

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.fv-berlin.de/>). You can find more details at 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:

“Growth and characterization of epitaxial gallium oxide films”

The group "Semiconducting Oxide Layers" 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.

As part of a BMBF project, our young team will develop the electrically active part of vertical Ga_2O_3 devices which will be processed at collaborating institutes in Germany with the support of industry. Be part of the journey to make Ga_2O_3 the next generation high power material beyond SiC and GaN. Benefit during your PhD 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)

Applicants should have:

- a MSc degree or a Diploma 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.

The position is limited to three years. Payment is according to TVöD Bund (75 %) (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.

For information about the project contact: Dr. Andreas Popp,
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Have we aroused your interest?

Then apply with a letter of motivation, curriculum vitae and all relevant certificates by **15.09.2019**. 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 receive your application!