Technische Universität Dresden

TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the **Faculty of Chemistry and Food Chemistry,** the **Chair of Inorganic Chemistry I** offers, subject to the availability of resources, a full-time project position as

## Research Associate / Postdoc (m/f/x)

(subject to personal qualification, employees are remunerated according to salary group E 13 TV-L)

starting **November 1, 2026**. The position is limited until October 31, 2028. The period of employment is governed by § 2 (2) Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). The position is funded by the European Union.

Junior researchers within the meaning of these guidelines are natural persons, who have completed their studies or PhD no more than six years before submitting the project proposal (deadline 01.04.2026) for funding the junior research group or who have submitted the application to open the doctoral procedure by submitting the dissertation. This period is extended by two years for each supervised child born between the completion and submission of the project proposal.

Natural persons who have previously received doctoral funding from the ESF/ESF Plus for more than 36 months or who were previously employed for more than 36 months as early career researchers in an ESF/ESF Plus-funded early career researcher, early career researcher or REACT research group are only eligible for funding if they are working as postdocs. The doctoral project must already have been completed for these persons or the application to initiate the doctoral procedure must have been submitted with the dissertation. Sentence 1 does not apply if the natural person was working as a Student Assistant or Research Assistant.

### Tasks:

- establishing a database for adsorption data of fluorinated gases (F-gases)
- simulation of Gas Adsorption isotherms for relevant F-gases in advanced crystalline adsorbents, including competitive water adsorption (humidity) effects
- establishing AI-supported algorithms for material selection in close feedback loops with experimentalists
- machine learning for process implementation and scaling
- process simulation of adsorption processes on system level
- collaboration and exchange with team members: Close collaboration with partner groups within the joint project, participation in project meetings and integration into the networks of contributing institutions
- documentation and presentation of results: Writing of scientific publications, presentations on national and international conferences, contribution in teaching and supervision of students

### Requirements:

- very good university degree (M.Sc. or equivalent) in chemical engineering, materials sciences, chemistry, computational science, physics, data science, or a closely related field
- specialization in computational chemistry, data science, porous materials, FAIR guidelines
- practical experience in the simulation and analysis of adsorption data, experience in the managing of databases
- profound knowledge in porous materials and adsorption processes
- strong programming and data skills
- excellent results on individual performance criteria (e.g., manuscript/publication resulting from Master and PhD thesis, awards) and timely completion of higher education
- strong motivation to independently conduct research and to work in interdisciplinary collaborations (especially LCA)
- strong interest in interdisciplinary research on environmental technologies and digitalization
- excellent written and verbal communication skills in the English language

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The university is a family-friendly university. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

**Application:** Please submit your detailed application with the usual documents quoting the **reference number w26-187** by **August 31, 2026** (stamped arrival date of the time stamp on the email server of TUD applies) **exclusively by email**, preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file to **sekretariat-ac1@mailbox.tu-dresden.de.** Expenses incurred in attending interviews cannot be reimbursed.

TUD is a founding partner in the DRESDEN-concept alliance.

DRESDEN concept

**Reference to data protection:** Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.