

Helmholtz-Zentrum Dresden-Rossendorf e.V.

With cutting-edge research in the fields of ENERGY, HEALTH and MATTER, around 1,500 employees from more than 70 nations at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) are committed to mastering the great challenges facing society today. The Institute for Ion Beam Physics and Materials Research is dedicated to the study of materials and their nanostructures that can be considered for future applications in information technology and are based on electrical, magnetic or optical functionalities. The Department of Magnetism is looking for a Scientific Assistant (f/m/d).

Scientific Assistant (f/m/d)

to pursue research in nanoscale magnetic phenomena generated using ions and femtosecond laser pulsing. The position is funded by the DFG and is suitable for either a PhD or a Postdoc, depending on qualifications. You will build on recent observations of local magnetic property changes caused by atomic rearrangements in thin film alloys (see, eg., Advanced Functional Materials 34 (2024)13, 2311951). Your task will be to gain insights into the mechanisms that lead to the activation of ferromagnetic order through rigorous experimental studies as well as simulations. Proof-of-principle studies to observe the response of generated spin-textures to magnetic fields and electrical currents will be carried out.

City: Dresden; Starting date (earliest): 01/11/25; Remuneration: TVöD-Bund; Reference number: 2025(97; Closing date: 15/08/25

Working field

- Using the extensive research facilities at the HZDR for the preparation and characterization magnetic thin film alloys
 - Observing the magneto-optical as well as structural behaviour of the material under ion and femtosecond laser pulse irradiation
 - Liaising with collaboration partners at LH Mittweida for femtosecond laser experimentation
 - Modelling and analysis of the outcomes and proposing new experiments for exploiting the results
- Follow-up on promising results with experiments at large-scale facilities
 - Report results in peer-reviewed publications and international conferences and doctoral thesis (for PhD students)

Requirements

- Completed university studies (Master/Diploma/PhD) in the field of Physics, Materials Sciences or related field
- Basic knowledge in the areas of solid state physics, Magnetism and nanoscale phenomena

- Hands-on experience in one or more of the following methods is an advantage:
Thin-films preparation, magneto-optical characterization, clean-room processes or magnetic imaging
- Past experience in Micromagnetic or Atomistic simulations is desirable, but not mandatory
- Willingness to work closely with collaboration partners and travel to research facilities in Germany and abroad
- Scientific writing skills evidenced in publications (for Postdocs)
- A deep sense of scientific curiosity and the aspiration for achieving knowledge in solid state physics
- Willingness to discuss scientific results regardless of success or failure, as well as the desire to learn new skills
- Fluency in written and spoken English

What we offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment, mobile working and flexible working hours
- Numerous company health management offerings
- Employee discounts with well-known providers via the platform Corporate Benefits
- An employer subsidy for the "Deutschland-Ticket Jobticket"

Application

We look forward to receiving your application documents (including cover letter, CV, diplomas/transcripts, etc.), which you can submit via our online-application-system: <https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=75137>

More information at <https://stellenticket.de/195875/TUB/>
Offer visible until 31/07/25

