Publications:

Low temperature bonding of heterogeneous materials using Al2O3 as an intermediate layer
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

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

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

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

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

Wavelength tunable MEMS VCSELs for OCT imaging
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

An ultra-efficient nonlinear planar integrated platform for optical signal processing and generation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Characterization and optimization of a high-efficiency AlGaAs-On-Insulator-based wavelength converter for 64- and 256-QAM signals
Publication: Research - peer-review › Journal article – Annual report year: 2017

Fabrication and experimental demonstration of photonic crystal laser with buried heterostructure
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Lasers, switches and non-reciprocal elements based on photonic crystal Fano resonances
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Optical Time Domain Demultiplexing using Fano Resonance in InP Photonic Crystals
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Parity control of Fano resonances and its application for signal regeneration and pulse carving
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Photonic crystal Fano lasers and Fano switches
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Photonic crystal Fano resonances for realizing optical switches, lasers and non-reciprocal elements
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Towards Polarization-Independent Four-Wave Mixing in Dispersion Engineered AlGaAs-on-Insulator Nano-Waveguide
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018
Towards Ultra-High Q Microresonators in High-Index Contrast AlGaAs-On-Insulator
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

An Ultra-Efficient Nonlinear Platform: AlGaAs-On-Insulator
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Broadband and Efficient Dual-Pump Four-Wave Mixing in AlGaAs-On-Insulator Nano-Waveguide
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Broadband and efficient dual-pump four-wave-mixing in AlGaAs-on-insulator nano-waveguides
Publication: Research - peer-review › Annual report year: 2016

Characterization of a Wavelength Converter for 256-QAM Signals Based on an AlGaAs-On-Insulator Nano-waveguide
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Efficient frequency comb generation in AlGaAs-on-insulator
Publication: Research - peer-review › Journal article – Annual report year: 2016

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

Nonlinear Optics in AlGaAs on Insulator
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Optically pumped 1550nm wavelength tunable MEMS VCSEL
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Phase-sensitive Four-wave Mixing in AlGaAs-on-Insulator Nano-waveguides
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

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

Supercontinuum Generation in AlGaAs-On-Insulator Nano-Waveguide at Telecom Wavelengths
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Surface Plasmons on Highly Doped InP
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

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

A Highly Efficient Nonlinear Platform: AlGaAs-On-Insulator
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

AlGaAs-On-Insulator Nanowire with 750 nm FWM Bandwidth, -9 dB CW Conversion Efficiency, and Ultrafast Operation Enabling Record Tbaud Wavelength Conversion
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015
AlGaAs-On-Insulator nonlinear photonics
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Highly Efficient Four-Wave Mixing in an AlGaAs-On-Insulator (AlGaAsOI) Nano-Waveguide
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Highly Sensitive Photonic Crystal Cavity Laser Noise Measurements using Bayesian Filtering
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Slow-light effects in photonic crystal membrane lasers
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Thermal analysis of line-defect photonic crystal lasers
Publication: Research - peer-review › Journal article – Annual report year: 2015

Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Tailored design of WDM filters in BCB embedded PhC membranes
Publication: Research - peer-review › Journal article – Annual report year: 2013

High-speed photodetectors in a photonic crystal platform
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Strip detector for nanoscale resolution
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Projects:

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

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

Photonic crystal Fano structures
Project: PhD

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

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

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