

## Post doctoral Position in sulfur isotope geo-biology

Start date: 01.01.2025

Duration: Two years.

Percentage time: 100%

Place of work: Geopolis – UNIL Mouline

The Institute of Earth Surface Dynamics (IDYST) at the University of Lausanne invites applications for a postdoctoral position in geobiology, funded by an SNF project. This interdisciplinary project combines microbiology with isotope geochemistry to study the formation, preservation, and alteration of biosignatures preserved in sedimentary pyrite. Microbial metabolisms involving sulfur are considered extremely ancient and thus may have played an important role in shaping the surface chemistry of early Earth. These ancient metabolic reactions are known to leave stable isotopic signatures in byproducts ( $\text{HS}^-$  and  $\text{H}_2\text{S}$ ) that are subsequently involved in forming Fe-S minerals, notably pyrite. These isotopic fingerprints allow us to trace their origin and extent in modern environments. This project aims to investigate the fractionation of S isotopes in microbial cultures under controlled conditions and environmental samples. This work will lead to a more detailed understanding of the microbial and/or environmental variables that control the isotopic composition of sulfur in sedimentary pyrite throughout the geologic record.

The minimum qualification for this position is a Ph.D. in geochemistry, geobiology or a related field. A strong background in stable isotope geochemistry with previous experience in geochemical techniques and sulfur isotope analyses (e.g. chemical extractions, HPLC, EA-IRMS) is required. The laboratory facilities at UniL are equipped for both inorganic and organic sulfur analyses and there is the possibility for further development according to the candidate's interest. Previous experience in microbiology would be an advantage. Good written and spoken English is required. A working knowledge of French is not required initially, but the successful candidate will need to acquire sufficient skills by the end of the first year to be able to assist with practical work.

Please send your applications which should include (1) a detailed curriculum vitae, (2) a one page statement of research interest and (3) names and contact details of three potential references to Prof. Johanna Marin-Carbonne ([Johanna.MarinCarbonne@unil.ch](mailto:Johanna.MarinCarbonne@unil.ch)) and Prof Jasmine Berg ([jasmine.berg@unil.ch](mailto:jasmine.berg@unil.ch)) in a single pdf file.

Please also mention your preferred starting date in the cover letter.

Any question can be directed to Prof. Johanna Marin Carbonne and Prof Jasmine Berg.  
Applications must be received by 15 of November 2024.

The University of Lausanne is an equal opportunity employer.