



Master thesis (m/f/d) “Characterization of Gas Sensors”

Job-ID: 0011/23 | Department: Materials Research | Limitation: 6 months with option of extension | Earliest Entry Date: April 1, 2023

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 350 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.

Master thesis project:

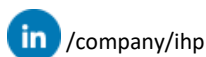
The demands foreseen for the new hydrogen market are expected to be fulfilled by the microelectronics industry. Specifically, gas sensors will be required to detect different concentrations at different atmospheric conditions. The goal of this project is to develop a characterization setup of commercial gas sensors. Using testing boards, along with Arduino or Raspberry PI for interfacing, the student will test the operation of the gas sensors under different conditions and will benchmark its performance against our in-house fabricated prototypes.

Your team:

You will be member of the research group “Adaptive Materials”, whose focus is the development of functional materials for microelectronics. A motivated and committed team, consisting of both experienced and younger scientists, is looking forward to welcoming you. Scientist with experience in (bio) chemicals labs and electrical characterization tools will support your work. Flat hierarchies and mutual support are important to us. We see diversity of perspectives as an opportunity for the team and we strive for a balanced gender representation.

Your qualifications:

You hold Bachelor's degree in physics, chemistry, nanoengineering, electronics or related. You have experience in physics and chemical laboratories. Furthermore, you have a good understanding of electronics. Hands-on experience with Arduino and/or Raspberry PI hardware and software is highly desirable. English and/or German language skills are welcome. The consolidating of German or English language skills is expected and highly encouraged, for example in in-house language courses and intensive courses.





Our Offer:

Gain insights into a dynamic and multinational research institute for microelectronics! You will apply your theoretical knowledge from university in practice and contribute to our research projects with your work! A motivated, international team, consisting of very experienced scientists as well as young colleagues is looking forward to you. Take the opportunity to lay the foundations for your career in a research institute that operates close to the economy. Your experience will be of great benefit to you, regardless of whether you want to start your career in academia or in business. We guarantee flexible working hours.

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 **March 31st, 2023** via our [online application form](#).

For further information about the position, please contact Carlos Alvarado Chavarin: career@ihp-microelectronics.com.