GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

The **Institute for Physical Chemsitry** at the **Georg-August-Universität Göttingen** is looking to fill **two positions** , one experimental and one theoretical/computational for

Research Assistant (Ph.D. position)

These positions can start on Sept. 1st 2019 (or soon thereafter). The regular working hours will be 50% of a full-time position (currently 19,9 hours per week) with a limited contract of three years. Salary: **Pay grade 13 TV-L.**

These posts are designed to foster young researchers and allow the successful applicants to pursue doctoral degrees.

The positions will be affiliated with the group of Prof. Dr. Theofanis Kitsopoulos and are supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No. [833404].

Catalytic rates for site-specific elementary reactions will be studied experimentally and theoretically thus offering remarkable opportunities to advance our fundamental understanding of heterogeneous catalysis. Knowledge of elementary chemical reaction mechanisms in heterogeneous catalysis underlies our ability to construct comprehensive kinetic models for many such important chemical processes, in order to optimise them. The aim is to characterize the important factors that influence the kinetics of elementary reactions at surfaces, e.g. the chemical nature of the catalyst and the geometry of the active site (stereodynamics). We chose elementary reactions involving C, H, O, N, as these are important in many key industries, such as the methane reforming, syngas, fuel cells, Fischer-Tropsch synthesis and the Haber-Bosch process. Our strategy is that of a "bottom-up" approach to catalysis, i.e., building and understanding complex heterogeneous chemical catalysis, from the site-specific kinetics of the elementary building block reactions. Our measurements, will serve for benchmarking first principles calculations of reaction rates in surface chemistry. Our methodology measures the kinetics in the microsecond regime with temperatures in the 200 to 1000 K range, i.e, conditions more relevant to industrial conditions.

Suitable candidates should hold a Masters degree in Chemistry, Physics or related field. Desired skills for experimental candiates include chemical kinetics, molecular spectroscopy, REMPI / MPI using lasers, mass spectrometry, vacuum technology, ion optics, molecular beams, ion imaging. Desired skills for theoretical candiates include chemical kinetics, molecular spectroscopy, statistical mechanics, quantum mechanics, computer programming, DFT, molecular dynamics simulations.

The Göttingen Campus is a leading center for Physical Chemistry in Europe hosting numerous internationally renowned research institutions, including the Max Planck Institute for Biophysical Chemistry and the Max Planck Institute for Dynamics and Self Organization.

The University of Göttingen is an equal opportunities employer and places particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply in fields in which they are underrepresented. The university has committed itself to being a family-friendly institution and supports their employees in balancing work and family life. The mission of the University is to employ a greater number of severely disabled persons. Applications from severely disabled persons with equivalent qualifications will be given preference.

Please send your application with the usual documents (including a letter of interest, your curriculum vitae, copies of your certificates and contact information of at least two references) preferably in electronic form in one single PDF-document by August 4th to

Prof. Dr. Theofanis Kitsopoulos
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email: **tkitsop@mpibpc.mpg.de**

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Mitglied des Best Practice-Clubs

If you have any questions, please contact Prof. Dr. Theo Kitsopoulos via e-mail.

Please note:
With submission of your application, you accept the processing of your applicant data in terms of data-protection law. Further information on the legal basis and data usage is provided in the Hinweisblatt zur Datenschutzgrundverordnung (DSGVO) https://www.uni-goettingen.de/hinweisdsgvo