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

**Research Associate / PhD Student**

(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 as soon as possible. The position entails 75 % of the fulltime weekly hours and is limited for three years (latest 31.12.2022). The period of employment is governed by Fixed Term Research Contracts Act (Wissenschaftszeitgesetz-WissZeitVG). The position aims at obtaining further academic qualification (e.g. PhD).

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 B01 project of the SFB in particular explores **materials aspects of oxide and halide frustrated magnets** based on 3d, 4d, and 5d transition metals with three central aims: (i) development of synthetic routes for polycrystalline samples of emergent frustrated magnets, (ii) exploration of growth routes for yet unavailable single-crystals, and (iii) investigation of structural, magnetic and thermodynamic properties of magnetically frustrated materials. Classes of materials that will be studied comprise double perovskites with anisotropic or competing magnetic interactions; layered cluster compounds with kagome structural motifs; layered trihalides as well as layered oxyhalides and tetrahalides.

The PhD project will be conducted at the **Faculty of Physics** of TU Dresden in the newly founded research group of Jun.-Prof. Dr. Anna Isaeva in strong collaboration with the Leibniz Institute for Solid State and Materials Research (IFW Dresden) and the Faculty of Chemistry and Food Chemistry (Prof. Dr. M. Ruck).

**Tasks:** The successful applicant will work on **synthesis, crystal growth and structure characterization** of novel, perspective candidates for magnetic frustration, in particular:

- conduct and fine-tune crystal-growth techniques, including chemical vapor transport reactions;
- perform explorative synthesis in order to identify new promising material candidates and study their thermochemical properties;
- elucidate crystal structures by combined powder/single-crystal X-ray diffraction and transmission electron microscopy;
- work in a strong, interdisciplinary team of chemists, experimental physicists and theoreticians and coordinate the “chemistry” input for the studies of magnetic and electronic phase diagrams.

**Requirements:** university degree (M.Sc., Dipl.) in materials science, chemistry or related disciplines, preferably with notable practical experience in solid-state synthesis and crystal X-ray diffraction; basic competences in solid state physics/magnetism; good spoken and written English; ability to work in a team and strong motivation; willingness to integrate into the existing team and to take over 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 the a cover letter, curriculum vitae, certificates and a short description of previous professional activities by **28.05.2019** (stamped}
arrival date of the university central mail service applies) via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to anna.isaeva@tu-dresden.de or to TU Dresden, Fakultät Physik, Institut für Festkörper- und Materialphysik, Frau Jun.-Prof. Dr. Anna Isaeva, Helmholtzstr. 10, 01069 Dresden. 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