

Special Issue

Silicon and Silicon Nitride Integrated Photonics: Challenges and Opportunities

Message from the Guest Editors

This Special Issue explores the challenges and opportunities of silicon and silicon nitride integrated photonics. The Special Issue covers topics such as the design and fabrication of waveguides and other optical devices, the integration of nonlinear optics, and the development of integrated circuits for photonics. Thus, we encourage you to contribute review papers, original research short letters, or long articles on such topics as:

- Silicon and silicon nitride passive waveguides and devices: design optimization, fabrication techniques, and characterization;
- Silicon and silicon nitride active photonic devices: modulators, detectors, filters, switches, resonators, and amplifiers;
- Integrated nonlinear optics including frequent combs and supercontinuum generation;
- Integration of silicon and silicon nitride photonics with other material systems: 2D materials, III-V/II-VI semiconductor compounds, chalcogenide glasses, LiNbO_x, VO_x, magneto-optic materials, phase-change materials, etc.;
- Applications of silicon and silicon nitride photonics, e.g., programmable photonics, mode manipulations, sensors, MIR photonics, on-chip spectrometers, etc.

Guest Editors

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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.

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