



PhD Position (m/f/d) for the simulation of graphene based modulators

Job-ID: 0031/21 | Dept.: Material Research | Salary: according TV-L | Working time: 40h/week | Limitation: initially 2 years with option of extension for three more years | Entry Date: 01.06.2021

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 330 people. It operates a pilot line for technological developments and the preparation of high-speed circuits with 0.13/0.25 μm BiCMOS technologies, located in a 1500 m² cleanroom.

The Research/Position:

- Simulation and modelling of the Graphene based modulators.
- Component level simulation: Electrical (Charge, E-Field, etc.) and Optical (Loss, Effective index, etc.)
- Device level simulation (Transmission, RF, etc.)
- Analysis of the experimental data and its presentation to the international communities.
- A PhD degree will be highly encouraged.

Your Qualifications:

- Master's degree in physics, materials research, engineering or similar.
- Basic knowledge of photonic devices.
- Hands-on experience in simulation platforms (Comsol, Lumerical, Fimmwave, CST, etc.)
- First experiences in graphene based electro-optic modulators would be desirable.
- 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:

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. 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 **until April 30th 2021** via our [online application form](#).

For further information regarding the position please contact Dr. Mindaugas Lukosius:
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