Special Issue

Terahertz Communications in Photonics

Message from the Guest Editor

With the rapid development of 6G wireless networks and beyond, the demand for ultra-high-speed and ultra-broadband communication systems has become more pressing than ever. Terahertz (THz) communication, benefiting from the ultra-wide bandwidth available in the THz spectrum (0.1–10 THz), has emerged as a key technology in efforts to meet these demands. However, practical implementation faces significant challenges, including high propagation loss, hardware limitations, and signal processing complexity.

Photonics-assisted THz technologies offer a promising route to overcome these limitations, leveraging the advantages of optical carriers for signal generation, modulation, transmission, and detection. This Special Issue aims to provide a comprehensive platform, presenting the latest advances in photonics-enabled THz communications, bridging the gap between theory, devices, and systems. The scope of this publication with the journal's focus on photonic devices, systems, and applications, and seeks to highlight cutting-edge research that enables THz wireless communication through photonic techniques.

We look forward to receiving your contributions.

Guest Editor

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Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

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