

Leoben, 28.02.2018

Announcement of a Post-doc Position:

***In-situ* TEM analysis of crack tip processes**

Background:

In the 'Micro- and Nanomechanics' group of Assoz.Prof. Dr. Daniel Kiener the ERC Consolidator Grant TOUGHIT focusses on the development of superior strong and tough composite materials by tailoring microstructure and interface properties. In this regard, we are looking for a candidate that will apply quantitative *in-situ* transmission electron microscopy to analyze the fundamental processes taking place during nucleation and propagation of cracks in metallic nanocomposites.

Requirements:

The applicants must hold a PhD degree within materials science or equivalent with a strong background in transmission electron microscopy. Previous knowledge and experience with *in-situ* nanomechanical testing, focused ion beam microscopy as well as density functional theory modeling will be considered an advantage.

Applicants will work in a team in an international environment and need to have excellent presentation and communication skills. The candidate is expected to conduct and analyze the *in-situ* experiments, to initiate novel scientific ideas, to participate in supervision of PhD students and master thesis projects, and to publish the research work in international journals.

Location:

Department Materials Physics, Montanuniversität Leoben, Jahnstr. 12, Leoben, Austria.

Timeline:

Earliest starting date is 1st of May 2018, the project duration is five years.

Contact:

For further information or application please contact:

Dr. Daniel Kiener, Tel.: +43 3842 804-412, Email: daniel.kiener@unileoben.ac.at

Applications accompanied by supporting documentation in **English** (Cover letter, CV, certificates, credentials, names and addresses of 2 references) should be submitted only via email. Applications will be accepted until a candidate is found.

Leoben, 28.02.2018

Announcement of a Post-doc Position:

Local strain fields near crack tips

Background:

In the 'Micro- and Nanomechanics' group of Assoz.Prof. Dr. Daniel Kiener the ERC Consolidator Grant TOUGHIT focusses on the development of superior strong and tough composite materials by tailoring microstructure and interface properties. In this regard, we are looking for a candidate to apply strain mapping techniques in the transmission electron microscope to analyze the local strain fields around cracks in inhomogeneous metallic materials.

Requirements:

The applicants must hold a PhD degree within materials science or equivalent with a strong background in transmission electron microscopy. Previous knowledge and experience with crystal orientation mapping, *in-situ* nanomechanical testing, focused ion beam microscopy as well as density functional theory modeling will be considered an advantage.

Applicants will work in a team in an international environment and need to have excellent presentation and communication skills. The candidate is expected to conduct and analyze the experiments, to initiate novel scientific ideas, to participate in supervision of PhD students and master thesis projects, and to publish the research work in international journals.

Location:

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