

## Stellenausschreibung Nr. 2021\_32

The Leibniz Centre for Photonics in Infection Research (LPI, <http://lpi-jena.de>) is a project of the National Roadmap for Research Infrastructures of the Federal Ministry of Education and Research (BMBF). As one of the supporting institutions of the LPI, the Leibniz Institute of Photonic Technologies (Leibniz-IPHT, <https://www.leibniz-ipht.de/>) is looking to recruit a

## Postdoctoral Researcher

from February 1, 2022 (or the next possible time) for 2 years full time. An extension might be discussed if suitable.

The LPI is being established by a consortium of four supporting institutions ([Leibniz-HKI](#), [Leibniz-IPHT](#), [FSU Jena](#), [Universitätsklinikum Jena](#)) In future, it will combine photonic technologies with infection research and thus contribute to the development of new methods for diagnosis, monitoring and therapy for human medicine. Research results will be transferred to clinical practice along the entire value chain. The LPI's research programme is divided into basic technologies, in which the four supporting institutions jointly address various scientific and technological focal points in an interdisciplinary approach. As a user-open translational infrastructure, LPI makes newly developed demonstrators and methods available to external partners within the framework of joint projects.

The use of mid-IR lasers enables optical detection principles based on the photothermal effect (<https://IR4future.de>). After a first photothermal IR microscope was commercialized, further developments in terms of wide-field imaging and high throughput have already been published (DOI 10.1126/sciadv.aav7127, DOI 10.1073/pnas.1912400117). The goal of the position to be filled is to develop an imaging platform using mid-IR lasers from the Leibniz IPHT. Starting points are a unique research infrastructure consisting of a Fourier transform infrared microscope with array detector, a quantum cascade laser-based infrared microscope, and an optical photothermal infrared microscope.

### Your tasks:

- Research and implementation of an optical-photothermal IR microscope for wide-field imaging beyond the current state of the art
- Exploration and refinement of the underlying excitation and detection phenomena
- Research and demonstration of the measurement principle for biomedical samples

### We expect:

- Ph.D. in optical engineering, electrical engineering, applied physics, or comparable disciplines
- Solid knowledge of optical design in the mid-IR and visible spectral range as well as lock-in signal acquisition
- Desired knowledge in creation of control software using Matlab, Python or Labview
- Very good command of written and spoken English

federführende Trägerinstitutionen:

unterstützt durch:

gefördert von:

## We offer:

- A professional environment in an international and interdisciplinary research team
- A family-friendly atmosphere where work-life balance is a key concern
- Support and further development of our employees

Salary is in accordance with the regulations of the TV-L. The Leibniz-IPHT aims to increase the proportion of women among its staff and strongly encourages qualified women to apply. Severely disabled persons will be given preferential consideration in case of equal suitability.

## Further information:

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Prof. Dr. Jürgen Popp | 03641 206 301 | [juergen.popp@leibniz-ipht.de](mailto:juergen.popp@leibniz-ipht.de)

The application must be accompanied by a CV, certificates, personal motivation statement on how your knowledge and experience will benefit the project, contact information of two professional references and publication list and submit until **10.01.2022** with **Code 2021\_32** preferably by e-mail as a pdf file via the Leibniz-IPHT personnel office:

**Leibniz-Institut für Photonische Technologien Jena e.V.**  
**Personalbüro**  
**Albert-Einstein-Straße 9, 07745 Jena**  
**[Personal\\_Abtl@leibniz-ipht.de](mailto:Personal_Abtl@leibniz-ipht.de)**

**Note on data protection:** By submitting your application and the accompanying documents, you consent to the processing of your personal data in connection with the application process. You may revoke this consent in writing or electronically at any time without giving reasons. Please note, however, that a revocation of consent means that any application in progress can no longer be considered.

federführende Trägereinrichtungen:



unterstützt durch:



gefördert von:

