

We are a young, innovative university in the heart of the Ruhr metropolis. Excellent in research and teaching, we think in terms of possibilities rather than limits and develop ideas with a future. We embrace diversity, promote potential and are committed to educational equality worthy of the name.

The **University of Duisburg-Essen** is seeking to recruit a researcher in the Faculty of Engineering, Department of **Applied Quantum Materials**, at the **Duisburg Campus**.

Research assistant (f/m/d)

Topic:

Investigation of possible electronic causes of hydrogen embrittlement

For the development of hydrogen technology, it is extremely important to understand the changes in materials caused by hydrogen in order to ideally counteract harmful influences (e.g. hydrogen embrittlement of metals). The interactions of hydrogen, especially with the large number of free electrons present in metals, have so far been poorly investigated - since electronic driving forces generally play an important role in metals, e.g. in solid-state phase transitions or corrosion processes, it makes sense to also investigate the influence of hydrogen from this point of view.

Specifically, intermetallic compounds (samples are available, as are synthesis possibilities) are to be specifically exposed to hydrogen. Changes in the electronic transport properties (resistance, Hall coefficient, Seebeck coefficient) will be correlated in combination with morphological and structural investigations in order to obtain and understand information about electronic driving forces for the observed material changes.

Your profile:

- Completed Master's degree in nanoengineering / physics / energy science / materials science or mechanical engineering with a specialization in materials science at a German university.
- Interest in experimental laboratory work

Appointment date: by arrangement, in 2024

Contract duration: 3 years

Remuneration: TVL 13 (100 %)

Please contact Prof. Gabi Schierning (gabi.schierning@uni-due.de) for further information.

The University of Duisburg-Essen aims to promote the diversity of its members (see <http://www.uni-due.de/diversity>). It strives to increase the proportion of women among its academic staff and therefore strongly encourages relevantly qualified women to apply. In accordance with the State Equal Opportunities Act, women with equal qualifications will be given preferential consideration. Applications from suitable severely disabled persons and persons of equal status within the meaning of Section 2 (3) SGB IX are welcome.

www.uni-due.de



Zertifikat seit 2010