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

Group Leader (m/f/d) Process Integration

Job-ID: 70811/25 | Department: Technology | Salary: as per tariff (TV-L) | Working Time: 40h/week | 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 380 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:

At IHP, we research and develop cutting-edge silicon-based technologies for high-performance microelectronics. Our Process Integration group is a key part of the Technology Department, driving innovations in SiGe heterojunction bipolar transistors (HBTs), germanium photodiodes, and modulators for applications in the sub-terahertz and high-speed optical communication domains. We are currently looking for an experienced and visionary Group Leader (f/m/d) to lead and advance our process integration activities.

As the head of the Process Integration group, you will take scientific and strategic responsibility for three core teams:

- Device & Technology Development
  Develop and optimize semiconductor devices for integration into IHP's advanced 130 nm SiGe BiCMOS technology platform. Guide research in device physics, TCAD simulation, reliability studies, and yield optimization according to industrial standards.
- Electrical Characterization
  Oversee a state-of-the-art measurement laboratory focusing on DC and RF characterization, compact modeling, and statistical process control (SPC) of processed silicon wafers.
- Process Control & Prototype Production
  Support multi-project wafer (MPW) production and prototype runs. Analyze process data and electrical results (PCM), identify failures, and implement improvements to ensure robust process stability and yield.

You will be responsible for:

- Defining goals, monitoring progress, and evaluating results in close cooperation with your team and other departments.
- Strategically shaping research directions and aligning them with industry trends in high-frequency electronics, optoelectronics, and IC manufacturing.
- Guiding and developing your team, conducting performance reviews, and fostering a culture of collaboration and innovation.

Your qualifications:

You have proven leadership experience in managing scientific and technical teams. This includes advanced competencies in employee development, conflict resolution, strategic planning, and performance assessment. Your strong scientific background lies in solid-state physics, semiconductor device physics, and silicon-based microelectronics. You bring hands-on experience in semiconductor technology development, with in-depth knowledge of cleanroom processes, device simulation, and electrical characterization. You possess a sound understanding of current trends in RF and microwave engineering, communications technology, and photonic integration. You are fluent in English, both spoken and written; German language skills are considered an asset or should be developed with support.

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.

Your application:

Have we sparked your interest? Then we look forward to receiving your application via our **online application form.**

For further information regarding the position please contact Prof. A. Mai: career@ihp-microelectronics.com.