

Special Issue

Silicon Photonics: Functional Enhancement by New Structures and Materials

Message from the Guest Editors

This Special Issue aims to provide an overview and highlights of the most recent theoretical and experimental efforts of applying novel waveguide structures and functional materials on silicon chips toward enhancing or extending the functions of silicon photonic devices, whether passive or active, linear or nonlinear, silicon-based or hybrid material-assisted. We encourage you to contribute review papers, original research short letters, or long articles on such topics as (1) novel silicon-based waveguide structures such as hybrid plasmonic structure, subwavelength gratings, nano pillars/slots, suspended structures, etc.; (2) silicon photonic devices integrated with CMOS-compatible materials such as SiN and oxides and hybridized with materials such as 2D materials, III-V/II-VI semiconductor compounds, chalcogenides, LiNbO_x, VO_x, magneto-optic materials, phase-change materials, etc.; (3) applications of the aforementioned structures and devices, e.g., programmable photonics, mode manipulations, sensors, MIR photonics, integrated nonlinear optics, etc. Submissions on other topics are also welcome if they are relative to the theme of the Special Issue.

Guest Editors

Dr. Xiaowei Guan

Department of Photonics Engineering, Technical University of Denmark, Bldg. 345A, Ørstedss Plads, 2800 Kgs. Lyngby, Denmark

Dr. Peipeng Xu

Faculty of Electrical Engineering and Computer Science, Ningbo University, Ningbo 315211, China

Deadline for manuscript submissions

closed (31 January 2022)



Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



mdpi.com/si/66292

Photonics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
photonics@mdpi.com

[mdpi.com/journal/
photonics](https://mdpi.com/journal/photonics)





Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



[mdpi.com/journal/
photonics](https://mdpi.com/journal/photonics)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Nelson Tansu

School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q2 (Instrumentation)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).