

Special Issue

Advanced Electronic Noses and Tongues Systems for Environmental Monitoring

Message from the Guest Editors

Electronic noses and tongues have evolved remarkably over the last three decades, progressing from early laboratory prototypes to sophisticated analytical platforms capable of real-time and in situ environmental monitoring. These bio-inspired multisensor systems, which emulate the human senses of smell and taste through cross-selective sensor arrays, have become indispensable tools for detecting and classifying volatile and liquid-phase compounds in complex natural environments. Their evolution has been accelerated by advances in nanostructured materials, microfabrication, signal conditioning, and machine-learning algorithms, enabling accurate, selective, and adaptive chemical recognition.

This Special Issue seeks to gather recent advances and future perspectives on the design, modeling, and application of advanced electronic nose and tongue systems for environmental and industrial applications. We invite interdisciplinary contributions that integrate materials science, physics, chemistry, and data-driven analytics to build autonomous, low-cost, and intelligent sensing networks capable of operating under real-world conditions.

Guest Editors

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Message from the Editor-in-Chief

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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