

Special Issue

Advances in Fluorescence Sensing: Technologies and Applications

Message from the Guest Editors

Fluorescence sensing represents a cornerstone of modern analytical science, enabling researchers to detect, monitor, and quantify chemical and biological events with exceptional sensitivity and specificity. Advances in instrumentation, such as miniaturized spectroscopic systems, single-molecule detection, and high-resolution imaging, further expand the range of applications, while computational tools and machine learning offer deeper insights into fluorescence dynamics and signal interpretation. This Special Issue, “Advances in Fluorescence Sensing: Technologies and Applications”, will bring together cutting-edge contributions that showcase innovations in sensor design, mechanisms of fluorescence modulation, and practical implementations in real-world systems. From diagnostic probes for healthcare to responsive materials for environmental remediation, the collected works highlight the interdisciplinary nature of the field and underscore its growing impact. Together, these advances will illustrate how fluorescence sensing continues to evolve as a transformative tool for both fundamental discovery and applied solutions.

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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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