

Job Advertisement

The Leibniz Institute of Photonic Technology ([Leibniz-IPHT](http://www.leibniz-ipht.de)) offers the following **position (50%)** in the *Department Functional Interfaces, Working Group Silicon Nanostructures*, starting **February 1st, 2022** 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 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 HZ 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
- Experience in Raman spectroscopy
- Experience in 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:

- Highly motivated, ambitious, and driven team
- Warm, welcoming culture and team spirit
- Interdisciplinary and international workplace

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

We are a modern, internationally oriented research institute. The compatibility of work and family is one of our main concerns. We strive to increase diversity. Severely disabled people will be given preference if they are equally qualified.

Further information regarding the project can be obtained from
Dr. Vladimir Sivakov, Tel.: 03641 / 206 440 / mail: vladimir.sivakov@leibniz-ipht.de.

Please send your application electronically **with Code 2021_37** as one pdf file via Email **until December 15th, 2021** (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: 2021_37

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.