UNIVERSITY OF COLOGNE


Photo: Thomas Obek

Faculty of Mathematics and Natural Sciences

Doctoral position on ultrafast charge and exciton processes in organic semiconductors (f/m/x)

Institute of Physics II

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

The position is available in the research group 'Optical Condensed Matter Science' (https://ph2.uni-koeln.de/arbeitsgruppen/loosdrecht) of the Institute of Physics II. in the physics department. It is part of the DFG-funded research training group 'Template-Designed Organic Electronics' DFG research training group (TIDE) which offers a multidisciplinary research environment and a structured doctoral programme (https://tide.uni-koeln.de).
The aim of the doctoral project is to deepen our understanding of ultrafast exciton and charge processes in organic semiconductor materials.

YOUR TASKS

- Study of exciton and charge carrier dynamics in (templated) organic and hybrid semiconductors using ultrafast optical spectroscopy techniques, advanced data analysis and modelling.
- Presentation of research results at seminars and conferences, and publication of research results in peer-reviewed journals
- Active participation in training courses and events of TIDE research training group (https://tide.uni-koeln.de/home)
- Teaching and supervision of Bachelor's and Master's students

YOUR PROFILE

- Master's degree in physics, with a focus on condensed matter or molecular physics
- Highly motivated person having experience with ultrafast lasers and time-resolved optical spectroscopy
- Experience with advanced data analysis and interpretation using Python, Mathematica or other programming languages
- Preferably experience with organic and/or hybrid semiconductors
- Excellent communication skills in written and spoken English
- Capability of working independently while demonstrating a strong ability to work in a team

WE OFFER

- An inspiring, collaborative, and international research environment with unique ultrafast spectroscopy facilities
- A diverse working environment with equal opportunities
- Support in balancing work and family life
- Extensive advanced training opportunities
- Occupational health management offers
- Flexible working time models
- Opportunity to work remotely

The University of Cologne is committed to equal opportunities and diversity. Women are especially encouraged to apply and will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from people with disabilities/special needs or of equal status.

The position is available immediately on a part-time basis (29,87 hours per week). It is to be filled for a fixed term of 3 years. If the applicant meets the relevant wage requirements and personal qualifications, the salary will be based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications without a photo under: https://jobportal.uni-koeln.de. The reference number is Wiss2403-17. The application deadline is 31.10.2024.
For further inquiries, please contact Dr Tianyi Wang (twang@ph2.uni-koeln.de) or Professor Paul H.M. van Loosdrecht (pvl@ph2.uni-koeln.de).

HR EXCELLENCE IN RESEARCH