

Special Issue

Multimodal Flexible Sensors: Toward Intelligent Sensing and Adaptive Interfaces

Message from the Guest Editors

Multimodal flexible sensors integrate multiple sensing mechanisms—such as piezoresistive, capacitive, triboelectric, optical, or ionic responses—into a single platform, enabling comprehensive detection of pressure, strain, temperature, biochemical markers, or a combination of these stimuli. This approach not only improves sensing accuracy and robustness but also opens new opportunities for intelligent human–machine interfaces, soft robotics, and personalized healthcare. This Special Issue aims to highlight the latest progress in multimodal sensing materials, device architectures, integration strategies, and system demonstrations.

Topics include, but are not limited to:

- Hybrid material systems;
- Multi-physics modeling of coupled sensing phenomena;
- Multimodal wearable devices;
- AI-driven signal fusion;
- Applications in healthcare, robotics, and industry.

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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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