The **Research Training Group** (RTG) **2767** „Supracolloidal Structures: From Materials to Optical and Electronic Devices“ of TU Dresden, funded by Deutsche Forschungsgemeinschaft (DFG), offers 1 of 12 positions as

**Research Associate / PhD Student (m/f/x)**

(subject to personal qualifications, employees are remunerated according to salary group E 13 TV-L)

starting **1 April 2022**. The position comprises 70% of the full-time weekly hours as specified below and is initially limited for 3 years, with the option of extension. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG). The position aims at obtaining further academic qualifications (e.g. doctoral degree).

**About the RTG**

The RTG 2767 aims to train a new generation of experts who will design materials made of supracolloidal structures from the drawing board to application in components. Nanoparticles are used in many optical and electronic components nowadays. Supracolloidal structures are complex superstructures composed of different nanoparticles, similar to how atoms are linked to molecules. This results in innovative, exceptionally promising optical and electronic properties that go far beyond those of the individual building blocks. To date, these structure-property relationships of the assembled particles are not adequately understood. The technological visions of these new materials include novel solar cells, field amplification for highly sensitive spectroscopy, biosensing applications where complex detection processes are made simpler, and even on-site sample examination using smartphones. In order to realize the technical complexity in the training, numerous institutions are connected within the RTG’s 2767 tight network, including various groups at the TU Dresden, the Universität Leipzig, the TU Dresden Research Cluster cfaed and the Dresden Center for Nanoanalysis as well as the Leibniz Institute for Polymer Research Dresden, the Helmholtz-Center Dresden-Rossendorf and the Kurt Schwabe Institute for Measurement and Sensor Technology Meinsberg e.V.

**Position**

**RTG2767-A6**

**Investigators:** Dr. Bernd Rellinghaus / Prof. Dr. Andreas Fery

**Terms:** 75% of the full-time weekly hours

**Location:** Technische Universität Dresden

**Tasks:** In situ and in operando characterization of functional self-assembled nanostructures

**Requirements:** Excellent Master of Science or diploma in physics, materials science, or chemistry.

Experience in (i) the processing of nanostructured or nanoparticulate materials or (ii) transmission electron microscopy.

**General Requirements**

- above-average degree achieved in short study period,
- willingness and ability to think beyond the boundaries of your field, to act in an international and diverse environment and to live an open and constructive communication,
- strong analytic and problem-solving skills, creativity,
- an independent, target- and solution-driven work attitude,
- fluency in English, knowledge of German would be a plus
What we offer
You will join an enthusiastic and ambitious research training group, where you can drive your project forward and benefit from inspirational interactions with like-minded researchers. The RTG offers structured training program with technical and soft skill courses, research stays abroad as well as contact to industry. It offers the opportunity for PhD thesis completion. The working language of our international teams is English.

About the DCN at cfaed of TU Dresden
The Dresden Center for Nanoanalysis (DCN) at the TU Dresden was founded in November 2012 and officially opened in April 2013. The center serves as an analytics platform for the Center for Advancing Electronics (cfaed). The determination of the structure and chemical composition of modern materials and components with up to atomic resolution and the development of methods for the characterization of kinetic processes in nanoscale materials are the focus of the activities of the DCN. www.cfaed.tu-dresden.de/dcn.

For informal enquiries, please contact the investigator given above or Kristin Schmidt (kristin.schmidt@tu-dresden.de, +49 351 463 43703).

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

Your application (in English only) must include: a motivation letter, your CV with publication list, copy of degree certificate, and transcript of grades (i.e. the official list of coursework including your grades). Please include also a link to your Master’s or diploma thesis. Complete applications should be submitted preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document quoting the reference number RTG2767-06 in the subject header to recruiting.cfaed@tu-dresden.de or alternatively by post to: TU Dresden, cfaed, Frau Kristin Schmidt, Helmholtzstr. 10, 01069 Dresden, Germany. The closing date for applications is 31 Jan 2022 (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://tu-dresden.de/karriere/datenschutzhinweis