



Postdoctoral Fellowships

MSCA

Marie Skłodowska-Curie Actions

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advancing research*



CALL FOR APPLICATIONS 2025 – FELLOWS

Supervisor	Marie Albéric
Supervisor page	https://www.researchgate.net/profile/Marie-Alberic
Host Institution	Sorbonne Université https://www.sorbonne-universite.fr/en
Research Lab	Laboratoire de Chimie de la Matière Condensée de Paris https://lcmcp.science/
Research Team	Spectroscopies, modélisation, interfaces pour l'environnement et la santé https://lcmcp.science/smiles/

Project Title

Bio-inspired pigmented vesicles for understanding calcium carbonate coloration in sea urchins

Project Description

Color in sea urchins is due to naphthoquinone pigments occluded within their calcium carbonate spines. These pigments are stored in vesicles and released during crystal growth. To elucidate these mechanisms, we will synthesize giant vesicles loaded with pigments via microfluidic and further induce membrane lysis by mineral precipitation to mimic the formation of colored biomineral. The findings aim to better understand biomineral pigmentation and inspire sustainable material development.

Keywords

pigmented giant unilamellar vesicles, microfluidics and confinement, pH, CaCO₃

Description of the Host Research Lab

The LCMCP is a well-known figure in the development of inorganic or organic-inorganic hybrid functional materials, and in the evaluation of their physico-chemical properties at different scales. These materials target applications with high societal impact, particularly in the fields of energy, health and the environment.

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