



The **Kurt Schwabe Institute for Measuring and Sensor Technology e.V. (KSI) Meinsberg** has a longstanding expertise in the fields of basic and applied research on novel sensor materials, sensor devices and scientific instrumentation. Main competences are in the fields of physical chemistry, electrochemistry, solid-state electrolytes, biological and physical sensors as well as environmental monitoring. The institute is well equipped with modern lithographic and bottom-up methods for the synthesis of functional nanostructures and with state-of-the art methods for their characterization. The research group “Organophotonic Sensing”, led by Dr Caroline Murawski, utilizes the advantages of organic semiconductors for developing new sensors that can be applied in medicine, diagnostics, and therapy. Being located close to Dresden, in Saxony, Germany, the KSI Meinsberg is situated within the largest R&D and manufacturing hub for organic semiconductors in Europe. The KSI Meinsberg ist part of DRESDEN-concent and holds strong links with the Excellence [University of Technology in Dresden](#) (TU Dresden).

To strengthen the organic semiconductor research for biomedical applications at KSI Meinsberg, we invite applications for a fixed 3-year position as

PhD candidate (f/m)

(Pay scale 75 % TV-L E13)

with focus on **integration of organic light-emitting diodes and photodiodes for optogenetics and fluorescence imaging.**

Tasks

Organic semiconductors provide unique properties such as flexibility, micro-structuring, ease of fabrication, scalability, and bio-compatibility. This makes them particularly interesting for applications in the biomedical area. The advertised position is part of a project funded by the German ministry of science and education (BMBF), which studies organic semiconductor materials and applies them in devices for optogenetic stimulation and detection of neuronal signals. The position focusses on the integration of organic light-emitting diodes (OLEDs) and organic photodiodes (OPDs) on flexible substrates. The developed devices shall be used for optogenetic stimulation and fluorescence imaging of neuronal signals.

The candidate will investigate transparent substrates and will develop methods for photolithographic patterning of OPDs. The topic leaves room for personal development and comprises material research and testing of the devices with cells and fruit flies. The work is highly interdisciplinary being situated at the interface between chemistry, physics, biology, and engineering.

Profile

Master degree (or similar) in chemistry, material sciences, physics or other relevant disciplines is required. You should have very good experimental skills and a profound theoretical knowledge in physical and organic chemistry, semiconductor physics and optics as well as a keen interest in applied sciences. Experience in organic electronics, biophysics or sensing are highly welcome. Furthermore, you need to have good organizational skills and very good communication skills with a high command on English in speech and writing. German language skills would be an advantage and you should be willing to learn German.

Offer

We offer you a position in the group of Dr Murawski, working in a renowned research institute that is very well equipped with state-of-the-art experimental facilities. Dr Murawski is an expert in organic semiconductors and their application in biophotonics with international research experience and a proven track record. We will provide a stimulating work environment with the opportunity to meet and collaborate with leading experts in the field. Attendance at international conferences will be provided and publication of research in international scientific journals is expected.

The position benefits from recently acquired equipment for thin film deposition (atomic layer deposition, parylene coating, and thermal evaporator) as well as equipment for optical and electrical measurement of cells (microscopy and patch clamp).

The KSI Meinsberg is committed to equal opportunities and diversity in the work place. Applications are welcome from everyone matching our search profile, not depending on gender, nationality, ethnicity, or disability.

Salary and contract

The position is to be filled immediately and will be **fixed term for a maximum of 3 years** at 75 % of full working hours. Duration of employment will be according to German law (WissZeitVG). Payment will be received according to the law of public service at pay scale E 13 TV-L and will be due to reductions including tax, social insurances and retirement benefits (depending on personal conditions). This also gives access to the excellent German social health and insurance system.

Interested?

For more information please contact Dr Caroline Murawski, email:

caroline.murawski@ksi-meinsberg.de

More information on KSI Meinsberg can be found under www.ksi-meinsberg.de and more about the research group of Dr Murawski under www.murawskilab.com or on twitter/X [@murawskilab](https://twitter.com/murawskilab).

Applications should include a letter of motivation, curriculum vitae with copies of degrees (Bachelor/Master/Diploma) and contact details for 2 academic individuals who can provide recommendation letters.

Applications shall be submitted before **December 17, 2023** via email as a **single pdf file** to caroline.murawski@ksi-meinsberg.de