

# Special Issue

## Femtosecond Lasers: Principles, Techniques and Applications

### Message from the Guest Editors

We invite you to contribute to the Special Issue “Femtosecond Lasers: Principles, Techniques and Applications”. Recent decades have seen rapid advances in femtosecond laser technology, driven by ultrafast optics, nonlinear light–matter interactions, and precision laser engineering. Femtosecond pulses enable direct access to once-inaccessible ultrafast physical, chemical, and biological processes, making these lasers indispensable in scientific and technological domains. Their key traits—ultrashort pulses, high peak intensity, minimal thermal diffusion—enable transformative applications in precision micro/nanofabrication, biomedical imaging/surgery, spectroscopy, optical communications, and strong-field physics. Ongoing advances in laser sources, pulse shaping, stabilization, and integration expand performance limits and application scope. Given the interdisciplinary nature of femtosecond laser research, there is a growing need for a platform integrating fundamental principles, enabling techniques, and emerging applications. This Special Issue meets this need by featuring high-quality work on the latest progress and future directions in this dynamic field.

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### Guest Editors

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### Deadline for manuscript submissions

30 November 2026



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## 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.

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### Editor-in-Chief

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