TU BERGAKADEMIE FREIBERG

TUBAF
Die Ressourcenuniversität.
Seit 1765.

# Research Associate (m/f/d)

**reference: 18-E/2026**

Institute of Energy Process
Engineering and Chemical Engineering, Chair of Reaction Engineering

Hours: 1,0 FTE (40 hours/week, part-time may be possible) Pay-grade: E13 TV-L
Contract type: 36 months Start: at the earliest possible time

The Technische Universität Bergakademie Freiberg creates solutions in research and teaching for the global challenges of the 21st century—the sustainable, safe, economical, and environmentally friendly extraction, provision, and use of resources. Innovative strength, scientific expertise, sustainability, and internationality are core elements of our resource university.

The research is part of a publicly funded project to produce sustainable olefins and aviation fuel components using CO2-based Fischer-Tropsch synthesis.

## Main tasks:

The research project deals with the development of iron catalysts for the production of short-chain olefins (primarily ethene and propene) as sustainable chemical feedstocks as well as liquid hydrocarbons useful as “green” aviation fuel. The project uses $CO_2$ and $H_2$, which are converted into the targeted product fractions by Fischer-Tropsch synthesis using the novel iron catalysts. The project is part of a consortium including another academic partner and companies of the chemical industry.

## The work includes:

- Preparation and physico-chemical characterization of iron catalysts
- Investigation of the activity and selectivity of catalysts toward Fischer-Tropsch synthesis
- Determination of optimal catalyst properties for the synthesis of short-chain olefins and kerosene components (structure- activity-selectivity correlations)
- Upgrading of the liquid Fischer-Tropsch products (e.g. hydrotreating)
- Upscaling of catalyst preparation and Fischer-Tropsch synthesis to produce liquid products on a liter scale

## What you can expect from us:

- Working at a family-friendly university with flexible working hours
- Remuneration according to the provisions of the collective agreement for the public service of the German federal states in accordance with the personal requirements
- A wide range of networking, mentoring and development opportunities
- Attractive fringe benefits, e.g. asset-based benefits (VL), company pension schemes (VBL), health management; Job Ticket for public transportation

## What we expect from you:

- University diploma or master degree or doctorate in the fields of natural sciences and engineering
- Good written and spoken German and English skills
- Independent scientific work as well as scientific curiosity and the ability to work in a team

## Your application

Please send your application with the usual documents, quoting the reference number (18-E/2026)
by February 28, 2026, preferably
by email to:
bewerbungen@tu-freiberg.de

or by post:
**TU Bergakademie Freiberg**
**Dezernat Personalangelegenheiten**
**09596 Freiberg**

## For further information, please contact:

**Prof. Dr. Sven Kureti**
**phone: 03731 / 394482,**
**E-Mail:**
sven.kureti@iec.tu-freiberg.de

Applicants (m/f/d) must meet the employment requirements for fixed-term employment contracts in accordance with the WissZeitVG (German Academic Fixed-Term Contract Act). Severely disabled persons or persons of equal status (m/f/d) will be given preferential consideration if they have the same qualifications, performance, and abilities. Please include proof of this. The TU Bergakademie Freiberg specifically promotes the proportion of women and expressly invites qualified women to apply.

FAMILIE IN DER HOCHSCHULE
Zertifikat seit 2023 audit familiengerechte hochschule
Innovative Hochschule
WELTOFFENE HOCHSCHULEN GEGEN FREMDENFEINDLICHKEIT