

The Leibniz Institute for Solid State and Materials Research Dresden e. V. (IFW Dresden) conducts modern materials research on a scientific basis for the development of new and sustainable materials and technologies. The institute employs an average of 500 people from over 40 nations and, in addition to its scientific tasks, is dedicated to promoting young scientists and engineers. Further information at: <http://www.ifw-dresden.de>

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

## PhD position (m/f/d)

on the following topic:

### Tellurium-free Thermoelectric Modules

They will develop sustainable thermoelectric modules using Mg-based Zintl-phase materials and optimize these thermoelectric materials and modules for higher performance in terms of energy conversion efficiency, thermal stability and long-term stability. The nanostructured thermoelectric materials are synthesized by high energy ball-milling and spark plasma sintering. Interface engineering at the atomic scale will be applied to improve the thermoelectric performance. This Ph.D. thesis will take part in the European Network Project THERMOS on sustainable thermoelectric modules, where the IFW Dresden is collaborating with the Fraunhofer IFAM in Dresden, the University Pardubice, Czech republic, the NanoGune Institute in Spain and the Company TEGnology from Denmark.

We are seeking highly motivated applicants (m/f/d) with a university degree (Master/ Diploma) with a background in materials science and engineering, Solid state physics, Nanotechnology, Mechanical Engineering or a relevant subject. Good communication skills in English (spoken and written) are expected.

The project duration is limited to 3.5 years and will start as soon as possible. We support and strongly encourage the Ph.D. candidates to perform a research stay of max 6 months abroad. The salary is based upon the TV-L rules (EG 13, 75 % - 65% for the project activities and 10% outside the project). PhD candidates (m/f/d) 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.

IFW Dresden strives for a balanced gender ratio in all areas. In science, IFW Dresden would like to increase the proportion of women and therefore explicitly invites suitably qualified female scientists to apply. The application of severely disabled persons is explicitly welcome.

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 **040-22-2001** no later than **June 30<sup>th</sup>, 2022** online as a single pdf-file to:

[bewerbung@ifw-dresden.de](mailto:bewerbung@ifw-dresden.de).

For further information, please contact: Prof. Kornelius Nielsch ([K.Nielsch@ifw-dresden.de](mailto:K.Nielsch@ifw-dresden.de)).

