



State of the Art in Silicon Photonics

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Message from the Guest Editors

Dear Colleagues,

Silicon photonics (SiPh) has been an early adopter of the fabless foundry model, process design kits, and multi-project wafer runs (MPW), directly resulting in the field's growing ubiquity. The unprecedented access to technology that this gives, combined with the cost effectiveness of MPWs, has allowed for an explosion of SiPh into new application spaces. While SiPh in datacom has been flourishing with the recent announcement of deployable 1.6 Tb optical engines, new exciting application areas have arisen as well, such as quantum computing, photonic computing, reprogrammable photonics, visible photonics for atom/ion trapping, and spectral-based sensing. These SiPh-driven applications promise new paradigms in computing, health care diagnostics, sensing, and security. Growth in these diverse use areas is driven by both technology and device enhancements.

Within this Special Issue of *Applied Sciences*, we will publish novel and high-impact research papers representing the 'State of the Art in Silicon Photonics'.





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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