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Nanomaterial-Optimized Device Construction and AI-Enhanced Signal Analysis of Gas Sensors

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Message from the Guest Editors

The development of gas sensors, as the core hardware components of artificial olfactory systems for odor digitization, has been a continuous hotspot in both academic research and industrial applications in recent years. The rise of nanofunctional materials and artificial intelligence technologies in recent decades has delivered new approaches and further possibilities to address the gas sensor-associated dilemmas. Novel nanomaterials have attracted significant attention from many scholars and demonstrated their outstanding properties in gas sensing applications, such as controllable specific modifications, flexibility, and room-temperature applications. This Special Issue will focus on the latest research progress in two aspects: One is the modulation mechanism of nanosensitive materials on the response and selectivity of gas sensors. The other is the enhancement of data analysis methods for encoding and decoding output signals. We anticipate that this Special Issue will discuss the development of gas sensors from a range of unique perspectives and inspire the innovation of multidisciplinary technologies to promote the advancement of sensor technologies.



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Special Issue



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Message from the Editor-in-Chief

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