



Special Issue

Announcing a Feature Section of the *IEEE Photonics Journal* dedicated to:
Progress in Semiconductor Lasers

Submission Deadline: March 14, 2025

The IEEE Photonics Journal will publish a Feature Section dedicated to Progress in Semiconductor Lasers. The purpose of this issue is to collect expanded versions of papers presented at the 2024 IEEE 29th International Semiconductor Laser Conference (ISLC) and is also open to original manuscripts on the topic of semiconductor lasers not presented at ISLC 2024. Research on semiconductor laser is a vibrant field that covers a wide range of topics: new materials, new structures also based on quantum effects, integration technologies for compactness and power scaling, new modelling and design methods. The innovation in semiconductor laser is crucial for many application domains such as classical and quantum communication, information processing also at quantum level, computing, sensing, environmental monitoring, industrial process control and bio-photonics.

This Feature Section welcomes contribution on the latest developments in: semiconductor lasers, semiconductor optical amplifiers, and light emitting diodes, including: semiconductor lasers and amplifiers, surface emitting lasers (VCSELs, VECSELs, and PCSELs) and related devices, photonic band-gap and microcavity lasers, topological lasers, grating controlled lasers, multi-segment and ring lasers, quantum cascade, and interband cascade lasers, sub-wavelength scale nano-lasers, MWIR, LWIR, and THz sources, InP, GaAs and GaSb materials, quantum dot lasers, high power and high-brightness lasers, GaN and ZnSe based UV to visible LDs and LEDs, Light emitting diodes (LEDs) and micro-LEDs, applications of semiconductor lasers and photonic integrated circuits with semiconductor lasers.

Both fundamental research and application-related contributions are encouraged.

The submission starts on **October 7, 2024** and the deadline for submission of manuscripts is **March 14, 2025**. Submissions should be made online at <https://iee.atyponrex.com/journal/pj-ieee> with papers formatted compliant to IEEE Photonics Journal standards. All submissions will be reviewed in accordance with the normal procedures of the Journal. Be sure to tag the paper type as Progress in Semiconductor Lasers, not an Original Paper and Technical topic as #06 (Focus Issue).

Authors may contact anyone below for more information or at the website at <https://www.photonicsociety.org/publications/photronics-journal/call-for-papers>.

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