

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 Center for Advanced Systems Understanding (CASUS) is a German-Polish research center for data-intensive digital systems research. The Institute CASUS is looking for a PhD Student (f/m/d) - Electrochemical swing adsorption of carbon dioxide.

PhD Student (f/m/d) - Electrochemical swing adsorption of carbon dioxide

City: Görlitz; Starting date (earliest): 01/04/26; Duration: 36 months; Remuneration: TVöD-Bund; Reference number: 2026/26; Closing date: 26/03/26

Tasks

- Performing quantum mechanical and ML-based simulations to determine CO₂ adsorption energies
- Application of self-consistent continuum solvation models to account for solvation effects
- Collaborating with peers including experimental project partners
- Publishing results in academic and peer-reviewed journals
- Presenting results at scientific meetings

Requirements

- Completed university studies (Master/Diploma) in the field of Chemistry, Physics, Computer Science or related field
- Knowledge of Density Functional Theory (DFT)
- Familiarity with artificial intelligence methods
- Good knowledge of electronic structure methods
- Experience with Linux, Git and related tools
- Knowledge in the field of high-performance computing
- Strong motivation to work in a collaborative environment
- Excellent communication skills in English and in a professional context

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-applicationsystem: <https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=76687>

More information at <https://stellenticket.de/201975/BEUTH/>
Offer visible until 26/03/26

