UNIVERSITÄT DUISBURG ESSEN

Open-Minded

We are one of the youngest universities in Germany and think in terms of possibilities rather than limitations. In the heart of the Ruhr metropolis, in our 11 faculties, we develop ideas for the future. We are strong in research and teaching, live diversity, support potential and are highly committed to an educational equality that deserves this name.

The **University of Duisburg-Essen** is searching at the Campus Essen for a position in the **Faculty of Engineering, Department of Civil Engineering, Institute of Materials Science**, as a

Scientific Researcher - Materials Science (f/m/d)

(salary group EG 13 TV-L, 75%)

The Institute of Materials Science at UDE is part of the Faculty of Engineering. It represents non-metallic functional materials and building materials as essential expertise.

Main research topics and duties:

A researcher position is open in the research project "High-entropy relaxor oxide ceramics for electrical energy storage". High entropy oxides have attracted significant attention due to their low thermal expansion, enhanced thermal stability, and unique mechanical properties. Also the functional properties change significantly for large atomic disorder within the crystalline structure. The concept of entropy driven improvement of functional properties can also be applied to relaxor ferroelectrics. In relaxors the chemical disorder (high-entropy) yields excellent dielectric and electromechanical properties. One of their promising applications are dielectric capacitors for high energy high power density storage. Your task will be to synthesize and study structure, dielectric, and ferroelectric properties of series of high-entropy relaxors based on the niobate family of (anti-)ferroelectrics and to obtain ceramics with enhanced energy storage densities and efficiencies. As part of the activity, we offer a possibility of obtaining a Ph.D. degree.

Your profile:

- A university degree (master's or diploma) in Materials Science, Inorganic Chemistry, Physics or related disciplines.
- Experience in synthesis of ceramic materials and characterization of dielectric materials is desirable.
- Profound knowledge of English (both written and spoken) is also a necessary requirement for the implementation of the project.

We offer:

- A working environment with respectful, appreciative collaboration
- A diverse, varied range of tasks in a research-intensive environment
- A pleasant working atmosphere in a dynamic team.
- The opportunity for a PhD with numerous support offers.
- Family-friendliness through childcare services for your children
- Consultation for family care responsibilities
- A broad range of training and further education opportunities, individual induction
- Excellent public transport connections and free parking
- Attractive sports and health offers (university sports)
- The possibility of home office

Start of position: 01.04.2026

Contract period: 36 months (Project duration)

Working time: 75% of a full-time position

The University of Duisburg-Essen aims to promote the diversity of its members. (s. **https://www.uni-due.de/diversity**)

It is seeking to increase the number of women on its scientific staff and therefore strongly encourages suitably qualified women to apply. In case of equal qualification, women will be given preference in accordance with state equal opportunity legislation.

Applications from suitable handicapped persons and equivalent applicants according to Article 2, Paragraph 3 of the social code (SGB IX) are also welcome.

Please send your application with the usual documents (cover letter, curriculum vitae, list of scientific publications, documents on your scientific and professional career, copies of certificates) as a single pdf file to Dr. Vladimir Shvartsman, University of Duisburg-Essen, Faculty of Engineering, 45141 Essen, telephon +49 (0) 201 18-33791, e-mail **vladimir.shvartsman@uni-due.de**; **shvartsman@materials-ude.de**. Please also quote the reference number 611-25

Information on the Faculty and the advertised vacancy is available temporarily at: **https://www.uni-due.de/iw/de/** and **http://www.uni-due.de/materials/** or **http://www.materials-ude.org**