

Special Issue

Next-Generation Vertical-Cavity Surface-Emitting Lasers

Message from the Guest Editors

Vertical-cavity surface-emitting lasers (VCSELs) have become light sources of great importance for industrial, sensing and consumer applications. They offer many inherent advantages, such as efficient high-speed modulation at low currents, superior fiber coupling efficiency, wafer-level fabrication and scalability in high-density array architectures. At present, the growing bandwidth demands for data communication and new applications under research, including autonomous vehicle systems (LiDAR in particular), gas detection, biomedical sensing, imaging, quantum computing, chip-scale atomic devices, etc., drive the significant development of VCSEL technology. Novel trends and concepts in the design, configuration and fabrication of VCSELs emerge to meet the specification requirements of the next generation of photonic systems.

Guest Editors

Dr. Yun Sun

Institute of Microelectronics, Chinese Academy of Sciences, 3 Beitucheng West Road, Chaoyang District, Beijing 100029, China

Dr. Qiang Kan

Institute of Semiconductors, Chinese Academy of Sciences, A35 Qinghua East Road, Haidian District, Beijing 100083, China

Deadline for manuscript submissions

closed (10 December 2024)



Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



mdpi.com/si/185547

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](https://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 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).