



A position is available at the Institute of Energy Process Engineering and Chemical Engineering, Professorship of Energy Process Engineering



Research Associate – reference number 270-E/2021

to be filled within the framework of a third-party funded project at the earliest possible time.

Pay grade: E13 TV-L
Hours: 1,0 FTE (part-time possible)
Contract type: 3 years (prolongation aspired)

The team at the Chair of Thermochemical Conversion Process Modeling uses numerical models to develop new, sustainable technologies for the chemical industry and metallurgy. A key process is the partial oxidation of carbonaceous feedstocks to produce synthesis gas - a basic material for the chemical industry.

Job description:

The researcher is expected to develop new reactor and burner concepts for the partial oxidation of gaseous feedstocks with the help of numerical flow simulation. The focus is on reducing CO₂ emissions and maximizing conversion. The tasks include:

- (Further) development of CFD-based computational models for partial oxidation processes
- Application of the computational models for the development and optimization of new reactor and burner concepts
- Support in the planning and evaluation of accompanying experimental investigations
- Validation of the computational models on the basis of experimental data
- Cooperation with national and international partners from science and industry
- Publication of research results in international journals and conferences

What you can expect from us:

- A position in an active and supportive research group at a family-friendly university with flexible working hours
- Salary in accordance with the collective labour agreement for civil servants of the German states
- Support from experienced colleagues for lab work, scientific publications and participation in conferences
- Possibility to take part in the University's career development programs
- Collaboration in a young, international team; interdisciplinary working environment

What we expect from you:

- University diploma or master's degree in process engineering, mechanical engineering, informatics, mathematics or a related field
- Knowledge of CFD modeling of reactive flows preferred
- Independent, self-reliant way of working and support of the working group
- Enthusiasm and creativity
- Very good English language skills (verbal and written)
- Readiness for further qualification

**For further information please contact PD Dr.-Ing. habil. Andreas Richter, Phone: +49 3731 39-4801,
E-mail: a.richter@iec.tu-freiberg.de**

The applicant must meet the hiring requirements for fixed-term employment contracts according to the WissZeitVG. Applicants with disabilities will receive preferential consideration, provided they possess equal qualifications. For consideration, we ask you to submit proof of your disabled status together with your application documents. TU Bergakademie is committed to increasing the number of women in teaching and research positions, hence qualified female candidates are especially encouraged to apply.

Written applications, including a CV, motivation letter and copies of all relevant qualifications documents (certificates, diplomas), should be submitted by **03 December 2021** stating **reference number (270-E/2021)** to the following address:

**TU Bergakademie Freiberg, Dezernat für Personalangelegenheiten, 09596 Freiberg or
bewerbungen@tu-freiberg.de**

Your application documents will not be returned, please only submit copies. Candidates will not be compensated for any costs incurred for attending interviews. TU Bergakademie Freiberg is always looking for scientific personnel from various disciplines. Further information can be found at <http://tu-freiberg.de/wirtschaft/karriere/stellenausschreibungen>