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## Silicon Photonics and Other Integrated Photonic Platforms

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### Message from the Guest Editor

Dear Colleagues,

Silicon photonics is a leading platform for large-scale photonic integration. A large number of optical devices with different functionalities, including gratings, phase shifters, modulators, and detectors, can be manufactured monolithically to form photonic integrated circuits. Silicon photonics leverages the mature CMOS process to enable high-volume production capability while foundries continue to provide more advanced services and complete PDKs. Recent years have witnessed the growing applications of silicon photonics, including optical interconnects for data centers, LIDAR for autonomous vehicles, artificial neural networks, biomedical and chemical sensors, and quantum communications and computation. Integrated photonic platforms based on III-V semiconductors and nonlinear optical materials can provide functionalities beyond silicon photonics. These platforms enable light sources, gain media, strong modulation, and nonlinear optical phenomena on a chip-scale.



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# Special Issue



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