Research outputs:

Consequence of Non-Uniform Expansion of InP-on-Si Wafers for the Performance of Buried Heterostructure Photonic Crystal Lasers
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2019 › Research › peer-review

Investigation of the Expansion in InP layer bonded to Si and its Effects on the Performance of the Photonic Crystal Lasers with the Buried Heterostructure
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2019 › Research › peer-review

Low temperature bonding of heterogeneous materials using Al2O3 as an intermediate layer
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

Low temperature bonding of heterogeneous materials using Al2O3 as an intermediate layer
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Nano-engineered high-confinement AlGaAs waveguide devices for nonlinear photonics
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

Pulse carving using nanocavity-enhanced nonlinear effects in photonic crystal Fano structures
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Quantifying non-uniform InP-on-Si wafer expansion with a sub-50 nm precision using E-beam metrology
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2019 › Research › peer-review

Signal reshaping and noise suppression using photonic crystal Fano structures
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Single-source chip-based frequency comb enabling extreme parallel data transmission
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Ultra-Efficient and Broadband Nonlinear AlGaAs-on-Insulator Chip for Low-Power Optical Signal Processing
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Wavelength tunable MEMS VCSELs for OCT imaging
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

An ultra-efficient nonlinear planar integrated platform for optical signal processing and generation
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

Characterization and optimization of a high-efficiency AlGaAs-On-Insulator-based wavelength converter for 64- and 256-QAM signals
Fabrication and experimental demonstration of photonic crystal laser with buried heterostructure

Lasers, switches and non-reciprocal elements based on photonic crystal Fano resonances

Optical Time Domain Demultiplexing using Fano Resonance in InP Photonic Crystals

Parity control of Fano resonances and its application for signal regeneration and pulse carving

Photonic crystal Fano lasers and Fano switches

Photonic crystal Fano resonances for realizing optical switches, lasers and non-reciprocal elements

Photonic Crystal with Buried Heterostructure Platform for Laser Devices Directly Bonded to Si

Towards Polarization-Independent Four-Wave Mixing in Dispersion Engineered AlGaAs-on-Insulator Nano-Waveguide

Towards Ultra-High Q Microresonators in High-Index Contrast AlGaAs-On-Insulator

An Ultra-Efficient Nonlinear Platform: AlGaAs-On-Insulator

Broadband and Efficient Dual-Pump Four-Wave Mixing in AlGaAs-On-Insulator Nano-Waveguide

Broadband and efficient dual-pump four-wave-mixing in AlGaAs-on-insulator nano-waveguides

Characterization of a Wavelength Converter for 256-QAM Signals Based on an AlGaAs-On-Insulator Nano-waveguide
Efficient frequency comb generation in AlGaAs-on-insulator
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Low-loss high-confinement waveguides and microring resonators in AlGaAs-on-insulator
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Nonlinear Optics in AlGaAs on Insulator
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Optically pumped 1550nm wavelength tunable MEMS VCSEL
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Phase-sensitive Four-wave Mixing in AlGaAs-on-Insulator Nano-waveguides
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Single-Source AlGaAs Frequency Comb Transmitter for 661 Tbit/s Data Transmission in a 30-core Fiber
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Supercontinuum Generation in AlGaAs-On-Insulator Nano-Waveguide at Telecom Wavelengths
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2016 › Research › peer-review

Surface Plasmons on Highly Doped InP
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Threshold Characteristics of Slow-Light Photonic Crystal Lasers
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

A Highly Efficient Nonlinear Platform: AlGaAs-On-Insulator
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2015 › Research › peer-review

AlGaAs-On-Insulator Nanowire with 750 nm FWM Bandwidth, -9 dB CW Conversion Efficiency, and Ultrafast Operation Enabling Record Tbaud Wavelength Conversion
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

AlGaAs-On-Insulator nonlinear photonics
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2015 › Research › peer-review

Highly Efficient Four-Wave Mixing in an AlGaAs-On-Insulator (AlGaAsOI) Nano-Waveguide
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

Highly Sensitive Photonic Crystal Cavity Laser Noise Measurements using Bayesian Filtering
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review
Projects:

Fabrication and characterization of novel nanophotonic structures with electrical control  
Project: PhD

Ultrahigh-speed Si-integrated on-chip laser  
Project: PhD

Ultrahigh-speed hybrid III-C-on-Si lasers  
Project: PhD

Photonic crystal Fano structures  
Project: PhD

QUantum dot Energy level Engineering for laser applicationNs on InP and Si platforms  
Project: Research

Compact Otdm/wdm oPtical rEceiveRs based on photoNic crystal Integrated  
Project: Research

Activities:

Tunable MEMS VCSEL on silicon substrate  
Activity: Talks and presentations » Conference presentations

Ultrahigh-speed hybrid VCSEL for short-distance optical interconnects  
Activity: Talks and presentations » Conference presentations