Special Issue

Quantum Photonics: Development and Applications

Message from the Guest Editor

Dear colleagues, In the 21st century, we are moving towards a true coming-of-age of technologies that use quantum mechanical phenomena, such as entanglement and quantum many-body effects with applications ranging from quantum communications to quantum imaging. The quantum mechanical properties of single photons have proven to be fundamental for the implementation of intrinsically secure cryptographic distribution systems and are the stepping stones for the development of new research paths ranging from fundamental studies to their applications. This Special Issue will be devoted to the development of quantum photonics and their applications. Topics include the study of quantum correlations and their applications by using photons such as causality tests, photonic protocols for quantum key distribution, hybrid entanglement, quantum walks, search for new physics with high-precision quantum optics experiments, etc. Accordingly, this Special Issue seeks to showcase research papers, communications, and review articles that focus on the theoretical and experimental progress of quantum photonics and their applications in physics and technology.

Guest Editor

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