

2 PhD Positions in Environmental Biogeochemistry

The Environmental Chemistry Group is offering **2 PhD positions** in the Institute of Chemistry at the University of Neuchâtel (Switzerland) with Prof. Laurel ThomasArrigo. The group aims to understand the abiotic and biotic processes that control the biogeochemical cycling of nutrients, major and trace elements, and contaminants in soils and sediments by combining field- and laboratory-based methods with wet chemistry and spectroscopic techniques.

Project description

Mineral phases in soils play a key role in global element cycles. Yet our understanding of how fluctuating soil redox conditions affects mineral stability and impacts the sequestration and/or mobilization of associated trace metals and nutrients is not clear. The aim of the 2 PhD projects will be to elucidate the role of mineral phases in controlling **(PhD 1)** trace metal speciation and mobility and **(PhD 2)** the preservation or decomposition of organic carbon during redox cycles. To this end, successful PhD candidates will conduct lab-based experiments exploiting novel methods (e.g., stable isotopes as tracers) and advanced spectroscopic techniques (synchrotron XAS, XRD).

Main duties and responsibilities include

- Design and execute laboratory experiments
- Publish research results in international scientific journals
- Attend and present research at national and international conferences
- Participate in teaching and supervision of laboratory practical courses

Your profile

- Masters degree in a relevant field (e.g., environmental science, chemistry, engineering, ecology, soil science)
- Motivated, creative, with a strong interest in environmental science research
- Good organizational and communication skills
- Knowledge in wet chemistry and lab techniques and a willingness to learn
- Experience with synchrotron techniques or XRD is an advantage
- Fluent English (written and spoken) is essential and basic French is an advantage

We offer

- An inclusive and supportive working environment that encourages scientific curiosity and creativity
- Opportunities to learn advanced analytical methods (e.g., spectroscopic techniques, X-ray diffraction)
- Opportunities to attend and present at conferences and meetings
- The chance to build a scientific network in the fields of environmental and soil biogeochemistry

The University of Neuchâtel offers a stimulating research environment within a small setting. With ~4'200 students, 22% of which come from abroad, the university's small size encourages advanced training and fosters relationships between students and professors. Situated on the shores of Lake Neuchâtel between Geneva, Bern, and Zürich, Neuchâtel is a perfect place to undertake high-level research in an idyllic setting between lakes and mountains.

Start date: Summer 2023 (or upon agreement)

Duration: 4 years

Application and additional information

Review of applications will start immediately and will continue until the positions are filled. To apply, please send the following documents as a single pdf file with the subject line **"PhD application_ [your name]"** to laurel.thomas@unine.ch:

- A concise statement (2 page max.) describing your motivation and interest in this PhD position
- Detailed CV
- Contact information for 2-3 references
- Copies of transcripts from BSc and MSc studies

For additional information, please contact Prof. Laurel ThomasArrigo by email at laurel.thomas@unine.ch