Special Issue

Broadband Terahertz Devices and Communication Technologies, 2nd Edition

Message from the Guest Editors

The Recommendation Framework for IMT-2030 (Global 6G Vision) was completed by the International Telecommunication Union (ITU-R) radio communication division in 2023. Multiple frequency ranges will be needed to meet the capacity and coverage requirements and to serve emerging services and bandwidth-consuming Internet applications. There has been ongoing academic and industry research and development related to the suitability of mobile broadband systems in frequency bands above 100 GHz. The terahertz band (0.1 THz-10 THz), sandwiched between microwave and optical frequencies, is considered the next breakthrough point to revolutionize communication technology due to its rich spectrum resources.

Motivated by the potential of terahertz wireless communications, this Special Issue seeks critical technology breakthroughs in terahertz communications. The Special Issue topics include but are not limited to, broadband terahertz devices, terahertz frontend and antenna design, baseband processing for THz links, terahertz propagation and channel modeling, system-level demonstration of terahertz communications, integrated sensing, and communication.

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