Special Issue

Light Focusing and Optical Vortices

Message from the Guest Editor

Solving a problem that is as fundamental as controlling the state of light is a one of the most important areas of study in modern optics and nanophotonics. To achieve this goal, it is essential to understand the physical effects that arise during the propagation of laser beams, including during their focusing, as well as the possibility of predicting these effects. This is possible by developing a theory which describes the characteristics of laser light. Singular optics, which studies vortex optical beams, can be called upon to answer these questions. This Special Issue aims to present state-of-the-art articles regarding both theoretical and experimental studies on the generation, propagation, focusing and measurement of light beams and applications of structured beams. Topics include, but are not limited to:

- The design, simulation, and manufacturing of optical devices for light focusing (metasurfaces, zone plates, plasmonic lenses, etc.);
- Properties of tightly focused light;
- Photonic nanojet;
- Light bullet;
- Overcoming the diffraction limit;
- Applications of tightly focused light;
- Singular optics;
- The generation of optical vortices;

Guest Editor

Dr. Elena Kozlova

1. Department of Technical Cybernetics, Samara National Research University, 443086 Samara, Russia
2. Laser Measurement Laboratory, IPSI RAS - Branch of the FSRC «Crystallography and Photonics» RAS, 443001 Samara, Russia

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
photonics@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Nelson Tansu
School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

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

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JCR - Q2 (Optics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2024).