

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 of Fluid Dynamics is conducting basic and applied research in the fields of thermo-fluid dynamics and magnetohydrodynamics in order to improve the sustainability, the energy efficiency and the safety of industrial processes. The Department of Fluid Dynamics Resource Technology Processes is looking for a

PhD Student (f/m/d) for bubble dynamics in water electrolysis.

The position is subject to project approval.

City: Dresden; Starting date (earliest): 01/09/26; Duration: 3 years; Remuneration: TVöD Bund; Reference number: 2026/50; Closing date: 30/06/26

Tasks

- Carrying out experiments on gas bubble generation on micro electrodes
- Visualize and analyze bubble dynamics using advanced optical measurement techniques
- Measure the flow velocity and temperature distribution of the electrolyte
- Supervision of student internships and research projects

Requirements

- Completed university studies (Master/Diploma) in the field of Mechanical Engineering, Process Engineering, Chemistry, Physics or related fields
- Very good knowledge of Electrochemistry and Optical Measurements
- Ability to cooperate across disciplines in an international environment
- Independent, structured and target oriented way of working
- Team work ability in an international group
- Software skills in Python and Matlab
- Excellent English skills
- Basic German skills

What we offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- A structured PhD program with a comprehensive range of continuing education and networking opportunities - more information about the PhD program at the HZDR can be found [here](#)
- 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=77512>

More information at <https://stellenticket.de/203997/BEUTH/>
Offer visible until 07/06/26

