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

Research Associate (m/f/d) for Group-IV Epitaxy Process

Job-ID: 7011/26 | Department: Technology | Salary: as per tariff (TV-L) | Working Time: 40h/week ((part-time work option) | Limitation: initially 2 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:

The successful candidate will work as a Research Associate in the field of group-IV epitaxy. The role involves the development of new, highly robust and precisely controlled selective and non-selective Si, SiGe, and Ge epitaxy processes, including in-situ doping and strain engineering.

A key responsibility is the high-level evaluation and characterization of material and electrical properties of epitaxial layers. As part of the process research team, the candidate will focus primarily on fundamental research in group-IV epitaxy processes. This research is closely linked to device applications, particularly for SiGe:C BiCMOS and photonics device integration, as well as for future emerging technologies such as qubit devices.

The position also includes responsibility for maintaining the stability and reproducibility of epitaxy processes within the IHP pilot line. In addition, the Research Associate will actively participate in national and international research projects and contribute to scientific conferences through presentations and publications.

Your qualifications:

- Ph.D. degree in the field of physics, semiconductor engineering, material science
- Experiences and good knowledge in the field of group-IV epitaxy process technology. Experiences atomic-layer deposition processes will be an advantage.
- Capability of logical thinking for constructing experiments for the group-IV epitaxy process development

- Experiences of material diagnostics like AFM, spectroscopic ellipsometry are needed. Knowledge of heterointerfaces and optical/electrical diagnostics such as CV, PL, DLTS and related background will be helpful
- Highly motivated with very good experimental and theoretical skills
- Experiences in cleanroom operation
- Very good English language skills. Basic German skills are an advantage. Deepening German language skills is expected and encouraged, for example, in in-house 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 for various fare zones | 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 further information regarding the position please contact Dr. Yamamoto: career@ihp-microelectronics.com.