



Silicon Photonic Devices and Integration

Guest Editor:

Prof. Dr. Jianping Chen

The State Key Laboratory on
Fiber Optic Local Area
Communication Networks and
Advanced Optical
Communication Systems,
Shanghai Jiao Tong University,
Shanghai 200240, China

Deadline for manuscript
submissions:

closed (30 April 2024)

Message from the Guest Editor

Dear Colleagues,

Silicon photonic devices and integration have been investigated widely for the unique features, such as compatibility with CMOS fabrication and potential to be monolithically integrated with microelectronic circuits. Rapid progresses have been made in design and fabrication of new concept devices, larger scale photonic integration, hybrid integration with other material platforms such as lithium niobate, III-V, two-dimensional material, and phase change material. Multiple new applications are enabled by the development of silicon photonics, such as optical phase arrays for Radar and Lidar systems, photonic neural networks for fast computing. Silicon photonic chips are expected to meet the ever-increasing demand of bandwidth, high integration density and low power consumption in existing and emerging systems. Accordingly, this Special Issue seeks to showcase research papers, and review articles that focus on novel designs, fabrication of photonic devices and chips, new developments of their applications in intra/inter-chip, short-reach and long-haul optical communications, high-frequency and broadband signal processing and optical computing.





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 (*Chemistry, Analytical*) / CiteScore - Q2 (*Mechanical Engineering*)

Contact Us

Micromachines Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

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