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Silicon-Based Integrated Optics: From Design to Applications

Guest Editor:

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Message from the Guest Editor

Photonics welcomes your submission to a Special Issue on silicon-based integrated optics: From design to applications.

Silicon-based integrated optics is a silicon platform from which photonic-integrated circuits can be made. Not only silicon but also silicon nitride can serve as core materials for silicon-based integrated optics. Silicon-based integrated optics with electronic integrated circuits (ICs) in one chip can provide a complete solution for applications of optical communication, sensors, biomedical sciences, automobiles, astronomy, aerospace, augmented reality (AR), virtual reality (VR), and artificial intelligence (AI).

Topics of interest include, but are not limited to, the following:

- Active and passive integrated photonic devices on silicon-based platforms.
- Fabrication and characterization technologies for silicon-based integrated optics.
- Device theory, modelling, and design: machine learning and reverse engineering.
- Applications of silicon-based integrated optics devices.
- Silicon-based integrated nonlinear and quantum optics.
- New materials on silicon platforms for integrated optics.

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Special Issue