Freie Universität Berlin - Department of Physics

Who We Are The group of Dr. Ordóñez focuses on the theory of nonlinear chiral light-matter interactions. We study how to control the quantum dynamics of chiral molecules by structuring electromagnetic fields in time and space and leveraging state-of-the-art light sources, from femtosecond lasers to X-ray free-electron lasers. We collaborate closely with several experimental groups around the world. Our research is financed by the DFG's Emmy Noether Programme through the project Coherent Highly Enantioselective Molecular Manipulation enabled by Multiphoton Interactions with Structured Light.

Research assistant (praedoc) (f/m/d) (DM-PHY-816)

Department: Department of Physics contract duration: limited to 3 years Salary / pay grade: E 13 TV-L FU Working hours: 75 % Requisition ID: 816 Application deadline: 19.10.2026

City: Berlin; Starting date (earliest): At the earliest possible; Duration: befristet auf 3 Jahre; Remuneration: Entgeltgruppe 13 TV-L FU; Reference number: DM-PHY-816; Closing date: 19/10/26

Tasks

What You Can Expect in Your New Role

As a PhD student in our group, you will explore the fundamental physics of non-linear chiral light-matter interactions at the nanoscale. Your objective will be to uncover novel mechanisms for steering and probing molecular chirality by exploiting recent breakthroughs in ultrafast physics, nanophotonics, and quantum chemistry. Your theoretical insights will directly guide ongoing and future experimental campaigns. You will share your findings in renowned journals and at international conferences. The third-party funded research project offers the opportunity to pursue a PhD.

Requirements

Key Requirements

completed Master's degree in a relevant discipline (e.g., physics or chemistry)

Desirable

- Research experience in at least one of the following areas: atomic and molecular physics, nonlinear optics, theoretical chemistry, ultrafast dynamics, nanophotonics, computational physics.
- A high level of motivation, curiosity, and problem-solving skills.
- Ability to work independently, meticulously, and proactively.
- Very good English skills (fluent).
- Solid understanding of the principles of quantum mechanics and

electromagnetism.
- Strong interest in mathematical and computational physics.
- Experience in scientific programming.

What we offer

Benefits and Other Advantages

- Excellent research environment: A modern workplace on the historic, green Dahlem campus with access to first-class infrastructure.
- Academic development: Comprehensive support for conference participation and your individual academic development.
- Attractive Funding: A public service contract (75% TV-L E13) with full social security/health insurance coverage with an initial 3-year term.
- Job ticket: Good public transport connections and the option of a discounted job ticket.

Application

If you are interested in what we have to offer,

We look forward to receiving your application documents:

- CV.
- Transcripts for Bachelor's and Master's degrees.

Please submit your application exclusively through our career portal by clicking the "Apply Now" button. Applications submitted in paper form or by email cannot be considered. For further information, please contact Dr. Andrés Ordóñez (andres.ordonez@fu-berlin.de).

More information at https://stellenticket.de/207556/BUA/
Offer visible until 19/10/26