

## Special Issue

# Advancements in PET Instrumentation and Sensor Technologies for Enhanced Disease Diagnosis

### Message from the Guest Editors

Positron emission tomography (PET) continues to redefine the landscape of molecular imaging, enabling highly sensitive and specific detection of disease processes at the cellular and molecular levels. Recent breakthroughs in sensor technologies and instrumentation, including novel scintillator materials, advanced photodetectors, and sophisticated signal acquisition methods, are rapidly enhancing PET system performance, image resolution, and diagnostic accuracy. This Special Issue invites original research articles and comprehensive reviews focused on the latest developments in PET detector design, sensor integration, system architectures, and application-driven instrumentation. We encourage submissions exploring the synergy of PET with AI-based image analysis, and hybrid or organ-targeted imaging systems, as well as studies translating these advancements into clinical solutions for oncology, neurology, cardiology, and beyond. By assembling leading contributions from the fields of physics, engineering, medical imaging, and data science, this Special Issue aims to accelerate innovation in PET technology and foster its clinical impact on global health.

### Guest Editors

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### Deadline for manuscript submissions

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## Sensors

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*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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