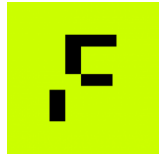


Freie Universität Berlin



[We](<https://www.physik.fu-berlin.de/en/einrichtungen/ag/ag-kampfrath/index.html>) study ultrafast phenomena in quantum materials. A strong focus lies on the angular momentum of electrons (spin+orbit) and of the crystal lattice. The associated processes often coincide with the femtosecond time scale and, thus, terahertz frequency scale. Consequently, to study such extremely fast dynamics, we develop novel tools like ultrafast ampere-meters, ohm-meters and strong terahertz voltage sources, which greatly rely on femtosecond optical pulses and ultrabroadband terahertz electromagnetic transients. To better understand our experimental results, we work out simple theoretical models. Important questions we address include the writing and reading of magnetic information, the ultrafast transport of the spin and orbital angular momentum of electrons, and the impact of lattice vibrations on the angular momentum of electrons. Our fundamental scientific insights are relevant for applications in information technology where bit rates are approaching the THz range. We also explore our results directly for applications in THz photonics, including the development of novel emitters, detectors and modulators of broadband THz radiation. [Homepage of the group "Terahertz Physics in Quantum Materials"](<https://www.physik.fu-berlin.de/en/einrichtungen/ag/ag-kampfrath/index.html>)

Research assistant (praedoc) (f/m/d) (DM-PHY882)

Department: Department of Physics contract duration: limited to 4 years Salary / pay grade: E 13 TV-L FU Working hours: 75 % Requisition ID: 882 Application deadline: 28.09.2026

City: Berlin; Starting date (earliest): At the earliest possible; Duration: auf 4 Jahre; Remuneration: Entgeltgruppe 13 TV-L FU; Reference number: DM-PHY-882; Closing date: 28/09/26

Tasks

What You Can Expect in Your New Role

You will participate in a project on the ultrafast dynamics of the angular momentum of phonons, spins and electrons in spintronic materials and nanostructures. You will deal with cutting-edge optical setups, femtosecond laser systems, analysis tools and modeling. The third-party funded research project offers the opportunity to pursue a PhD.

Requirements

Key Requirements

Completed university studies with a Master degree preferentially in physics.

Desirable

- Experience in at least two of the following areas: solid-state physics, magnetism/spintronics, femtosecond laser spectroscopy.

- Team spirit, endurance and enthusiasm for new ideas and topics
- Good English language skills
- Master in Physics with very good grades
- Knowledge on/experience in solid-state physics, magnetism/spintronics or femtosecond lasers

What we offer

Benefits and Other Advantages

- Modern workplace in the leafy suburb of Dahlem
- Job security
- Salary in line with the collective agreement for the civil service at the state level (TV-L FU), plus additional one-off annual payment
- Flexible working hours and mobile working by arrangement, where possible
- The compatibility of work and family life
- 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
- Free parking close to the office and good public transportation connections
- Discounted "Job Ticket" for public transportation
- Free use of the Freie Universität library system
- Employee discount in the cafeteria
- Exclusive deals for products and services through Corporate Benefits

Application

If you are interested in what we have to offer,

then you can send your application materials to us directly. Simply submit your application exclusively via our career portal by clicking the "Apply now" button. Unfortunately, we cannot consider applications by post or by e-mail.

You can also get in touch with Mr. Prof. Dr. Tobias Kampfrath (b.selke@fu-berlin.de).

More information at <https://stellenticket.de/207425/BUA/>
Offer visible until 28/09/26

