Ruhr-Universität Bochum

PhD student (m/f/x)

Online seit 06.05.2025 | 2025-05-06-931034 | Wissenschaftliche:r Mitarbeiter:in

Stellenbeschreibung

Faculty of Chemistry and Biochemistry:
Physical Chemistry II Petersen Group (Nonlinear Infrared Spectroscopy Group)

In order to fill a **fixed-term position in part-time (26,6861 hours/week = 67%) starting before 31.12.2025**, we are looking for 1

PhD student (m/f/x)

The Petersen Group (Nonlinear Infrared Spectroscopy Group) at the Ruhr University, Bochum is seeking a PhD student to perform heterodyned 2-dimensional sum-frequency generation (2D SFG) spectroscopy of various surfaces to probe interfacial water dynamics as a function of the surface chemistry. This method combines the advantages of two-dimensional infrared (2D IR) spectroscopy and SFG spectroscopy to capture ultrafast spectral diffusion dynamics of molecules with the surface-specificity of SFG. Several different surfaces will be investigated to map out how the surface chemistry influences the ultrafast interfacial water dynamics. The advanced nonlinear spectroscopic method is facilitated by a new 100 kHz Yb-based OPCPA laser system. The position involves a significant amount of experimental development so a strong background in laser spectroscopy, ultrafast spectroscopy, and/or nonlinear optics is preferred. Furthermore, some chemical preparation work will be involved.

Your tasks:

- Setting up and performing 2D SFG and other experiments of various surfaces
- Chemical functionalization of surfaces
- Spectroscopic measurements, data analysis, and interpretation
- Taking active part in science communication, both locally and globally
- Taking part in a multidisciplinary team
- Taking part in normal group responsibilities

Anforderungsprofil & Qualifikationen

Your profile:

- Master degree in physical chemistry or related field. Candidates who are close to completion at the application time will be considered given that the master degree will be completed before starting the position.
- Strong background in laser spectroscopy, ultrafast spectroscopy, and/or nonlinear optics.
- Good communication and writing skills in English
- Good team player

We offer:

- The opportunity to work in a dynamic work environment embedded in the exciting collaborative research environment at the Ruhr-University Bochum
- The opportunity to work with advanced nonlinear spectroscopic methods in a state-of-the-art laboratory
- Challenging and varied tasks with a high degree of personal responsibility
- Team-orientated and collaborative work environment
- International work environment with the English as the working language
- Access to a series of career development workshops/opportunities
- Family friendly work environment

Further information:

The position is salaried and based on the collective agreement of the Länder (TV-L). If the personal and collective agreement requirements are met, the employee will receive pay grade E13 TV-L.

Further information can be found at https://oeffentlicher-dienst.info/ (in German).

The place of work is Ruhr University Bochum.

If the position is funded by third-party funds the employee has no teaching obligation.

At the request of the applicant (m,f,x), the staff council may be involved in selection interviews.

The Ruhr-Universität Bochum is one of Germany's leading research universities, addressing the whole range of academic disciplines. A highly dynamic setting enables researchers and students to work across the traditional boundaries of academic subjects and faculties. To create knowledge networks within and beyond the university is Ruhr-Universität Bochum's declared aim.

The Ruhr-Universität Bochum stands for diversity and equal opportunities. For this reason, we favour a working environment composed of heterogeneous teams, and seek to promote the careers of individuals who are underrepresented in our respective professional areas. The Ruhr-Universität Bochum expressly requests job applications from women. In areas in which they are underrepresented they will be given preference in the case of equivalent qualifications with male candidates. Applications from individuals with disabilities are most welcome.

Contact persons for further information:

Prof. Dr. Poul B. Petersen; poul.petersen@rub.de , Tel.: +49 234 32 28249

Travel costs, accommodation costs and loss of earnings or other application costs for job interviews can unfortunately not be reimbursed.

We look forward to receiving your application via our **online application portal by 2025-05-26**. Please make sure to mention the reference number ANR 4550.

Vorteile für Mitarbeitende

- Vergünstigtes Jobticket
- Arbeitsplatz in lebendiger Metropolregion

Stellenmerkmale

Beschäftigungsart	**Wissenschaftliche:r Mitarbeiter:in**
Beschäftigungsumfang	**Teilzeit (befristet)**
Home Office	**Nein**
Bewerbungslink	**https://jobs.ruhr-uni-bochum.de/jobposting/4fc96d899453c29826822c9031dd8cccbcb997ed?**

Kontaktdaten

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