



**MSCA**

Marie Skłodowska-Curie Actions

*Developing talents,  
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## Postdoctoral Fellowships



### CALL FOR APPLICATIONS 2025 – FELLOWS

<b>Supervisor</b>	Lionel Marcon
<b>Supervisor page</b>	<a href="https://www.researchgate.net/profile/Lionel-Marcon">https://www.researchgate.net/profile/Lionel-Marcon</a>
<b>Host Institution</b>	Sorbonne Université <a href="https://www.sorbonne-universite.fr/en">https://www.sorbonne-universite.fr/en</a>
<b>Research Lab</b>	Observatoire Océanologique de Banyuls-sur-Mer <a href="https://www.obs-banyuls.fr/en/">https://www.obs-banyuls.fr/en/</a>
<b>Research Team</b>	Laboratory of Microbial Biodiversity and Biotechnology <a href="https://www.obs-banyuls.fr/en/research/research-units/lbbm.html">https://www.obs-banyuls.fr/en/research/research-units/lbbm.html</a>

#### Project Title

Designing High-Performance Antimicrobial Coatings with Modified Nanophotocatalysts for Hospital Environments

#### Project Description

This project aims to design antimicrobial coatings with modified nanophotocatalysts for hospital air disinfection. Semiconductor structures will be synthesized hydrothermally, combined with titanium oxide, metal-organic frameworks, and enhanced with metal doping. Visible-light absorption will be optimized using carbon nitride and photosensitizers. The most effective composites will be evaluated for antibacterial activity, aiming to create durable antimicrobial coatings for hospital environments.

#### Keywords

nanophotocatalysis, antimicrobial coatings, hospital air disinfection

#### Description of the Host Research Lab

With an exceptional location, in particular a great terrestrial and marine biodiversity, and the presence of a wide range of scientific and technical skills housed in its infrastructures, the OOB is perfectly positioned to be an important player in oceanography, ecology and marine biology. The goal of this research is to better understand the functioning of coastal or offshore marine ecosystems and the biology of the organisms that inhabit them with the objectives of identify threats to them, decipher how marine organisms adapt to their environment and to the changes caused by human activities, analyze the conditions for sustainable exploitation of marine biodiversity.

To submit your application, please send an email with the required documents to  
[msca-pf@sorbonne-universite.fr](mailto:msca-pf@sorbonne-universite.fr)