Leibniz-Institute of Photonic Technology
Albert-Einstein-Straße 9 • 07745 Jena • Germany
www.leibniz-ipht.de

Job Advertisement

The Leibniz Institute of Photonic Technology (Leibniz-IPHT) offers the following **full-time position (100%)** in the **Research Department Spectroscopy and Imaging**, **Work Group Field-Resolved Optical Precision Metrology,** starting at the next possible time:

Postdoctoral Researcher

The position is to be filled as soon as possible and is initially **limited to a period of 2 years**.
An extension will be sought if suitable.

The Leibniz-IPHT is a university independent research institute with close connection to the Friedrich-Schiller-University Jena and member of the Leibniz association.

Job description

The candidate will work at the Leibniz-IPHT and the Department of Anesthesiology an Intensive Care Medicine at Jena University Hospital directly on intensive care patients, applying spectroscopic tools to the multivariate analysis of biological gases to elucidate the host response to severe infections and sepsis[1]. In an excellent clinical-scientific environment, the candidate will contribute to shaping the newly established intensive care laboratory that is unique in Germany, at the BMBF-funded Leibniz Centre for Photonics in Infection Research (LPI). The close proximity to the Institute for Clinical Chemistry and Laboratory Diagnostics at the Jena University Hospital and the affiliation with the Field-Resolved Optical Precision Metrology Group within the Spectroscopy and Imaging Department at the Leibniz-IPHT will provide access to state-of-the-art clinical laboratory diagnostics and cutting-edge infrared vibrational spectroscopy techniques[2,3], respectively. The position is furthermore affiliated with the DFG-funded Cluster of Excellence "Balance of the Microverse" whose core mission is to elucidate fundamental principles of the interactions and functions in microbial communities in diverse habitats, ranging from oceans and groundwater to plant and human hosts.

Your field of activity includes:

- Applying infrared vibrational spectroscopy in combination with mass spectrometry to the multivariate analysis of biological gases.
- Collaboration with partners within the DFG-funded Cluster of Excellence Balance of the Microverse in setting up and performing headspace analysis of in-vitro bacterial and cell cultures, to study their response to pathogen and drug stimulation.
- Development of sample collection and storage protocols for the spectroscopic analysis of the exhalome of intensive-care patients.

Your qualification:

- Completed doctorate in the natural sciences or medicine.

Desired knowledge and skills:

- Laboratory experience with clinical analytics and/or biomedical application of spectroscopic methods, ideally with gases
- Enjoy interdisciplinary work with a focus on applications in the biomedical field
- Strong motivation, commitment and independence
- Very good written and spoken English

We offer:

- **An open welcoming culture** and an inclusive and interdisciplinary working environment:
  Located on the Beutenberg campus in Jena, Leibniz-IPHT is home to more than 400 employees from around the world working at the interface of physics, biochemistry, technology, data science and medicine to develop the photonic technologies of tomorrow.
- **World-class equipment and facilities**: Leibniz-IPHT has a large number of physics, chemistry and biology laboratories at the highest level. It also has state-of-the-art fiber drawing and clean room facilities (including lithography facilities) as well as microfluidics fabrication and big data computing facilities.
- **Thorough and comprehensive personal training:** Transferring good practices in scientific working and outreach is one of our main focus points. We'll teach everything that is needed for a career inside and outside of academia in a respectful and enjoyable way. Moreover, plenty of workshops and opportunities for scientific exchange are offered by the Leibniz IPHT, as well as the Abbe School of Photonics and the Graduate Academy of the Friedrich-Schiller University Jena.
- **A family-friendly working environment** with support offers for the compatibility of family and work (e.g. parent-child rooms, campus kindergarten places, advice on family care situations from trained care guides and much more).
- **Flexible working time models** as well as 30 days vacation/year, special annual payment and bridge days.
- **Jena - City of Science**: a young city with a vibrant local cultural agenda!

Salary:

Salary is in accordance with the regulations of the TV-L and your qualifications and experience.

About us:

We are a modern, internationally focused research institute. Work-life balance is one of our central concerns. We value diversity and therefore welcome all applications - regardless of gender, disability, nationality or ethnic and social origin. If women are underrepresented in the area of the advertised position, they will be given preferential consideration in the hiring process if they are equally qualified.

Further information:

If you have any questions, please contact Prof. Dr. Ioachim Pupeza, mail: ioachim.pupeza@rptu.de.
See also: lightwavelab.de

Application:

Please apply **by April 30, 2024** via our job portal (https://www.leibniz-ipht.de/en/institute/career/job-portal/) by clicking on the **"apply" button**.

Leibniz-Institute of Photonic Technology Jena e. V.
Human Resources
Albert-Einstein-Straße 9, 07745 Jena

Code: 1247

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[1] M. F. Osuchowsk et. al., "The COVID-19 puzzle: deciphering pathophysiology and phenotypes of a new disease entity", Lancet Respiratory Medicine 9, 622 (2021).
[2] I. Pupeza et. al., "Field-resolved infrared spectroscopy of biological systems", Nature 577, 52 (2020).
[3] P. Sulzer et. al., "Cavity-enhanced field-resolved spectroscopy", Nature Photonics 16, 692 (2022).