IHP GmbH - Leibniz-Institut für innovative Mikroelektronik

Das IHP ist ein Institut der Leibniz-Gemeinschaft und betreibt Forschung und Entwicklung zu siliziumbasierten Systemen, Höchstfrequenz-Schaltungen und -Technologien einschließlich neuer Materialien. Es erarbeitet innovative Lösungen für Anwendungsbereiche wie die drahtlose und Breitbandkommunikation, Sicherheit, Medizintechnik, Industrie 4.0, Mobilität und Raumfahrt. Das IHP beschäftigt ca. 330 Mitarbeiterinnen und Mitarbeiter. Es verfügt über eine Pilotlinie für technologische Entwicklungen und die Präparation von Hochgeschwindigkeits-Schaltkreisen mit 0,13/0,25 µm-BiCMOS-Technologien, die sich in einem 1000 m² großen Reinraum der Klasse 1 befindet.

Research Associate (m/f/d): Photonics Device Development (CMOS | SiN) – Research & Process Integration

Job-ID: 7057/25 | Department: Technology | Salary: as per tarif (TV-L) | Working Time: 40h/week (part-time work option) | Limitation: initially till end of 2027 with option of extension | Starting Date: as soon as possible

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

Working field

The position:
Do you want to shape modern fabrication technologies at the intersection of photonics and quantum research?
In our team, you will contribute to a noval photonic platform that sets new standards in precision sensing and integrated optics. The Diagnostics, Sensory & Emerging Modules (DSE) group is part of the department "Technology". We focus on advanced failure analysis, sensor integration, and hybrid device concepts. A key research topic is the development of photonic and microelectronic components
within CMOS-compatible processes – particularly low-loss silicon nitride waveguide platforms for
integrated photonic systems.

Your responibilities:

- Managing and optimizing technology processes for the fabrication of photonic and quantum-optical
  devices in a CMOS-compatible environment
- Organizing and supporting wafer processing in a modern semiconductor fabrication line (e.g. lithography, etching, deposition, metallization, optical/electrical characterization)
- Collaborating closely with scientists and technologists to integrate novel device

concepts (e.g. silicon
nitride waveguides and highly sensitive silicon photodiodes)
- Analyzing and evaluating measurement results to derive process and design improvements
- Documenting, presenting, and publishing research results in peer-reviewed journals and international conferences.

An international team of developers is looking forward to welcoming you in their team. Flat hierarchies and mutual support are important to us. We see diversity of perspectives as a great advantage for our team and strive for a balanced gender mix.

Requirements

Your qualifications:

- Master's degree or diploma in physics, electrical engineering, microsystems technology, or a related
discipline
- Solid knowledge of microelectronics manufacturing technologies (e.g. lithography, etching, PECVD,
implantation)
- Experience in technology or process development, ideally including the supervision of wafer runs
- Experience with optical and/or electrical characterization of devices is a plus
- Structured, team-oriented working style with interest in technical responsibility
- Fluent in English or German

You are also a strong team player. We are looking for a team member, who is able to structure his or her own work and to bring a well-organized and systematic way of working into the cooperation with creative minds. 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. It is necessary that you confidently handle the English or German language.

What we offer

Our Offer:
At IHP, you will conduct research in a challenging and multinational environment that offers excellent career opportunities. Within a collaborative and interdisciplinary team culture supported by strong research infrastructure, you will have the chance to build an international reputation working at the forefront of nextgeneration technologies.
You will have access to state-of-the-art, CMOS-compatible process technology and play an active role in shaping a novel photonic platform with real-world applications. A structured orientation guide will help you quickly integrate into the institute and become familiar with your research environment.
We are committed to supporting your individual career development through conference participation, further training, and mentoring opportunities. At the same time, we value the personal needs of our employees by offering flexible working hours, remote work options, and a family-friendly work culture.
IHP is TOTAL E-QUALITY-certified for promoting equal opportunities for women and men in the workplace and is strongly committed to diversity and inclusion. We explicitly encourage women to apply and welcome applications from all individuals regardless of gender, nationality, ethnic or social origin, disability, age, or sexual orientation.
Disabled applicants with equal qualifications will be given preference.
If you are relocating to Frankfurt (Oder), our Relocation Service will be happy to assist you with accommodation and settling in.

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 for various fare zones | On-site health services | 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

Contact person: Norbert Herfurth

By internet: https://www.ihp-microelectronics.com/career/vacancies/online-application-form?job=7057/25#c977

More information at https://stellenticket.de/194654/TUB/
Offer visible until 18/06/25