Progress in manufactured silicon photonics

OLED-on-CMOS integration for optoelectronic sensor applications

Active silicon components for chip to chip interconnects

High-speed low-voltage optical receivers consisting of Ge-on-SOI photodiodes paired with CMOS ICs

Germanium on silicon photodetectors for telecom wavelengths

5-GHz optical front-end for active pixel applications in standard 0.35-[mu]m CMOS

Silicon photonic-wire waveguide devices

Tailoring the response and temperature characteristics of multiple serial-coupled resonators in silicon on insulator

Silicon microspheres for mid infrared photonics

Polarization-insensitive MMI-coupled ring resonators in silicon-on-insulator using cladding stress engineering

Novel fabrication techniques for silicon photonics

SOI waveguide based planar reflective grating demultiplexer for FTTH

Broadband silicon-on-insulator passive polarization splitters

Effective medium based on two-dimensional photonic crystals for index-confinement waveguide application

Efficient and compact silicon-on-insulator rib waveguide 90[degrees] bends and splitters

Scattering loss measurement of SOI waveguides using 5x17 integrated optical star coupler

Guided-mode resonance device constructed with membrane structure: theoretical analysis and experimental demonstration

A CMOS-compatible rib waveguide with local oxidation of silicon isolation

Plasmonics and the parallel programming problem

A 40Gbps CMOS photonics transceiver

Integrated optical components in silicon for high speed analog-to-digital conversion

Advances in fully CMOS integrated photonic devices

Two order increase in the optical emission intensity of CMOS integrated circuit Si LEDs (450nm - 750nm). Injection-avalanche based n*pn and p*np designs

Nano-engineered crystalline silicon for enhanced photoluminescence and 1.28[mu]m laser action: a study of mechanisms

Ge electroabsorption modulators and SiGe technology for optical interconnects

Enhanced electro-optic effect in silicon

High-speed electro-optical silicon modulators based on photonic crystal waveguides

Recent advances in high speed silicon optical modulator

Assessment of the effective carrier lifetime in a SOI p-i-n diode SI modulator using the reverse recovery method

Hybrid photonic crystal microcavity switches on SOI
High performance total internal reflection type optical switches in silicon-on-insulator
Integrated silicon optical sensors based on hollow core waveguide
Tailoring the transmission of liquid-core waveguides for wavelength filtering on a chip
Optical DNA sensing based on resonant porous silicon structures
Thin silicon waveguides for biological and chemical sensing
Si based waveguide and surface plasmon sensors
Optical biosensor based on arrays of waveguide microcantilevers
Lab-on-a-chip platforms based on highly sensitive nanophotonic SI biosensors for single nucleotide DNA testing

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.