

The Department of Materials Science, Working Group Synthesis and Real Structure, of Kiel University, is seeking to August 15, 2023 for an initial period of 3 years (end of project) a

**research assistant  
with the opportunity of obtaining a doctorate**

The position will be classified in pay group 13 TV-L if the requirements of the collective agreement are met. The regular weekly working time is 75% of that of a full-time employee (currently 29.025 hours).

**Area of responsibilities**

High entropy alloy nanoparticles (HEA-NP) represent a growing scientific field and are of particular interest for heterogeneous catalysis. On the one hand, they are characterized by a high complexity in chemical composition, but still have a simple solid solution structure. The samples are prepared by laser ablation at the Chair of Technical Chemistry I at the University of Duisburg-Essen. The formation mechanism of these HEA-NPs is only incompletely understood. Furthermore, the range of compositions (number of elements and their atomic ratios) leading to fully mixed HEA-NPs has never been systematically investigated until today. This is where the work on nanoanalytics, which is the subject of this announcement, comes in. These studies require the development and use of advanced transmission electron microscopy techniques, e.g., STEM for the differentiation of various elements and crystal structures in a single HEA-NP at atomic resolution. In addition, in situ heating experiments shall be performed in the TEM to investigate compositional and crystal structure changes that occur in this process. Among other things, these experiments should provide information on whether the particle formation of HEA-NP is dominated by thermodynamic or kinetic effects.

**Job requirements**

- A Master's degree (or comparable) in physics, chemistry, materials science or comparable fields
- Practical experience in electron microscopy and materials analysis as well as in project processing and management is desirable
- You should have no difficulties in independent practical work and you should have scientific interest as well as the ability to work in a team with other scientists - Good English skills in both oral and written communication

**We offer**

- A good work-life balance due to the possibility of variable working hours
- Employee conditions in various facilities (canteen, university sports, job tickets, ...) 30 days of vacation per year
- A company pension plan with a high additional payment by the employer - and much more.

Kiel University sees itself as a modern and cosmopolitan employer. We welcome your application regardless of your age, gender, cultural and social background, religion, ideology, disability or sexual identity. We promote gender equality.

Kiel University aims at increasing the number of women in research and academic teaching and strongly encourages applications of accordingly qualified women. Women will be preferred, provided equal qualifications and scientific performance.

We are committed to the employment of people with disabilities: Applications from severely disabled persons and their equals will be given preferential consideration if they are suitably qualified.

We expressly welcome applications from people with a migration background.

Applications with the usual documents and a meaningful letter of motivation are requested electronically in a single pdf document by June 15, 2023 to:

kb@tf.uni-kiel.de

Prof. Dr. Lorenz Kienle  
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University  
Department of Materials Science  
Kaiserstr. 2  
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We expressly waive the submission of photographs / application photos and therefore ask you to refrain from doing so.

