

PhD Position in Computational Modeling of Focused Ion-Beam Milling

The Institute for General Material Properties of the Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) is seeking outstanding candidates for a research project within the framework of the European large-scale integrating collaborative research project “iSTRESS: Pre-standardisation of incremental FIB micro-milling for intrinsic stress evaluation at the sub-micron scale”.

Focused ion beam (FIB) micro-milling is a recent and already widely used method to prepare micro- and nanoscale structures from a wide range of bulk materials. How the damage introduced by the FIB process affects the local mechanical properties of the material is, however, still poorly understood. The aim of the project is to use atomistic simulations to analyze the defect structures created by the ion beam and to study their effect on local strain relief. The atomistic simulation results will be compared directly with experimental investigations and form the basis for a multiscale model of FIB-introduced artifacts. For more information on the iSTRESS project see <http://www.stm.uniroma3.it/iSTRESS/>

We invite highly qualified candidates with M.Sc or equivalent degree in physics, chemistry, materials science or related disciplines to apply. The successful candidate will have a solid background in solid-state physics and mechanical behavior of materials, as well as experience with numerical simulations (preferably Molecular Dynamics) and scientific programming. Excellent oral and written communication skills and the ability to work well in a dynamic and collaborative research environment are essential.

Please send your application (including a cover letter describing your research interests, curriculum vitae, scanned certificates and contact information of two references) to comp-mat-sci-jobs@ww.uni-erlangen.de