# Special Issue

# Advances in Smart Nanomaterials and Quantum Sensors: Integrating AI/ML for Next-Generation Applications

## Message from the Guest Editors

Smart nanomaterials and quantum sensors are transforming the landscape of sensing technologies by offering unprecedented sensitivity, selectivity, and efficiency. These innovations are particularly impactful in fields such as healthcare, environmental monitoring, and energy management. Smart nanomaterials, characterized by their high surface area and tunable chemical reactivity, serve as the foundation for next-generation sensors. Quantum sensors, based on principles like superposition and entanglement, enable the detection of minute changes in physical, chemical, or biological parameters. The integration of lab-on-chip systems with quantum sensing technology promises compact, efficient solutions for rapid and precise analysis, essential for medical diagnostics and environmental monitoring. Incorporating artificial intelligence and machine learning further amplifies these systems' potential through real-time data processing and autonomous decision-making. These advancements are paving the way for a new era of intelligent, high-performance sensing technologies with wide-ranging applications.

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## Deadline for manuscript submissions

25 December 2025


# Sensors

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Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/218245

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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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