Special Issue

Emerging Trends in Photodetector Technologies

Message from the Guest Editor

Photodetectors are pivotal in bridging optical and electronic domains and underpin various critical applications, from high-speed communications and biomedical imaging to environmental monitoring and consumer electronics. This dynamic field is rapidly advancing, driven by breakthroughs in materials science, novel device architectures, and the escalating demands of technological advancements. This Special Issue welcomes contributions on innovative materials, novel device designs, advanced fabrication techniques, and compelling applications that emphasize interdisciplinary and real-world approaches, reflecting the forefront of photodetection research. The scope of this Special Issue includes, but is not limited to, the following topics:

- Advanced materials for photodetection
- Novel photodetector architectures
- single-spectral/multispectral photodetectors
- Flexible, wearable, and transparent photodetector integration
- On-chip/CMOS-compatible photodetectors
- Emerging applications in imaging, communications, and sensing
- AI-enhanced design, modeling, and signal processing for photodetectors

Guest Editor

Dr. Dongyang Han
Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo 315201, China

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Photonics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
photonics@mdpi.com

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Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

Editor-in-Chief

Prof. Dr. Nelson Tansu
School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

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