
Design of Passive Integrated Photonic Components for Optical Coupling and Polarization Handling

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Short description:

Photonic Integrated Circuits integrate a large number of photonic components and functions onto a single chip, providing numerous benefits such as scalability, enhanced performance, improved reliability, seamless co-integration with electronics, and reduced costs compared to discrete component solutions. In our contribution, we will present the design and experimental results of passive components for coupling and splitting optical signals as well as components that tackle the polarization dependency of integrated waveguides. These components serve as basic building blocks for more complex components such as wavelength filters, light sources, modulators, etc. that are utilized in applications ranging from telecommunications to quantum communications and computing.

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More about Andraž Debevc

Andraž Debevc received his MSc in Electrical Engineering at the Faculty of Electrical Engineering, University of Ljubljana, Slovenia, in 2017. In the same year, he became a PhD student and a Laboratory of Photovoltaics and Optoelectronics member at the Faculty of Electrical Engineering, University of Ljubljana. He finished his PhD on nanophotonic structures in photonic integrated circuits in 2023. He is currently working as a researcher and teaching assistant. His research work is related to photonics. The main research activities include design, optical modelling and characterization of photonic integrated circuits.