Elizaveta Semenova - DTU Orbit (10/02/2018)

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Publications:

A valence force field-Monte Carlo algorithm for quantum dot growth modeling
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

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

Demonstration of a self-pulsing photonic crystal Fano laser
Publication: Research - peer-review › Journal article – Annual report year: 2017

Enhancing Optical Forces in InP-Based Waveguides
Publication: Research - peer-review › Journal article – Annual report year: 2017

Experimental demonstration of a Fano laser based on photonic crystals
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

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

High Q gallium nitride microring resonators
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Hybrid Si-on-chip Lasers with Nano Structures
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

Mid-IR optical properties of silicon doped InP
Publication: Research - peer-review › Journal article – 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
Publication: Research - peer-review › Journal article – Annual report year: 2017
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

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

Towards Ultra-High Q Microresonators In High-Index Contrast AlGaAs-On-Insulator
Publication: 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 мкм, синтезированного на подложке InP
Publication: Research - peer-review › Journal article – Annual report year: 2017

1.5 μm InAs/InGaAsP/InP quantum dot laser with improved temperature stability
Publication: Research - peer-review › Conference article – Annual report year: 2016

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 › Article in proceedings – 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

Highly doped InP as a low loss plasmonic material for mid-IR region
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
硅化铟作为中期红外区的替代等离子体材料

单源AlGaAs频率组合发射器用于661 Tbit/s数据传输

超连续光谱在AlGaAs-on-Insulator纳米波导中的产生

等离子体在高度掺杂的InP上的特性

慢光光子晶体激光器的阈值特性

超高速硅集成的激光器

垂直腔式激光器与新型格栅镜

高效率非线性平台：AlGaAs-on-Insulator

AlGaAs-on-Insulator纳米线：750 nm FWM带宽，-9 dB CW转换效率和超快速运行

AlGaAs-on-Insulator非线性光子学

直径530 nm，850 nm范围的砷化镓激光器：实验研究

高效率四波混频在AlGaAs-on-Insulator (AlGaAsOI)纳米波导

高度敏感的光子晶体激光器噪声测量

垂直腔式激光器与水平输出到硅波导

垂直腔式激光器与侧向输出到硅波导

III-V/SOI垂直腔式激光器结构

III-V/SOI垂直腔式激光器与水平输出到Si波导
1060-nm Tunable Monolithic High Index Contrast Subwavelength Grating VCSEL
Publication: Research - peer-review › Journal article – Annual report year: 2013

Crystallographic dependence of the lateral undercut wet etch rate of Al$_{0.5}$In$_{0.5}$P in diluted HCl for III-V sacrificial release
Publication: Research - peer-review › Journal article – Annual report year: 2013

Hybrid III-V-on-Si Vertical Cavity laser for Optical Interconnects
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

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

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

41 GHz and 10.6 GHz low threshold and low noise InAs/InP quantum dash two-section mode-locked lasers in L band
Publication: Research - peer-review › Journal article – Annual report year: 2012

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

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

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

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

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

Nano-selective area growth of InGaAs/InP using CBr$_4$ in situ etching
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

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

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

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

InAs/InGaAsP Quantum Dots Emitting at 1.5 μm for Applications in Lasers
Publication: 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
Metal organic vapor-phase epitaxy of InAs/InGaAsP quantum dots for laser applications at 1.5 μm
Quantitative strain mapping of InAs/InP quantum dots with 1 nm spatial resolution using dark field electron holography
Towards quantitative three-dimensional characterisation of buried InAs quantum dots
Towards quantitative three-dimensional characterisation of InAs quantum dots
10-GHz 1.59-μm quantum dash passively mode-locked two-section lasers
Lambda shifted photonic crystal cavity laser
Quarter-lambda-shifted photonic crystal lasers
Projects:
III-V Nanowire Selective Area MOVPE Growth for High Efficiency Solar Cell
Tailored nanoscale optical materials and devices
Developing of Superior Quantum Dot Gain Material for 1.5-1.6 um Wavelength Range
Developing of III-V epitaxy of highly efficient quantum dot gain material to the silicon platform
Block Copolymer Precursors for Chemical Nanopatterning of Graphene
Design and fabrication of mid-infrared plasmonic materials based on highly doped III-V semiconductors
QUantum dot Energy level Engineering for laser applications on InP and Si platforms
Vertical-cavity laser with a novel grating mirror
QDLaser : Development of novel quantum dot based materials for compact laser devices for potential
Nanoscale semiconductor optical devices
Project: PhD

Femtosecond semiconductor lasers
Project: PhD

Femtosecond semiconductor LASers Harnessed
Project

Governing the speed of light
Project

Activities:

Presentation title: "A valence force field-Monte Carlo algorithm for quantum dot growth modeling".
Activity: Talks and presentations › Conference presentations