



Seminar

Solid-state based terahertz imaging systems: issues and applications

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Venue: Room W563, Physics building, Peking University

地点: 北京大学物理楼, 西563会议室

Abstract

Development of compact and alignment-free terahertz (THz) imaging systems remains as one of the most important topics for direct implementation of THz technology. In this communication, we consider solid-state-based solutions in design of spectroscopic THz imaging systems. The main components of such systems – compact THz sources and detectors -- will be discussed delivering special attention to the fabrication technology of passive optical components relying on phase zone plates and their on-chip integration with THz detectors. Implementation of compact spectroscopic THz imaging will be demonstrated in post packages scanning and medical imaging experiments employing various type of compact sensors, i.e. bow-tie diodes, nanometric field-effect transistors and microbolometers. Finally, experimental and technological facilities of Terahertz (THz) technology cluster at Optoelectronics department will be described. It includes modern THz experimental facilities for development of THz technology and THz photonics components as well as investigation of novel materials properties using various THz techniques.

About the speaker

Prof. Gintaras Valušis received his Ph.D. in physics from Semiconductor Physics Institute, Vilnius University in 1991. From 1995 to 1996, he worked as postdoctoral research fellow with Prof. Dr. Karl Leo in Institut für Angewandte Photophysik, TU Dresden. Now he is the director and principal research associate at the Center for Physical Sciences and Technology, a professor at Physics Faculty of the Vilnius University. His main scientific interests focus on Terahertz physics and spectroscopy, physics of nanostructures and semiconductor devices. He received many competitive awards, such as Lithuanian National Science Prize, State Award of Order of the Lithuanian Grand Duke Gediminas Officer's Cross.