New Thinking. New Materials.

POSTDOC POSITION: THREE-DIMENSIONAL SCANNING TRANSMISSION ELECTRON MICROSCOPY

We are looking for a scientist with a PhD in physics for the project "TFS-STEM: Combined tilt- and focal series for STEM tomography with a computational correction for beam blurring" funded by the Deutsche Forschungsgemeinschaft (DFG).

The INM – Leibniz Institute for New Materials in Saarbrücken, Germany, is an internationally leading center for materials research. We focus on surface and interface phenomena and their exploitation in the development of innovative materials and structures. INM is a scientific partner to national and international research institutions and a provider of research and development for companies throughout the world. INM has about 250 employees and is an institute of the Leibniz Association.

The Program Division Innovative Electron Microscopy at INM conducts interdisciplinary research at the interface of physics of electron microscopy, biophysics, materials science, cell biology, and image processing. We develop liquid-phase scanning transmission electron microscopy (STEM) methods for the study of functional materials and biological systems at realistic conditions. We are exploring new routes for three-dimensional (3D) data acquisition using intelligent STEM- and image reconstruction strategies. We are looking for a scientist who will study a new concept for acquiring 3D data via combined tilt- and focal STEM: TFS-STEM. This concept promises several key advantages compared to conventional 3D electron microscopy techniques for imaging samples from both materials science and biology. The project includes analyzing the parameter space of TFS-STEM, analysis of the achievable spatial resolution for samples of different type and thickness and exploring its possible application areas. The project is conducted together with the group of Dr. Tim Dahmen at the German Center for Artificial Intelligence (DFKI, Saarbrücken). This team will develop and test advanced 3D reconstruction algorithms. Your tasks will be to conduct exciting research, and to publish papers in top journals. In addition, you will be responsible for updating the 3D capabilities in our electron microscopy facility including an aberration corrected TEM/STEM (ARM200, JEOL).

The successful candidate has a PhD degree in physics. The demonstrated ability to write high-quality scientific papers as first author is a must. A specific requirement for this position is in-depth knowledge of and practical experience with transmission electron microscopy. Hands-on experience with 3D electron microscopy, and aberration corrected STEM are a plus. The candidate is a team player with an open mind for unconventional ideas. The ideal candidate shows a strong motivation for science and excellent writing and oral communication skills in English, and proficient communication skills in German.

INM is an equal-opportunity employer with a certified family-friendly policy. We promote the professional opportunities of women and strongly encourage them to apply. Full time jobs can be generally divided.

Please send your application via email to the attention of Prof. Niels de Jonge including a detailed CV and at least two references along with a motivation letter no later than July 20, 2018. The attachment should be a single pdf-file <5 MB:
Reference: “Postdoc position: 3D STEM”

E-mail: Diana.Loeb@leibniz-inm.de

Group website: http://www.leibniz-inm.de/en/research/innovative-electron-microscopy/

INM

Leibniz Gemeinschaft

Zertifikat seit 2012 audit berufundfamilie

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