

Special Issue

Semiconductor Lasers: Innovations, Challenges, and Future Perspectives

Message from the Guest Editors

This Special Issue aims at presenting original state-of-the-art research articles dealing with the dynamics and stability of semiconductor lasers in a broad sense, with special emphasis on their operation in a photonic integrated chip. Specifically, papers are solicited dealing with semiconductor lasers coupled to various kinds of external optical perturbations, such as delayed feedback, delayed coupling, optical injection, photonic nerve signal injection, etc. Researchers are invited to submit their contributions to this Special Issue. Topics include, but are not limited to:

- Semiconductor lasers;
- Dynamics and stability;
- Narrow linewidth lasers;
- Feedback-induced dynamics;
- VCSELs;
- Ring lasers;
- Semiconductor disk lasers;
- Neuromorphic computing based on semiconductor lasers;
- Quantum dot lasers;
- Frequency combs;
- Integrated lasers;
- Pulse lasers.

Guest Editors

Dr. Yongqiang Ning

State Key Laboratory of Luminescence and Applications, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, Changchun 130033, China

Dr. Xiaoying He

School of Electronic Engineering, Beijing University of Posts and Telecommunications, Beijing, China

Deadline for manuscript submissions

closed (20 January 2026)



Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



mdpi.com/si/202875

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 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).