

Special Issue

Photodetectors for Next-Generation Imaging and Sensing Systems

Message from the Guest Editor

This Special Issue covers the methodologies used to synthesize these cutting-edge materials; their potential to enhance photodetection performance; the design and fabrication of photodetectors with novel structures and physics, emphasizing devices that achieve high figure-of-merit parameters, such as enhanced sensitivity, fast response times, and broad spectral detection; and the demonstration of the new applications enabled by these advanced photodetectors, including flexible and wearable devices, next-generation imaging systems, and environmental sensing technologies. Through this Special Issue, we aim to provide insights into current trends and future directions in the field of photodetection, guiding further research and development in this rapidly evolving area. This Special Issue invites manuscripts that introduce the recent advances in **Photodetectors for Next-Generation Imaging and Sensing Systems**. All theoretical, numerical and experimental papers are accepted. Topics of interest for this Special Issue include, but are not limited to, the following: Novel photodetectors; Advanced imaging techniques; New sensing systems; New laser technologies.

Guest Editor

Dr. Changqing Cao

School of Physics and Optoelectronic Engineering, Xidian University,
Xi'an 710071, China

Deadline for manuscript submissions

30 September 2025



Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



mdpi.com/si/230229

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

[mdpi.com/journal/
photonics](https://mdpi.com/journal/photonics)





Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



[mdpi.com/journal/
photonics](https://mdpi.com/journal/photonics)



About the Journal

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q2 (Instrumentation)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).