

Special Issue

Recent Trends in Quantum Sensing

Message from the Guest Editor

Quantum sensing is rapidly transforming the landscape of precision measurement by leveraging uniquely quantum resources such as superposition, coherence, and entanglement. This Special Issue presents a curated collection of recent advances in quantum sensing technologies, methods, and applications. Topics covered span from fundamental breakthroughs in sensor design and control techniques in various platforms to real-world implementations in areas including material science, biology, chemistry, and environmental science. Emphasis is placed on how advances in quantum techniques are boosting sensitivity, improving spatial resolution, increasing robustness to noise, and broadening the capabilities of existing sensors. By bringing together contributions from leading researchers, this Special Issue aims to provide a comprehensive snapshot of the current state and future directions of quantum sensing, highlighting its growing role in both fundamental research and emerging technologies.

- quantum sensing
- quantum metrology
- semiconductor spin defects
- biosensing
- quantum control
- noise spectroscopy
- magnetometry
- quantum imaging
- quantum sensor design
- distributed sensing.

Guest Editor

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Deadline for manuscript submissions

30 October 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



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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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