Ottaviano, Luisa

Research outputs:

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

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

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

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

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

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

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

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

Single-source chip-based frequency comb enabling extreme parallel data transmission
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review
Ultra-Efficient and Broadband Nonlinear AlGaAs-on-Insulator Chip for Low-Power Optical Signal Processing
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

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

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

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

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

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

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

Parity control of Fano resonances and its application for signal regeneration and pulse carving
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

Photonic crystal Fano lasers and Fano switches
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2017 › Research › peer-review
Nonlinear Optics in AlGaAs on Insulator
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

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

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

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

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

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

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

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

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

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

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

Slow-light effects in photonic crystal membrane lasers
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

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

Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

Tailored design of WDM filters in BCB embedded PhC membranes
Malaguti, S., Bellanca, G., Ottaviano, L., Yvind, K., Combré, S., Rossi, A. D. & Trillo, S., 2013, In : Optical and Quantum Electronics. 45, 4, p. 329-342
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

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

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

Projects:

Fabrication and characterization of novel nanophotonic structures with electrical control
Marchevsky, A., Yvind, K., Mørk, J. & Ottaviano, L.
Samfinansierede - Virksomhed
01/10/2016 → 30/09/2019
Project: PhD

Ultrahigh-speed Si-integrated on-chip laser
Tandukar, S., Chung, I., Ottaviano, L., Frandsen, L. H., Almuneau, G. & Hammar, M.
Samfinansieret - Andet
Ultrahigh-speed hybrid III-C-on-Si lasers
Topic, V., Chung, I., Ottaviano, L., Yvind, K., Birkedal, D. & Bakir, B. B.
Samfinansieret - Andet
15/03/2015 → 12/06/2019
Project: PhD

Photonic crystal Fano structures
Bekele, D. A., Mørk, J., Ottaviano, L., Yvind, K., Frandsen, L. H., De Rossi, A. & O’Faolain, L.
Samfinansieret - Andet
15/05/2015 → 30/09/2018
Project: PhD

QUEENs: QUantum dot Energy level Engineering for laser applicatioNs on InP and Si platforms
01/06/2013 → 31/08/2017
Project: Research

COPERNICUS: Compact Otdm/Wdm Opitical rEceiveRs based on photoNic crystal Integrated
Forsk. EU - Andre EU-midler
01/07/2012 → 01/07/2015
Project: Research

Activities:

Tunable MEMS VCSEL on silicon substrate
Hitesh Kumar Sahoo (Speaker), Thor Ansbæk (Speaker), Luisa Ottaviano (Speaker), Elizaveta Semenova (Speaker), Fedor I. Zubov (Guest lecturer), Ole Hansen (Speaker), Kresten Yvind (Speaker)
12 Apr 2018 → 13 Apr 2018
Activity: Talks and presentations › Conference presentations

Ultrahigh-speed hybrid VCSEL for short-distance optical interconnects
Vladimir Topic (Speaker), Gyeong Cheol Park (Other), Sushil Tandukar (Other), Luisa Ottaviano (Other), Il-Sug Chung (Other)
28 Aug 2017 → 1 Sep 2017
Activity: Talks and presentations › Conference presentations