# Special Issue

# Realization and Application of Vortex Laser

## Message from the Guest Editors

The unique helical phase distribution of the vortex laser field is widely used in many advanced technological fields. In nanoparticles, the orbital angular momentum of the vortex laser can manipulate nanoparticles and living cells, making a breakthrough contribution to biomedicine. In information transmission, vortex beams have functions like ultra-high-density optical data storage, imaging, and metrology, and have good prospects in free space communication. With the deepening of research on quantum optics, the development of quantum communication, computing, measurement, and sensing also relies on vortex lasers. There are many types of vortex lasers, such as semiconductor lasers, fiber lasers, and all-solid-state lasers, which can output different types of vortex lasers in different wavebands. The performance improvement and application exploration of vortex lasers involve multiple disciplines, like optics, materials science, electronics, communication engineering, information science, and biology. This Special Issue aims to publish selected articles on vortex lasers and their applications.

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## Deadline for manuscript submissions

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