Special Issue

High-Power Diode Lasers: Advances and Challenges

Message from the Guest Editor

High-power diode lasers play a pivotal role in a myriad of applications, from industrial processes to medical devices, and their continuous development is essential for realizing many emerging applications. Recent advances in device physics, material science, hybrid integration, and packaging technology have greatly improved the performance of a wide range of high-power diode lasers. We welcome original research articles, reviews, and perspectives addressing various aspects of high-power diode lasers. Topics of interest include, but are not limited to, the following:

- Power scaling and efficiency improvements in diode lasers;
- Novel materials for high-power diode lasers;
- Advanced diode laser designs and technologies;
- Diode lasers for specific applications (e.g., industrial, medical, defense);
- Diode lasers with innovative resonators and cavity designs;
- Tunable and single-mode diode lasers;
- Beam combining of diode lasers;
- Hybrid integrated diode lasers;
- Advances in diode laser modulation, pulse generation, and mode locking;
- High-power diode lasers in emerging fields (e.g., quantum technologies).

Guest Editor

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Deadline for manuscript submissions

closed (10 September 2024)

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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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