

Press Release

2021-04-07

Detection of viruses, bacteria and toxins in real time IHP scientists win Leibniz Founding Award 2021

Frankfurt (Oder) For their start-up project HyPhoX, the scientists Dr. Patrick Steglich and Prof. Dr. Andreas Mai from the Leibniz Institute for High Performance Microelectronics, IHP, in Frankfurt Oder received the Leibniz Founding Award 2021. The award-winning project provides a universal analysis tool for liquids in the health and environmental sectors based on a patented photonic sensor. To further support their project, the founders will receive an earmarked prize money of 25.000 euros.

HyPhoX enables the analysis of liquids such as water, urine or blood to detect viruses, bacteria, toxins or proteins. With the help of photonic sensor, the analysis results can be evaluated on site and in real time. Specific areas of application are in medicine, for example to detect Covid-19 using an antibody test or in hygiene monitoring to detect legionella in water analysis.

The process is based on sensor chips with a silicon-based and industrially usable semiconductor technology, which allows cost-effective mass production. The patented process, in which manufacturing processes from microelectronics are used, enables simple and cost-effective further processing into finished products and, in addition to the economic benefits, also offers a high reliability and integrability into existing systems.

“With the help of technologies available at the Leibniz-IHP and supported by research projects with partners such as TH Wildau, innovative sensor chips were developed. Our sensor system is extremely versatile and the demand from small and medium-sized companies in the region have been signaled to us for some time”, says Dr. Steglich, who evaluates various application scenarios in cooperation with industrial partners. “However, the breadth of applications is also the particular challenge for the start-up project”, adds Prof. Mai. “The development into a finished product is not yet complete, but the Founding Award helps us to take further steps to identify relevant applications and plan the market entry.”



Leibniz Institute
for high
performance
microelectronics



Press Release



Leibniz Institute
for high
performance
microelectronics



Winner of the Leibniz Founder Award 2021-
Prof. Dr. Andreas Mai (left) und Dr. Patrick
Steglich (right) from the Leibniz Institute for
High Performance Microelectronics © IHP

Contact:

Katja Werner

Public Relations

IHP GmbH - Innovations for High Performance Microelectronics/

Leibniz-Institut für innovative Mikroelektronik

Im Technologiepark 25

15236 Frankfurt (Oder)

Fon: +49 (335) 5625 206

E-Mail: werner@ihp-microelectronics.com

Website: www.ihp-microelectronics.com

About IHP:

The IHP is an institute of the Leibniz Association and conducts research and development of silicon-based systems and ultrahigh 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. The 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 DIN EN ISO 14644-1 3 certified clean room.

www.ihp-microelectronics.com

