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Waveguide Technology: Development and Applications

Guest Editor:

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Deadline for manuscript submissions:
closed (30 June 2023)

Message from the Guest Editor

The unique structure of the slot waveguide has received an increasing amount of interest since it was first demonstrated. Using this unique structure leads to a variety of advantages, such as a small beat length of the guiding light and a strong confinement in the slot region that results in extremely low losses. Another benefit is that CMOS-compatible materials and technology can be used in slot-waveguide fabrication.

Thus, slot waveguide technology has become a significant subject of research and growth in the understanding of nanometer-scale photonic devices.

Potential topics include but are not limited to:

- Semiconductor-materials-based slot waveguide technology;
- Tapers and couplers for coupling light to nano-silicon chip;
- Multiplexer/demultiplexer for o/c-band range;
- Power combiner/splitter;
- Grating coupler, ring-resonator, MZM,
- Special optical fibers
- Waveguide structurer;
- Amplifiers and lasers;
- Study new slot waveguide structure;
- Study modes field inside waveguide structure;
- VLC devices based on waveguide structure;
- Fabrication of new optical waveguide structures;
- Numerical methods for solving slot waveguide structure.

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Editor-in-Chief

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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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