Date of announcement: 22. 11. 2018

BACHELOR/DIPLOM/MASTER-ARBEIT OPPORTUNITY OFFERED:

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„Incomplete Orientation Imaging Microscopy applied to Crystallographic Twin character determination“
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Background

Twinning is a common deformation mechanism in some crystal structures, leading to stress relaxation. Since different twinning systems can get activated depending on the local stress-strain state, and affecting it correspondingly, the unbiased characterization of twins is of major importance. The intrinsic deformation of the twinned material makes it a challenging process, as complete crystal mapping is unfeasible.

Tasks

The experimental work will consist in crystal mapping of several sample surface areas by means of microscopy. Subsequently the student will use and partially develop codes in MATLAB and other existing computing tools to be applied to the maps for the determination of the twin character.

Requirements

Basic knowledge on materials science, especially on crystallography, and prior experience with MATLAB are an advantage. The work can be written in either English or German.

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