Special Issue

Advanced Technologies in Optical Wireless Communications

Message from the Guest Editors

Optical wireless communication (OWC) combines the advantages of optical fiber and radio frequency (RF) technology, enabling high-speed, unlicensed broadband transmission. Its resistance to electromagnetic interference ensures robust confidentiality, fueling interest in applications like indoor LiFi and underwater communication. Researchers are exploring methods to enhance data rates and reliability in OWC systems, including the use of machine learning and advanced transceiver devices like micro LEDs and VCSELs. There is also growing interest in novel optical materials to improve transmission performance. As these developments progress, OWC is set to play a key role in the future 6G network. This Special Issue invites high-quality papers on emerging OWC technologies, covering areas such as:

- Transmitter/receiver technologies for OWC;
- Advanced signal processing in OWC;
- Optical MIMO and spatial modulation;
- High-quality OWC experiments;
- Advanced optical materials in OWC;
- Photon counting receivers in OWC;
- Machine learning and neural networks in OWC;
- Indoor localization and positioning;
- Underwater optical wireless systems.

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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.

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