All-Si photodetector for telecommunication wavelength based on subwavelength grating structure and critical coupling
Research output: Research - peer-review › Journal article – Annual report year: 2017

Compact dielectric cavities based on frozen bound states in the continuum
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Dynamical dispersion engineering in coupled vertical cavities employing a high-contrast grating
Research output: Research - peer-review › Journal article – Annual report year: 2017

Efficient quality-factor estimation of a vertical cavity employing a high-contrast grating
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Hybrid Si-on-chip Lasers with Nano Structures
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Quasi bound states in the continuum with few unit cells of photonic crystal slab
Research output: Research - peer-review › Journal article – Annual report year: 2017

Reciprocal-Space Engineering of Quasi-Bound States in the Continuum in Photonic Crystal Slabs for High-Q Microcavities
Research output: Research › Article in proceedings – Annual report year: 2018

Vertical cavity laser
Research output: Research › Patent – Annual report year: 2016

Hybrid grating reflectors: Origin of ultrabroad stopband
Research output: Research - peer-review › Journal article – Annual report year: 2016

Hybrid III-V on Si grating as a broadband reflector and a high-Q resonator
Research output: Research - peer-review › Article in proceedings – 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

Hybrid vertical cavity laser for silicon photonics light source integration (invited paper)
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Numerical Investigation of Vertical Cavity Lasers With High-Contrast Gratings Using the Fourier Modal Method
Research output: Research - peer-review › Journal article – Annual report year: 2016

Theoretical Investigation of Subwavelength Gratings and Vertical Cavity Lasers Employing Grating Structures
Ultrabroadband Hybrid III-V/SOI Grating Reflector for On-chip Lasers
Research output: Research › peer-review › Article in proceedings – Annual report year: 2016

Ultrahigh-speed Si-integrated on-chip laser with tailored dynamic characteristics
Research output: Research › peer-review › Journal article – Annual report year: 2016

Vertical-cavity laser with a novel grating mirror

Vcsel structure
Research output: Research › Patent – Annual report year: 2015

A New Compact Broadband Reflector: The Hybrid Grating
Research output: Research › peer-review › Article in proceedings – Annual report year: 2016

Effect of in-plane Mirror Dispersion on Vertical Cavities Based on High-Contrast Grating Mirrors
Research output: Research › peer-review › Article in proceedings – Annual report year: 2015

Hybrid III-V-on-Si Laser with Ultra-low Energy Consumption
Research output: Research › peer-review › Poster – Annual report year: 2015

Hybrid III-V/SOI single-mode vertical-cavity laser with in-plane emission into a silicon waveguide
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 structure for 120 Gbit/s speed
Research output: Research › peer-review › Article in proceedings – 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

MEMS Tunable nanostructured photodetector
Research output: Research › Ph.D. thesis – Annual report year: 2015

Polarization-Independent Wideband High-Index-Contrast Grating Mirror
Research output: Research › peer-review › Journal article – Annual report year: 2015

Study on differences between high contrast grating reflectors for TM and TE polarizations and their impact on VCSEL designs
Research output: Research › peer-review › Journal article – Annual report year: 2015

Towards Electrically Pumped Nanolasers for Terabit Communication.
Research output: Research › Ph.D. thesis – Annual report year: 2015

Ultracompact resonator with high quality-factor based on a hybrid grating structure
Research output: Research › peer-review › Journal article – Annual report year: 2015

Vertical-Cavity In-plane Heterostructures: Physics and Applications
Research output: Research › peer-review › Journal article – Annual report year: 2015
130-nm tunable grating-mirror VCSEL
Research output: Research - peer-review › Conference article – Annual report year: 2014

Comparison of Different Numerical Methods for Quality Factor Calculation of Nano and Micro Photonic Cavities
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

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

Hybrid grating reflector with high reflectivity and broad bandwidth
Research output: Research - peer-review › Journal article – Annual report year: 2014

Mode selection laser
Research output: Research › Patent – 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

Effect of External Optical Feedback for Nano-laser Structures
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

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

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

Laser device
Research output: Research › Patent – Annual report year: 2014

Polarization-independent high-index contrast grating and its fabrication tolerances
Research output: Research - peer-review › Journal article – Annual report year: 2013

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

Speed enhancement in VCSELs employing grating mirrors
Research output: Research - peer-review › Conference article – 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

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

VCSELs with a high-index-contrast grating for mode-division multiplexing
Research output: Research › Sound/Visual production (digital) – Annual report year: 2013
Fabrication activity for nanophotonics
Research output: Research - peer-review › Paper – Annual report year: 2012

Low-energy-consumption hybrid lasers for silicon photonics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Reflectivity-modulated grating-mirror
Research output: Research › Patent – Annual report year: 2012

VCSELs and silicon light sources exploiting SOI grating mirrors
Research output: Research - peer-review › Conference article – Annual report year: 2012

Vertical-cavity surface-emitting lasers for medical diagnosis
Research output: Research › Ph.D. thesis – 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

Wave-front-engineered grating mirrors for VCSELs
Research output: Research - peer-review › Conference article – Annual report year: 2012

High-index-contrast grating reflector with beam steering ability for the transmitted beam
Research output: Research - peer-review › Journal article – Annual report year: 2011

Hybrid Si/III-V vertical-cavity laser for silicon photonics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Hybrid vertical-cavity laser
Research output: Research › Patent – Annual report year: 2011

Modelling of photonic-crystal VCSELs with semi-vectorial and vectorial models
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

80-nm-tunable high-index-contrast subwavelength grating long-wavelength VCSEL: Proposal and numerical simulations
Research output: Research - peer-review › Conference article – Annual report year: 2010

Broadband MEMS-tunable high-index-contrast subwavelength grating long-wavelength VCSEL
Research output: Research - peer-review › Journal article – Annual report year: 2010

High-index-contrast subwavelength grating VCSEL
Research output: Research - peer-review › Conference article – Annual report year: 2010

Hybrid vertical cavity laser
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Hybrid Vertical-Cavity Laser
Research output: Research › Patent – Annual report year: 2010

Monomode surface emitting laser: (Third year activity report)
Research output: Research - peer-review › Report – Annual report year: 2010
Numerical methods for modeling photonic-crystal VCSELs
Research output: Research - peer-review › Journal article – Annual report year: 2010

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

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

Silicon-photonics light source realized by III-VSI grating-mirror laser
Research output: Research - peer-review › Journal article – Annual report year: 2010

Transverse-mode-selectable microlens vertical-cavity surface-emitting laser
Research output: Research - peer-review › Journal article – Annual report year: 2010

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

Advanced vectorial simulation of VCSELs with nano structures invited paper
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Selectively-pumped grating-mirror long-wavelength VCSEL
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

The optical chip: high speed and diminutive size
Research output: Communication › Book chapter – 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

Vectorial analysis of dielectric photonic crystal VCSEL
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Broadband subwavelength grating mirror and its application to vertical-cavity surface-emitting laser
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

Subwavelength grating-mirror VCSEL with a thin oxide gap
Research output: Research - peer-review › Journal article – Annual report year: 2008

Finite-difference time-domain analysis of micro-lens integrated vertical-cavity surface-emitting lasers
Research output: Research - peer-review › Poster – Annual report year: 2007

Opto-VLSI-based reconfigurable free-space optical interconnects architecture
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

A method to tune the cavity-mode wavelength of resonant cavity-enhanced photodetectors for bidirectional optical interconnects
High Speed (2.5Gbps) reconfigurable inter-chip optical interconnects using opto-VLSI processors

Effect of outermost layers on resonant cavity enhanced devices

Projects:

VCSEL’S til medicinsk diagnosticering
Project: PhD

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

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

Electrically pumped nanolaser for terabit communication
Project: PhD

Hybrid III-V-on-Si laser with ultralow energy consumption
Project: PhD

Vertical-cavity laser with a novel grating mirror
Project: PhD

MEMS tunable nano-structured photodetector
Project: PhD

End-to-end energy efficient communication networks
Project: PhD

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

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

Hybrid vertical cavity laser
Project: Research

Monomode surface emitting lasers
Project: Research

Thermo-electro-optical analysis of subwavelength grating-mirror VCSELs
Project: Research

Self-configurable optical links
Project: Research
Activities:

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