The Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden) is a non-university research institute and a member of the Leibniz Association. The IFW employs approximately 600 people and one focus is on the training of young scientists besides enhancing fundamental and applied research development. The IFW is a research institute at the highest international level and pursues modern materials science from fundamental research to products useful for application and economy. The complex and interdisciplinary research work is carried out within the IFW by five scientific institutes, which are supported by a highly developed technical infrastructure. The IFW supports its employees in reconciling work and family life and regularly submits to the berufundfamilie® audit. Further information at: http://www.ifw-dresden.de.

The Institute for Metallic Materials (Prof. Kornelius Nielsch) of the IFW Dresden offers a

**PhD position (m/f/d)**

with a weekly working time of 26 hours in the Department of Thermoelectric Materials and Devices on the following topic:

“Development of an integrated thermoelectric temperature stabilized sample carrier”

In-situ transmission electron microscopy of biological cells is of great interest for understanding underlying biochemical mechanism i.e. to prevent and fight diseases. Such investigations presuppose vacuum tight TEM sample carriers with nano fluidic channels to supply organic solutions in the TEM’s field of view. Further a precise temperature control of biological cells is essential to study temperature dependent properties and mechanisms. In this project we will develop a TEM sample carrier with an integrated micro thermoelectric module for precise temperature control of the observed samples.

The applicant should have experience in at least one of the following fields:

- Thermoelectric device modeling and design optimization
- System simulation including thermal, electrical and fluidic transport
- Electrochemical deposition of thermoelectric materials
- Fabrication of thermoelectric devices
- Thermoelectric characterization techniques

We are seeking highly motivated applicants with a university degree (Master / Diploma) in physics, materials science, electrical engineering or a relevant subject, who are interested in interdisciplinary, applied research and creatively contribute their own ideas into the team. Good communication skills in English (spoken and written) are expected.

The project duration is limited to three years and will start as soon as possible. The salary is based upon the TV-L rules (EG 13, 65 %). PhD candidates are facilitated to participate in the PhD program to successfully complete their dissertation. We offer an attractive work place with excellent facilities and environment in Dresden.

The IFW is aiming to increase the percentage of women in science. Qualified women are therefore explicitly invited to apply. Severely handicapped persons (m/f/d) will be preferred for the same qualification set.

For further information, please contact: Dr. Gabi Schierning (g.schierning@ifw-dresden.de) or Dr. Heiko Reith (h.reith@ifw-dresden.de)

Application including a CV, a motivation letter describing the research career goals, skills and experience, copies of all certificates should be sent citing the reference number H2502-2/20 not later than June 30th, 2020 online as a single pdf-file (other formats will not be accepted) to:

bewerbung@ifw-dresden.de.