Special Issue

Single-Photon Generation and Applications

Message from the Guest Editors

Single-photon sources are in a great need for many applications in quantum physics. As a non-classical light source, single-photon sources are used to demonstrate the principle of quantum mechanics, illustrating quantum strangeness, such as the wave–particle duality of light. Up to now, many single-photon sources have been developed, including single atoms and ions in a trap, single molecules, single quantum dots, and single optically active defects in solids. New applications of single-photon sources also emerge. Therefore, this Special Issue aims to provide the newest developments in the rapidly evolving research fields of single-photon generation. We welcome papers that highlight recent breakthroughs and improvements in single-photon generation and related applications. Topics covered include, but are not limited to:

- Single-photon sources and related applications;
- Entangled-photon pair sources;
- Single-photon frequency conversions;
- Calibration of single-photon detection with single-photon sources;
- Photon-number resolving detection;
- Cavity-enhanced single-photon generation.

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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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