

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 Group Electrochemical Systems is looking for a PhD Student (f/m/d) AI-assisted Performance tests of electrode material for water electrolysis.

PhD Student (f/m/d) AI-assisted Performance tests of electrode material for water electrolysis

City: Dresden; Starting Date: 01/03/25; Duration: 36 months; Remuneration: TVöD-Bund; Reference number: 2024/169; Closing date: 07/01/25

Working field

- Manufacture hierarchically structured electrocatalytic materials based on advanced electrochemical methods and laser deposition methods
- Adapt available small electrolyzer platforms for high throughput testing of these materials and of materials delivered by Helmholtz partner institutes
- Perform performance test (surface properties, electrochemical behaviour, bubble dynamics) of these electrode materials using statistical experiment planning and AI-based feature extraction to identify the best operating parameters

Requirements

- Completed university studies (Master/Diploma) in the field of Chemical Engineering, Process Engineering, Mechanical Engineering, Chemistry, Physics or a comparable discipline
- Profound knowledge of electrochemistry and material science, basic understanding of image analysis
- Good experience and skills with hands-on experimental work
- Well-developed social and communicative skills, ability to work collaboratively in a multidisciplinary team
- Good English language skills
- Programming skills in Python

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=73447>

More information at <https://stellenticket.de/190358/>
Offer visible until 15/01/25

