

Open postdoc position in Environmental Microbiology

‘Small but powerful - using mineral nanoparticles to improve microbial wastewater treatment’

We are seeking an environmental microbiologist to investigate a novel approach for improving biological wastewater treatment by applying mineral nanoparticles. This project will investigate cultures of anaerobic Fe(III)-reducing ammonium-oxidizing (Feammox) and methanogenic microorganisms amended with mineral nanoparticles for ammonium removal, phosphorous recovery and simultaneously producing methane.

We will carry out laboratory experiments with geochemical and molecular analyses (qPCR) to follow microbial growth, NH_4^+ removal and CH_4 production efficiency. In addition, the nanoparticles will be analyzed (wet-chemistry, ICP-MS, XRD, Mössbauer spectroscopy).

The postdoc will be given many opportunities to be creative and innovative, to apply state-of-the-art microbiological and geochemical analyses, molecular techniques, microbial physiological studies, and spectroscopy. This postdoc will work closely together with a second postdoc from this joint project with Prof. Sara Kleindienst's group at the University of Stuttgart (see open position in Stuttgart here: <https://careers.uni-stuttgart.de/job/Stuttgart-Postdoc-Position-in-Environmental-Microbiology/964393455/>). The postdocs will have access to the teaching and research sewage treatment plant (LFKW).

Start date for successful applicant is summer 2024 (or as soon as the candidate is available). Employment (TVL E13, initially for 1 year – potentially extended by up to 3 years) will be arranged by the University of Tübingen.

Requirements:

- Strong background in Environmental Microbiology, Microbial Ecology and Geochemistry.
- Ability to work independently and in a team.
- Excellent management and communication skills.
- Highly motivated for interdisciplinary research.
- Good computer and language (English) skills.

For more information and to apply, please send a CV, motivation letter and overview of techniques and methods previously used by email before March 15th, 2024 to:

Prof. Dr. Andreas Kappler (andreas.kappler@uni-tuebingen.de), Geomicrobiology, Department of Geosciences, University of Tübingen, Germany. <https://uni-tuebingen.de/de/104138>