

July, 2023

Open PhD Position On the understanding of the anaerobic oxidation of methane in river sediments

Are you interested in a research career and in working at the frontiers of biogeochemical processes? Then here is an opportunity to perform your studies on surface-water issues in an internationally recognized research environment.

Context of the project

The overall aim of the project is to investigate the role of the anaerobic oxidation of methane (AOM) in river sediments with a focus on process understanding. Methane is the second most important greenhouse gas and the increase of atmospheric methane concentrations has accelerated significantly in recent years (IPCC, 2021). One suspected reason for this effect is an increase in emissions from natural sources such as freshwater sediments. Therefore, an improved understanding of the methane cycle in freshwater systems is required.

Scientific focus of the announced position

Within this project, related research questions will be studied using field investigations and laboratory experiments, as well as mathematical modeling. Among others this will include the understanding of water transport, analysis of process-related isotope fractionation, determination of process kinetics, analytical modeling and model development. To measure stable isotopes several analytical tools are available at the Chair.

Qualifications

At the date of appointment candidates must hold a Master degree in natural sciences, preferably with a specialization in the fields of bio-geochemical sciences, environmental sciences or hydrogeological sciences. The successful candidate must be an efficient team worker, have good communication skills, and have a critical approach to the formulation and testing of hypotheses. Practical experience and willing to work in the proposed scientific field is a prerequisite.

PhD Position at the Chair of Hydrogeology

We are one of the leading university institutes in Europe with a large network worldwide. We have an international environment with an international MSc education. Therefore, this position also requires teaching activities within the first and second year of your research at the Chair of Hydrogeology. You have to fulfill a schedule of around 3,5 contact hours per semester. TUM is an equal opportunity employer. Qualified women are, therefore, particularly encouraged to apply. Applicants with disabilities are treated with preference given comparable qualification.

Salary and appointment terms

As researcher at TUM you will be part of the scientific staff and treated as such. The salary and appointment terms are consistent with the current rules for TUM degree students. The salary and appointment terms are consistent with the current rules for TUM degree students. It depends on qualification and is in accordance to the Public Sector Collective Agreement (TV-L E12/13, 75%-position). The period of employment is 3 years. The starting time of the PhD project is not later than beginning of 2024.

Further information

Further information is available. Please send an email to **f.einsiedl@tum.de**.

Application

Please send your application to **irene.danhofer@tum.de**

Keyword: Open PhD-Position

Please attach the following documents (create one pdf file for your application):

- A cover letter explaining the applicant's motivation to apply for the research project (not more than one page)
- A curriculum vitae providing relevant academic, employment and personal details
- Authorized academic transcripts and copy of your master thesis
- Contact details for two reference persons that we may contact for further inquiries
- Documentation of English language competence

Candidates will be evaluated based on their research potential and commitment and selected candidates will be invited for an interview.

The scholarship is open to both German and international applicants.

All interested candidates irrespective of age, gender, race, religion or ethnic background are encouraged to apply.