

Job Advertisement

The Leibniz Institute of Photonic Technology ([Leibniz-IPHT](http://www.leibniz-ipht.de)) offers the following **position (65%)** in the **Department Functional Interfaces, Working Group Silicon Nanostructures**, starting **January 1st, 2023** or at the next possible time:

PhD candidate (f/m/d)

The position is **limited for 3 years**.

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

Position description:

The main research focuses on the formation and characterization of plasmonic active silver and copper nanostructures in porous matrix for the biophotonics application. The candidate will be integrated to the research group of Dr. Vladimir Sivakov and Dr. Dana Cialla-May in frame of multidisciplinary research project funded by Deutsche Forschungsgemeinschaft (DFG). The employee will be responsible for the pre-patterning of silicon surfaces for further intersection with functional plasmonic metals. The characterization of plasmonic structures will be performed by surface analytic methods like SEM, EDX, EBSD, TEM, etc., which will be combined with theoretically modeling growth processes and plasmonic properties. A precise and detailed analysis of the atomic and electronic structure as well as the physico-chemical state of the formed surfaces and interfaces will be achieved by using large-scale facilities at BESSY II synchrotron storage ring at HZB Berlin. The candidate aims to develop the processes and measurement protocols for the SERS measurements of different target analytes in complex biological matrices. The candidate is expected to have already hand-on experience in the plasmonic nanostructures formation, vibrational spectroscopy (especially, Raman and its enhancing techniques) and surface analytics. The candidate is expected to work independently and actively participate in all research activities (travelling to: synchrotron storage rings; project meetings, workshops, conferences worldwide), the preparation of reports, scientific papers, presentations, and related proposals for further research funds.

Your qualification:

- Master of Science or Engineering in Chemistry or Physics with strong background in Material Sciences or related degrees

Your expertise and knowledge:

- Deep knowledge on surface formation, characterization and theoretical modelling
- Strong background in vibrational spectroscopy
- Experience in plasmonics, Raman spectroscopy and surface analytics
- Experience in theoretical calculations (Diffusion-Limited-Aggregation (DLA))
- Good English communication and writing skills
- Know-how in COMSOL and MATLAB

What we offer:

- **A truly integrative and interdisciplinary work environment:**
Being situated on the Beutenberg Campus in Jena, the Leibniz IPHT hosts more than 400 employees from around the world who work at the interface of physics, biochemistry, technology, data sciences, and medical sciences to develop sensing solutions of tomorrow
- **A thorough and comprehensive personal training:**
Transferring good practices in scientific working and outreach is one of the main focus points in the *Silicon Nanostructures Group*. 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.
- **World-class equipment and facilities:**
The Leibniz IPHT offers a large variety of physics, chemistry, and biology labs at highest standards. Moreover, it holds state-of-the-art fiber-drawing and clean-room facilities (incl. lithography units), as well as microfluidics fabrication and big data computing units. Simply everything your interdisciplinary heart beats for.
- **A family-friendly working environment** with a variety of offers for families: parent-child room, campus kindergarten places, family events
- **Flexible working time models**, 30 days vacation/year, special annual payment, bridging days, VMT job ticket
- **Jena – City of Science:** A young and lively town with a vibrant local cultural agenda!

Salary: German tariffs for public employees (TV-L).

About us:

We are a modern, internationally oriented research institute. The compatibility of work and family is one of our central concerns. We value diversity and therefore welcome all applications - regardless of gender, disability, nationality or ethnic and social background. If women are underrepresented in the area of the advertised position, they will be given preferential consideration if they are equally qualified.

Further information

If you have any questions, please contact [Dr. Vladimir Sivakov](mailto:Dr.Vladimir.Sivakov), Tel.: 03641 / 206 440 / mail: vladimir.sivakov@leibniz-ipht.de.

Please send your application electronically **with Code 1123** as one pdf file via Email **until December 16th, 2022** (including your CV, recommendation letter(s) and university interim and final certificates) to:

Leibniz-Institute of Photonic Technology
Human Resources
Albert-Einstein-Straße 9, 07745 Jena / Germany
E-Mail: Personal_Abtl@leibniz-ipht.de

Code: 1123

Or simply apply via our job portal <https://www.leibniz-ipht.de/en/institute/career/job-portal> by clicking on the “**apply**” button.

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.