Special Issue

Advanced Methods in Exploring Light–Matter Interactions and Nonlinear Effects Optics Applications

Message from the Guest Editors

The investigation of light–matter interactions and nonlinear optics has been a research hotspot in recent years. This research has gained significant momentum owing to its pivotal role in advancing technologies across various fields. Its aim is to understand the new application of light–matter interactions and nonlinear optics. The scope of this Special Issue includes the latest advances in experimental, theoretical, and computational aspects of light–matter interactions and nonlinear effects optics. Here, we invite original research articles and reviews on these topics. We encourage contributions that explore new aspects of these areas, including but not limited to the following:

- Solid-state laser technology and their applications;
- Nonlinear optics and high-power laser interactions;
- Nonlinear optical microscopy;
- AO systems and component technologies;
- Machine learning applications in optical systems;
- Wavefront shaping for enhanced optical performance;
- Computational imaging techniques in nonlinear optics;
- Millimeter-wave/terahertz system-on-chip.

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Deadline for manuscript submissions

30 April 2025

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About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

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indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Optics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2024).

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