

Leibniz-Institut für Kristallzüchtung (IKZ)



The Leibniz Institute for Crystal Growth (IKZ) is a leading research institution in the area of science & technology as well as service & transfer of crystalline materials to enable solutions in society by modern technologies (e.g. artificial intelligence, climate protection, health etc.). Our work covers the full spectrum from basic over applied research up to pre-industrial development, including national and international partners from university, institutes as well as industry. The institute is part of Forschungsverbund Berlin (<https://www.fv-berlin.de/>) and a member of the Leibniz Association <https://www.leibniz-gemeinschaft.de>. You can find more details on the institute webpage: <https://www.ikz-berlin.de>.

Scientist for heat and mass transfer (m/f/d)

City: Berlin; Starting Date: At the earliest possible; Remuneration: TVöD

Working field

Modern crystalline materials, that are the basis of innovations in microelectronics or renewable energy, are produced in complex high-temperature processes involving a large variety of physical phenomena. In the group "Model experiments" at the IKZ (project homepage: <https://nemocrys.github.io/>), we are working on a new generation of multiphysical models for such processes. An innovative experimental platform provides comprehensive data for the development and validation of new numerical models, which is one of the major challenges in crystal growth technology. In our group you will gain unique experience while working in an interdisciplinary team on ground-breaking science shaping the production of the materials of tomorrow.

Requirements

Your tasks:

- Analyze heat and mass transfer in selected crystal growth processes at IKZ (e.g., growth from melt for semiconductors or oxides). Depending on your previous experience, you can focus more on the experimental or the simulation topics described below.
- Set up model experiments for crystal growth processes using in-situ measuring equipment for various physical fields (e.g., temperature field, flow velocity)
- Build multi-physical numerical models in open-source software (e.g., Elmer, OpenFOAM)
- Perform experimental and numerical studies to validate the new models and publish the results in scientific journals
- Apply the new experimental and numerical tools to optimize various crystal growth processes at IKZ

Our requirements:

- MSc or equivalent degree or PhD in physical sciences, engineering or related discipline
- Solid understanding of processes involving heat and mass transfer
- Practical experience in numerical simulation and scripting with Python
- Basic skills in laboratory work including measurement devices
- Excellent capability of scientific work as well as its documentation and presentation

What We Offer

The position is initially limited to 1 year, an extension is possible. Payment is according to TVöD (Treaty for German public service). IKZ is an equal opportunity employer. Therefore, female candidates are encouraged to apply and will be preferred in case of adequate qualification. Among equally qualified applicants preference will be given to disabled candidates.

Application

For information about the project contact: Dr. Kaspars Dadzis, **kaspars.dadzis@ikz-berlin.de**,

Phone +49 30 6392 2830.

Apply with a letter of motivation, curriculum vitae and all relevant certificates. To do so, please go to Career/Vacancies on our homepage (www.ikz-berlin.de) and click on this advertisement and then on "Apply online". Please note that we process all applications as they come in, and currently there is no formal deadline.

Weitere Informationen unter <https://stellenticket.de/181366/>

Angebot sichtbar bis 18.04.2024

