fr/recherche/presentation-equipe-epom/composition-equipe-e-pom/anna-proust/
Host Institution	Sorbonne Université https://www.sorbonne-universite.fr/en
Research Lab	Paris Institute of Molecular Chemistry https://ipcm.fr/en/en-the-institute/
Research Team	Polymetallic edifices https://ipcm.fr/index.php/en/en-research/en-presentation-e-pom-group/

Project Title

Molecular oxide counter-cations as unconventional tuners for neuro-inspired nano-electronics

Project Description

It aims at:

- (i) deciphering the intricate role of polyoxometalate (POM) counterions in the charge-trapping and -stabilization mechanisms of redox resistive switching devices;
 - (ii) introducing redox cations to break with the intrinsically low conductivity of POM molecular materials.
- Besides gaining POM expertise, the candidate will benefit from solid collaborations with physicists and theoreticians to explore the dynamics of the POMs/cations association in non-volatile neuromorphic devices.

Keywords

molecular oxides, charge transport, resistive switching devices

Description of the Host Research Lab

The IPCM (Institut Parisien de Chimie Moléculaire/Parisian Institute for Molecular Chemistry) is a joint research unit between Sorbonne Université and CNRS (Centre National de la Recherche Scientifique). The expertise in molecular chemistry in the broadest sense, the great diversity of the teams and the laboratory's high-performance technical platforms lead to research ranging from the structuring of matter on a molecular scale to materials, involving know-how in inorganic and organic chemistry, polymer science, nanoscience, and even the interfaces with biology. The scientific results of the IPCM, in relation to the major societal challenges, have an impact on fields ranging from health, the environment and new energies to information technologies.

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