INSTITUTE OF ELECTRON MICROSCOPY AND NANOANALYSIS

Tenure Track Professorship in the field of Experimental High-Resolution TEM (f/m/d)

Job Category: Professorship Path
Job Profile: Professorship
Employment Start: As soon as possible
Hours per week: 40 h/w
Employment Type: Permanent

We are seeking a candidate with proven scientific expertise in experimental high-resolution electron microscopy using STEM. The following knowledge is of particular interest:

- Diffraction-based techniques such as 4D-STEM and spectroscopic, momentum-resolved methods such as EELS, as well as EDXS
- Expertise in electron microscopic preparation of nanoscale structured materials, including FIB techniques and cryo-preparations
- Expertise in materials from the fields of Energy Materials Science and Photocatalysis, as well as functional oxides and low-dimensional (2D) and bio-materials
- Experience and application of numerical methods / simulations and implementations necessary for these research questions (molecular dynamics, multi-slice, DFT)
- Experience in handling and preparation of environmentally and electron-beam sensitive materials

With this professorship, the field of aberration-corrected, high-resolution transmission electron microscopy for the characterization of nanoscale materials at both the development and application levels at FELMI will be strategically strengthened. The focus is on the experimental, quantitative analysis and targeted modification of defects in energy materials, 2D materials, and functional oxides at the atomic level. Central objectives are the development of precise simulation and reconstruction models and their experimental validation. Close collaboration with research groups in theoretical solid-state physics/chemistry, machine learning, and artificial intelligence is expected. Close cooperation with industrial partners and the acquisition of third-party funding projects are required.

The new professor will complement the existing strengths of the institute and build an internationally visible research group. In addition to research activities, intensive involvement of the position holder in teaching within the Physics and Materials Science degree programs at the Master's and PhD levels is expected. Active participation in academic self-administration is required. At Graz University of Technology, the degree programs in Physics and Materials Science are taught in English.

Employment Requirements

- Completed university studies with a doctoral degree in Physics
- Outstanding scientific achievements in the field of scanning transmission electron microscopy
- Postdoctoral experience
- Management and leadership skills
- Excellent English skills, spoken and written

Selection Criteria

- International experience and integration into the international research community
- Experience in acquiring research funding and/or industry collaborations
- Passion for excellence in teaching and student supervision
- Competence in gender and diversity issues

We Offer

- Interesting area of responsibility
- Flexible working schedule (e.g. possibility for home office, paid lunch break)
- Seal of quality for in-house advancement of women
- Subsidy for public transport
- Shopping Discounts
- Top research infrastructure and access to the latest technologies
- Safe and stable working environment
- Collegial and friendly working atmosphere
- International training and teaching opportunities
- Family-friendly employer
- University's sports program
- Workplace Health Management
- Exciting opportunities for professional and personal development
- Company pension funds

We offer an annual gross salary of at least € 76,308.40 for a fulltime position. An overpayment based on qualification and experience is possible.

Application Documents

- Curriculum vitae (with copies of degree certificates)
- List of publications with indication of the five most important publications
- Research statement describing past and planned research activities (max. 5 pages)
- Teaching statement (max. 3 pages) and evaluation of previous teaching activities (if available)

To ensure international representation of the research group and its work, excellent spoken and written competence in English is expected. Fluencey in German or the willingness to acquire it between the first 2-3 years of service is required.

Graz University of Technology aims to increase the proportion of women, in particular in management and academic staff, and therefore qualified female applicants are explicitly encouraged to apply. Preference will be given to women if applicants are equally qualified.

Graz University of Technology actively promotes diversity and equal opportunities. Applicants are not to be discriminated against in personnel selection procedures on the grounds of gender, ethnicity, religion or ideology, age, sexual orientation (Anti-discrimination).

People with disabilities and who have the relevant qualifications are expressly invited to apply.

Contact

Graz University of Technology

Dean of the Faculty of Mathematics, Physics and Geodesy

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About us

Graz University of Technology is the longest-established university of technology in Austria. Here, successful teams of students, talented up-and-coming scientists, ambitious researchers and a lively start-up scene enjoy an inspirational environment as well as access to top-quality equipment. And all this in one of the most innovative and livable regions in Europe. TU Graz offers an inspiring working environment with outstanding infrastructure and service-oriented university management.

In this video, we give you an insight into the working environment at TU Graz: HERE

Become part of the team of Graz University of Technology - we are looking forward to your application!

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