

Special Issue

Advanced Optical Transmission Techniques

Message from the Guest Editors

Since the breakthrough introduction of low-loss optical fiber and semiconductor lasers in 1970, optical communication has undergone an unprecedented revolution, evolving into the backbone of global information networks. Over the past decades, transmission capacities have surged by millions of times, enabling applications across ultra-long-distance telecommunications, mobile networks, data centers, cloud computing, and beyond. Today, as society enters a new era of data-driven demands—requiring higher speeds, lower latency, greater capacity, and enhanced reliability—optical communication technologies continue to push boundaries through innovations in scalability, flexibility, and cost efficiency.

This Special Issue, "Advanced Optical Transmission Techniques", aims to showcase cutting-edge research and transformative solutions addressing the challenges and opportunities in next-generation optical communication systems. We invite contributions from researchers, engineers, and industry experts to explore novel methodologies, architectures, and technologies that redefine the limits of optical transmission.

Guest Editors

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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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