

Faculty of Mechanical Science and Engineering

For the **EU-funded research project** *Bottom-Up generation of atomically precise synthetic 2D Materials for high performance in energy and Electronic applications (ULTIMATE)* the **Institute of Materials Science, Chair of Materials Science and Nanotechnology** offers a position as

Research Associate / PhD student

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

The position will start **as soon as possible**. The fixed-term position is for 3 years. The period of employment is governed by the Fixed Term Research Contracts Acts (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position aims at obtaining further academic qualification (e.g. PhD).

Position and Requirements

The EU Marie Skłodowska-Curie Innovative Training Network *ULTIMATE* encourages the highest quality research in Europe through competitive funding and by supporting investigator-driven frontier research on the basis of scientific excellence. The project allows researchers to identify new opportunities and tries to fund new and promising topics with a great degree of flexibility. Ultimately, with this project we would like to address the needs of a knowledge-based society and provide Europe with the capabilities in frontier research necessary to meet global challenges.

The position is embedded in a cooperative research project funded by the European Union which aims to synthesize and understand novel atomically precise 2D materials and to find ways to exploit their unique and tuneable properties for electronics and energy applications. Furthermore, it will be embedded within the Dresden Center for Computational Materials Science (DCMS) and strongly interacting with its more than 70 members. The Center aims at fostering and clustering the activities related to materials modeling and simulations in the Dresden region. For more information, please refer to <https://nano.tu-dresden.de/> and <http://dcms.tu-dresden.de/>.

The successful candidate will use modern approaches of **computational materials science** in combination with efficient methods for **data analysis** to compute and predict properties of synthetic 2D materials in close collaboration with experimental groups in Europe.

An excellent university degree in Physics, Chemistry, Materials Science, or a closely related area is required, as well as excellent communication and writing skills in English. Furthermore, personal initiative, independent work, as well as the ability to work in a team are necessary. Experience in computational material science (DFT, advanced MD) is desirable. Exemplifying your programming skills using a GitHub or HackerRank (or similar) profile is strongly encouraged. We target at top-notch dedicated and proactive young scientists who plan to make their mark in science.

What we offer

You will join a team of enthusiastic scientists who pursue creatively their individual research agenda inspired by the chair's innovative approach and support. Your research environment will include access to state of the art research of leading academic institutes; promotion of gender equality and family-friendly work environment.

Applications from women are particularly welcome. The same applies to people with disabilities.

Application Procedure

Applicants should send their application documents as a **single PDF file**, including a letter of motivation, Curriculum Vitae, publication list, and names of at least **two** referees preferably via mail to jobs@nano.tu-dresden.de (Please note: We are currently not able to receive electronically

signed and encrypted data.) with the **Subject:"Application ULTIMATE, your_surname"** or to **TU Dresden, Fakultät Maschinenwesen, Institut für Werkstoffwissenschaft, Professur für Materialwissenschaft und Nanotechnik, Herrn Prof. Cuniberti, Helmholtzstr. 10, 01069 Dresden**. Deadline for applications is **15.01.2020** (stamped arrival date of the university central mail service applies). Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

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://tudresden.de/karriere/datenschutzhinweis>

About the Chair

The scientific activities of the Chair of Materials Science and Nanotechnology (Prof. Dr. G. Cuniberti) are focused on developing non-conventional strategies for novel materials and devices with intrinsic nanoscale complexity. Please visit <http://nano.tu-dresden.de/> for more information on our activities.

About DCMS

Dresden is a leading center of materials research in Europe and worldwide. To foster the activities in the field of materials modeling and simulations, the Dresden Center for Computational Materials Science (DCMS) has been established to join the competences of more than 70 researchers active at several TU Dresden faculties (e.g. Mechanical Science and Engineering, Electrical and Computer Engineering, Computer Science, Physics, Chemistry) and at a large number of research institutions in Dresden and Saxony. Our members possess broad expertise in the simulation of materials properties ranging from studies on the pico- and nanometer scale up to the modeling of materials at the microscale and beyond.

About TU Dresden

The TU Dresden is among the top universities in Germany and Europe and one of the eleven German universities that were identified as an 'elite university' in June 2012. As a modern full-status university with 18 faculties it offers a wide academic range making it one of a very few in Germany.