Special Issue

New Insights in Terahertz Detection and Imaging Methodologies

Message from the Guest Editor

Terahertz waves possess unique characteristics that enable their use across a broad spectrum of applications, particularly in fields such as astronomy and biomedical sciences. A pivotal technology that supports these applications is the detection of terahertz radiation. By measuring parameters like amplitude, phase, temporal characteristics, and polarization of terahertz waves as they interact with different materials, we can gain meaningful insights into various physical processes. Moreover, terahertz imaging techniques allow for detailed analysis of objects at millimetre or sub-millimetre resolutions, including evaluations of their chemical compositions. This research topic aims to highlight the latest developments in the physics, methods, devices, and systems associated with terahertz detection and imaging. We will focus on innovative physical principles and device designs that extend beyond traditional thermal, electronic, and photonic approaches to terahertz detection. Additionally, this topic will examine novel imaging techniques, including single-pixel, near-field, super-resolution, hyperspectral, and tomographic imaging.

Guest Editor

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

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