The Institute of Micro- and Nanostructure Research (IMN) & Center for Nanoanalysis and Electron Microscopy (CENEM) at the University of Erlangen-Nürnberg are seeking

PhD-students / PostDocs

for

Advanced and *In Situ* Electron Microscopy

in the following research areas

- **High-temperature materials**
- **C-allotropes & organic solar cells**
- **Nanomechanics**
- **Thin films**

IMN's research focuses on the development and application of advanced TEM, FIB-SEM and tomography techniques for quantitative analysis of structural and functional materials with the goal to contribute to an understanding of process-structure-property relations and to improve materials properties and device performance. Within various collaborative projects funded by the German Research Foundation (DFG) we address a broad range of materials, including high temperature superalloys (SFB-TR103), C-allotropes and organic devices (SFB953), glass structures (SPP1594), porous materials (SPP1570), as well as nanostructures and thin films (EXC315). Moreover, in our research training group GRK1896 "In situ microscopy with electrons, X-rays and scanning probes" we combine complementary in situ techniques for unravelling fundamental materials processes and structure-property relations directly on the microscopic scale (www.grk1896.fau.de). Further details on our research activities can be found at IMN's homepage www.em.tf.fau.de.

At CENEM (www.cenem.fau.de) we operate an advanced electron microscopy lab with FIB Helios Nanolab 660 and double-corrected monochromated FEI Titan^3 Themis 60-300. Specialized sample holders for advanced electron tomography and in situ studies are available, including 360° tomography holder (Fishione Instruments, Model 2050), PI95 picoindenter (Hysitron), TEM-STM/AFM holders (Nanofactory) as well as chip-based sample heating systems (DENSsolutions). Moreover, a TEM liquid-cell has been developed for in situ studies of materials processes in liquids. A recently installed X-ray microscope / Nano-CT (Zeiss Xradia Ultra 810) and atom probe tomography instrument (Cameca LEAP 4000X HR) complement the unique portfolio of 3D micro- and nanocharacterization techniques available at CENEM.

We are seeking highly motivated **PhD students** / **PostDocs** with a master's degree / PhD in physics, materials science, chemistry, mineralogy or a related discipline. PhD candidates should have a solid background in the theory of electron microscopy and hands-on experience in SEM and/or conventional TEM. PostDoc applicants are expected to have several years of experience in the application of advanced (S)TEM of FIB-SEM techniques for materials characterization.

We offer working in a great team and an expanding microscopy group within a vibrant scientific environment. Scientific discussion, the process of creating own ideas and the possibility to implement them are key elements of our research philosophy.

The salary is according to German standard (75% E13 TL-V for PhD, 100% E13 TL-V for PostDoc). The PostDoc position will be for 2 years with evaluation after 1 year. **The position will be filled as soon as possible**.

The University of Erlangen-Nürnberg is interested in increasing the share of women in research and teaching positions and therefore explicitly encourages female candidates to apply.

Physically disabled applicants receive favorable consideration when equally qualified.

Please send your application by e-mail to Prof. Erdmann Spiecker (Erdmann.Spiecker@fau.de).