Research outputs:

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

**All-Optical Switching Improvement Using Photonic-Crystal Fano Structures**
Research output: Research - peer-review › Journal article – 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

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

**Ultrahigh-speed Si-integrated on-chip laser with tailored dynamic characteristics**
Park, G. C., Xue, W., Piels, M., Zibar, D., Mark, J., Semenova, E. & Chung, I-S. 2016 In : Scientific Reports. 6, 38801
Research output: Research - peer-review › Journal article – Annual report year: 2016

**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

**Highly Sensitive Photonic Crystal Cavity Laser Noise Measurements using Bayesian Filtering**
Research output: Research - peer-review › Article in proceedings – 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**
Laser Rate Equation Based Filtering for Carrier Recovery in Characterization and Communication
Research output: Research - peer-review › Journal article – Annual report year: 2015

Nonreciprocal transmission in a nonlinear photonic-crystal Fano structure with broken symmetry
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 › 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

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

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

Nonplanar nanoselective area growth of InGaAs/InP
Research output: Research - peer-review › Conference article – Annual report year: 2014

Demultiplexing of OTDM-DPSK signals based on a single semiconductor optical amplifier and optical filtering
Research output: Research - peer-review › Journal article – Annual report year: 2011

Simple and efficient methods for the accurate evaluation of patterning effects in ultrafast photonic switches
Xu, J., Ding, Y., Peucheret, C., Xue, W., Seoane, J., Zsigri, B., Jeppesen, P. & Mørk, J. 2011 In : Optics Express. 19, 1, p. 155-161
Research output: Research - peer-review › Journal article – Annual report year: 2011

SOA-based OTDM-DPSK Demultiplexing Assisted by Offset-Filtering
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

The Influence of Optical Filtering on the Noise Performance of Microwave Photonic Phase Shifters Based on SOAs
Lloret, J., Ramos, F., Xue, W., Sancho, J., Gasulla, I., Sales, S., Mørk, J. & Capmany, J. 2011 In : Journal of Lightwave Technology. 29, 12, p. 1746-1752
Compact optically-fed microwave true-time delay using liquid crystal photonic bandgap fiber device
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Controlling the speed of light in semiconductor waveguides: Physics and applications: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Demonstration of tunable microwave photonic notch filters using slow and fast light effects in semiconductor optical amplifiers
Xue, W., Sales, S., Mørk, J. & Capmany, J. 2009 *Conference proceedings, OFC*. IEEE
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Experimental demonstration of 360 tunable RF phase shift using slow and fast light effects
Xue, W., Sales, S., Capmany, J. & Mørk, J. 2009 *Proceedings of Slow and Fast Light, Topical meeting and Tabletop Exhibit*. Optical Society of America, p. SMB6
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Exploring carrier dynamics in semiconductors for slow light: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Microwave phase shifter with controllable power response based on slow-and-fast-light effects in semiconductor optical amplifiers
Research output: Research - peer-review › Journal article – Annual report year: 2009

Microwave photonics processing controlling the speed of light in semiconductor waveguides: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Optically fed microwave true-time delay based on a compact liquid-crystal photonic bandgap-fiber device
Research output: Research - peer-review › Journal article – Annual report year: 2009

Optical signal processing using slow and fast light technologies: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Photonic generation of ultrawideband monocycle and doublet pulses by using a semiconductor-optical-amplifier-based wavelength converter
Research output: Research - peer-review › Journal article – Annual report year: 2009

Photonic generation of UWB monocycle using a cascaded semiconductor optical amplifier and electroabsorption modulator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009
Semi-analytical model of filtering effects in microwave phase shifters based on semiconductor optical amplifiers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

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

Theory of Optical-Filtering Enhanced Slow and Fast Light Effects in Semiconductor Optical Waveguides
Research output: Research - peer-review › Journal article – Annual report year: 2008

Projects:

Slow and Fast Light for Applications in Microwave Photonics
Xue, W., Mørk, J., Sales, S., Öhman, F., Oxentæwe, L. K., Morthier, G. J. I. & Nielsen, M. L.
Forskningsrådsfinansiering
01/07/2007 → 29/09/2010
Project: PhD

PhCLaser: Dynamics and noise of Photonic-crystal based nano and micro lasers
Xue, W.
01/01/2013 → …
Project: Research

GOSPEL: Governing the speed of light
Mørk, J., Gregersen, N., Yvind, K., Kristensen, P. T., Hansen, P. L., Semenova, E., Xue, W., Pu, M. & Larsson, D.
Forsk. EU - Rammeprogram
01/09/2008 → 31/12/2011
Project: Research

Activities:

International Nano-Optoelectronics Workshop (iNOW)
Xue, W. (Participant)
10 Aug 2009 → 14 Aug 2009
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.