

## Special Issue

# Ultrafast and Nonlinear Laser Applications

### Message from the Guest Editor

This Special Issue aims to explore the cutting-edge developments in the field of laser technology, particularly focusing on the applications of ultrafast and nonlinear laser dynamics. "Ultrafast and Nonlinear Laser Applications" explores the cutting-edge advancements and versatile applications of ultrafast and nonlinear laser technologies across various disciplines. This Special Issue looks into the interplay between ultrafast lasers and nonlinear optical processes, and their roles in fields such as photonics, materials science, biomedicine, telecommunications, and beyond. From ultrafast spectroscopy and pulse shaping to nonlinear frequency conversion and quantum optics, this compilation aims to collect diverse works on innovative methodologies, theoretical insights, and practical implementations on the frontier of laser-based research. Contributions from leading experts provide a comprehensive overview of the latest breakthroughs and emerging trends in the field of ultrafast and nonlinear laser applications.

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### Guest Editor

Dr. Sergej Orlov

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### Deadline for manuscript submissions

closed (20 June 2025)



## Applied Sciences

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### 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.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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