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*Special Issue Reprint*

## **Chemical Sensors for Volatile Organic Compound Detection**

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The aim of the following reprint is to immerse the reader in the latest approach of Chemical Sensors for Volatile Organic Compound Detection. As VOCs are ubiquitous in multiple specific settings, such as confined spaces and chemical production processes, it is essential to achieve superior detection of VOCs, particularly in terms of lower detection limits of sub-ppm and shorter response time. The detection of volatile organic compounds (VOCs) is in high demand in various fields, such as environmental pollution monitoring, early disease screening, and food freshness assessment. A variety of methods, including spectroscopic analysis, mass spectrometry, chromatographic analysis, electrochemical gas sensors, infrared gas sensors, and semiconductor gas sensors, have been extensively used for VOC detection. In particular, semiconductor sensors have been extensively investigated to detect VOCs due to their high sensitivity, fast response time, and cost-effectiveness. Under the unremitting efforts of researchers, research on semiconductor gas sensors has made a major breakthrough. Articles included in this reprint focus on gas sensors with selective enhancement, lower power consumption, and fast response. The characterization and evaluation of sensing performance, and the completion of gas-sensitive mechanistic discussions of experimental phenomena are also included. This reprint serves as a detailed entry point for readers interested in exploring VOC detection.



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