



Quantum Photonics: Development and Applications

Guest Editor:

Dr. Gonzalo Carvacho

Dipartimento di Fisica, Sapienza
Università di Roma, Piazzale Aldo
Moro 5, I-00185 Roma, Italy

Deadline for manuscript
submissions:

closed (20 January 2024)

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.





an Open Access Journal by MDPI

Editor-in-Chief

Message from the Editor-in-Chief

You are invited to contribute research articles or comprehensive reviews for consideration and publication in *Micromachines* (ISSN 2072-666X). *Micromachines* is published in the open access format. Research articles, reviews and other contents are released on the internet immediately after acceptance. The scientific community and the general public have unlimited free access to the content as soon as it is published. As an open access journal, *Micromachines* is supported by the authors or their institutes by payment of article processing charges (APC) for accepted papers. We are pleased to welcome you as our authors.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, dblp, and other databases.

Journal Rank: JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Mechanical Engineering)

Contact Us

Micromachines Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/micromachines
micromachines@mdpi.com
[X@micromach_mdpi](https://twitter.com/micromach_mdpi)