Special Issue

High-Performance Optical Parametric Oscillators

Message from the Guest Editor

Optical Parametric Oscillators (OPOs) are pivotal in nonlinear frequency conversion, enabling the generation of continuous-wave or pulsed laser spanning visible, near-infrared, mid-infrared, and long-wave infrared spectral regimes based on different pump sources and nonlinear optical crystals. OPO systems exhibit superior power scalability and wavelength tunability, facilitating high-power pulsed lasers and broad spectral coverage through optimized phase-matching and cavity configurations, which have important applications and prospects in the fields of optical remote sensing, spectral detection, industrial processing, and optoelectronic countermeasures. This Special Issue aims to focus on the most recent advances in nonlinear optical crystals, cavity designs, and pumping schemes that push the limits of OPO performance—enhancing conversion efficiency, lowering threshold powers, improving beam quality, and expanding wavelength coverage. Original research articles and reviews are welcomed. We look forward to receiving your contributions.

Guest Editor

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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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