



## Recent Advances in Ultrafast Laser Pulses

Guest Editor:

### Dr. Qian Li

School of Electronic and  
Computer Engineering, Peking  
University, Shenzhen 518055,  
China

Deadline for manuscript  
submissions:

**closed (20 December 2024)**

### Message from the Guest Editor

Ultrafast laser pulses are widely demanded in the biomedical field and for materials processing because of their large peak power and capability for ultrahigh-precision fabrication. The duration of ultrafast laser pulses is typically defined as several tens of femtoseconds to tens of picoseconds. Ultrafast pulses are usually generated by passive mode-locked lasers or optical parametric amplifiers, and can also be obtained by pulse compression using longer pulses. Obtaining stable ultrafast laser pulses and the physical mechanism of pulse formation are very important research issues.

Topics to be discussed in this Special Issue include but are not limited to: ultrafast pulse formation in mode-locked lasers or micro-ring resonant cavities, ultrashort pulse generation with pulse compression techniques, interaction of ultrafast laser pulses with materials, nonlinear interactions between ultrashort pulses, supercontinuum generation, and noise and stability of ultrafast laser pulses.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**  
Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[appls@mdpi.com](mailto:appls@mdpi.com)  
[X@Appls](https://twitter.com/appls)