Special Issue

Ultrafast Lasers: Science and Applications

Message from the Guest Editor

The recent advances in ultrafast lasers have pushed peak output power up to a multi-PW level, the pulse duration into a single cycle limit, crossing the 1 fs milestone, and extended the operation wavelength from extreme UV through near- and mid-IR to THz spectral region. This Special Issue will highlight the most recent progress in ultrafast lasers, from new technologies to applications. It will also provide a better understanding on the state-of-the-art technologies, discuss current difficulties in ultrafast pulse generation and inspire new ideas for its applications in ultrafast science. Topics of interest include, but are not limited to, the following:

- Advances in femtosecond pulse generation from solid state and fiber sources: novel lasers and amplifiers;
- Ultrashort-pulse semiconductor lasers;
- Wavelength tuning techniques and tunable lasers including ultrafast parametric amplifiers, parametric chirped pulse amplifiers, Raman lasers;
- Pulse compression and shaping;
- Ultrafast optoelectronic systems and devices;
- Advanced laser architectures including hybrid systems;
- High-power and high-energy lasers for large-scale facilities.

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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