Faculty of Chemistry and Food Chemistry

The Chair of Theoretical Chemistry offers, subject to resources being available, a project position as

**Research Associate/ Postdoc**

(Subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **as soon as possible**. The position is limited for 36 months. The period of employment is governed by Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG).

**Tasks:** Research for a project entitled „Design and Control of Patterned Large-Area Molecule-Surface Interfaces for Multiple-State Data Storage Technologies“, which is supported by the Leibniz Collaborative Excellence program and involves two experimental groups at the Institute of Surface Modification (IOM) Leipzig and a theory group at TU Dresden.

The successful candidate shall, in close collaboration with the experimental partners, design predictive atomistic models for multiple-state data storage materials. The envisaged hybrid structures include hydrogen bonded metalloporphyrin networks on gold surfaces and deposited polyoxometalates. Materials manufactured by the experimental partners shall be jointly characterized and analyzed, in order to elucidate structure, electronic structure and function of the materials. Calculations shall be carried out using a portfolio of atomistic methods ranging from force fields and density-functional theory.

**Requirements:** university degree and PhD degree in chemistry, physics or material science. We expect profound knowledge in computational chemistry, including atomistic simulations of materials, electronic structure calculations, predictive spectroscopic simulations, and high performance computing. We expect a high level of competence, in particular in scientific communication with the experimental partners.

**What we offer:** We offer a stable 3-year's position with a competitive salary in one of Germany's most attractive research environments. TU Dresden is one of the 13 German Universities of Excellence and provides outstanding working, research and networking possibilities. Further qualification, for example aiming at the *venia legendi*, is possible.

The Chair of Theoretical Chemistry is headed by Prof. Thomas Heine. The international group of ~25 researchers from 9 nations works interdisciplinary in the fields of computational materials science, theoretical and computational chemistry, and physics of low-dimensional materials. It maintains strong ties with the local experimental groups of TU Dresden and the institutes of the DRESDEN-concept environment. The group hosts its own computer cluster and has full access to the high-performance computing infrastructure at ZIH Dresden, one of Germany's leading HPC centres. Dresden, the capital of the State of Saxony, is a city with beautiful historical city centre. It offers a high standard of living with high ratings in housing, safety and healthcare. Applications from women are particularly welcome. The same applies to people with disabilities.

Please submit your comprehensive application including the usual documents by **11.02.2020** (stamped arrival date of the university central mail service applies) by mail to: **TU Dresden, Fakultät Chemie und Lebensmittelchemie, Professur für Theoretische Chemie, Herrn Prof. Dr. Thomas Heine, Helmholtzstr. 10, 01069 Dresden** or preferably via the TU Dresden SecureMail Portal [https://securemail.tu-dresden.de](https://securemail.tu-dresden.de) by sending it as a single pdf-document to **antje.voelkel@tu-dresden.de**. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

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**Reference to data protection:** Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: [https://tu-dresden.de/karriere/datenschutzhinweis](https://tu-dresden.de/karriere/datenschutzhinweis)