Freie Universität Berlin - Fachbereich Physik

Are you passionate about cutting-edge fundamental research on molecular and 2D materials heterostructures? Are you looking to pursue your PhD in an excellent, interdisciplinary research environment at a leading German university? If so, we invite you to apply! The Collaborative Research Center CRC 1772 "mol2Dmat" investigates novel collective states and quantum phenomena in heterostructures of molecules and two-dimensional materials. Our interdisciplinary consortium brings together 20 research groups from Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin, and the Max Planck Institute in Hamburg. Our work combines physics, chemistry, and materials science – pushing the frontiers of quantum materials research. The overarching goal of the Collaborative Research Center (CRC) 1772 is to explore and harness previously inaccessible collective phenomena and ground states in heterostructures of molecules and two-dimensional materials. Two-dimensional (2D) materials are atomically thin crystals that may be stacked into heterostructures with new and totally unexpected properties. CRC 1772 takes this to the next level by creating and studying heterostructures of organic and inorganic molecules encapsulated inside 2D materials.

Research assistant (praedoc) (f/m/d)

with 75%part-time job limited to 30.06.2029 salary grade (Entgeltgruppe) 13 TV-L FU
reference code: DM-PHY-669

City: Berlin; Starting date (earliest): At the earliest possible; Duration: befristet bis 30.06.2029; Remuneration: Entgeltgruppe 13 TV-L FU; Reference number: DM-PHY-669; Closing date: 03/08/26

Tasks

As a PhD student, you will become part of an excellent scientific network and benefit from our structured, interdisciplinary graduate program, which includes tailored training, workshops, retreats, and conference travel. You will have access to cutting-edge laboratories, individual supervision, and a wide range of development opportunities. We are committed to family and academic life being compatible and promoting diversity and equal opportunity through a variety of support measures.

We offer a PhD position at the Department of Physics at Freie Universität Berlin starting as soon as possible. Contribute to research in the subproject A01 of CRC 1772 “Collective excited states in molecular lattices” under supervision of Prof. Dr. Reich.

- Growth of highly ordered molecular layers (phtalocyanine, costum-synthesized dyes) on hBN, graphene, and transition metal dichalcogenides
- Study of the emerging collective excitations by Raman scattering, linear optical spectroscopy, and near-field microscopy

Requirements

Key Requirements

Master in Physics or a closely related field.

Desirable

- Experimental expertise in research on solid-state or molecular physics.
- Excellent Master degree with courses in solid-state and molecular physics or closely related fields.
- Research expertise of several months (e.g., during a Master thesis). Ideally, the experimental methods in your command align with the research direction of the project you are interested in.
- Excellent command of written and oral English (B2).
- Experience in the presentation of scientific results in written and oral forms, e.g., during seminar presentation and as a written manuscript.
- Dedication towards scientific work, high motivation for pursuing a PhD thesis.

We are interested in a diverse research community and particularly encourage members of underrepresented groups to apply.

What we offer

Benefits and Other Advantages

- Salary in line with the collective agreement for the civil service at the state level (TV-L FU), plus additional one-off annual payment
- Flextime with proportional allowance of days for working from home
- Good work-life balance thanks to flexible working hours makes family and care responsibilities easier to manage
- Thirty days of vacation (based on a five-day working week)
- Office closed on December 24 and December 31
- Numerous training and continuing education options for professional and personal development
- Opportunity to participate in University Sports Center courses and the health promotion program

Application

We look forward to receiving your detailed application, which should include: a cover letter, your tabular CV, and your certificates (BSc, MSc) and transcripts. Please explain why your academic and scientific expertise has prepared you for this research project.

Please send us your application via our online recruiting portal by clicking on the “Apply now” button. From there, you will be redirected to create a profile. This is only necessary for first-time applicants.

Further information is available from Prof. Dr. Stephanie Reich and her colleagues (office@crc1772.de /, 030-838-63593).
Freie Universität Berlin is an equal opportunity employer.