IHP GmbH -
Leibniz Institute for High Performance Microelectronics/
Leibniz-Institut für innovative Mikroelektronik



Postdoc position (m/f/d): Electrical characterization of electronic graphene devices

Job-ID: 0116/26 | Department: Material Research | Salary: as per tariff (TV-L) | Working Time: 40h/week | Limitation: initially two years with option of extension | Starting Date: as soon as possible

IHP is an institute of the Leibniz Association and conducts research and development of silicon-based systems and ultra high-frequency circuits and technologies including new materials. It develops innovative solutions for application areas such as wireless and broadband communication, security, medical technology, industry 4.0, automotive industry, and aerospace. IHP employs approximately 400 people. It operates a pilot line for technological developments and the preparation of high-speed circuits with 0.13/0.25 µm-SiGe-BiCMOS technologies, located in a 1500 m² cleanroom that meets the highest industrial nanotechnology requirements.

The position:

As a member of the 2D Materials group within the department of Materials Research, you will contribute to the latest research on graphene at IHP. Your tasks will include advanced electrical characterization of simple and complex graphene-based devices (TLMs, Kelvin, Hall Bars, GFETs etc.) aiming at understanding the effect of fabrication variations/graphene growth conditions/annealing on various properties of Graphene (Mobility, sheet resistance, contact resistance, doping, etc.). You will analyze experimental data and present the results to international communities. An international team composed by experienced scientists, postdocs and PhD students is looking forward to you. Flat hierarchies and mutual support are important to us. We value diversity of perspectives and strive for a balanced gender mix in our team.

Your project:

As a post doc, you will be involved in three core activities:

i) Device development.
Layout of graphene devices. I-V, C-V and transport measurements.

ii) Supervision of PhD and Master students.
Defining goals, monitoring progress, and evaluating results.

iii) Active involvement in proposal preparation and execution.
Participation in the National (DFG, BMFTR) and EU projects.

Your qualifications:

You hold a PhD degree in Physics, Material Science, Electrical Engineering or a related field. You have a good knowledge of the physics of semiconductor devices, two-dimensional materials with a focus on graphene and its properties (contact resistance, mobility, etc.). You must have hands-on experience in electrical characterization of devices using semiconductor analysis systems. You are an ideal match for this position, when you have experimental, analytical and problem-solving skills, very strong communicative skills and the ability to quickly learn how to operate the latest technical equipment including various software.
We need you to be a strong team player, able to effectively plan and execute your own work, and to work in an organized manner with other creative minds. You will be ideally suited for this position if you have experimental, analytical and problem-solving skills, very strong communication skills, the ability to quickly learn how to use the latest technical equipment including various software, and most importantly, if you are an independent thinker.
As IHP is an international research center, it is necessary that you are fluent in English. German language skills are welcome. The improvement of German language skills is expected and strongly encouraged, e.g. through in-house language courses and intensive courses.

Our Offer:
Conduct research in a challenging, multinational environment giving you excellent career opportunities. You will have the chance to establish international reputation at the edge of top-notch technologies.
It is important to us to support the individual career developments (e.g. conferences, advanced trainings) as well as the personal needs of our employees by offering flexible working hours and the possibility to work off-site. The compatibility of work and family is highly valued. More information about our scientific excellence and the working environment at IHP can be found on our website.
IHP is TOTAL E-QUALITY-certified for equal opportunities for women and men at work and actively pursues the equality of all gender and all groups of people. We promote the professional development of women and strongly encourage them to apply. Disabled applicants, qualified according to the above criteria, will be given preference over other candidates with equivalent relevant qualifications.

Further advantages:
30 days holiday | special annual payment | Company pension scheme (VBL) | Flexible working hours, also part-time (no core working hours) | Possibility to work up to 40 % independent of location according to company agreement | A wide range of further training opportunities in-house or within the framework of business trips | Discounted company ticket with monthly allowance of € 15,75 for various fare zones | Good transport connections, free parking at the institute | Structured induction and actively supported integration into the institute (welcome workshop, intercultural workshop, joint leisure activities)

Your application:
Have we sparked your interest? We look forward to receiving your application in German or English via our **online application form.**

For more information about the position, please contact Prof. Dr. Christian Wenger: career@ihp-microelectronics.com.