IHP GmbH - Leibniz-Institut für innovative Mikroelektronik

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 130 nm-SiGe-BiCMOS technologies, located in a 1500 m² cleanroom that meets the highest industrial nanotechnology requirements.

R&D Scientist / Engineer – Photonic Devices & Process Integration

Job-ID: 70914/26 | Department: Technology | Salary: as per tariff (TV-L) | Working Time: 40h/week (part-time work option) | Limitation: initially 2 years with option of extension for three more years | Starting Date: as soon as possible

City: Frankfurt (Oder); Starting date (earliest): At the earliest possible; Remuneration: TV-L

Tasks

As a member of the Process Integration Group within IHP’s Technology Department, you will contribute to the research and development of advanced semiconductor technologies. You will work in an international team of highly motivated researchers, engineers, PhD candidates and technicians. Flat hierarchies, close collaboration and mutual support are important to us, and we value the diversity of perspectives and expertise within our team.
Your work will focus on the development and integration of photonic devices and technologies within advanced silicon-based technology platforms, in particular SiGe BiCMOS and photonic BiCMOS technologies. This includes the development and optimization of devices such as germanium photodetectors, as well as related process modules and their integration into complex semiconductor technology platforms. Your tasks will comprise device and process development, characterization, data analysis and the evaluation and optimization of semiconductor fabrication processes. The work will focus on extending the functionality of integrated photonic and SiGe BiCMOS technologies
through novel devices and enabling applications beyond current technology capabilities.

Requirements

You hold a Master’s or PhD degree in electrical engineering, physics, materials science or a related field. You have a solid understanding of semiconductor device physics and ideally experience in the development of semiconductor or photonic devices. Knowledge of silicon-based semiconductor technologies, SiGe BiCMOS, silicon photonics or germanium-based optoelectronic devices is particularly welcome. Practical experience with common semiconductor cleanroom processes, such as lithography, etching, thin-film

deposition, epitaxy, ion implantation or thermal processing, is an advantage.
You enjoy working in an interdisciplinary team and are able to organize your work independently and systematically.
We are looking for a colleague with strong experimental, analytical and problem-solving skills, who is motivated to develop a deep understanding of the interaction between device design, fabrication processes and device performance. Good communication skills and the ability to quickly become familiar with new experimental equipment and software tools are important for this position. A confident command of English is required.
Knowledge of German is welcome; further development of German language skills is encouraged and supported, for example through in-house language courses and intensive courses.

What we offer

Do 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. An orientation guide will help you to quickly integrate into the institute and to familiarize yourself with the field.
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 | Parent-child room as a possibility to work with a child in case of childcare bottlenecks | A wide range of further training opportunities in-house or within the framework of business trips | Discounted company ticket with monthly allowance of € 15,60 for various fare zones | Good transport connections, free parking at the institute | Canteen with
breakfast and lunch | On-site health services | Company family and care guides | Free, confidential counselling by an external service provider in a wide variety of challenging private or professional situations, for example on how to reconcile work and family life or in psychosocial emergencies | Structured induction and actively supported integration into the institute (welcome workshop, intercultural workshop, joint leisure activities)

Application

By internet: https://www.ihp-microelectronics.com/career/vacancies/online-application-form?job=70914/26#c977