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Research outputs:

High-confinement gallium nitride-on-sapphire waveguides for integrated nonlinear photonics
Research output: Research - peer-review › Journal article – Annual report year: 2019

A versatile silicon-silicon nitride photonics platform for enhanced functionalities and applications
Research output: Research - peer-review › Journal article – Annual report year: 2019

High-Quality-Factor AlGaAs-On-Sapphire Microring Resonators
Research output: Research - peer-review › Journal article – Annual report year: 2018

128 × 2 Gb/s WDM PON System with a Single TDM Time Lens Source using an AlGaAs-On-Insulator Waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Annealing-free Si3N4 frequency combs for monolithic integration with Si photonics
Research output: Research - peer-review › Journal article – Annual report year: 2018

Broadband Light Sources Based On Highly-Nonlinear AlGaAs-On-Insulator Waveguide Devices
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Compact high-efficiency vortex beam emitter based on a silicon photonics micro-ring
Research output: Research - peer-review › Journal article – Annual report year: 2018

Fano Resonances for Realizing Compact and Low Energy Consumption Photonic Switches
Research output: Research - peer-review › Book chapter – Annual report year: 2018

Frequency comb generation in crack-free Si-photonics compatible Si3N4 microresonator chip
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Highly Nonlinear Gallium Nitride Waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

High Q AlGaAs-On-Sapphire Microresonators
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018
Low temperature bonding of heterogeneous materials using Al2O3 as an intermediate layer
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

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

Orbital angular momentum modes emission from a silicon photonic integrated device for km-scale data-carrying fiber transmission
Research output: Research - peer-review › Journal article – Annual report year: 2018

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

Reducing insulating substrate charging in electron beam lithography without using charge dissipation layer
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

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

Signal-to-Idler Conversion Penalty in AlGaAs-on-Insulator Wavelength Converter
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

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

SiNOI and AlGaAs-on-SOI nonlinear circuits for continuum generation in Si photonics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

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

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

10 GHz frequency comb spectral broadening in AlGaAs-on-Insulator nano-waveguide with ultra-low pump power
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

An ultra-efficient nonlinear planar integrated platform for optical signal processing and generation
Research output: 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
Research output: Research - peer-review › Journal article – Annual report year: 2017

Demonstration of a self-pulsing photonic crystal Fano laser
Research output: Research - peer-review › Journal article – Annual report year: 2017
Experimental demonstration of a Fano laser based on photonic crystals
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

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

High Q gallium nitride microring resonators
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

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

Low threshold frequency comb generation in AlGaAs-on-insulator microresonator in the normal dispersion regime
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

On the high characteristic temperature of an InAs/GaAs/InGaAsP QD laser with an emission wavelength of ~1.5 μm on an InP substrate
Research output: Research - peer-review › Journal article – Annual report year: 2017

Optical Time Domain Demultiplexing using Fano Resonance in InP Photonic Crystals
Research output: 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
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

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

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

Specific features of waveguide recombination in laser structures with asymmetric barrier layers
Research output: Research - peer-review › Journal article – Annual report year: 2017

Supercontinuum comb sources for broadband communications based on AlGaAs-on-insulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Towards actively stabilized micro ring resonator based frequency combs
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Towards Polarization-Independent Four-Wave Mixing In Dispersion Engineered AlGaAs-on-Insulator Nano-Waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Towards Ultra-High Q Microresonators In High-Index Contrast AlGaAs-On-Insulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Ultra-broadband optical signal processing using AlGaAs-OI devices
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Высокая характеристическая температура лазера на квантовых точках InAs/GaAs/InGaAsP с длиной волны излучения около 1.5 μм, синтезированного на подложке InP
Research output: Research - peer-review › Journal article – Annual report year: 2017
1.5 μm InAs/InGaAsP/InP quantum dot laser with improved temperature stability
Research output: Research - peer-review › Conference article – Annual report year: 2016

All-Optical Switching Improvement Using Photonic-Crystal Fano Structures
Research output: Research - peer-review › Journal article – Annual report year: 2016

An Ultra-Efficient Nonlinear Platform: AlGaAs-On-Insulator
Research output: 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
Research output: 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
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

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

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

Hybrid III-V/SOI resonant cavity enhanced photodetector
Research output: Research - peer-review › Journal article – Annual report year: 2016

Hybrid III-V/SOI Resonant Cavity Photodetector
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Linear all-optical signal processing using silicon micro-ring resonators
Research output: Research - peer-review › Journal article – Annual report year: 2016

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

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

On-chip mode division multiplexing technologies
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

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

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

Photonic crystal Fano structures and their application to ultrafast switching and lasers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Single-Source AlGaAs Frequency Comb Transmitter for 661 Tbit/s Data Transmission in a 30-core Fiber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016
Supercontinuum Generation in AlGaAs-On-Insulator Nano-Waveguide at Telecom Wavelengths
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Switching dynamics in InP photonic-crystal nanocavity
Research output: Research - peer-review › Journal article – Annual report year: 2016

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

Method for Generating a Compressed Optical Pulse
Research output: Research › Patent – Annual report year: 2015

160-Gb/s Silicon All-Optical Packet Switch for Buffer-less Optical Burst Switching
Research output: Research - peer-review › Journal article – Annual report year: 2015

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

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

Effective carrier sweepout in a silicon waveguide by a metal-semiconductor-metal structure
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Effective electro-optical modulation with high extinction ratio by a graphene-silicon microring resonator
Research output: Research - peer-review › Journal article – Annual report year: 2015

Efficient silicon PIC mode multiplexer using grating coupler array with aluminum mirror for few-mode fiber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Experimental demonstration of non-reciprocal transmission in a nonlinear photonic-crystal Fano structure
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Flat-top Drop Filter based on a Single Topology Optimized Photonic Crystal Cavity
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

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

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

Hybrid vertical-cavity laser with lateral emission into a silicon waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2015
III-V/SOI vertical cavity laser with in-plane output into a Si waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Improvement of power characteristics in 850 nm quantum well laser with asymmetric barriers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Nonreciprocal transmission in a nonlinear photonic-crystal Fano structure with broken symmetry
Research output: Research - peer-review › Journal article – Annual report year: 2015

Silicon nanowires for ultra-fast and ultrabroadband optical signal processing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

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

Suppression of sublinearity of light–current curve in 850 nm quantum well laser with asymmetric barrier layers
Research output: Research - peer-review › Journal article – Annual report year: 2015

The effect of asymmetric barrier layers in the waveguide region on power characteristics of QW lasers
Research output: Research - peer-review › Journal article – Annual report year: 2015

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

Topology Optimization of Coupled Photonic Crystal Cavities for Flat-top Drop Filter Functionality
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Topology optimized design for silicon-on-insulator mode converter
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Topology-optimized silicon photonic wire mode (de)multiplier
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Ultra-compact Higher-Order-Mode Pass Filter in a Silicon Waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Ultrafast all-optical modulation using a photonic-crystal Fano structure with broken symmetry
Research output: Research - peer-review › Journal article – Annual report year: 2015

Ultrafast low-energy all-optical switching using a photonic-crystal asymmetric Fano structure
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

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

Wavelength Conversion of a 640 Gbit/s DPSK Nyquist Channel Using a Low-Loss Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

A wavelength tunable photon source with sealed inner volume.
Research output: Research › Patent – Annual report year: 2015
All-optical signal processing using InP photonic-crystal nanocavity switches
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

All-Optical Signal Processing using Silicon Devices
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Butt-joint integration of active optical components based on InP/AlInGaAsP alloys
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Crystallographic dependent in-situ CBr4 selective nano-area etching and local regrowth of InP/InGaAs by MOVPE
Research output: Research - peer-review › Journal article – Annual report year: 2014

Electrical Injection Schemes for Nanolasers
Research output: Research - peer-review › Journal article – Annual report year: 2014

Epitaxial growth of quantum dots on InP for device applications operating at the 1.55 μm wavelength range
Research output: Research - peer-review › Conference article – Annual report year: 2014

Fano resonance control in a photonic crystal structure and its application to ultrafast switching
Research output: Research - peer-review › Journal article – Annual report year: 2014

Fully-etched apodized fiber-to-chip grating coupler on the SOI platform with −0.78 dB coupling efficiency using photonic crystals and bonded Al mirror
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Fully etched apodized grating coupler on the SOI platform with −0.58 dB coupling efficiency
Research output: Research - peer-review › Journal article – Annual report year: 2014

High-quality MOVPE butt-joint integration of InP/AlGaInAs/InGaAsP-based all-active optical components
Research output: Research - peer-review › Journal article – Annual report year: 2014

Hybrid Light-Emitting Diode Enhanced With Emissive Nanocrystals
Research output: Research › Ph.D. thesis – Annual report year: 2014

Improvement of light-current characteristic linearity in a quantum well laser with asymmetric barriers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Influence of thermal effects induced by nonlinear absorption on four-wave mixing in silicon waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Low-power 10 Gbit/s RZ-OOK all-optical modulation using a novel photonic-crystal Fano switch
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Material Engineering for Monolithic Semiconductor Mode-Locked Lasers
Research output: Research › Ph.D. thesis – Annual report year: 2014

Nonlinear switching dynamics in a photonic-crystal nanocavity
Research output: Research - peer-review › Journal article – Annual report year: 2014

Nonplanar nanoselective area growth of InGaAs/InP
Research output: Research - peer-review › Conference article – Annual report year: 2014
On-chip wavelength switch based on thermally tunable discrete four-wave mixing in a silicon waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Resonance Energy Transfer in Hybrid Devices in the Presence of a Surface
Research output: Research - peer-review › Journal article – Annual report year: 2014

Saturation broadening effect in an InP photonic-crystal nanocavity switch
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Slow-light-enhanced gain in active photonic crystal waveguides
Research output: Research - peer-review › Journal article – Annual report year: 2014

Temporal dynamics of all-optical switching in Photonic Crystal Cavity
Research output: Research - peer-review › Journal article – Annual report year: 2014

Topology optimized mode conversion in a photonic crystal waveguide fabricated in siliconon-insulator material
Research output: Research - peer-review › Journal article – Annual report year: 2014

Wavelength Conversion of a 9.35-Gb/s RZ OOK Signal in an InP Photonic Crystal Nanocavity
Research output: Research - peer-review › Journal article – Annual report year: 2014

Wavelength sweepable laser source
Research output: Research › Patent – Annual report year: 2014

1060-nm Tunable Monolithic High Index Contrast Subwavelength Grating VCSEL
Research output: Research - peer-review › Journal article – Annual report year: 2013

Active Photonic Crystal Switches: Modeling, Design and Experimental Characterization
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

All-Optical 9.35 Gb/s Wavelength Conversion in an InP Photonic Crystal Nanocavity
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

Crystallographic dependence of the lateral undercut wet etch rate of Al0.5In0.5P in diluted HCl for III-V sacrificial release
Research output: Research - peer-review › Journal article – Annual report year: 2013

Design and geometry of hybrid white light-emitted diodes for efficient energy transfer from the quantum well to the nanocrystals
Research output: Research - peer-review › Conference article – Annual report year: 2013

Dynamic Characterization and Impulse Response Modeling of Amplitude and Phase Response of Silicon Nanowires
Research output: Research - peer-review › Journal article – Annual report year: 2014

Electrical injection schemes for nanolasers
Research output: Research - peer-review › Conference article – Annual report year: 2013

Exciton dynamics in near-surface InGaN quantum wells coupled to colloidal nanocrystals
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013
Forward error correction supported 150 Gbit/s error-free wavelength conversion based on cross phase modulation in silicon
Research output: Research - peer-review › Journal article – Annual report year: 2013

Photomixer for terahertz electromagnetic wave emission comprising quantum dots in a laser cavity
Research output: Research › Patent – Annual report year: 2013

Resonant MEMS tunable VCSEL
Research output: Research - peer-review › Journal article – Annual report year: 2013

Switching characteristics of an InP photonic crystal nanocavity: Experiment and theory
Research output: Research - peer-review › Journal article – Annual report year: 2013

Systematic investigation of the temperature behavior of InAs/InP quantum nanostructure passively mode-locked lasers
Research output: Research - peer-review › Conference article – Annual report year: 2013

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

The chromatographic separation of particles using optical electric fields
Research output: Research - peer-review › Journal article – Annual report year: 2013

Topology Optimized Mode Conversion In a Photonic Crystal Waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

Tunable Resonant-Cavity-Enhanced Photodetector with Double High-Index-Contrast Grating Mirrors
Research output: Research - peer-review › Conference article – Annual report year: 2013

Ultra-Fast Low Energy Switching Using an InP Photonic Crystal H0 Nanocavity
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

Ultrahigh-speed hybrid laser for silicon photonic integrated chips
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Ultra-high-speed Optical Signal Processing using Silicon Photonics
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Wavelength Selective 3D Topology Optimized Photonic Crystal Devices
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

160 Gbit/s optical packet switching using a silicon chip
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

160 Gb/s Silicon All-Optical Data Modulator based on Cross Phase Modulation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

40 Gbit/s serial data signal regeneration using self-phase modulation in a silicon nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

41 GHz and 10.6 GHz low threshold and low noise InAs/InP quantum dash two-section mode-locked lasers in L band
Research output: Research - peer-review › Journal article – Annual report year: 2012
Broadband Nonlinear Signal Processing in Silicon Nanowires
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Broadband Polarization-Insensitive Wavelength Conversion Based on Non-Degenerate Four-Wave Mixing in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Comparison of Monolithic Optical Frequency Comb Generators Based on Passively Mode-Locked Lasers for Continuous Wave mm-Wave and Sub-THz Generation
Research output: Research - peer-review › Journal article – Annual report year: 2012

Complex characterization of short-pulse propagation through InAs/InP quantum-dash optical amplifiers: From the quasi-linear to the two-photon-dominated regime
Research output: Research - peer-review › Journal article – Annual report year: 2012

Dynamic characterization of silicon nanowires using a terahertz optical asymmetric demultiplexer-based pump-probe scheme
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Effect of Asymmetric Barrier Layers in the Waveguide Region on the Temperature Characteristics of QuantumWell Lasers
Research output: Research - peer-review › Journal article – Annual report year: 2012

Enhanced Gain in Photonic Crystal Amplifiers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Experimental demonstration of a four-port photonic crystal cross-waveguide structure
Research output: Research - peer-review › Journal article – Annual report year: 2012

Extreme nonlinearities in InAs/InP nanowire gain media: the two-photon induced laser
Research output: Research - peer-review › Journal article – Annual report year: 2012

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

Improvement of temperature-stability in a quantum well laser with asymmetric barrier layers
Research output: Research - peer-review › Journal article – Annual report year: 2012

Individual optimization of InAlGaAsP-InP sections for 1.55-μm passively mode-locked lasers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

InGaAsP photonic crystal nanocavities with a Fano line shape resonant at 1.55 μm
Research output: Research - peer-review › Journal article – Annual report year: 2012

Integrated Photonics Enabled by Slow Light
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

Light modulation abilities of nanostructures
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Nano-selective area growth of InGaAs/InP using CBr4 insitu etching
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012
Nonlinear carrier dynamics in a quantum dash optical amplifier
Research output: Research - peer-review › Journal article – Annual report year: 2012

Observation of phase noise reduction in photonically synthesized sub-THz signals using a passively mode-locked laser diode and highly selective optical filtering
Research output: Research - peer-review › Journal article – Annual report year: 2012

Photonic synthesis of continuous-wave millimeter-wave signals using a passively mode-locked laser diode and selective optical filtering
Research output: Research - peer-review › Journal article – Annual report year: 2012

Physics and applications of slow and fast light in semiconductor optical waveguides
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Plasmonic modulator based on finite-thickness metal-semiconductor-metal waveguide with gain core
Research output: Research - peer-review › Paper – Annual report year: 2012

Plasmonic modulator based on gain-assisted metal-semiconductor-metal waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2012

Polarization Insensitive One-to-Six WDM Multicasting in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Polarization Insensitive Wavelength Conversion Based on Four-Wave Mixing in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Polarization insensitive wavelength conversion in a dispersion-engineered silicon waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2012

Silicon Nanowires for All-Optical Signal Processing in Optical Communication
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Silicon Photonics for Signal Processing of Tbit/s Serial Data Signals
Research output: Research - peer-review › Journal article – Annual report year: 2012

Slow-light enhancement of spontaneous emission in active photonic crystal waveguides
Research output: Research - peer-review › Conference article – Annual report year: 2012

The Chromatographic Separation of Molecules/Particles Using Optical Electric Fields
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

The continuous separation of molecules on the basis of their polarizability using optical electric fields
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Two-Copy Wavelength Conversion of an 80 Gbit/s Serial Data Signal Using Cross-Phase Modulation in a Silicon Nanowire and Detailed Pump-Probe Characterisation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Ultrafast Nonlinear Signal Processing in Silicon Waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012
Vertical-cavity surface-emitting laser vapor sensor using swelling polymer reflection modulation
Research output: Research - peer-review › Journal article – Annual report year: 2012

Wavelength Conversion with Large Signal-Idler Separation using Discrete Four-Wave Mixing in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

High Capacity Radio over Fiber Transmission Links
Research output: Research › Ph.D. thesis – Annual report year: 2011

Integrated Ultrasonic-Photonic Devices
Research output: Research › Ph.D. thesis – Annual report year: 2011

Silicon Nano-Photonic Devices
Research output: Research › Ph.D. thesis – Annual report year: 2011

Coupled Photonic Crystal Cavity Array Laser
Research output: Research › Ph.D. thesis – Annual report year: 2011

15-THz Tunable Wavelength Conversion of Picosecond Pulses in a Silicon Waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2011

320 Gb/s Phase-Transparent Wavelength Conversion in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Active III-V Semiconductor Photonic Crystal Waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

All-Optical Wavelength Conversion of a High-Speed RZ-OOK Signal in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Comparison of the noise performance of 10 GHz repetition rate quantum-dot and quantum well monolithic mode-locked semiconductor lasers
Research output: Research - peer-review › Journal article – Annual report year: 2011

Complex-coefficient microwave photonic tunable filter using slow light silicon-on-insulator-based microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Efficient and compact TE-TM polarization converter built on silicon-on-insulator platform with a simple fabrication process
Research output: Research - peer-review › Journal article – Annual report year: 2011

Enhanced Gain in Slow-Light Photonic Crystal Waveguides with Embedded Quantum Dots
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Frequency unlimited optical delay lines based on slow and fast light in SOAs
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

InAs/InGaAsP Quantum Dots Emitting at 1.5 μm for Applications in Lasers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011
Investigating the chemical and morphological evolution of GaAs capped InAs/InP quantum dots emitting at 1.5μm using aberration-corrected scanning transmission electron microscopy
Research output: Research - peer-review › Journal article – Annual report year: 2011

Metal organic vapor-phase epitaxy of InAs/InGaAsP quantum dots for laser applications at 1.5 μm
Research output: Research - peer-review › Journal article – Annual report year: 2011

Non-Degenerate Four-Wave Mixing in a Silicon Nanowire and its Application for One-to-Six WDM Multicasting
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Numerical modeling in photonic crystals integrated technology: the COPERNICUS Project
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

One-to-six WDM multicasting of DPSK signals based on dual-pump four-wave mixing in a silicon waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2011

Optical Waveform Sampling and Error-Free Demultiplexing of 1.28 Tb/s Serial Data in a Nanoengineered Silicon Waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2011

Quantitative strain mapping of InAs/InP quantum dots with 1 nm spatial resolution using dark field electron holography
Research output: Research - peer-review › Journal article – Annual report year: 2011

Silicon chip based wavelength conversion of ultra-high repetition rate data signals
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Silicon-on-insulator polarization splitting and rotating device for polarization diversity circuits
Research output: Research - peer-review › Journal article – Annual report year: 2011

Silicon waveguides and carbon nanotube-based pulsed fiber lasers for ultra-high-speed optical signal processing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Towards Polarization Diversity on the SOI Platform With Simple Fabrication Process
Research output: Research - peer-review › Journal article – Annual report year: 2011

Towards quantitative three-dimensional characterisation of buried InAs quantum dots
Research output: Research - peer-review › Conference article – Annual report year: 2011

Towards quantitative three-dimensional characterisation of InAs quantum dots
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2011

Tunable complex-valued multi-tap microwave photonic filter based on single silicon-on-insulator microring resonator
Research output: Research - peer-review › Journal article – Annual report year: 2011

Two Photon Induced Lasing in 1550 nm Quantum Dash Optical Gain Media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Ultra-Broadband Tunable Wavelength Conversion of Sub-Picosecond Pulses in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Ultra-Fast Optical Signal Processing in Nonlinear Silicon Waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011
Ultra-high-speed optical serial-to-parallel data conversion by time-domain optical Fourier transformation in a silicon nanowire
Research output: Research - peer-review › Journal article – Annual report year: 2011

Ultra-High-Speed Optical Serial-to-Parallel Data Conversion in a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Ultra-high-speed wavelength conversion in a silicon photonic chip
Research output: Research - peer-review › Journal article – Annual report year: 2011

10-GHz 1.59-μm quantum dash passively mode-locked two-section lasers
Research output: Research - peer-review › Conference article – Annual report year: 2011

1.28-Tb/s Demultiplexing of an OTDM DPSK Data Signal Using a Silicon Waveguide
Research output: Research - peer-review › Journal article – Annual report year: 2010

360° tunable microwave phase shifter based on silicon-on-insulator dual-microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

All-optical tunable photonic crystal cavity
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

BROADBAND TRAVELLING WAVE SEMICONDUCTOR OPTICAL AMPLIFIER
Research output: Research › Patent – Annual report year: 2010

Comparison of the noise performance of 10GHz QW and QD mode-locked laser diodes
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Enhanced amplified spontaneous emission in III-V semiconductor photonic crystal waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Fully-etched photonic crystal grating coupler as an interface between single-mode fibers and photonic circuits on silicon-on-insulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

High-efficiency, large-bandwidth silicon-on-insulator grating coupler based on a fully-etched photonic crystal structure
Research output: Research - peer-review › Journal article – Annual report year: 2010

Investigations of repetition rate stability of a mode-locked quantum dot semiconductor laser in an auxiliary optical fiber cavity
Research output: Research - peer-review › Journal article – Annual report year: 2010

Lambda shifted photonic crystal cavity laser
Research output: Research - peer-review › Journal article – Annual report year: 2010

Microwave photonic phase shifter based on tunable silicon-on-insulator microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Modulation response of nanoLEDs and nanolasers exploiting Purcell enhanced spontaneous emission
Research output: Research - peer-review › Journal article – Annual report year: 2010
Optical waveform sampling and error-free demultiplexing of 1.28 Tbit/s serial data in a silicon nanowire
Research output: Research › Article in proceedings – Annual report year: 2010

Optimization of VCSELs for Self-Mixing Sensing
Research output: Research › Journal article – Annual report year: 2010

Polymer-coated vertical-cavity surface-emitting laser diode vapor sensor
Research output: Research › Conference article – Annual report year: 2010

Pulse delay measurements in cascaded quantum well gain and absorber media
Research output: Research › Journal article – Annual report year: 2010

Quarter-lambda-shifted photonic crystal lasers
Research output: Research › Poster – Annual report year: 2010

Silicon-on-insulator ring-shaped photonic crystal waveguides for refractive index sensing
Research output: Research › Article in proceedings – Annual report year: 2010

Thermoplastic microcantilevers fabricated by nanoimprint lithography
Research output: Research › Journal article – Annual report year: 2010

Topology-optimized slow-light couplers for ring-shaped photonic crystal waveguide
Research output: Research › Article in proceedings – Annual report year: 2010

Tunable microwave phase shifter based on silicon-on-insulator microring resonator
Research output: Research › Journal article – Annual report year: 2010

Ultra-low-loss inverted taper coupler for silicon-on-insulator ridge waveguide
Research output: Research › Journal article – Annual report year: 2010

Ultra-low loss nano-taper coupler for Silicon-on-Insulator ridge waveguide
Research output: Research › Article in proceedings – Annual report year: 2010

Widely tunable microwave phase shifter based on silicon-on-insulator dual-microring resonator
Research output: Research › Journal article – Annual report year: 2010

2R-regeneration in a monolithically integrated four-section SOA-EA chip
Research output: Research › Journal article – Annual report year: 2009

Acetone vapor sensing using a vertical cavity surface emitting laser diode coated with polystyrene
Research output: Research › Conference abstract in proceedings – Annual report year: 2009

Low insertion loss SOI microring resonator integrated with nano-taper couplers
Research output: Research › Article in proceedings – Annual report year: 2009

Optimization of self-mixing modulation in VCSELs for sensing applications
Research output: Research › Article in proceedings – Annual report year: 2009

Self-mixing interferometry in VCSELs for nanomechanical cantilever sensing
Research output: Research › Article in proceedings – Annual report year: 2009
Self-mixing interferometry in vertical-cavity surface-emitting lasers for nanomechanical cantilever sensing
Research output: Research - peer-review › Journal article – Annual report year: 2009

Slow and fast light: Controlling the speed of light using semiconductor waveguides
Research output: Research - peer-review › Journal article – Annual report year: 2009

Slow and fast light effects in semiconductor waveguides for applications in microwave photonics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

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

Sub-threshold investigation of two coupled photonic crystal cavities
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Sub-threshold wavelength splitting in coupled photonic crystal cavity arrays
Research output: Research - peer-review › Poster – Annual report year: 2009

Time-resolved measurement of the light-current characteristic of a coated VCSEL diode in acetone vapour
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2009

Carrier dynamics and slow light in semiconductor nanostructures
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Distributed fiber Raman amplification in long reach PON bidirectional access links
Research output: Research - peer-review › Journal article – Annual report year: 2007

Experimental observation of pulse delay and speed-up in cascaded quantum well gain and absorber media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Fabrication and measurements on coupled photonic crystal cavities
Research output: Research - peer-review › Poster – Annual report year: 2008

Fabrication of Cantilevers by NIL
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Laser self-mixing interferometry in VCSELs - an ultra-compact and massproduceable deflection detection system for nanomechanical polymer cantilever sensors
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Low-noise monolithic mode-locked semiconductor lasers through low-dimensional structures
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Nanophotonics: Semiconductor Optical Devices
Research output: Research - peer-review › Poster – Annual report year: 2008

Pulse delay and advancement of ultrafast pulses in semiconductor waveguides
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2008
Pulse Delay and Speed-up of Ultra Fast Pulses in an Absorbing Quantum Well Medium
Research output: Research - peer-review + Article in proceedings – Annual report year: 2008

Slow and fast light in semiconductor waveguides for applications in microwave photonics
Research output: Research - peer-review + Article in proceedings – Annual report year: 2008

10 Gb/s-NRZ Optical 2R-regeneration in two-section SOA-EA chip
Research output: Research - peer-review + Article in proceedings – Annual report year: 2007

High-Power and Low-Noise 10-GHz All-Active Monolithic Mode-Locked Lasers with Surface Etched Bragg Grating
Research output: Research - peer-review + Article in proceedings – Annual report year: 2007

Long all-active monolithic mode-locked lasers with surface-etched bragg gratings
Research output: Research - peer-review + Journal article – Annual report year: 2007

Long reach PON links for metro and access convergence
Research output: Research - peer-review + Article in proceedings – Annual report year: 2007

Monolithic mode-locked lasers with surface etched bragg gratings
Research output: Research - peer-review + Article in proceedings – Annual report year: 2007

Nanoteknologi i masseproduktion
Research output: Research - peer-review + Book chapter – Annual report year: 2007

Slow light in a semiconductor waveguide for true-time delay applications in microwave photonics
Research output: Research - peer-review + Journal article – Annual report year: 2007

Slow light in semiconductor quantum dots
Research output: Research - peer-review + Conference abstract for conference – Annual report year: 2007

Slow light in semiconductor quantum dots
Research output: Research - peer-review + Poster – Annual report year: 2007

85 km Long Reach PON System Using a Reflective SOA-EA Modulator and Distributed Raman Fiber Amplification
Research output: Research - peer-review + Article in proceedings – Annual report year: 2006

An in-situ monitoring technique for optimizing antireflection coatings using a monolithic integrated photodetector
Research output: Research - peer-review + Journal article – Annual report year: 2006

Monolithically integrated reflective SOA-EA carrier re-modulator for broadband access nodes
Research output: Research - peer-review + Journal article – Annual report year: 2006

Monolithic Hybrid and Passive Mode-Locked 40GHz Quantum Dot Laser Diodes
Research output: Research - peer-review + Article in proceedings – Annual report year: 2006
Slow Light at High Frequencies in an Amplifying Semiconductor Waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

Steep and Adjustable Transfer Functions of Monolithic SOA-EA 2R-Regenerators
Research output: Research - peer-review › Journal article – Annual report year: 2006

Voltage-controlled slow light in an integrated semiconductor structure with net gain
Research output: Research - peer-review › Journal article – Annual report year: 2006

Design and evaluation of mode-locked semiconductor lasers for low noise and high stability
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Experimental Demonstration and Theoretical Analysis of Slow Light in a Semiconductor Waveguide at GHz Frequencies
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Light slow-down in semiconductor waveguides due to population pulsations
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2005

Measurement and Modeling of the Transfer Function of a Monolithic SOA-EA 2R-Regenerator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Measurement of record-low residual jitter in 40-GHz monolithic mode-locked lasers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Measurements of record-low residual jitter in 40-GHz monolithic mode-locked lasers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Mode-Locked Semiconductor Lasers for Optical Communication Systems
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Mode-locked semiconductor lasers with low noise and high stability
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2005

Monolithic mode-locked lasers with deeply dry etched Bragg mirror
Research output: Research › Poster – Annual report year: 2005

Nonlinear saturation dynamics and its application to all-optical regeneration and light slow-down
Research output: Research › Conference abstract for conference – Annual report year: 2005

Slow light in a semiconductor waveguide at gigahertz frequencies
Research output: Research - peer-review › Journal article – Annual report year: 2005

Wide-band residual phase-noise measurements on 40-GHz monolithic mode-locked lasers
Research output: Research - peer-review › Journal article – Annual report year: 2005

10G to 10 Gb/s all-optical demultiplexing using a single electroabsorption modulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

2R Regeneration in Concatenated Semiconductor Optical Amplifiers and Electroabsorbers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004
7x40 Gb/s base rate RZ all-optical broadcasting utilizing an electroabsorption modulator
Research output: Research - peer-review › Journal article – Annual report year: 2004

8x40 Gb/s RZ all-optical broadcasting utilizing an electroabsorption modulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

Experimental characterisation of a highly non-linear fibre based 3-stage NOLM scheme for regeneration at 160 Gb/s
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

High-performance 10 GHz all-active monolithic mode-locked semiconductor lasers
Research output: Research - peer-review › Journal article – Annual report year: 2004

Low-jitter and high-power 40 GHz all-active mode-locked lasers
Research output: Research - peer-review › Journal article – Annual report year: 2004

Low-jitter prescaled clock recovery with compact semiconductor components for ultra high-speed OTDM systems
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

Novel design of low-jitter 10 GHz all-active monolithic mode-locked lasers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

Optical label switching in telecommunication using semiconductor lasers, amplifiers and electro-absorption modulators
Research output: Research - peer-review › Article in proceedings – Annual report year: 2003

Pre-Scaled clock recovery with compact semiconductor devices for ultra high-speed OTDM systems
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

Ultralow noise monolithic mode-locked semiconductor lasers
Research output: Research › Poster – Annual report year: 2004

10 GHz All-Active Monolithic Mode-Locked Lasers
Research output: Research › Paper – Annual report year: 2003

A novel 160 Gb/s receiver configuration including a glass crystal pulsed laser, photonic crystal fiber and a simple dynamic clock recovery scheme: Scoop
Research output: Research - peer-review › Article in proceedings – Annual report year: 2003

Experimental demonstration of cascaded transmission and all-optical label swapping of orthogonal IM/FSK labelled signal
Research output: Research - peer-review › Journal article – Annual report year: 2003

Low jitter and high power all-active mode-locked lasers
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2003

Optical label encoding using electroabsorption modulators and investigation of chirp properties
Research output: Research - peer-review › Journal article – Annual report year: 2003
Optical label swapping and packet transmission based on ASK/DPSK orthogonal modulation format in IP-over-WDM networks
Research output: Research › peer-review › Article in proceedings – Annual report year: 2003

Optical signal processing using electro-absorption modulators: (invited)
Research output: Research › peer-review › Article in proceedings – Annual report year: 2003

Semiconductor Mode-Locked Lasers for Optical Communication Systems
Research output: Research › Ph.D. thesis – Annual report year: 2003

Using a phase modulator for improvement of the tolerance to secondorder dispersion in a 160 Gb/s transmission system
Research output: Research › peer-review › Article in proceedings – Annual report year: 2003

An Ultra Low Noise Self-Starting Pulse Generator
Research output: Research › peer-review › Article in proceedings – Annual report year: 2002

A self-starting hybrid optoelectronic oscillator generating ultra low jitter 10-GHz optical pulses and low phase noise electrical signals
Research output: Research › peer-review › Journal article – Annual report year: 2002

Bandwidth and chirp characterisation of wavelength conversion based on electroabsorption modulators
Research output: Research › peer-review › Article in proceedings – Annual report year: 2002

Improved electroabsorption demultiplexer by tandem-arrangement with semiconductor optical amplifier
Research output: Research › peer-review › Article in proceedings – Annual report year: 2002

Performance of external cavity mode-locked semiconductor lasers employing reverse biased saturable absorbers
Research output: Research › peer-review › Journal article – Annual report year: 2002

Short pulse absorption dynamics in a p-i-n InGaAsP MQW waveguide saturable absorber
Research output: Research › peer-review › Article in proceedings – Annual report year: 2002

Tunable mode-locked semiconductor laser with Bragg mirror external cavity
Research output: Research › peer-review › Article in proceedings – Annual report year: 2002

All-optical demultiplexing and wavelength conversion in an electroabsorption modulator
Research output: Research › peer-review › Article in proceedings – Annual report year: 2001

Characterisation of a MQW electroabsorption modulator as an all-optical demultiplexer
Research output: Research › peer-review › Article in proceedings – Annual report year: 2001

Performance of an External Cavity Mode-locked Semiconductor Laser using Reverse Biased Saturable Absorber
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2001

SCOOP - Semiconductor COmponents for Optical signal Processing
Research output: Communication › Journal article – Annual report year: 2001

The cascaded amplifier and saturable absorber (CASA) all-optical switch
Research output: Research › peer-review › Article in proceedings – Annual report year: 2001
Projects:

Foundry based silicon photonics devices
Project: PhD

Nonlinear integrated Photonics
Project: PhD

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

VCSELs til medicinsk diagnosticering
Project: PhD

Photonic Crystal Fano Lasers
Project: PhD

Nonlinear integrated photonics
Project: PhD

Tailored nanoscale optical materials and devices
Project: PhD

Photonic crystal Fano structures
Project: PhD

Developing of Superior Quantum Dot Gain Material for 1.5-1.6 um Wavelength Range
Project: PhD

Ice lithography for large-scale sub-10 nm patterning
Project: PhD

MEMS Tunable VCSEKs for Optical Coherence Tomography
Project: PhD

Developing of III-V epitaxy of highly efficient quantum dot gain material to the silicon platform
Project: PhD

Design and fabrication of mid-infrared plasmonic materials based on highly doped III-V semiconductors
Project: PhD

Advanced Characterization of One-dimensional Nanowires for Photovoltaics by Electron Microscopy
Project: PhD

MEMS Optical Sensor Systems
Project: PhD

Ultrafast nonlinear dynamics in semiconductor nanostructures
Project: PhD
Characterization of pulse propagation in photonic crystal structures and ultrafast dynamics in quantum dots
Project: PhD

Femtosecond semiconductor lasers
Project: PhD

Nanoscale semiconductor optical devices
Project: PhD

Kompakte Fibre-Baseded Ultrahurtige Pulskilder
Project: PhD

Nano-structured filters
Project: PhD

Hybrid light emitting diode enhanced with emissive nanocrystals
Project: PhD

Optical Sampling Coherent communication receivers
Project: PhD

Surface acoustic modulation of planar photonic circuits
Project: PhD

Fabrication and Characterization of Semiconductor Optical Devices
Project: PhD

Modelling of Ultrafast Semiconductor Components
Project: PhD

Optical switching in nanophotonic structures
Project: PhD

Halvlederkomponenter til optisk kommunikation
Project: PhD

Processing and Characterization of Quantum dot Devices
Project: PhD

Electrically pumped nanolaser for terabit communication
Project: PhD

Next generation optical metropolitan area networks
Project: PhD

MEMS tunable nano-structured photodetector
Project: PhD

Coupled Photonic Crystal Resonator Array Lasers
Project: PhD
Advanced modulation of VCSELs for Access and In-Home Networks
Project: PhD

Quantum dot Energy level Engineering for laser applications on InP and Si platforms
Project: Research

CMOS-Compatible Silicon-Based Micro-Ring Resonator for On-Chip Optical Frequency Comb Generation (SiMOF)
Project: Research

High-speed Laser with Ultralow Energy Consumption for Silicon Photonics
Project: Research

Nano-engineered silicon for Terabit per second optical processing
Project: Research

Nanophotonics for terabit communications: VKR centre of excellence - NATEC
Project: Research

Governing the speed of light
Project: Research

Quantum dot structures enabling light slow-down and amplification
Project: Research

Separation of Macromolecules by Photonic Crystal Defect Chromatography
Project: Research

Coherent encoding of THz signals onto optical signals by THz electro-absorption effect in quantum dots, enabling Tbit/s data rates in Radio-over-Fiber systems
Project: Research

Giga Bit Access Passive Optical Network Using Wavelength Division Multiplexing
Project: Research

Photonic devices for multi-wavelength amplification and regeneration (M-WARE)
Project: Research

Compact Otdm/Wdm Optical Receivers based on Photonic crystal Integrated
Project: Research

Component production and characterization/SCOOP (Semiconductor Components for Optical signal Processing)
Project: Research

Femtosecond semiconductor LASers Harnessed
Project: Research

Optical coherent control in photonic nanostructures
Project: Research

Optoelectronic integration technologies
Project: Research
Activities:

**Monolithic integration of immersed InP on Si**
Activity: Talks and presentations › Conference presentations

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

**Annual Conference on Commercialization of Micro and Nano Systems**
Activity: Attending an event › Participating in or organising a conference

**Talk about "Fabrication of Cantilevers by Nanoimprint Lithography" Presented at "International Workshop on Cantilever sensors"**
Activity: Talks and presentations › Conference presentations

**Talk about "Laser self-mixing interferometry in VCSELs - an ultra-compact and massproducible deflection detection system for Nanomechanical Polymer cantilever sensors" Presented at "International workshop on cantilever Sensors"**
Activity: Talks and presentations › Conference presentations