

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)** Shape memory alloy films for self-folding Origami

The Institute of Metallic Materials at the Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden) offers a PhD position in the field of “Shape memory alloy films for self-folding Origami” starting from December 2019.

#### **Project description:**

We are looking for a PhD student interested in the development of shape memory films for self folding origami, which represent a new approach for re-programmable micro-matter. This work focuses on deposition of Ni-Ti films and shape setting for bending microactuators and covers hard magnetic films for fixation. It includes the analysis of structure, microstructure and transformation properties, as well as understanding & optimizing functional shape memory and magnetic properties. It is part of a joint project with KIT, where these films will be used to build self-folding micro-origami and FAU, where these microsystems will be simulated. Accordingly, interdisciplinary collaborations are possible.

This work is embedded in the research group “Functional magnetic films”, which examines (magnetic) shape memory, magnetocaloric, multicaloric, and hard magnetic films for energy applications like magnetocaloric refrigeration and thermomagnetic generators.

For further information please contact: Dr. Sebastian Fähler ([s.faeher@ifw-dresden.de](mailto:s.faeher@ifw-dresden.de))  
See also: <https://www.ifw-dresden.de/ifw-institutes/imw/>

#### **Your profile:**

You should have a master degree or diploma in material science, physics or microtechnology. Knowledge and interest on shape memory alloys, functional thin films, or microsystem technology are welcome. The successful candidate is open-minded, curious and ready to work in a strongly interdisciplinary environment. Good communication skills in written and spoken English are required.

#### **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.  
The salary (E13; volume of employment 65%) 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 **DM2103-Origami/2019** in a single PDF file (other formats will not be accepted) exclusively to: [bewerbung@ifw-dresden.de](mailto:bewerbung@ifw-dresden.de)

Deadline for applications: **6 October 2019**