

Applications in planar optical waveguide chips

As photonics technology continues to evolve, planar waveguides are likely to remain a key component, driving innovations in optical communications, sensing, and beyond. This document provides an ...

Planar waveguides, also called slab waveguides, are waveguides with a planar geometry, which guide light only in one dimension. They are often fabricated in the form of a thin transparent film with ...

Chip-integration of femtosecond technology could revolutionize applications such as point-of-care diagnostics, bio-medical imaging, portable chemical sensing, or autonomous navigation.

Examples of applications driving these advancements include data-communications, bio-sensing, positioning and navigation, low noise microwave synthesizers, spectroscopy, RF signal processing, ...

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An all-optical plasmonic sensor platform designed for smartphones based on planar-optical waveguide structures integrated in a polymer chip is reported for the first time.

This book focuses on the development of an planar waveguide optical sensor that includes its application as an evidence while capturing an essence of on-chip Lab on a Chip (LOC) device ...

In this paper, researchers demonstrated a wide range of functions, showing the device could tailor the dynamics of nonlinear optics in spectral, spatial, and spatio-spectral domains, all on a ...

FIMMWAVE/FIMMPROP can be used to design any arbitrary waveguide geometry. FIMMWAVE's Thermo-Optic Solver can be used to model thermal lensing, self heating and thermo-optic switches. ...

The fundamental element in a photonic integrated circuit is the optical planar waveguide, also known as planar "dielectric" waveguide, which is a structure that is used to confine and guide light in integrated ...

In this paper, an architecture and tuning mechanisms of reconfigurable multifunctional fractional-order analogue photonic chip are proposed and theoretically demonstrated, using a single silica-on-silicon ...

In this paper, we provide an overview and comparison of devices used for optical waveguide-to-waveguide coupling including inter-chip edge couplers, grating couplers, free form ...



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