



Post-Doctoral fellowship in non-conventional isotopes in coastal environments

General information

Workplace : Laboratory of Oceanography of Villefranche ([LOV](#)), South France

Date of publication : 21st March 2025

Type of Contract : FTC Scientist (full time)

Contract Period : 24 months

Expected date of employment : June 2025

Remuneration : between 2500 and 3500 euros per month according to experience

Desired level of education : PhD

Experience required : Indifferent

Deadline for application: 25th April 2025

Missions

This position is related to the ERC Advanced project SeaLi2Bio “Biological Isotopy of Lithium isotopes in Littoral Zones” that started in April 2024. Lithium (Li) is key in the energy transition and massively used to produce mobile devices and electrical vehicles. Yet its current consumption rate exceeds its river flux to the ocean, and it is poorly recycled, while Li excess is toxic for aquatic life and humans. Although concentrations of Li and its isotopes have been measured in coastal waters, at river outlets, to study continental chemical weathering and climate controls, Li monitoring has been occasional. Moreover, bias caused by anthropogenic inputs is not quantified. Combining a novel isotopic methodology with ecotoxicology and biology approaches, SeaLi2Bio aims to determine and understand the littoral Li contamination sources, flux and controls, and quantify its current contribution to the Li cycle. Plankton, macroalgae and bivalves will act as long-term bioindicators at selected reference sites. By disentangling the factors of Li contamination from the natural background, SeaLi2Bio will assemble a first robust reference for a global issue tied to the history of climate and its future evolution in response to reduction of fossil fuels use.

This pluridisciplinary project includes scientists from different fields: isotope geochemists, biologists, and modelers, with collaborators located in various laboratories in France and in different continents.

Activities

The post-doc will focus his/her activity on quantifying, interpreting and modeling lithium level and lithium isotopes in coastal environments. The post-doc will also participate to the experimental work initiated at the cellular and at the organism level, in collaboration with other laboratories.

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Presentations to international conferences will be possible, as well as student supervision and mediation actions.

Skills

Candidates should have a significant experience with non-traditional isotopes. Additional expertise will be appreciated in environmental science, (paleo)oceanography, or biology. Skills in data modeling would be an asset. The capacity to get organized, work in a multidisciplinary team, and the ability to write and communicate easily in English is essential.

Work context

LOV is a joint research unit of both the CNRS and Sorbonne University, and is a French marine station highly active in plankton ecology, ocean acidification and marine biogeochemical cycles. At LOV, the candidate will participate to the Chemistry-Ocean-Climate (CHOC) team dynamics that involves about 12 researchers, technical staffs and several PhD students and post-docs. In the context of the project, He/She will be fully involved in the ERC SeaLi2Bio team meetings, workshops, and papers.

An equipped clean laboratory, as well as ICP-OES (Perkin), TQ-ICP-MS (ICap MTX), and MC-ICP-MS (NEOMA, installed in 2024) will be available for the project, with the help of two technical staffs dedicated to these approaches. On site, there are also other equipments and technical platforms such as GC- EA-IRMS, Orbitrap, Optical Sensors, Quantitative Imaging, Boats, Cultures in controlled conditions and Cytometry.

Application

Send applications (CV, name of two referents, motivation letter) or questions to:

nathalie.vigier@imev-mer.fr (PI of SeaLi2Bio project) and to isabelle.thomin@imev-mer.fr, before 25th April 2025



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