Special Issue

Ultrafast Vortex Pulses

Message from the Guest Editors

The application of vortex-shaped wave-packets holds numerous kinds of promise: to provide an improved understanding of the dynamics of atomic and molecular processes, to enable the generation of unprecedented short flashes of light, to facilitate the exploitation of enhanced selectivity in interactions with material having chiral properties, to provide a means for massively parallel optical data transfer, or to furnish advanced approaches for the ultrafast excitation of magnetic materials. Our Special Edition is intended to cover the full spectrum of such activities, ranging from basic theory, over advanced methods for formation and detection, through to very recent applications of ultrafast singular optics, such as attosecond pulse generation, high-resolution imaging, and fast optical information processing. Particular emphasis will be placed on array-specific problems like self-imaging, adaptive optical methods of structured beam shaping and characterization, and the emerging capabilities of super-resolution techniques in the spatial and temporal domain. Prof. Dr. David L. Andrews

Guest Editors

Prof. Dr. David Andrews

School of Chemistry, University of East Anglia, Norwich Research Park, Norwich NR4 7TJ, UK

Dr. Ruediger Grunwald

Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Max-Born-Straße 2A, 12489 Berlin, Germany

Deadline for manuscript submissions

closed (30 June 2020)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/29404

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

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.

Editor-in-Chief

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

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, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)