Special Issue

New Advances in Optical Wireless Communication

Message from the Guest Editor

Optical wireless communication (OWC) is a crucial research emphasis in the development of next-generation data acquisition and transmission, offering significant applications in either free space or underwater scenarios. However, current OWC systems encounter many challenges from both technical and engineering perspectives. This Special Issue invites authors working in relevant fields to submit manuscripts that introduce the recent advances in "optical wireless communication". All types of paper are acceptable, whether theoretical, numerical, or experimental. Topics include, but are not limited to, the following:

- Designs of visible-light/infra-red/ultra-violet OWC systems;
- Estimations and modeling for free-space/indoor/underwater OWC channels;
- Optical wireless signal processing;
- Code and modulation schemes in OWC systems;
- Micro-LED array based optical transmitters;
- Photon-counting detection;
- Power control and resource allocation in OWC systems;
- High-rate and energy-efficient OWC techniques;
- Massive and random access OWC networks;
- Optical intelligent reflecting surface;
- Signal compensation under turbulence, beam misalignment, beam wander, etc.

Guest Editor

Dr. Xiaolin Zhou

School of Information Science and Technology, Fudan University, Shanghai, China

Deadline for manuscript submissions

10 August 2025

hv

Photonics

an Open Access Journal by MDPI

Impact Factor 2.1
CiteScore 2.6

mdpi.com/si/173844

Photonics
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 2.1
CiteScore 2.6

mdpi.com/journal/photonics

MDPI

About the Journal

Message from the Editor-in-Chief

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, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Optics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 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 2024).