



Photo: Thomas Jösel

## Doctoral position (f/m/x)

### in biogeochemistry/isotope geochemistry including radiocarbon

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

The PhD project will focus on characterizing microbial communities and their role in carbon cycling in permafrost soils in a warmer and wetter Arctic. This includes microbial activity measurements and the use of carbon isotopes ( $^{13}\text{C}$ ,  $^{14}\text{C}$ ) to quantify carbon uptake, respiration, and sources of  $\text{CO}_2$  emissions. A further focus is on assessing how enhanced plant-derived carbon inputs and mineral-associated carbon stabilization influence microbial processes. The work will be carried out in close cooperation with national and international partners. The position will be based in the Institute of Geology and Mineralogy in the Organic Geochemistry & Radiocarbon group.

#### YOUR TASKS

- » Planning and conducting field measurements in Arctic regions including: organizing fieldwork and logistics, sampling of sediments, water, and measurement of  $\text{CO}_2$  and  $\text{CH}_4$  fluxes
- » Analyzing organic matter composition and microbial communities using organic-geochemical techniques
- » Planning and conducting laboratory experiments
- » Applying and improving existing methods (e.g.  $\text{CO}_2$  and  $\text{CH}_4$  samplers, vacuum systems)
- » Analyzing data using statistical methods
- » Publishing results in peer-reviewed journals and at conferences/meetings

#### YOUR PROFILE

- » M.Sc. in geosciences, environmental sciences, chemistry or related subjects
- » Willingness and ability to participate in several 2-3 week long field campaigns in the Arctic
- » Pronounced interest and excellent background in biogeochemical cycles, isotope geochemical and/or organic geochemical methods
- » Creative ability to develop digital solutions for data analysis
- » Ability to work well independently and within a team
- » Strong interest in technical and analytical work
- » A high level of competence in spoken and written English

#### WE OFFER

- » 3 year doctoral position
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » Opportunity to work remotely

The University of Cologne promotes equal opportunities and diversity. Women will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from all suitable candidates regardless of their gender, nationality, ethnic and social origin, religion, disability, age, sexual orientation and identity.

Upon allocation of funds, the position is available from 1 May 2026 on a part-time basis (27,88 hours per week). It is limited for a fixed term until 30 April 2029. If the applicant meets the relevant wage requirements and has the appropriate personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications (letter of motivation, CV, list of publications, copies of certificates) without a photo under: <https://jobportal.uni-koeln.de>. The reference number is Wiss2601-10. The application deadline is 23 March 2026.

For further inquiries, please contact Professor Dr. Janet Rethemeyer ([janet.rethemeyer@uni-koeln.de](mailto:janet.rethemeyer@uni-koeln.de)) and take a look at our [FAQs](#).

