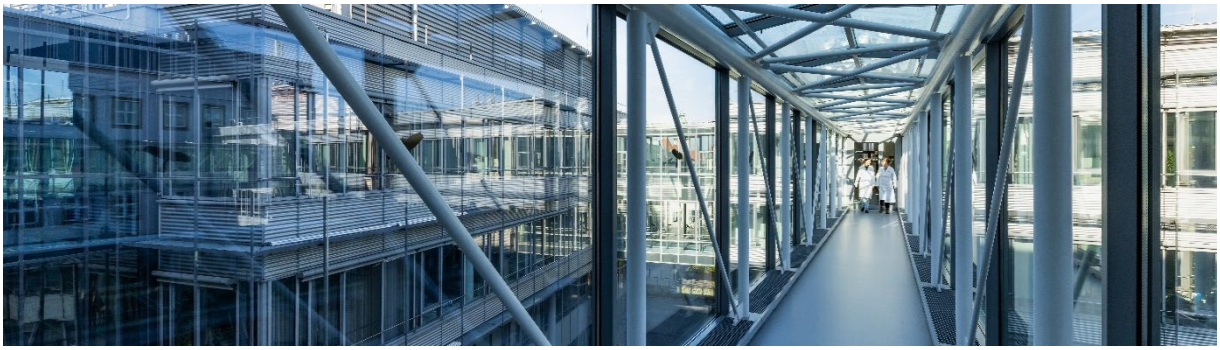
Leibniz Institute for Solid State and Materials Research Dresden

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. The IFW supports its employees in reconciling work and family life and regularly undergoes the audit berufundfamilie®. Further information at: www.ifw-dresden.de.



The Institute for Materials Chemistry (Director: Prof. Dr. Anjana Devi) offers in the working group Nanostructured Thin Film Materials at the IFW Dresden a

PhD position (m/f/div)

on the topic:
Area-Selective Atomic Layer Deposition for Next-Generation Semiconductors

starting at 01.08.2026 in part-time with 26,8 hour per week (= 67 % full-time equivalent), initially on a fixed-term contract for 12 months with the prospect of an extension for a further 24 months.

Main Tasks:

- Development of atomic layer deposition (ALD)/area-selective deposition (ASD) processes for next-generation semiconductors, including fabrication of functional metal and oxide thin films and optimisation of surface chemistry, inhibitors, and growth conditions for selective deposition.
- Characterisation of deposited films and selective growth behaviour via XPS, SEM, AFM, XRD, Raman, ellipsometry, electrical measurements, and other analytical methods to understand surface chemistry, nucleation mechanisms, and structure–property relationships in memristor devices.

Your Profile:

We are seeking highly motivated candidates (m/f/div) with an M.Sc. degree in materials science, chemistry, physics, or a related field who are interested in interdisciplinary research in thin-film deposition, surface chemistry, and electronic device engineering. Candidates should have knowledge of thin-film fabrication techniques, particularly atomic layer deposition (ALD),

chemical vapour deposition (CVD), or related surface engineering methods. Experience in surface chemistry, nanomaterials, and thin-film characterisation is advantageous. Applicants (m/f/div) should demonstrate strong communication skills in English, the ability to clearly present scientific results, and the capacity to work collaboratively in an international research environment with postdoctoral researchers (m/f/div), PhD students (m/f/div), and technical staff (m/f/div) from inorganic chemistry, materials chemistry, and materials science and engineering.

What we offer:

- a modern, well-equipped workplace on the campus of the Technische Universität Dresden,
- flexible, family-friendly working hours,
- 30 days vacation per year,
- Company pension scheme (VBL),
- Benefits for job ticket/Germany ticket,
- Special annual payment,
- Capital-forming benefits,
- 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.
- a future-oriented environment with a workplace with modern research infrastructure,
- working with international and interdisciplinary scientists from different fields,
- working on current research fields.

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.

Notes on the application:

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. Applications from people with severe disabilities and those treated as such within the meaning of Section 2(3) of SGB IX are ex-pressly encouraged. Proof of this status must be included with the application documents.

If you are interested in the position, please send your application including a CV and the list of publications, a motivation letter describing the research career goals, skills and experience, copies of certificates, and contact details for at least two professional references citing the **reference number 038-26-3500** as a single pdf file (other formats will not be accepted) no later than **31.05.2026** to

bewerbung@ifw-dresden.de

Please contact Prof. Dr. Anjana Devi or Dr. Harish Parala (office-imc@ifw-dresden.de) for more information.