Job posting

**Type of position**
- [x] scientific
- [ ] administrative

**Target group**
- [x] graduates
- [ ] post docs
- [ ] other

**Title**
Doctoral Researcher (f/m/d): "Analytical electron microscopy of beam sensitive materials"

**Institution**
The Cluster of Excellence 3D Matter Made to Order (3DMM2O) combines the competencies of two Universities of Excellence to advance 3D Additive Manufacturing to the next level. The goal is to break current barriers of scale, precision and speed to unleash the true potential of the technology.

The doctoral researcher will work in the new research group MNM (microscopy of nanoscale structures & mechanisms) guided by Dr. Yolita Eggeler, which is part of the central laboratory for electron microscopy (LEM) at KIT.

MNM uses high-resolution analytical scanning and transmission electron microscopy (SEM and TEM) to identify new material structures. We explore elementary processes which govern microstructural evolution during material processing. We are interested in the evolution of nano- and microstructures in functional (magnetic materials) and structural materials (high temperature materials, high entropy alloys). We work on the new materials, which are engineered on the atomic and nano scale (e.g. by 3D nanoprinting) in the Cluster of Excellence 3D Matter Made to Order (3DMM2O). MNM is in close contact with other material researchers at KIT and with material scientists from universities and research institutions in Germany and abroad.

**Position**
As of November 2020, we are looking for a PhD candidate (m / f / d) who fits well into our team. The research aims at establishing new techniques to characterize the nanostructure of SURMOFs beam sensitive materials.

The project combines and draws on different areas of expertise, including materials processing (synthesis by the dipping method), assessment of different layer thicknesses and chemical distribution, and in particular advanced SEM and TEM techniques (including high resolution TEM, high resolution TEM spectroscopy and in situ TEM). The topic is not only scientifically interesting but also technologically important.

A scientific staff position (f/m/d) with a remuneration of 0.65 E13 is offered to candidates who aim for a doctoral degree (German
PhD degree). Funding is secured for 3 years and can be extended if required. The candidate will benefit from the offers and structure provided by the HEiKA Graduate School on Functional Materials, which is integrated into the Cluster of Excellence.

Responsibilities

Requirements
- Master degree in the fields, physics, materials science, chemistry, mechanical engineering, or related fields
- Background in transmission electron microscopy (TEM)
- Very good English and/or German communication and scientific writing skills
- Keen interest in advanced materials topics

Application procedure (deadline etc.)
For further questions about the project, you can contact yolita.eggeler@kit.edu.

Please go to our application portal: https://functionalmaterials.applicationportal.org/home.html

The application period is open until October 30, 2020. We will start reviewing applications immediately.

Contact
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