

Project

This Postdoc position builds on ongoing research projects in the area of NanoElectroMembrane processes for the removal of trace pollutants during water reuse. The main aim of this project is to fabricate an electrochemical membrane and extend its applications in environmental monitoring and remediation.

The research is carried out in collaboration with the Hebrew University of Jerusalem and the Technion, in Israel. The project is developed with the following objectives, i) design and set-up of an electrochemical membrane filtration system, ii) develop a suitable membrane with good electrochemical properties, iii) study the effectiveness of membrane for the removal of micropollutants.

This research will investigate the following research questions;

- ◆ Which kind of composite membranes are suitable in electrochemical filtration?
- ◆ How to measure the electrochemical properties of membrane?
- ◆ What are the mechanisms involved in trace pollutant removal in electrochemical membrane filtration?

Further, the postdoc will be responsible for process development, setup and control of this membrane filtration system in the laboratory working with workshops and suppliers.

At postdoctoral level the preparation of research proposals and publications, participation in team responsibilities and activities as well as the supervision of students is a key requirement. Management of the BMBF funded project involves the preparation of reports, budget controls and organization of project meetings. Throughout the project, there will be additional opportunities for cooperation with internal and external partners, team events, as well as contributing to (a minimal amount of) teaching.



Qualifications

You will hold a PhD in Chemical, Process, Environmental Engineering, or equivalent. You are a naturally curious person who is eager to learn more and has a strong interest in research. Experience with membrane filtration and electrochemical systems (of any scale) is a definite advantage, as well as being comfortable in specifying system components and sound experimental problem solving skills, water analysis and micropollutant experience – as well as a good common sense. Excellent English language proficiency is essential, basic German language skills of advantage. Willingness to travel to Israel for project meetings as well as a valid driver's licence is required.

KIT

KIT is one of the biggest research institutions worldwide and has access to state-of-the-art research facilities resulting from the merger of the National Research Centre of the Helmholtz Association and the former Technical University of Karlsruhe. This project is hosted by the new Institute for Advanced Membrane Technology (IAMT).

Position details

TvOD E13 100% for 3 years

Contact

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Applications

Please send applications with cover letter addressing position requirements, CV, publication list and your contribution to the publication (if relevant), academic transcripts, degree certificates, contact details for three references and a preliminary research proposal to the above contact(s).

Closing date: 31 October 2020