

Freie Universität Berlin - Fachbereich Physik - Institut für Theoretische Physik AG Netz**Research assistant (praedoc) (m/f/d)**

with 67%part-time job limited to 31.12.2026 salary grade (Entgeltgruppe) 13 TV-L FU

reference code: Netz-SFB1349-C4b-2026(2)

City: Berlin; Starting date (earliest): At the earliest possible; Duration: befristet bis 31.12.2026; Remuneration: Entgeltgruppe 13 TV-L FU; Reference number: Netz-SFB1349-C4b-2026(2); Closing date: 01/12/25

Working field

In the Collaborative Research Center (CRC) 1349 "Fluorine-Specific Interactions" (www.sfb1349.de), 50 PhD students and Postdocs are conducting research in the field of fluorine chemistry in 20 working groups of the Freien Universität Berlin, the Humboldt University Berlin, the Technical University Berlin, the Federal Institute for Materials Research and Testing and the Leibniz Research Institute for Molecular Pharmacology on fluorochemical issues. The scientific objectives are to understand and control the complex interactions that can emanate from fluorinated structural units in chemical systems. For this purpose, the wide-ranging expertise of the different working groups involved in synthesis/biosynthesis, analytics/spectroscopy, and theory/modeling will be complementarily and synergistically linked to systematically expand our understanding of both the conceptual underpinning of Fluorine-Specific Interactions and their many consequences across many areas of chemistry.

The CRC 1349 has been funded by the German Research Foundation since 2019 and, after successful re-evaluation, will be extended for another four years from 2023.

Job description:

- Collaboration on the C4 Network project "Microscopic Mechanisms of Superhydrophobicity and Superlubricity of Fluorinated Surfaces" as part of CRC 1349
- Performance and evaluation of MD simulations to characterize the interaction of fluorinated molecules in aqueous solution with the aim of optimizing adsorbent materials for fluorinated molecules
- Calculation of reaction dynamics using non-Markovian reaction rate theory
- Calculation of linear and nonlinear spectra in the microwave and infrared range from ab initio and force-field simulation trajectories and their interpretation in the framework of the generalized Langevin equation

Requirements

Requirements:

Successfully completed university degree (diploma or master's degree) in physics or a comparable subject.

Desirable:

- Experience with performing and evaluating atomistic MD simulations
- Knowledge of statistical mechanics of equilibrium and non-equilibrium systems
- Very good academic performance, especially in numerical simulation methods, statistical mechanics, and stochastics
- Very good oral and written English skills.

For further information, please contact Prof. Roland Netz, rnetz@physik.fu-berlin.de

Application

Applications should be sent by e-mail, together with significant documents (Cover letter, CV), indicating the reference code, no later than December 1st , 2025 in PDF format (preferably as one document) to Prof. Dr. Roland Netz: rnetz@physik.fu-berlin.de or postal to

Freie Universität Berlin
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Institut für Theoretische Physik
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With an electronic application, you acknowledge that FU Berlin saves and processes your data. FU Berlin cannot guarantee the security of your personal data if you send your application over an unencrypted connection.

Freie Universität Berlin is an equal opportunity employer.

More information at <https://stellenticket.de/199337/BUA/>
Offer visible until 01/12/25

