Special Issue

Terahertz Sensors

Message from the Guest Editor

For most molecular detections in practice, the concentration of samples is often at a trace level and samples cannot adequately interact with the incident THz wave, which results in difficulty in capturing weak changes in the amplitude and phase for conventional terahertz (THz) spectroscopy techniques and limits applications of THz spectroscopy. How to enhance the spectral signal of samples in the THz band becomes a key issue. In the recent decade, a number of spectral signal enhancement techniques, including surface plasmon resonance, quantum dots, metamaterials, and quasi-bound states in the continuum (QBIC), have been utilized to improve the detection sensitivity of THz spectroscopy. Novel THz sensors with higher Q values and sensitivity, better easiness in fabrication, and better stability in utilization are continuously aspired. This Special Issue seeks original research and review articles on the design, fabrication, and applications of novel THz sensors for low-concentration or even trace molecular detection in food, agriculture, biomedicine, etc.

Guest Editor

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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