

Special Issue

Devices in Silicon Photonics

Message from the Guest Editor

Based on the high refractive-index-contrast and CMOS-compatible processing of the silicon-on-insulator material, it has become a quite promising platform for integrated optics, allowing silicon photonics to emerge. Up to now, many functional devices have been developed to solve the issues of electro-optic modulation, wavelength, polarization, mode management, fiber-to-chip coupling, high-capacity transmission, signal processing, photo-electric detection, and others in the field of silicon photonics. Recently, new technologies (e.g., artificial intelligence algorithms) and materials (e.g., 2D materials, phase change materials, ferroelectric materials) have been introduced to silicon photonics to enhance device performance and explore some new applications.

This Special Issue focuses on the state-of-the-art achievements in silicon photonic devices, covering new device structures, new photonic materials, new fabrication techniques and new applications. With the unflagging efforts of the worldwide researchers, we believe silicon photonics will enter a new stage of development with powerful device functions, high integration densities, and cutting-edge applications.

Guest Editor

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