

The Leibniz-Institut für Kristallzüchtung (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 the 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 / Postdoc position (m/f/d)

for the topic:

“Growth and characterization of epitaxial gallium oxide films”

The group Epitaxy of Semiconducting Gallium Oxide" of the IKZ deals with homoepitaxial growth of gallium oxide (Ga_2O_3) films by metal organic vapor phase epitaxy (MOVPE). Due to its large band gap of about 4.8 eV, Ga_2O_3 has a high potential to be used as a material for high power switching devices and to increase the efficiency of power converters for climate protecting technologies. However, during operation of high power devices heat is generated, which is expected to dramatically limit the device lifetime. Therefore the understanding of the heat transport in the material is crucial to address this issue.

As part of a joint DFG project together with the Humboldt- University zu Berlin, our young team will investigate the ballistic heat transport in Gallium Oxide thin films and we are looking for engaged/commit PhD students or Postdocs. Be part of the journey to make Ga_2O_3 the next generation high power material beyond SiC and GaN. Benefit from the unique selling points of IKZ which performs in-house bulk crystal growth, thin film epitaxy and advanced materials characterization. Do application focused material research with the aim to make energy conversion more efficient!

Applicants Responsibilities:

- epitaxial growth of $\beta\text{-Ga}_2\text{O}_3$ by MOVPE,
- development of growth models,
- process-accompanying standard characterization (e.g. AFM, Ellipsometry, XRD, Hall).

Applicants should have:

- a MSc degree or a Diploma/PhD in physics, chemistry, materials science or a related discipline,
- expertise in the field of oxides, thin film growth or knowledge regarding thin film characterization,
- the capability to scientifically work on an independent basis; carry out structured scientific work within a highly motivated team of researchers and technicians,
- good English language skills to work in an international environment.

For information about the project contact: Dr. Andreas Popp, andreas.popp@ikz-berlin.de, Phone +49 30 6392 2844.

The position is limited to three years. Payment is according to TVöD Bund (75 % for PhD position) (Treaty for German public service). IKZ is an equal opportunity employer. The IKZ is an equal opportunity employer and actively supports reconciliation of work and family life. There is equality for applicants of all genders. Qualified women are especially encouraged to apply. Among equally qualified applicants preference will be given to disabled candidates.

Have we aroused your interest?

Then apply with a letter of motivation, curriculum vitae and all relevant certificates by **25.06.2021**. 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 are looking forward to receiving your application!