Special Issue

Vortex Beams: Fundamentals and Applications

Message from the Guest Editors

Over the past three decades, significant fundamental studies on vortex beams have been carried out, from paraxial model to non-paraxial model, from scalar beams to vectorial beams. Dynamical characteristics of polarization singularities, coherence singularities, and speckle fields have been extensively studied as well. Meanwhile, different approaches and technologies have been proposed to generate vortex beams and measuring its OAM. Consequently, with the advance of optical vortex beams, the rapid development of optical technologies, such as optical manipulation, optically driven motors, data processing, imaging, optical sorting, delivering, etc., have been achieved. This Special Issue aims at presenting state-of-the-art articles on both the theoretical and experimental studies on generation, propagation and measurement of vortex beams, and applications of vortex beams. Topics include, but are not limited to:

- Vortex Dynamics
- Partially coherent vortex beams
- Fractional vortex beam
- Plasmonics vortices
- Vector vortex beams
- Orbital angular momentum
- Applications of vortex beams

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Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

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