Special Issue

Emerging Technologies for Silicon Photonics and Integrated Circuits

Message from the Guest Editor

This Special Issue focuses on developing silicon photonics and integrated circuit technologies, encompassing new device structures, photonic materials, fabrication techniques, and applications. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- High-performance electro-optic modulators;
- Wavelength/polarization/mode management devices;
- Fiber-to-chip coupling devices;
- On-chip high-capacity transmissions;
- Signal processing for photonic integrated circuits;
- Optical sensing;
- Efficient photo-electric detectors;
- New materials assisting photonic device performance (e.g., 2D materials, phase change materials, ferroelectric materials);
- Silicon photonic device design using AI algorithms;
- Integrated photonic neural network and optical computing;
- Integrated quantum photonic devices;
- Silicon-based heterogeneous integration technology;
- Large-scale photonic integrated circuits.

Guest Editor

Dr. Yin Xu

School of Optoelectronic Science and Engineering, Soochow University, Suzhou 215006, China

Deadline for manuscript submissions

20 August 2025

hv

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/si/228439

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

mdpi.com/journal/photonics

MDPI

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/journal/photonics

MDPI

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).