Special Issue

Semiconductor Radiation Detectors: Sensors, Readout Electronics and Applications

Message from the Guest Editor

Semiconductor radiation detectors (SRDs) are a wide class of sensors for the measurement of radiation, that, according to their material, can be classified into either elemental (Si, Ge, C, etc.) or compound (SiC, GaAs, GaN, etc.) semiconductor detectors. Due to their versatility, in terms of physical and electrical properties, geometry, and doping profiles, SRDs can be adopted for highresolution spectroscopy, imaging, timing, and dosimetry purposes, as well as for light transducers in scintillatorbased detection systems, with a widespread usage in scientific, medical, and industrial applications. This Special Issue is dedicated to the advances in radiation detection systems based on SRDs, inviting contributions with a focus on fundamental and applicative studies of the sensors, on the design and development of the front-end electronics, and on the characterization and calibration of complete SRD systems. Potential topics include but are not limited to:

- semiconductor radiation detectors
- X-ray and gamma-ray detectors
- application-specific integrated circuits
- silicon drift detectors (SDDs)
- silicon photomultipliers (SiPMs)
- low-gain avalanche diodes (LGADs)

Guest Editor

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Deadline for manuscript submissions

25 October 2025



Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



mdpi.com/si/192552

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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.

Editor-in-Chief

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