

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. Our goal is to enable solutions for urgent societal challenges (e.g. communication, artificial intelligence, climate protection, health etc.) by modern electronic & photonic technologies. The work covers the full spectrum from basic over applied research up to pre-industrial development and is performed in collaboration with national and international partners from university, academy and industry. The institute is part of Forschungsverbund Berlin (<https://www.fv-berlin.de/>) and a member of the *Leibniz Association* www.leibniz-gemeinschaft.de. You can find more details on the institute webpage: www.ikz-berlin.de.

Commencing **as soon as possible** there is an opening for a

PhD position (m/f/d)

for the topic:

“Galliumoxide for power electronics”

Due to its large band gap of about 4.8 eV, β -Ga₂O₃ has high potential to be used as a material for high power switching devices, which e.g., increase the efficiency of power converters for climate protecting technologies. Within the framework of the project, „Gallium oxide technology for the next generation of high power devices (ForMikro-GoNext)“ funded by the Bundesministerium für Bildung und Forschung, IKZ is cooperating with institutes in Germany under support from industry. IKZ deals with the growth of β -Ga₂O₃ bulk single crystals by the Czochralski method as well as homoepitaxial layers by metal organic vapor phase epitaxy (MOVPE).

Applicants Responsibilities: The candidate will perform structural and electrical investigations of the grown material with respect of its suitability and improvement for device fabrication in close feedback to the crystal growers and device engineers. This will give him/her the opportunity to do high-level applied research at the crossing of materials and device physics. IKZ has excellent expertise and facilities for the characterization of dielectric and semiconducting crystals such as high-resolution transmission and scanning electron microscopy, X-ray diffraction techniques, optical spectroscopy, and electrical measurement techniques (Hall effect, I-V, C-V, DLTS). Within these measurement capabilities, the candidate's focus will be on electrical and optical characterization but with support from the other fields.

Applicants should have: We are looking for a candidate with excellent knowledge of basic physics, in particular solid-state physics, with experimental background and expertise in electrical and optical characterization techniques. Applicants must hold a Diploma or MSc degree in physics, crystallography, materials science or a related discipline. Furthermore, we expect good English language skills, scientific self-dependence, cooperativeness, and ability to work in a team.

The position is limited to 3 years. Payment is according to TVöD Bund (75%). The 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. The IKZ supports the compatibility of job and family and is certified as family-friendly by the "Job and Family" audit.

For information about the position contact:

Dr. Klaus Irmischer (Mail: klaus.irmischer@ikz-berlin.de, Phone +49 30 6392 3090)

Are you interested?

Then apply with a letter of motivation, curriculum vitae and all relevant certificates by **31.12.2019**. To do so, please go to **Job offers/jobs** on our homepage and click on this advertisement and then on "**Apply online**". Please send us your complete application documents this way.

We look forward to receiving your application!