Technische Universität Braunschweig - Institute of Physical and Theoretical Chemistry

With more than 15,000 students and 3,800 employees, the Technische Universität Braunschweig is one of Germany´s leading institutes of technology. It stands for strategic and performance-oriented thinking and acting, relevant research, committed teaching, and the successful transfer of knowledge and technologies to the economy and society. We consistently advocate for family friendliness and equal opportunities. Our research focuses are mobility, engineering for health, metrology, and city of the future. Strong engineering and natural sciences are our core disciplines. These are closely interconnected with economics, social and educational sciences and humanities. Our campus is located in the midst of one of the most research-intensive regions in Europe. We work successfully together with over 20 research institutions in our neighborhood as we do with our international partner universities. The research group Physical Chemistry of Biomolecular Systems (AG Kozuch; at the Institute of Physical and Theoretical Chemistry) is seeking, at the earliest possible date, a candidate for

Research Associate / Doctoral Candidate (m/f/d) on the topic “Surface-Enhanced Infrared Spectroscopy of Viral Infection Mechanisms at Biomembranes”

(EG 13 TV-L, 66.67% part-time) The position is limited to a period of three years and is intended to support the qualification of early-career researchers with the opportunity to pursue a doctoral degree (PhD).

City: Braunschweig; Starting date (earliest): At the earliest possible; Duration: 3 years; Remuneration: EG 13 TV-L; Closing date: 08/03/26

Tasks

The research group Physical Chemistry of Biomolecular Systems (AG Kozuch) investigates the function of biomedically relevant (membrane) proteins, with a particular focus on electrostatic interactions that determine the formation and efficiency of functional motifs. The methodological approach is based on a combination of advanced infrared spectroscopic techniques, complemented by the use of model membrane systems, biochemical methods, and computational simulations. As part of the Braunschweig Integrated Centre of Systems Biology (BRICS), the group is embedded in an interdisciplinary research environment with diverse collaboration opportunities, including with research groups at the Helmholtz Centre for Infection Research.

Within the framework of this doctoral project, proteins will be investigated that play a key role in viral infection mechanisms. Methodologically, the focus lies on combining surface-enhanced infrared absorption spectroscopy (SEIRAS) with lipid membrane systems. The work will be further developed toward time-resolved or spatially resolved approaches, for example by employing infrared nanoscopy.

- You investigate the functioning of viral proteins that play a central role in

molecular infection mechanisms using advanced infrared spectroscopic methods
- You develop infrared spectroscopic methods in combination with biomembrane systems
- You publish research results and participate in national and international conferences
- You support university teaching in (bio)physical chemistry.

Requirements

- You hold a completed academic university degree (Master’s or equivalent) in chemistry, physics, biophysics, or a related field in the natural sciences
- You have experience in molecular spectroscopy and/or spectroelectrochemistry of biological molecules/systems
- You possess very good command of the English language
- You have a friendly and communicative manner and are able to work in a structured and independent way
- You have a strong interest in biophysical chemistry and are aiming to pursue a doctoral degree (PhD).

What we offer

- the opportunity to pursue a doctoral degree (PhD) on an exciting, forward-looking research topic in an inspiring work environment
- an introduction to fascinating and biomedically relevant topics in biophysical chemistry
- a vibrant campus life in an international atmosphere, with numerous intercultural offerings and international collaborations
- remuneration according to TV-L, as well as flexible working hours and part-time options, and a family-friendly university culture, recognized since 2007 with the “Family-Friendly University” audit.

Application

We welcome applicants of all nationalities. At the same time, we encourage people with severe disabilities to apply. Applications from severely disabled persons will be given preference if they are equally qualified. Please attach a proof of disability to your application. We are also working on the fulfilment of the Central Equality Plan based on the Lower Saxony Equal Rights Act (Niedersächsisches Gleichberechtigungsgesetz—NGG) and strive to reduce under-representation in all areas and positions as defined by the NGG. Therefore, applications from women are particularly welcome in this case.

The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen.

Application costs cannot be reimbursed.

Further Questions?
Do you have any questions? Prof. Dr. Jacek Kozuch will be happy to answer them by phone at (0531) 391-55243.

Apply until March 8, 2026

If we have sparked your interest, please send your application as a single PDF (cover letter, CV, and certificates), preferably by email to jacek.kozuch(at)tu-braunschweig.de

or by post to:

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Institut für Physikalische und Theoretische Chemie
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Prof. Dr. Jacek Kozuch
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More information at https://stellenticket.de/201580/FUB/
Offer visible until 08/03/26