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Hybrid and Heterogeneous Integration on Photonic Circuits: New Opportunities for Multifunctional Photonic Platforms

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

The field of Silicon Photonics has rapidly evolved over the last few years, supported by the gain in maturity of the technology, design tools, and methods employed. Despite the fact that indium phosphide (InP) and silicon-on-insulator (SOI) platforms are still considered as the warhorses of integrated photonics in terms of maturity and deployment of active (InP) and passive (SOI) components, other alternatives such as germanium-on-silicon, silicon nitride-on-insulator or hybrid solutions combining different functional materials and Si are gaining momentum. A representative example is the hybrid III-V/Si platform, which has been used to develop on-chip tunable lasers for wavelength division multiplexing purposes.

This Special Issue will focus on recent advancements on hybrid and heterogeneous photonic circuits spanning from materials, processing techniques, and implementation of novel components, devices, and circuits employing diverse materials to enable multifunctional photonic platforms. With a combination of invited and contributed papers, this issue will survey the state-of-the-art of hybrid and heterogeneous photonic circuit technology.









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Editor-in-Chief

Message from the Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy 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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