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Postdoc position (f/m/d) at the Institute for Applied Materials (IAM):

Hydrogen micromechanics

The Institute of Applied Materials - Mechanics of Materials and Interfaces (IAM-MMI) at the Karlsruhe Institute of Technology (KIT) strives for a fundamental understanding and prediction of the degradation mechanisms of functional material systems, as well as their mechanism-based optimization. Our materials portfolio includes materials for the energy transition, i.e. materials for energy conversion and storage, as well as applied structural materials. In all these materials, interfaces are both the backbone (in terms of functionality) and the Achilles heel (due to the degradation mechanisms that occur there).

In this context, the IAM-MMI is filling a postdoctoral position with immediate effect. The successful candidate should have a strong background in materials science / mechanics. As a postdoc, you will be part of a newly established research group ([Hydrogen Micromechanics](#) Group) consisting of five researchers conducting fundamental research on hydrogen embrittlement mechanisms.

The aim of the activity is to build up an in-depth mechanistic understanding of the hydrogen-defect interaction. For this purpose, micromechanical experiments should be carried out on samples loaded with hydrogen and tritium. The samples are prepared using a FIB microscope and then deformed under a scanning electron microscope. The interpretation takes place in the context of the specialist literature published on the topics of "HELP" and "HEDE".

The co-supervision of doctoral/master/bachelor students, possible contributions to teaching at the IAM-MMI and the development of own research project proposals in the field of hydrogen embrittlement are possible.

Successful candidates must have a PhD, preferably in materials science / mechanics. Experience in the field of material characterization, (nano-/micro-)mechanics, and electron microscopy is an advantage

In addition to a modern laboratory at the IAM and an inclusive and supportive atmosphere, we can offer a two-year postdoctoral contract (100%TVL-E13). We warmly welcome applicants of different cultures, ethnicities and beliefs – because it is precisely this diversity that is crucial to our success, fundamental to our values and enriches life at the Institute.

Applications will be accepted until the position is successfully filled. The project will start on 01.05.2025.

For further information please contact

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