Minhao Pu - DTU Orbit (30/03/2019)

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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

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

High-Confinement, High-Q Microring Resonators on Silicon Carbide-On-Insulator (SiCOI)
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

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

High Q gallium nitride microring resonators
Research output: Research - peer-review › Conference abstract 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

Octave-spanning supercontinuum generation in a silicon-rich nitride waveguide: Erratum
Research output: Research - peer-review › Comment/debate – 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

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

Low-loss high-confinement waveguides and microring resonators in AlGaAs-on-insulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

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

Octave-spanning supercontinuum generation in a silicon-rich nitride waveguide
Research output: Research - peer-review › Journal article – 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

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

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

Highly Efficient Four-Wave Mixing in an AlGaAs-On-Insulator (AlGaAsO1) Nano-Waveguide
Research output: Research - peer-review › Article in proceedings – 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
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

All-Optical Signal Processing using Silicon Devices
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

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

All-Optical 40 Gbit/s Regenerative Wavelength Conversion Based on Cross-Phase Modulation In a Silicon Nanowire
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

A scheme to expand the delay-bandwidth product in the resonator-based delay lines by optical OFDM technique
Research output: Research - peer-review › Journal 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

Experimental Demonstration of Phase Sensitive Parametric Processes in a Nano-Engineered Silicon Waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

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

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

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

Advances in silicon nanophotonics
Research output: Research - peer-review › Conference abstract for conference – 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

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

Nonlinear Optical Functions in Crystalline and Amorphous Silicon-on-Insulator Nanowires
Research output: Research - peer-review › Article in proceedings – 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

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

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

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

Silicon Nano-Photonic Devices
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

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

Bandwidth and wavelength-tunable optical bandpass filter based on silicon microring-MZI structure
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

Detailed Time-Resolved Spectral Analysis of Ultra-Fast Four-Wave Mixing in Silicon Nanowires
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

Generation of a 640 Gbit/s NRZ OTDM signal using a silicon microring resonator
Research output: Research - peer-review › Journal article – Annual report year: 2011

Multi-Channel 40 Gbit/s NRZ-DPSK Demodulation Using a Single Silicon Microring Resonator
Research output: Research - peer-review › Journal article – Annual report year: 2010

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

Nonlinear properties of and nonlinear processing in hydrogenated amorphous silicon waveguides
Research output: Research - peer-review › Journal article – 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

Optical Waveform Sampling of a 320 Gbit/s Serial Data Signal using a Hydrogenated Amorphous Silicon Waveguide
Research output: Research - peer-review › Article in proceedings – 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 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

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

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

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

Bandwidth tunable filter based on silicon microring-MZI structure
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

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

Multi-Channel 40 Gbit/s NRZ-DPSK demodulation using a single silicon microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Multi-channel WDM RZ-to-NRZ format conversion at 50 Gbit/s based on single silicon microring resonator
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: [post deadline]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

RZ-to-NRZ format conversion at 50 Gbit/s based on a silicon microring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Silicon based ultrafast optical waveform sampling: [Best Student Paper Award]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

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

Silicon waveguide based 320 Gbit/s optical sampling
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Topology-optimized slow-light couplers for ring-shaped photonic crystal waveguide
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010
Tunable microwave phase shifter based on silicon-on-insulator microring resonator
Research output: Research - peer-review › Journal article – Annual report year: 2010

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

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

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

Compact pulse repetition rate multiplication scheme using micro ring resonator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

High-q microring resonator with narrow free spectral range for pulse repetition rate multiplication
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

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

Projects:

Nonlinear Integrated Photonics
Project: PhD

AlGaAs Photonic Chips for 2 um Optical Communications
Project: PhD

Nonlinear Silicon Carbide Waveguide
Project: PhD

Nonlinear integrated photonics
Project: PhD

Highly efficient on-chip frequency comb generation
Project: PhD

Nano-structured filters
Project: PhD

Nano-Engineered Silicon waveguides for Terabit per second Optical pRocessing (NESTOR)
Project: PhD

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

Governing the speed of light
Project: Research