

Abstract Optical modulators, using acousto-optic, magneto-optic or electro-optic effects, as the principal components

Traditional electro-optic modulator devices typically consist of optical waveguides, traveling-wave electrodes or

In this review, we present the fundamental principles of electro-optics, drawing connections between fundamental science and the

Our thin-film lithium niobate electro-optic modulator is expected to promote the miniaturization, integration, and high

This work proposes and demonstrates an ultra-low-loss slow-light thin-film lithium niobate optical modulator with a

This work demonstrates a thin-film lithium niobate modulator with an 800-nm operational bandwidth covering from near

Lithium niobate (LN), an outstanding and versatile material, has influenced our daily life for decades--from enabling high-speed

Abstract: Since the emergence of optical fiber communications, lithium niobate (LN) has been the material of choice for electro-optic

The strong electro-optic interaction, low optical loss and high microwave bandwidth of thin-film lithium niobate have

A review of recent progress in the microstructure and domain engineering of lithium niobate film on insulator (LNOI)

Fig. 1: Unifying optical gain and electro-optical dynamics in Er-doped lithium niobate platform. Fig. 2: Basic designs

In the future, bulk LN crystal components will remain important for EM-frequency generation across the

This, in turn, established the lithium niobate modulators as the most promising external modulators, increasing

the system

Recently, thin-film lithium niobate electro-optical modulators have developed rapidly and have become the core

This Perspective discusses and compares several different approaches to the design of high-bandwidth, low-voltage

Electro-optic modulators with low driving voltage and wide bandwidth are critical for advanced analog and digital communication

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