Ruhr-Universität Bochum

Doctoral Researcher: Exploring phase stability in multinary intermetallic nanoparticles and thin films by comparative s

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Stellenbeschreibung

The Chair of Materials Discovery and Interfaces at the Faculty of Mechanical engineering is looking for a

Doctoral Researcher (m,f,x): Exploring phase stability in multinary intermetallic nanoparticles and thin films by comparative sputtering in ionic liquids and on solid substrates, for 3 years, 39,83 hours per week, TVL E13

The Chair of Materials Discovery and Interfaces at the Institute for Materials is one of the leading facilities for high-throughput materials research and develops new multifunctional materials by using combinatorial coating processes (material libraries) and high-throughput characterization methods. Unique experimental facilities are available for this purpose (combinatorial sputtering systems, high-throughput characterization methods, etc.).

In this cooperation project with the Max-Planck-Institut for Sustainable Materials (MPI-SusMat, Düsseldorf) we are looking for a doctoral researcher (m/f/x) for our part of the DFG project “Exploring phase stability in multinary intermetallic nanoparticles and thin films by comparative sputtering in ionic liquids and on solid substrates, and analysis by advanced transmission electron microscopy and electrochemical measurements”. We are looking for a highly motivated scientist with very good knowledge in the fields of materials science and thin film technology, who is willing to tackle new, exciting and promising topics in an interdisciplinary environment and has the ambition to efficiently generate and publish new scientific findings.

Your tasks:

- Synthesis of multinary intermetallic nanoparticles by sputtering in ionic liquids
- Synthesis of multinary intermetallic thin films by sputtering on solid substrates
- Inert handling of ionic liquids in glove-box system and in Schlenk line
- High-throughput characterization (composition, structure, electrochemical properties) and in-depth characterization of the synthesized materials
- Active and close collaboration with the project partner at MPI-SusMat
- Analysis and visualization of results

- Active usage of research data management system
- Publication of results

Anforderungsprofil & Qualifikationen

Your profile:

- Completed studies with very good results, with a focus on materials science, e.g., from mechanical engineering (specializing in materials), materials science, materials chemistry or comparable
- Practical experience in the synthesis of thin films or nanoparticles, preferable sputtering
- Practical experience in the characterization of thin films or nanomaterials, e.g. EDX, XRD, …
- Experience in the field electrochemistry is desirable
- Interest in publications
- The future doctoral researcher (m/f/d) is expected to: work independently with high motivation, be able to collaborate in teams in a goal-oriented manner, efficiently translate results into scientific publications, have very good scientific, technical and communication skills, be fluent in written and spoken English

Our offerings:

- Challenging and varied tasks with a high level of personal responsibility
- a qualified induction
- Support from and cooperation with competent colleagues
- Team-oriented cooperation in a committed, international and appreciative team
- a friendly and collegial environment

Additional information:

At the request of the applicant (m,f,x), the staff council may be involved in selection interviews. https://www.wpr.ruhr-uni-bochum.de/

If the position is funded by third-party funds the employee has no teaching obligation.

German language courses are offered by the University Language Center (ZFA) in the field of German as a Foreign Language (DaF).
https://www.daf.ruhr-uni-bochum.de/sbgk/index.html.en

You can find information about TVL at: https://oeffentlicher-dienst.info/

The Ruhr-Universität Bochum is one of Germany's leading research universities, addressing the whole range of academic disciplines. A highly dynamic setting enables researchers and students to work across the traditional boundaries of academic subjects and faculties. To create knowledge networks within and beyond the university is RUB's declared aim.

The Ruhr-Universität Bochum stands for diversity and equal opportunities. For this reason, we favour a working environment composed of heterogeneous teams, and seek to promote the careers of individuals who are underrepresented in our respective professional areas. The Ruhr-Universität Bochum expressly requests job applications from women. In areas in which they are underrepresented they will be given preference in the case of equivalent qualifications with male candidates. Applications from individuals with disabilities are most welcome.

Contact details for your application:

S. Thienhaus, Email: MDI-Lehrstuhl@rub.de

Travel expenses for interviews cannot be refunded.

For information on the collection of personal data in the application process see: https://www.ruhr-uni-bochum.de/en/information-collection-personal-data-application-process.

We are looking forward to receiving your **complete and informative application documents (informative motivation letter, CV, publications if applicable) as one pdf document with the specification ANR: 4259 until 10.03.2025, send by e-mail to the following address: MDI-Lehrstuhl@rub.de**

Please get in touch with the contact person named above if you would like to use an alternative application channel.

Vorteile für Mitarbeitende

- Vergünstigtes Jobticket
- Arbeitsplatz in lebendiger Metropolregion

Stellenmerkmale

Beschäftigungsart	**Wissenschaftliche:r Mitarbeiter:in**
Beschäftigungsumfang	**Vollzeit (befristet)**
Home Office	**Nein**
Bewerbungslink	**https://jobs.ruhr-uni-bochum.de/jobposting/4e5d3f6a23231e47cab26576c067b458868b9dd9?ref=stellenwerk**

Kontaktdaten

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