

# **PhD Candidate**

# Project Description:

## Novel Membrane Materials & Systems for Micropollutant Removal

KIT is one of the biggest research institutions worldwide and has access to state-of-the art research facilities within the National Research Centre of the Helmholtz Association and the former Technical University. The IFG-Membrane Technology Department was established in March 2014. As a PhD Candidate you will be responsible to work on a research project within one of the three main interest areas of the department (i) new membrane materials, (ii) membrane retention and fouling mechanisms, and (iii) membrane systems development – applied to water treatment.

This entails the identification of a set of research questions based on detailed literature survey and discussion of research needs with colleagues. Development of a research plan and timetable for the 3 year research project, set-up of required equipment and development of relevant analytical methods. Execution of the research plan through conducting of experiments, sample and data analysis and write up of results for scientific publication are part of the PhD process – a journey to become an independent researcher.

In addition, cooperation with internal and external partners, bachelor and master student supervision, oral presentations and contribution to teaching within the Faculty of Chemical and Process Engineering are part of the candidate responsibilities. Travel and research funding is sought from national and international funding bodies. The position is not defined by a particular project and hence provides the opportunity for the candidate to develop a project of personal interest (obviously in agreement with the supervisor(s)).

#### **Qualifications:**

#### Masters in Chemical/Process/Environmental Engineering/Applied Science or equivalent

You have completed a diploma / master degree, have a strong interest in research and experience with experimental laboratory work.

Experience with water treatment processes, membrane technologies, polymer materials, analytical chemistry, micropollutant detection and environmental issues will be a good foundation to the position, although candidates with a stronger foundation in membrane material synthesis or micropollutant specific analytical chemistry skills lacking applications experience will equally be considered.

Excellent English language proficiency is essential, basic German language skills of advantage.

Affiliation:

### KIT - Institute of Functional Interfaces (IFG) - Membrane Technology

c/o KIT Campus North, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen,

Germany

Faculty:

KIT - Faculty of Chemical and Process Engineering

c/o KIT Campus South, Kaiserstrasse 12, 76131 Karlsruhe, Germany

Deadline:

Applications are open and candidates will be considered continuously

Start Date:

Open

Contact:

Prof. Dr.-Ing. Andrea Iris Schäfer, Tel +49(0)721/608-26906, Andrea.Iris.Schaefer@kit.edu Professor of Water Process Engineering - Faculty of Chemical and Process Engineering Head of Membrane Technology Department - Institute of Functional Interfaces (IFG) https://www.ifg.kit.edu/english/mt.php

**Applications:** 

Please send applications with CV, publication list (if relevant), academic transcripts, degree

certificates, contact details for three references and a preliminary research proposal.