



**Technische Universität Berlin**



Technische Universität Berlin offers an open position:

## **Research Assistant - salary grade E13 TV-L Berliner Hochschulen**

part-time employment may be possible

### **Faculty III - Institute of Materials Science and Technologies / FG Ceramic Materials**

**Reference number:** III-534/22 (starting at 10/04/23 / limited until 28/02/2026 / closing date for applications 29/01/23)

**Working field:** Research in computational modelling of semiconducting materials. You will join a junior research group investigating the link between electrical conductivity and catalytic performance of materials, focusing on binary transition metal oxides. The aim of your project will be to develop methods for calculating electrical conductivity of the materials, and predict their behaviour during catalysis, in collaboration with experimental colleagues in the group. As a research assistant, we will support you in pursuing your doctorate. Therefore, you will be expected to write publications, present at conferences, and work independently. The position is funded for 3 years, and comes with a budget for international travel, with the possibility of collaboration with partners in Germany, UK, Switzerland, and Australia.

Your tasks will include:

- Calculating electrical conductivity of metal oxides using electronic structure methods
- Calculating kinetic and thermodynamic parameters for heterogeneous catalysis
- Supporting experimental collaborators with computational insights
- Dissemination of your research, including writing papers and presenting at conferences

#### **Requirements:**

- Successfully completed university degree (Master, Diplom or equivalent) in chemistry, physics, material science, or a related discipline.
- Demonstrable experience with electronic structure calculations, preferably applied to solid state or extended systems.
- Demonstrable programming skills, preferably in Python, Fortran, or C++.
- very good knowledge of English (knowledge of German is desirable).

#### **Desirable:**

- Ability and desire to work independently.
- Previous experience in the areas of heterogeneous catalysis, microkinetic modelling, modelling of dielectric properties, or with molecular mechanics is an advantage.
- Knowledge of good software practices, including working with version control software, continuous integration, and unit testing, is desired.
- Willingness to contribute to the experimental projects in the group.
- Experience in instrument automation and knowledge of FAIR data principles is an advantage.
- Experience with high performance computing and Linux administration is an advantage.
- Willingness to travel internationally to collaborators and conferences.

Please send complete applications **via email, including the reference number III-534/22** in the subject line, to [jobs@ceramics.tu-berlin.de](mailto:jobs@ceramics.tu-berlin.de). Applications must be sent as a single PDF file (max 10 MB in size) and include the following documents: (1) a cover letter (max. 1 page), (2) CV (max. 2 pages), (3) a statement addressing the selection criteria (max. 1 page), and (4) the usual application documents (degree certificates, reference letters from previous employers, if available). In your statement (Nr 3), you should discuss the above selection criteria (both required and desired conditions) in the field of electronic structure calculation and programming (e.g. theses, professional and private projects, links to platforms such as Github or similar).

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guarantee for the protection of your personal data when submitted as unprotected file. Please find our data protection notice acc. DSGVO (General Data Protection Regulation) at the TU staff department homepage: [https://www.abt2-t.tu-berlin.de/menue/themen\\_a\\_z/datenschutzerklaerung/](https://www.abt2-t.tu-berlin.de/menue/themen_a_z/datenschutzerklaerung/) or quick access 214041.

To ensure equal opportunities between women and men, applications by women with the required qualifications are explicitly desired. Qualified individuals with disabilities will be favored. The TU Berlin values the diversity of its members and is committed to the goals of equal opportunities.

Technische Universität Berlin - Die Präsidentin - Fakultät III, Institut für Werkstoffwissenschaften und -technologien, FG Keramische Werkstoffe, Prof. Dr. Aleksander Gurlo, Sekr. BA 3, Hardenbergstr. 40, 10623 Berlin

The vacancy is also available on the internet at <https://www.personalabteilung.tu-berlin.de/menue/jobs/>

