Visions to Products

Hahn Schickard

Hahn-Schickard stands for industry relates applied research, development and production in Microsystem Technologies. More than 300 employees develop at Freiburg, Stuttgart, Ulm and Villingen-Schwenningen solutions in Microsystem Technologies: from a first idea to fabrication of the final product. Hahn-Schickard is initiator and supporter of numerous spin-off companies. We are regionally based and also recognized as an international global partner.

At the **Freiburg** site, the focus is on analytical solutions, especially for point-of-care diagnostics. But we also research, develop and manufacture electrochemical energy systems and autonomous fluidic robots and 3D printing of electronics.

For the area of **Microfluidic Platforms** at our site **Freiburg im Breisgau** we offer the following position as **master student** (m/f/x), starting from **April 2024** or later

Master Thesis (m/f/x) Development of a microfluidic system for ultrafast photonic PCR

Your tasks

The aim of the project is to utilize photon-phonon coupling in order to perform ultrafast thermocycling for microfluidic-based PCR. This is achieved using a low-cost LED setup in combination with an ultrathin gold layer on a polymer substrate an a controlling setup.

design of a microfluidic chip for loading the sample fluid into the system & gold-coating of the reaction chambers

electronic development of the control unit for LED pulsing and contactless temperature measurements

performing PCR experiments with photonic and convential heating

contribution of own ideas and solutions

Your profile

You are currently pursuing a master's degree at university (after finished BSc in a STEM subject) in microsystems technology, embedded systems, medical technology, electrical engineering and retated areas

interest in interdisciplinary work and subject areas in the field of nano- & biotechnology

passionate about labaratory work in an innovation-driven environment

experience with CAD (SolidWorks), Embedded Electronics (Arduino/Raspberry Pi) is a bonus

good communication skills in English and/or German

Our offer to you

- ☑ an attractive workplace for a master student working at a modern, excellently equipped research institute that is close to industry
- ☑ excellent support and good familiarization with the subject area by motivated supervisors
- ☑ implementation of the learned knowledge from theory into practice
- ☑ flexible working hours
- ☑ partial refund of travel expenses when using public transport of the ÖPNV (public transport system Semesterticket or Deutschlandticket)
- ☑ This position is initially limited to 6 months.

Application process

If you are also excited about the topic **"Microfluidic Systems"**, please send us your **complete application documents** (cover and motivation letter/CV/credentials/transcript of records), stating the reference number **24/3240/08** in a **complete PDF document file** directly online or via the application form on our careers homepage.

If needed - please use for any technical questions the contact of Dr. Fabian Lickert by phone +49 (0)761 203 - 54063.

The decision regarding your application will be made directly by the division team.

As we always evaluate your applications personally , we kindly ask you for a little patience in advance.

Kontakt

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