TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. 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 Mechanical Science and Engineering, Institute of Process Engineering and Environmental Technology, the Chair of Chemical Process Engineering offer, subject to the availability of resources, a position as

**Research Associate (m/f/x)**

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

starting **January 1, 2024**. The position comprises 75% of the fulltime weekly hours and is limited to 3 years. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG). The position offers the chance to obtain further academic qualification (usually PhD).

**Tasks:** In a junior research group, funded by the ESF PLUS, innovative bio-chemical process chains for the production of valuable chemical substances from CO₂ via the intermediate ethylene glycol (EG) will be developed. For the upstream catalytic hydrogenation of dimethyl oxalate to EG, suitable operating conditions for heterogeneously catalyzed gas- or liquid-phase processes will be identified. The utilization of solid foams with high thermal conductivity as catalyst support for efficient temperature control will be evaluated. Furthermore, the focus is on the evaluation of the by-products for the subsequent fermentation process in the microbial process stage. Process models will be developed and applied to estimate the energy needed for the processing of product streams to meet by-product tolerance ranges. The PhD project requires the presentation of research results in journals and at conferences.

**Requirements:** university degree in the fields of Chemical Engineering, Process Engineering, Energy Process Technology, Technical Chemistry or similar, with clear reference to process-related questions;; joy in experimental work and solving engineering problems; creativity; interest in new forms of collaboration with students and knowledge transfer. Sound knowledge on reaction kinetics is of advantage, as well as competencies in process design (e.g. aspenONE, gPROMS) and data analysis / programming (e.g. MATLAB, Python).

Further information on +49 351 463-34106.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. 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.
Please submit your detailed application with the usual documents by **November 15, 2023** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies) to: **TU Dresden, Fakultät Maschinenwesen, Institut für Verfahrenstechnik und Umwelttechnik, Professur für Chemische Verfahrenstechnik, Herrn Prof. Dr.-Ing. Markus Schubert, Helmholtzstr. 10, 01069 Dresden, Germany** or via the TUD SecureMail Portal [https://securemail.tudresden.de](https://securemail.tudresden.de) by sending it as a single PDF file to **cvt@tu-dresden.de**. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

**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://tudresden.de/karriere/datenschutzhinweis](https://tudresden.de/karriere/datenschutzhinweis).