

The Paul-Drude-Institut (PDI) performs basic research as a lively symbiosis of materials science and solid state physics. Our activities aim at inspiring and demonstrating new functionalities for future information technologies. As a member of the Leibniz-Gemeinschaft and Forschungsverbund Berlin e. V., we are an independent research institute with about 100 employees and collaborate with all three universities in Berlin. We are located in the very heart of the city near the Gendarmenmarkt. You may find more details at www.pdi-berlin.de.

Postdoc position (m/f/d): Micro-integrated quantum-cascade lasers for high-resolution spectroscopy (PQCL)

PDI has a long-standing expertise in the design, growth, fabrication, and investigation of terahertz quantum-cascade lasers (THz QCLs) for high-resolution spectroscopy. Since 2014, THz QCLs developed at PDI have been operated in local oscillators on board the Stratospheric Observatory for Infrared Astronomy.

Within the framework of the priority program INTe grated TERAhErtz sySTEMs Enabling Novel Functionality (INTEREST) funded by the German Research Foundation, micro-integrated THz QCLs will be developed in cooperation with the German Aerospace Center in Berlin and the Ferdinand-Braun-Institut in Berlin. In close collaboration with highly competent scientists and technicians, your tasks will include contributions to the design of new heterostructures with higher gain at elevated operating temperatures, the optimization of resonator structures, the understanding of the physical processes which limit the maximum operating temperature, and the experimental investigation of the laser parameters.

You should have a Ph. D. degree in experimental physics, a background in semiconductor physics, and expertise in at least in one of the following scientific fields: development of QCLs, THz photonics, or THz spectroscopy. We are looking for a team player with a high level of communication skills and the spirit to work in a highly motivated team of researchers and technicians. The position is available as of now and limited to a three-year period.

Payment is according to TVöD Bund (Treaty for German public service). PDI is pursuing a gender equality policy. Women are therefore particularly encouraged to apply. Among equally qualified applicants, preference will be given to disabled candidates.

Please submit your application as PDF via email by January 31, 2022 to recruiting@pdi-berlin.de with reference to project *PQCL* in the subject line, including a dedicated cover letter, CV, publication list, reference for recommendation, degree(s), and transcript(s).



For questions related to the project, please contact Dr. Lutz Schrottke, lutz@pdi-berlin.de

