

# Special Issue

## Enabling Technologies for Optical Communications and Networking

### Message from the Guest Editors

Advanced optical communication networks are crucial for meeting the demands of cloud computing, IoT, and high-bandwidth services like 4K/8K streaming and VR. This requires innovative architectures, efficient signal processing, and effective network optimization. Robust control and management schemes are essential for performance monitoring and intelligent operations. Recent advancements in modulation formats, machine learning, and integration with sensing technologies are vital for handling increased data traffic and ensuring secure networking. This Special Issue invites papers on high-capacity optical transmission, high-speed access, performance monitoring, and efficient networking.

Original research articles and reviews are welcome

- Backbone/Core/Access /Indoor /Data center networks;
- Optical transmission systems and subsystems;
- Network architectures, control and management of optical networking;
- Signal processing and impairment mitigation;
- Artificial intelligence for optical communication and networking;
- Optical performance monitoring.

We look forward to receiving your contributions.

---

### Guest Editors

Prof. Dr. Xian Zhou

School of Computer & Communication Engineering, University of Science & Technology Beijing (USTB), No. 30 Xue Yuan Road, Haidian, Beijing 100083, China

Prof. Xue Chen

The State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, Beijing 100876, China

---

### Deadline for manuscript submissions

closed (15 April 2025)



# Photonics

---

an Open Access Journal  
by MDPI

---

Impact Factor 1.9  
CiteScore 3.5



[mdpi.com/si/166523](https://mdpi.com/si/166523)

*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](http://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 15 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2025).

