

The content covers a wide range of topics including the design, production, and testing of optical components like lenses, mirrors, and complex optical systems.

In this chapter, the fabrication methods for writing low-loss optical waveguides along with waveguide and device characterization techniques are reviewed. The advantages and ...

First, the material and waveguide properties are reviewed. Second, typical fabrication processes for waveguide devices are introduced. Subsequently, a variety of passive waveguide ...

Glasses, either pure or suitably doped, constitute an excellent material for the development of integrated optical circuits. A brief review is presented of the most widely used processes for the fabrication of ...

We survey the state of the art in fundamental building blocks, including strip, rib, and silicon nitride waveguides, with a focus on achieving ultra-low propagation loss.

Photolithography is a fundamental fabrication technique widely used in the creation of high-quality photonics passive circuits. It plays a crucial role in defining the intricate patterns and structures ...

In this chapter we will survey the key passive optical devices used in integrated photonic chips and compare the various approaches used to meet datacom application needs.

Methods of fabricating optical devices with high refractive index materials are disclosed. The method includes forming a first oxide layer on a substrate and forming a patterned template...

His research areas cover silicon photonics devices, subwavelength structured devices, and polarization/mode handling devices.

Here, we design and experimentally demonstrate an athermal silicon photonic optical transmitter, realized through heterogeneous integration of graphene on a silicon nitride (SiN) photonic...

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