

Job Advertisement

The Leibniz Institute of Photonic Technology (Leibniz-IPHT) offers the following **position (50%)** in the **Research Group "Silicon Nanostructures"** starting **April 1st, 2021**:

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.

Job description:

The main research focuses on the formation and characterization of plasmonic active Sn/SnO_x on nanostructured silicon surfaces for the biophotonics application. The candidate will be integrated to the research group of Dr. Vladimir Sivakov in frame of bilateral German-Russian project funded by Deutsche Forschungsgemeinschaft (DFG). The employee will be responsible for the pre-patterning of silicon surfaces for further intersection with functional tin oxide layers. For the formation of the tin-based plasmonic active nanostructures metalorganic chemical vapor deposition using tin (II) and tin (IV) volatile alkoxide precursors will be applied. 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 and Synchrotron Radiation Source (SRS) storage ring at National Research Center «Kurchatov Institute» (NRC KI). The candidate is expected to have already some hand-on experience in the tin-precursor synthesis and thin film technology and surface analytics. The candidate is expected to work independently and actively participate in the joint bilateral activities (travelling to: synchrotron storage rings in Berlin, Moscow, Voronezh; 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
- Deep knowledge on surface formation and characterization
- Strong interest in material research studies

Your knowledge and skills:

- Experience in Metalorganic Synthesis (Alkoxides Chemistry)
- Experience in Chemical Vapor Deposition
- Experience in surface analytics (Electron microscopy, crystallography, X-ray diffraction and spectroscopy)
- Experience in vacuum technique
- Good English communication and writing skills
- Know-how in software

Salary:

German tariffs for public employees (TV-L).

The Leibniz-IPHT strives to increase the proportion of female employees. The compatibility of work and family is one of our central concerns. Therefore women are explicitly encouraged to apply.

Further information can be obtained from Dr. Vladimir Sivakov, Tel. +49 3641 206-440 /
E-mail: vladimir.sivakov@leibniz-ipht.de.

Please send your application electronically as one pdf file via Email **until February 12th, 2021** including your CV and certificates to:

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

Code: 2021_01

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.