The Collaborative Research Center (SFB) 1143 “Correlated Magnetism: From Frustration to Topology” offers a full-time position as

**Research Associate / Postdoc**

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

at the crossover of Materials Chemistry and Solid State Physics starting at the **earliest possible date**. The position is limited until 31.12.2022. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification.

The SFB 1143 has successfully accomplished the first funding period in 2018 and has been extended for the second funding period 2019–2022. The consortium has achieved national and international impact and visibility via resourceful collaborations, excellent infrastructure and high publication rates.

The SFB project B03 under supervision by Prof. Dr. Michael Ruck (Chair of Inorganic Chemistry II) is currently investigating compounds with triangular or honeycomb networks decorated with magnetically active cations, e.g., which are discussed as candidates for quantum spin liquids. In addition, crystals of other potential magnetically frustrated materials are grown and extensively characterised. The work includes: identification of suitable compounds and their phase-pure synthesis, crystal growth, elucidation of the crystal structures and chemical characterization. In cooperation with project partners in experimental physics, measurements of thermodynamic and transport properties, neutron and electron spectroscopy, nuclear magnetic resonance studies are carried out. Cooperation with the theory enables the analysis of chemical bonding and the calculation of thermodynamic and transport properties. Active participation in the SFB and supervision of project-related student theses (Bachelor, Master) are expected.

**Tasks:** identification of suitable new materials and their synthesis; crystal growth (by Bridgman method or chemical gas phase transport, e.g.); determination of (thermo-)chemical properties; structural characterization by powder and single crystal X-ray diffraction and electron microscopy; operation and support of project-relevant devices (e.g. X-ray diffractometer, magnetometer); active cooperation in an established, interdisciplinary team of chemists, experimental physicists and theoreticians and coordination of the chemical part of the investigations.

**Requirements:** university degree and PhD (M.Sc., Dipl.) in materials science, chemistry or related disciplines; experience in inorganic synthesis and X-ray diffraction; basic competences in solid state physics/magnetism; very good English language skills; ability to work creatively and independently; high level of commitment and willingness to integrate into the existing team and to take responsibility.

We offer an intensive mentoring in an attractive scientific environment in combination with an excellent infrastructure. Further information on the SFB 1143 can be obtained via the web address [https://tu-dresden.de/mn/physik/sfb1143](https://tu-dresden.de/mn/physik/sfb1143).

Applications from women are particularly welcome. The same applies to people with disabilities. Please submit your comprehensive application including a cover letter, curriculum vitae, certificates and a short description of previous professional activities by **25.02.2020** (stamped arrival date of the university central mail service applies) to TU Dresden, Fakultät Chemie und Lebensmittelchemie, Professur für Anorganische Chemie II, Herrn Prof. Dr. Michael Ruck, Helmholtzstr. 10, 01069 Dresden, or 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: michael.ruck@tu-dresden.de. 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