

The Leibniz Institute for Solid State and Materials Research Dresden – in short 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. At the highest international level, the IFW operates modern materials science on a scientific basis and makes the obtained results useful for the 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>

Doctoral Researcher Position (m/f/d)

Fabrication of integrated micro thermoelectric generators

The Institute for Metallic Materials (Prof. K. Nielsch) of the IFW Dresden offers a PhD-Position (m/w/d) in the Department of Thermoelectric Materials and Devices starting as soon as possible.

Waste-heat recovery is a central and highly relevant issue in terms of resource conservation and reduction of environmental pollution. Using thermoelectric generators (TEG) waste heat can be directly and efficiently converted into electrical energy. The challenge in building TEGs is their cost-efficient fabrication and adaptation to the respective heat source and sink. Within this project suitable designs and appropriate manufacturing processes for TEGs are to be developed.

Your tasks:

- development of electrochemical deposition processes for thermoelectric materials with high power factors as well as appropriate contact materials
- process development for the fabrication of thermoelectric generators using lithography and electrochemical deposition
- TEG modeling and design strategies for optimal contact resistance, heat fluxes and thermoelectric transport
- Thermoelectric characterization and reliability study on TEGs

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

Your profile:

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.

We offer:

The employment contract is primarily limited to 12 months and will be extended by another 2 years upon a successful mid-term evaluation. 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 salary (E13; volume of employment 60%) is based upon the TV-L rules.

The institute promotes the professional equality between all genders. In science, the IFW Dresden would like to increase the proportion of woman. Qualified women are therefore explicitly invited to apply. Equally qualified handicapped applicants will be given preference.

Your application:

Please send your application including a cover letter with motivational statement, CV, copies of certificates, published articles and other relevant material (if applicable) quoting the reference number **DM2101-TEG/2019** in a single PDF file (other formats will not be accepted) exclusively to:

bewerbung@ifw-dresden.de

Deadline for applications: **6 October 2019**