

Jobs / Career at KIT

PostDoc in the field of electron microscopy (f/m/d)

Organizational unit

Institute of Nanotechnology (INT)

Starting date

01.03.2025

Job description

As part of the Advanced Electron Microscopy in Materials Research department at the Institute of Nanotechnology, you will work on high-end structural analysis of metal hydrides within the NRF-DFG cooperation project 'Exploring thermodynamics and kinetics of metal-hydrides for solid-state hydrogen storage systems through multi-dimensional electron microscopy analysis'. In close collaboration with the group of Prof. Dong Won Chun (Postech, Korea) and various research groups from the fields of mechanical engineering and physics at KIT, you will characterise metal hydrides using state-of-the-art (in-situ) transmission electron microscopy (TEM) techniques and develop these techniques further. Their focus is on the characterisation of microstructural changes and hydrogen distribution during charge and discharge cycles using a combination of ex-situ and in-situ TEM methods. Special attention is paid to the further development of 4D-STEM and EELS methods to analyse hydrogen distribution, local stresses and electronic properties. Your tasks include

Personal qualification

You have a university degree (Diplom (Uni) / Master) with a doctorate in materials science, physics or chemistry as well as several years of practical work experience in transmission electron microscopy. In addition, you have sound knowledge of the physical principles of transmission electron microscopy and related spectroscopy methods. You have experience in the field of analytical transmission electron microscopy and a broad range of methods in the field of electron microscopy (TEM, STEM, EELS, EDX and in-situ TEM). Business fluent English skills round off your profile.



- Development of innovative TEM techniques
- Planning and conducting experimental studies
- Writing scientific publications and presenting research results at international conferences
- Supervision of doctoral students

This is what we offer

Become a member of staff of the only German University of Excellence that conducts large-scale research on the national level. Work under excellent working conditions in an international environment and be active in research and academic education for our future. Benefit from specific training when starting your job and from a wide range of further qualification offers. Use our flexible working time models (flexitime, work from home), our sports and leisure offers, as well as our child and holiday care services. We also pay a share of EUR 25/month in the Job Ticket Baden-Württemberg. Enjoy a large variety of dishes, snacks, and beverages at our canteens.

Salary

Salary category 13 TV-L, depending on the fulfillment of professional and personal requirements.

Contract duration

3 years

Application up to

28.02.2025

Contact person in line-management

For further information, please contact Prof. Dr. Christian Kübel, phone +49 721 608-28970.

Please apply online using the button below for this vacancy number 23/2025.

Vacancy number: 23/2025

Recognized severely disabled persons will be preferred if they are equally qualified.



Contact

Personnel Support is provided by:

Personalservice (PSE) - Human Resources

Ms Gemeinder

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