

IFW Dresden e.V.



The Leibniz Institute for Solid State and Materials Research Dresden e. V. (IFW Dresden) conducts modern materials research on a scientific basis for the development of new and sustainable materials and technologies. The institute employs an average of 500 people from over 40 nations and, in addition to its scientific tasks, is dedicated to promoting young scientists and engineers. Further information at: <http://www.ifw-dresden.de>

PhD position (m/f/d) - 013-25-2001

The Institute for Metallic Materials (Prof. K. Nielsch) of the IFW Dresden offers a PhD position (m/f/d), TV-L 13, 65 % on the following topic: 2D Materials by Solid State Reactions of ALD Multilayers.

City: Dresden; Starting date (earliest): 01/06/25; Remuneration: TV-L 13; Reference number: 013-25-2001; Closing date: 15/03/25

Working field

We are seeking a PhD candidate (m/f/d) to join our interdisciplinary team for an exciting research project focused on Atomic Layer Deposition (ALD) and 2D materials. The project aims to explore the growth of multilayers from elemental materials and investigate solid-state reactions at interfaces. The successful candidate (m/f/d) will work on utilizing ALD for precise growth of thin films from metal-organic precursors on various surfaces. The project involves developing methods for growing layers of elemental materials (e.g., W, Mo, Te, Se) using ALD, followed by studying post-annealing processes to induce chemical reactions between layers. A key aspect of the research will be investigating the growth and properties of 2D material layers, as well as analyzing the electronic properties of the synthesized structures.

Requirements

We are looking for motivated individuals (m/f/d) with an MSc degree in Chemistry, Materials Science, or related fields. The ideal candidate (m/f/d) should have a strong background in solid-state chemistry, with experience in thin film growth techniques such as CVD or ALD being highly desirable. Knowledge of semiconductor layer growth would be an advantage. We seek candidates (m/f/d) who are passionate about cutting-edge research, possess excellent communication skills, and can work effectively in a team environment.

We provide comprehensive training in ALD thin film growth, as well as structural and electrical characterization of 2D materials and semiconducting films. This project offers an excellent opportunity to develop expertise in state-of-the-art thin film deposition techniques and 2D materials characterization.

What we offer

- employment in accordance with the collective agreement for the public service of the federal states (TV-L),
- A modern, well-equipped workplace on the campus of the Technische Universität Dresden,
- Flexible, family-friendly working hours,
- 30 days vacation,
- Company pension scheme (VBL),
- Benefits for job ticket/Germany ticket,
- Special annual payment,
- Capital-forming benefits,
- Cooperation agreements with daycare centers to help with childcare shortages,
- Company health management (back training, health day with various offers),
- discounted sports offers from the Dresden University Sports Center,
- job-related further training opportunities and language courses,
- Company restaurant with a variety of breakfast and lunch dishes.

The contract of employment, including remuneration, is based on the collective bargaining law for the public service of the federal states TV-L EG 13 (65 %). The position is limited for 1 year with the possibility of an extension for an additional two years based on performance. The anticipated start date is June 1st, 2025. We offer an attractive workplace with excellent facilities and environment in Dresden.

In line with our commitment to diversity, we encourage qualified women to apply, as we aim to increase female representation in the field of science. Additionally, disabled applicants (m/f/d) will receive preferential consideration if they meet the requisite qualifications. Promising candidates will be invited for an interview.

Application

Please send your application with informative documents (letter of motivation, CV, relevant transcripts, training certificates, and contact details for at least two professional references) exclusively in electronic form and in a PDF file (other formats will not be considered), citing the reference number 013-25-2001, no later than March 15th 2025 to bewerbung@ifw-dresden.de.

If you have further questions about the position please contact Prof. Kornelius Nielsch (k.nielsch@ifw-dresden.de).

More information at <https://stellenticket.de/191251/LUH/>
Offer visible until 21/02/25

