Ole Bang - DTU Orbit (02/11/2018)
Bang, Ole
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Department of Photonics Engineering - Professor, Group Leader
Fiber Sensors and Supercontinuum Generation

Research outputs:

Multi-stage generation of extreme ultraviolet dispersive waves by tapering gas-filled hollow-core anti-resonant fibers
Research output: Research - peer-review › Journal article – Annual report year: 2018

Role of the Raman gain in the noise dynamics of all-normal dispersion silica fiber supercontinuum generation
Gonzalo, I. B. & Bang, O. 1 Sep 2018 In : Journal of the Optical Society of America B: Optical Physics. 35, 9, p. 2102-2110
Research output: Research - peer-review › Journal article – Annual report year: 2018

Dynamic mechanical characterization with respect to temperature, humidity, frequency and strain in mPOFs made of different materials
Research output: Research - peer-review › Journal article – Annual report year: 2018

Fast Inscription of Long Period Gratings in Microstructured Polymer Optical Fibers
Research output: Research - peer-review › Journal article – Annual report year: 2018

Fast and stable gratings inscription in POFs made of different materials with pulsed 248 nm KrF laser
Research output: Research - peer-review › Journal article – Annual report year: 2018

All-depth dispersion cancellation in spectral domain optical coherence tomography using numerical intensity correlations
Jensen, M., Israelens, N. M., Maria, M., Feuchter, T., Podoleanu, A. & Bang, O. 2018 In : Scientific Reports. 8, 1, 10 p., 9170
Research output: Research - peer-review › Journal article – Annual report year: 2018

All-Polymer Fiber Bragg Grating based pH Sensor.
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Bragg Grating Inscription With Low Pulse Energy in Doped Microstructured Polymer Optical Fibers
Min, R., Ortega, B., Nielsen, K., Bang, O. & Marques, C. 2018 In : Ieee Sensors Letters. 2, 2, 4 p., 5000604
Research output: Research - peer-review › Journal article – Annual report year: 2018

Direct nanoimprinting of moth-eye structures in chalcogenide glass for broadband antireflection in the mid-infrared
Research output: Research - peer-review › Journal article – Annual report year: 2018

Effects of Solvent Etching on PMMA Microstructured Optical Fiber Bragg Grating
Polarization noise places severe constraints on coherence of all-normal dispersion femtosecond supercontinuum generation
Bravo Gonzalo, I., Engelholm, R. D., Sørensen, M. P. & Bang, O. 2018 In : Scientific Reports. 8, 13 p., 6579
Research output: Research - peer-review › Journal article – Annual report year: 2018

Polymer optical fiber Bragg grating inscription with a single Nd:YAG laser pulse
Research output: Research - peer-review › Journal article – Annual report year: 2018

Resolution dependence on phase extraction by the Hilbert transform in phase calibrated and dispersion compensated ultrahigh resolution spectrometer-based OCT
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Supercontinuum applications in high resolution non invasive optical imaging
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

The Application of Hansen Solubility Parameters for Local Etching of TOPAS Polymer Optical Fibers.
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Thermal profile detection through high-sensitivity fiber optic chirped Bragg grating on microstructured PMMA fiber
Research output: Research - peer-review › Journal article – Annual report year: 2018

The value of ultrahigh resolution OCT in dermatology - delineating the dermo-epidermal junction, capillaries in the dermal papillae and vellus hairs
Israelsen, N. M., Maria, M., Mogensen, M., Bojesen, S., Jensen, M., Haedersdal, M., Podoleanu, A. & Bang, O. 2018 Biomedical Optics Express. 9, 5, p. 2225-2250
Research output: Research - peer-review › Journal article – Annual report year: 2018

Towards a table-top synchrotron based on supercontinuum generation
Research output: Research - peer-review › Journal article – Annual report year: 2018

Two optical coherence tomography systems detect topical gold nanoshells in hair follicles, sweat ducts and measure epidermis
Mogensen, M., Bojesen, S., Israelsen, N. M., Maria, M., Jensen, M., Podoleanu, A., Bang, O. & Haedersdal, M. 2018 (Accepted/In press) In : Journal of Biophotonics. 23 p., e201700348
Research output: Research - peer-review › Journal article – Annual report year: 2018

Ultra-low noise supercontinuum source for ultra-high resolution optical coherence tomography at 1300 nm
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018
Optical measuring system with an interrogator and a polymer-based single-mode fibre optic sensor system
Research output: Research › Patent – Annual report year: 2017

A comparative study of noise in supercontinuum light sources for ultra-high resolution optical coherence tomography
Research output: Research › Article in proceedings – Annual report year: 2017

Annealing and etching effects on strain and stress sensitivity of polymer optical fibre Bragg grating sensors
Research output: Research › Article in proceedings – Annual report year: 2017

Bandpass transmission filters based on phase shifted fiber Bragg gratings in microstructured polymer optical fibers
Research output: Research › Article in proceedings – Annual report year: 2017

BDK-doped core microstructured PMMA optical fiber for effective Bragg grating photo-inscription
Research output: Research › Article in proceedings – Annual report year: 2017

Compact multichannel high-resolution micro-electro-mechanical systems-based interrogator for Fiber Bragg grating sensing
Ganziy, D., Rose, B. & Bang, O. 2017 In : Applied Optics. 56, 12, p. 3622-3627
Research output: Research › Journal article – Annual report year: 2017

Curvature and position of nested tubes in hollow-core anti-resonant fibers
Research output: Research › Conference abstract in proceedings – Annual report year: 2017

Dispersion free full range spectral intensity optical coherence tomography
Research output: Research › Conference abstract in proceedings – Annual report year: 2017

Effects of pre-strain on the intrinsic pressure sensitivity of polymer optical fiber Bragg-gratings
Research output: Research › Article in proceedings – Annual report year: 2017

Efficient Mid-Infrared Supercontinuum Generation in Tapered Large Mode Area Chalcogenide Photonic Crystal Fibers
Research output: Research › Article in proceedings – Annual report year: 2017
Fast bragg grating inscription in PMMA polymer optical fibres: Impact of thermal pre-treatment of preforms
Research output: Research - peer-review › Journal article – Annual report year: 2017

Femtosecond laser micromachining of compound parabolic concentrator fiber tipped glucose sensors
Research output: Research - peer-review › Journal article – Annual report year: 2017

Gabor fusion master slave optical coherence tomography
Cernat, R., Bradu, A., Israelsen, N. M., Bang, O., Rivet, S., Keane, P. A., Heath, D-G., Rajendram, R. & Podoleanu, A. 2017 In : Biomedical Optics Express. 8, 2, p. 813-827
Research output: Research - peer-review › Journal article – Annual report year: 2017

Generation of multiple VUV dispersive waves using a tapered gas-filled hollow-core anti-resonant fiber
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

High power, ultra-broadband supercontinuum source based on highly GeO2 doped silica fiber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

High-quality phase-shifted Bragg grating sensor inscribed with only one laser pulse in a polymer optical fiber
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Hybrid photonic-crystal fiber
Research output: Research - peer-review › Journal article – Annual report year: 2017

Increased mid-infrared supercontinuum bandwidth and average power by tapering large-mode-area chalcogenide photonic crystal fibers
Research output: Research - peer-review › Journal article – Annual report year: 2017

Influence of dispersion of nonlinearity on coherent supercontinuum generation bandwidth in photonic crystal fibers pumped at 2 μm
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Long-term strain response of polymer optical fiber FBG sensors
Research output: Research - peer-review › Journal article – Annual report year: 2017

Low Loss Polycarbonate Polymer Optical Fiber for High Temperature FBG Humidity Sensing
Research output: Research - peer-review › Journal article – Annual report year: 2017
Master/slave: A better tool for Gabor filtering optical coherence tomography imaging instruments
Research output: Research - peer-review › Journal article – Annual report year: 2017

Multiple soliton compression stages in mid-IR gas-filled hollow-core fibers
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Noise study of all-normal dispersion supercontinuum sources for potential application in optical coherence tomography
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Non-destructive testing of layer-to-layer fusion of a 3D print using ultrahigh resolution optical coherence tomography
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Phase estimation for global defocus correction in optical coherence tomography
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Phase-shifted Bragg grating inscription in PMMA microstructured POF using 248 nm UV radiation
Research output: Research - peer-review › Journal article – Annual report year: 2017

Polarization extinction ratio and polarization dependent intensity noise in long-pulse supercontinuum generation (Conference Presentation)
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Polymer optical fiber Bragg grating inscription with a single UV laser pulse
Pospori, A., Marques, A. T., Bang, O., Webb, D. J. & André, G. 2017 In : Optics Express. 25, 8, p. 9028-9038
Research output: Research - peer-review › Journal article – Annual report year: 2017

Q-switch-pumped supercontinuum for ultra-high resolution optical coherence tomography
Research output: Research - peer-review › Journal article – Annual report year: 2017

Simultaneous measurement of temperature and humidity with microstructured polymer optical fiber Bragg gratings
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017
Soliton-plasma nonlinear dynamics in mid-IR gas-filled hollow-core fibers
Research output: Research - peer-review › Journal article – Annual report year: 2017

Solution-Mediated Annealing of Polymer Optical Fiber Bragg Gratings at Room Temperature
Research output: Research - peer-review › Journal article – Annual report year: 2017

Thermal and chemical treatment of polymer optical fiber Bragg grating sensors for enhanced mechanical sensitivity
Research output: Research - peer-review › Journal article – Annual report year: 2017

Zeonex microstructured polymer optical fiber: fabrication friendly fibers for high temperature and humidity insensitive Bragg grating sensing
Research output: Research - peer-review › Journal article – Annual report year: 2017

Zeonex-PMMA microstructured polymer optical FBGs for simultaneous humidity and temperature sensing
Research output: Research - peer-review › Journal article – Annual report year: 2017

3D-printed PMMA Preform for Hollow-core POF Drawing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Anisotropic anti-resonant elements gives broadband single-mode low-loss hollow-core fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Annealing effects on strain and stress sensitivity of polymer optical fibre based sensors
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016
**Antiresonant hollow core fiber with seven nested capillaries**

Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

**Aviation Fuel Gauging Sensor Utilizing Multiple Diaphragm Sensors Incorporating Polymer Optical Fiber Bragg Gratings**

Research output: Research - peer-review › Journal article – Annual report year: 2016

**Bragg grating photo-inscription in doped microstructured polymer optical fiber by 400 nm femtosecond laser pulses.**

Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

**Coherent supercontinuum bandwidth limitations under femtosecond pumping at 2 µm in all-solid soft glass photonic crystal fibers**

Research output: Research - peer-review › Journal article – Annual report year: 2016

**Compact multichannel demultiplexer for WDM-POF networks based on spatially overlapped FBGs**

Research output: Research - peer-review › Journal article – Annual report year: 2016

**Creation of a microstructured polymer optical fiber with UV Bragg grating inscription for the detection of extensions at temperatures up to 125°C**

Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

**Embedding silica and polymer fibre Bragg gratings (FBG) in plastic 3D-printed sensing patches**

Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

**Fabrication and characterization of polycarbonate microstructured polymer optical fibers for high-temperature-resistant fiber Bragg grating strain sensors**

Research output: Research - peer-review › Journal article – Annual report year: 2016

**Fuel level sensor based on polymer optical fiber Bragg gratings for aircraft applications**

Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

**High energy supercontinuum sources using tapered photonic crystal fibers for multispectral photoacoustic microscopy**
Bondu, M., Brooks, C., Jakobsen, C., Oakes, K., Moselund, P. M., Leick, L., Bang, O. & Podoleanu, A. 2016 In : *Journal of Biomedical Optics*. 21, 6, 6 p., 61005

Research output: Research - peer-review › Journal article – Annual report year: 2016
Multimode supercontinuum generation in chalcogenide glass fibres
Kubat, I. & Bang, O. 2016 In: Optics Express. 24, 3, p. 2513-2526
Research output: Research - peer-review › Journal article – Annual report year: 2016

Performance of low-cost few-mode fiber Bragg grating sensor systems: polarization sensitivity and linearity of temperature and strain response
Research output: Research - peer-review › Journal article – Annual report year: 2016

Polymer Optical Fiber Compound Parabolic Concentrator fiber tip based glucose sensor: In-Vitro Testing
Research output: Research - peer-review › Journal article – Annual report year: 2016

Polymer Optical Fibre Bragg Grating Humidity Sensor at 100°C
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Record power, ultra-broadband supercontinuum source based on highly GeO2 doped silica fiber
Jain, D., Sidharthan, R., Moselund, P. M., Yoo, S., Ho, D. & Bang, O. 2016 In: Optics Express. 24, 23, p. 26667-26677
Research output: Research - peer-review › Journal article – Annual report year: 2016

Refractive index and dispersion control of ultrafast laser inscribed waveguides in gallium lanthanum sulphide for near and mid-infrared applications
Research output: Research - peer-review › Journal article – Annual report year: 2016

Sensitivity enhancement using annealed polymer optical fibre based sensors for pressure sensing applications
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Single mode step-index polymer optical fiber for humidity insensitive high temperature fiber Bragg grating sensors
Research output: Research - peer-review › Journal article – Annual report year: 2016

Spectral-temporal composition matters when cascading supercontinua into the mid-infrared
Petersen, C. R., Moselund, P. M., Petersen, C., Møller, U. V. & Bang, O. 2016 In: Optics Express. 24, 2, p. 749-758
Research output: Research - peer-review › Journal article – Annual report year: 2016

Study of doping non-PMMA polymer fibre canes with UV photosensitive compounds
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Temperature insensitive hysteresis free highly sensitive polymer optical fiber Bragg grating humidity sensor
Research output: Research - peer-review › Journal article – Annual report year: 2016

Towards supercontinuum-driven hyperspectral microscopy in the mid-infrared
**Towards the mid-infrared optical biopsy**

**Zeonex Microstructured Polymer Optical Fibre Bragg Grating Sensor**

**An efficient and fast detection algorithm for multimode FBG sensing**

**Angle dependent Fiber Bragg grating inscription in microstructured polymer optical fibers**

**Antiresonant guiding in a poly(methyl-methacrylate) hollow-core optical fiber**

**Coherent multi-octave spanning supercontinuum in tapered sulphide fibres.**

**Compound parabolic concentrator optical fiber tip for FRET-based fluorescent sensors**

**Dielectric tube waveguides with absorptive cladding for broadband, low-dispersion and low loss THz guiding**

**Dynamic gate algorithm for multimode fiber Bragg grating sensor systems**

**Fabry-Perot micro-structured polymer optical fibre sensors for opto-acoustic endoscopy**

**Fast Fiber Bragg Grating Inscription in the Undoped Microstructured Polymer Optical Fibers**
Fiber-based portable optical frequency standard for telecommunication
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Fiber-optic liquid level monitoring system using microstructured polymer fiber Bragg grating array sensors: performance analysis
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

High performance liquid-level sensor based on mPOFBG for aircraft applications
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

High-power picosecond pulse delivery through hollow core photonic band gap fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Humidity insensitive step-index polymer optical fibre Bragg grating sensors
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Improved Low-loss Hollow Core Anti-Resonant Silica Mid-IR Fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Long term strain behavior of PMMA based polymer optical fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Low Loss Double-clad Hollow Core Anti-Resonant Fibers in the Mid-IR
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Low-loss hollow-core silica fibers with adjacent nested anti-resonant tubes
Habib, S., Bang, O. & Bache, M. 2015 In : Optics Express. 23, 13, p. 17394-17406
Research output: Research - peer-review › Journal article – Annual report year: 2015

Mid infrared supercontinuum generation from chalcogenide glass waveguides and fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Mid-infrared supercontinuum generation in the fingerprint region
Mid-infrared supercontinuum generation spanning more than 11 μm in a chalcogenide step-index fiber

Multi-milliwatt mid-infrared supercontinuum generation in a suspended core chalcogenide fiber

Nonlinear Label-Free Biosensing With High Sensitivity Using As2S3 Chalcogenide Tapered Fiber

Optical frequency stabilization using gas-filled hollow-core photonic crystal fibers

Optical frequency standard using acetylene-filled hollow-core photonic crystal fibers
Triches, M., Michielletto, M., Hald, J., Lyngsøe, J. K., Lægsgaard, J. & Bang, O. 2015 In : Optics Express. 23, 9, p. 11227-11241

Pmma fiber viscoelasticity in extremely low frequency regime

Polarization effects in polymer FBGs: study and use for transverse force sensing

Polymer optical fiber compound parabolic concentrator tip for enhanced coupling efficiency for fluorescence based glucose sensors
Hassan, H. U., Nielsen, K., Aasmul, S. & Bang, O. 2015 In : Biomedical Optics Express. 6, 12, 13 p.

Polymer Optical Fibre Sensors for Endoscopic Opto-Acoustic Imaging

Production and Characterization of Polycarbonate Microstructured Polymer Optical Fiber Bragg Grating Sensor

Robust and accurate detection algorithm for multimode polymer optical FBG sensor system
Simple Room Temperature Method for Polymer Optical Fibre Cleaving
5 p.
Research output: Research - peer-review › Journal article – Annual report year: 2015

Tapering of Polymer Optical Fibers for Compound Parabolic Concentrator Fiber Tip Fabrication
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

The effect of humidity on annealing of polymer optical fibre bragg gratings
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Thermally tunable bandgaps in a hybrid As2S3/silica photonic crystal fiber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Time-dependent variation of fiber Bragg grating reflectivity in PMMA-based polymer optical fibers
Research output: Research - peer-review › Journal article – Annual report year: 2015

Two-octave mid-infrared supercontinuum generation in As-Se suspended core fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Bragg grating writing in PMMA microstructured polymer optical fibers in less than 7 minutes
Bundalo, I-L., Nielsen, K., Markos, C. & Bang, O. 2014 In : Optics Express. 22, 5, p. 5270-5276
Research output: Research - peer-review › Journal article – Annual report year: 2014

Broadband Mid-infrared Supercontinuum Generation in Suspended Core Chalcogenide Fibers
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Cladding defects in hollow core fibers for surface mode suppression and improved birefringence
Research output: Research - peer-review › Journal article – Annual report year: 2014

Design and Optimization of Air-Doped 3-dB Terahertz Fiber Directional Couplers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Design and optimization of mechanically down-doped terahertz fiber directional couplers
Bao, H., Nielsen, K., Rasmussen, H. K., Jepsen, P. U. & Bang, O. 2014 In : Optics Express. 22, 8, p. 9486-9497
Research output: Research - peer-review › Journal article – Annual report year: 2015

High Average Power Mid-infrared Supercontinuum Generation in a Suspended Core Chalcogenide Fiber
Hollow core fiber-based optical frequency standard

Hybrid polymer photonic crystal fiber with integrated chalcogenide glass nanofilms

Increase of the photosensitivity of undoped poly(methylmethacrylate) under UV radiation at 325 nm

Interferometric microstructured polymer optical fiber ultrasound sensor for optoacoustic endoscopic imaging in biomedical applications

Investigations on birefringence effects in polymer optical fiber Bragg gratings

Mid-infrared supercontinuum covering the 1.4–13.3 μm molecular fingerprint region using ultra-high NA chalcogenide step-index fibre

Mid-infrared supercontinuum generation in a suspended core chalcogenide fiber

Mid-infrared supercontinuum generation in concatenated fluoride and chalcogenide glass fibers covering more than three octaves

Mid-infrared supercontinuum generation to 12.5μm in large NA chalcogenide step-index fibres pumped at 4.5μm

Photo-acoustic imaging of coronary arteries with polymer optical fibers
Photosensitivity mechanism of undoped poly(methyl methacrylate) under UV radiation at 325 nm and its spatial resolution limit
Research output: Research - peer-review › Journal article – Annual report year: 2014

PMMA mPOF Bragg gratings written in less than 10 min
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

POF based glucose sensor incorporating grating wavelength filters
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Refractive index dispersion of chalcogenide glasses for ultra-high numerical-aperture fiber for mid-infrared supercontinuum generation
Research output: Research - peer-review › Journal article – Annual report year: 2014

Single-mode pumped high air-fill fraction photonic crystal fiber taper for high-power deep-blue supercontinuum sources
Research output: Research - peer-review › Journal article – Annual report year: 2014

Supercontinuum based mid-IR imaging spectroscopy for cancer detection
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Supercontinuum generation from ultraviolet to mid-infrared
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Supercontinuum light sources for food analysis
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Terahertz Fibres and Functional Fibre-Based Devices
Research output: Research › Ph.D. thesis – Annual report year: 2015

The all-fiber cladding-pumped Yb-doped gain-switched laser
Research output: Research - peer-review › Journal article – Annual report year: 2014

Thulium pumped mid-infrared 0.9–9μm supercontinuum generation in concatenated fluoride and chalcogenide glass fibers
Kubat, I., Petersen, C. R., Möller, U. V., Seddon, A., Benson, T., Brilland, L., Méchin, D., Moselund, P. M. & Bang, O. 2014 In : Optics Express. 22, 4, p. 3959-3967
Research output: Research - peer-review › Journal article – Annual report year: 2014
High-Tg TOPAS mPOF strain sensing at 110 degrees
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

High-Tg TOPAS microstructured polymer optical fiber for fiber Bragg grating strain sensing at 110 degrees
Markos, C., Stefani, A., Nielsen, K., Rasmussen, H. K., Yuan, S. W. & Bang, O. 2013 In : Optics Express. 21, 4, p. 4758-4765
Research output: Research - peer-review › Journal article – Annual report year: 2013

Hole-Size Increasing PCFs for Blue-Extended Supercontinuum Generation
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Influence of Phase Coherence on Seeded Supercontinuum Generation
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Infrared Supercontinuum Generation in Soft-glass Fibers
Research output: Research › Ph.D. thesis – Annual report year: 2013

Intensity noise in normal-pumped picosecond supercontinuum generation, where higher-order Raman lines cross into anomalous dispersion regime
Møller, U. V. & Bang, O. 2013 In : Electronics Letters. 49, 1, p. 63-65
Research output: Research - peer-review › Journal article – Annual report year: 2013

Intensity Noise of Normal-Pumped Picosecond Supercontinuum Generation
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Mid-infrared supercontinuum generation in tapered ZBLAN fiber with a standard Erbium mode-locked fiber laser
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Mid-infrared supercontinuum generation to 4.5 μm in uniform and tapered ZBLAN step-index fibers by direct pumping at 1064 or 1550 nm
Research output: Research - peer-review › Journal article – Annual report year: 2013

New horizons for Supercontinuum light sources: from UV to mid-IR
Research output: Research - peer-review › Conference article – Annual report year: 2013

Numerical demonstration of 3-12μm supercontinuum generation in large-core step-index chalcogenide fibers pumped at 4.5μm
Numerical demonstration of 3-12μm supercontinuum generation in large-core step-index chalcogenide fibers pumped at 4.5μm
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Optimized ZBLAN fiber for efficient and broadband mid-infrared supercontinuum generation through direct pumping at 1550nm
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Selective Serial Multi-Antibody Biosensing with TOPAS Microstructured Polymer Optical Fibers
Research output: Research - peer-review › Journal article – Annual report year: 2013

Zero-dispersion wavelength independent quasi-CW pumped supercontinuum generation
Research output: Research - peer-review › Journal article – Annual report year: 2013

All fiber based supercontinuum light source utilized for IR microscopy
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Anomalous interaction of nonlocal solitons in media with competing nonlinearities
Research output: Research - peer-review › Journal article – Annual report year: 2012

Asymmetric Draw-Tower Tapers for Supercontinuum Generation and Verification of the Novel Concept of Group-Acceleration Matching
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Cleaving of TOPAS and PMMA microstructured polymer optical fibers: Core-shift and statistical quality optimization
Research output: Research - peer-review › Journal article – Annual report year: 2012

Deep-blue supercontinuum sources with optimum taper profiles – verification of GAM
Research output: Research - peer-review › Journal article – Annual report year: 2012

Describing supercontinuum noise and rogue wave statistics using higher-order moments
Research output: Research - peer-review › Journal article – Annual report year: 2012

Direct Writing of Fiber Bragg Grating in Microstructured Polymer Optical Fiber
Research output: Research - peer-review › Journal article – Annual report year: 2012
Dynamic Characterization of Polymer Optical Fibers
Research output: Research - peer-review › Journal article – Annual report year: 2012

Fabrication and characterization of porous-core honeycomb bandgap THz fibers
Bao, H., Nielsen, K., Rasmussen, H. K., Jepsen, P. U. & Bang, O. 2012 In : Optics Express. 20, 28, p. 29507-29517
Research output: Research - peer-review › Journal article – Annual report year: 2012

Fiber design and realization of point-by-point written fiber Bragg gratings in polymer optical fibers
Research output: Research - peer-review › Conference article – Annual report year: 2012

Fiber Drawn 2D Polymeric Photonic Crystal THz Filters
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Higher-Order Moment Characterisation of Rogue Wave Statistics in Supercontinuum Generation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

High power supercontinuum generation in tapered photonic crystal fibers
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

High Sensitivity Polymer Optical Fiber-Bragg-Grating-Based Accelerometer
Research output: Research - peer-review › Journal article – Annual report year: 2012

Influence of pump power and modulation instability gain spectrum on seeded supercontinuum and rogue wave generation
Research output: Research - peer-review › Journal article – Annual report year: 2012

Influence of two-photon absorption on soliton self-frequency shift
Research output: Research - peer-review › Journal article – Annual report year: 2012

IR microscopy utilizing intense supercontinuum light source
Research output: Research - peer-review › Journal article – Annual report year: 2012

Modulational instability and solitons in nonlocal media with competing nonlinearities
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Nonlinear fiber-optic strain sensor based on four-wave mixing in microstructured optical fiber
Research output: Research - peer-review › Journal article – Annual report year: 2012
Nonlinear matching of Solitons - Continued redshift between silica and soft-glass fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Nonlinear Properties of Soft Glass Waveguides
Research output: Research › Ph.D. thesis – Annual report year: 2012

Optical fiber sensors fabricated by the focused ion beam technique
Research output: Research - peer-review › Conference article – Annual report year: 2012

Optimization of Tapered Photonic Crystal Fibers for Blue-Enhanced Supercontinuum Generation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Optimum PCF tapers for blue-enhanced supercontinuum sources
Research output: Research - peer-review › Journal article – Annual report year: 2012

Photonic crystal fibers for supercontinuum generation pumped by a gain-switched CW fiber laser
Research output: Research - peer-review › Conference article – Annual report year: 2012

Power dependence of supercontinuum noise in uniform and tapered PCFs
Research output: Research - peer-review › Journal article – Annual report year: 2012

Power dependence of supercontinuum noise in uniform and tapered PCFs: erratum
Møller, U., Sørensen, S. T., Jakobsen, C., Johansen, J., Moselund, P. M., Thomsen, C. L. & Bang, O. 2012 In : Optics Express. 20, 21, p. 23318-23319
Research output: Research - peer-review › Comment/debate – Annual report year: 2012

Quadratic solitons for negative effective second-harmonic diffraction as nonlocal solitons with periodic nonlocal response function
Research output: Research - peer-review › Journal article – Annual report year: 2012

Seeded Supercontinuum Generation - Modulation Instability Gain, Coherent and Incoherent Rogue Waves
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Supercontinuum - broad as a lamp, bright as a laser, now in the mid-infrared
Research output: Research - peer-review › Conference article – Annual report year: 2012
Supercontinuum Generation in Uniform and Tapered Photonic Crystal Fibers
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Supercontinuum generation in ZBLAN fibers—detailed comparison between measurement and simulation
Research output: Research - peer-review › Journal article – Annual report year: 2012

Tapered photonic crystal fibers for blue-enhanced supercontinuum generation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Temperature compensated, humidity insensitive, high-Tg TOPAS FBGs for accelerometers and microphones
Research output: Research - peer-review › Conference article – Annual report year: 2013

Temperature Compensated Strain Sensor Based on Cascaded Sagnac Interferometers and All-Solid Birefringent Hybrid Photonic Crystal Fibers
Research output: Research - peer-review › Journal article – Annual report year: 2012

The role of phase coherence in seeded supercontinuum generation
Research output: Research - peer-review › Journal article – Annual report year: 2012

THz Photonic Band-Gap Prisms Fabricated by Fiber Drawing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

Tunable Polymer Fiber Bragg Grating (FBG) Inscription: Fabrication of Dual-FBG Temperature Compensated Polymer Optical Fiber Strain Sensors
Research output: Research - peer-review › Journal article – Annual report year: 2012

Polymer fiber waveguides for terahertz radiation
Research output: Research › Ph.D. thesis – Annual report year: 2011

870nm Bragg grating in single mode TOPAS microstructured polymer optical fibre
Research output: Research - peer-review › Conference article – Annual report year: 2011

All-solid birefringent hybrid photonic crystal fiber based interferometric sensor for measurement of strain and temperature
Gu, B., Yuan, S. W., Zhang, A. P. & Bang, O. 2011 In : Proceedings of SPIE, the International Society for Optical Engineering. 8311, p. 831121
Research output: Research - peer-review › Conference article – Annual report year: 2012
Midinfrared optical rogue waves in soft glass photonic crystal fiber
Research output: Research - peer-review › Journal article – Annual report year: 2011

Mode profiling of THz fibers with dynamic aperture near-field imaging
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Modulational instability and solitons in nonlocal media with competing nonlinearities
Research output: Research - peer-review › Journal article – Annual report year: 2011

Narrow Bandwidth 850-nm Fiber Bragg Gratings in Few-Mode Polymer Optical Fibers
Research output: Research - peer-review › Journal article – Annual report year: 2011

Nonlinear soliton matching between optical fibers
Research output: Research - peer-review › Journal article – Annual report year: 2011

Note: Optical fiber milled by focused ion beam and its application for Fabry-Pérot refractive index sensor
Research output: Research - peer-review › Journal article – Annual report year: 2011

Optical Cherenkov radiation by cascaded nonlinear interaction: an efficient source of few-cycle energetic near- to mid-IR pulses
Research output: Research - peer-review › Journal article – Annual report year: 2011

Optical Cherenkov radiation by cascaded nonlinear interaction: an efficient source of few-cycle near- to mid-IR pulses
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Optical fibre Bragg grating recorded in TOPAS cyclic olefin copolymer
Research output: Research - peer-review › Journal article – Annual report year: 2011

Optimum fiber tapers for increasing the power in the blue-edge of a supercontinuum - group-acceleration matching
Sørensen, S. T., Judge, A., Thomsen, C. L. & Bang, O. 2011 In : Optics Letters. 36, 6, p. 816-818
Research output: Research - peer-review › Journal article – Annual report year: 2011

Polymer PCF Bragg grating sensors based on poly(methyl methacrylate) and TOPAS cyclic olefin copolymer
Research output: Research - peer-review › Conference article – Annual report year: 2011

Porous-core honeycomb bandgap THz fiber
Research output: Research - peer-review › Journal article – Annual report year: 2011
Reduced Amplitude Noise in Supercontinuum Generated in Tapered PCFs
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Selective filling of photonic crystal fibers using focused ion beam milled microchannels
Wang, F., Yuan, S. W., Hansen, O. & Bang, O. 2011 In : Optics Express. 19, 18, p. 17585-17590
Research output: Research - peer-review › Journal article – Annual report year: 2011

Sensing characteristics of birefringent microstructured polymer optical fiber
Research output: Research - peer-review › Conference article – Annual report year: 2011

Stimulated Raman scattering in soft glass fluoride fibers
Research output: Research - peer-review › Journal article – Annual report year: 2011

Supercontinuum generation in a photonic crystal fiber pumped by a gain-switched high-power fiber laser
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Supercontinuum noise in tapered photonic crystal fibers

Viscoelastic limit of polymer optical fibers: characterization of the dynamic response
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

ZBLAN supercontinuum generation - detailed comparison between measurement and simulation.
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Analytical theory for the dark-soliton interaction in nonlocal nonlinear materials with an arbitrary degree of nonlocality
Research output: Research - peer-review › Journal article – Annual report year: 2010

Analytical theory of dark nonlocal solitons
Research output: Research - peer-review › Journal article – Annual report year: 2010

Broadband polymer microstructured THz fiber coupler with downdoped cores
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Broadband terahertz fiber directional coupler
Research output: Research - peer-review › Journal article – Annual report year: 2010
Collisions and turbulence in optical rogue wave formation
Research output: Research - peer-review › Journal article – Annual report year: 2010

Design of microstructured waveguide devices for applications in optical sensing: [invited]
Town, G. E., McCosker, R., Yuan, S. W. & Bang, O. 2010 proceedings of the Optics and Photonics Congress. Optical Society of America (OSA), p. STuC1
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Few-cycle femtosecond optical pulses in the visible and near-infrared: [invited]
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Fiber-optical accelerometers based on polymer optical fiber Bragg gratings
Yuan, S. W., Stefani, A., Bang, O., Andresen, S., Jacobsen, T., Nielsen, F. K., Jacobsen, T., Rose, B. & Herholdt-Rasmussen, N. 2010 proceedings Optics and Photonics Congress. Optical Society of America (OSA), p. SWA5
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

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Research output: Research - peer-review › Conference article – Annual report year: 2010

Grating writing and growth at 325nm in non-hydrogenated silica fiber
Town, G. E., Yuan, S. W., Stefani, A. & Bang, O. 2010
Research output: Research - peer-review › Poster – Annual report year: 2010

Increasing the blue-shift of a picosecond pumped supercontinuum
Research output: Research - peer-review › Book chapter – Annual report year: 2010

Microstructured optical fiber refractive index sensor
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Research output: Research - peer-review › Journal article – Annual report year: 2010

Modelling of PCF Nonlinearities
Research output: Research - peer-review › Book chapter – Annual report year: 2010

Nonlinear diffraction from a virtual beam
Research output: Research - peer-review › Journal article – Annual report year: 2010

Optical Cherenkov radiation in ultrafast cascaded second-harmonic generation
Research output: Research - peer-review › Journal article – Annual report year: 2010

Photonic crystal fibers for label-free biosensing: [invited]
Bang, O., Yuan, S. W., Town, G. E., Frosz, M. H. & Simonsen, R. 2010 Proceedings EUROPT(R)ODE X.
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010
Polymer microstructured fibers for guiding of THz radiation: [Invited]  
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Polymer optical fiber bragg grating sensors: measuring acceleration  
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Refractive index sensing in an all-solid twin-core photonic bandgap fiber  
Research output: Research - peer-review › Journal article – Annual report year: 2010

Tensile strain and temperature characterization of FBGs in preannealed Polymer Optical Fibers  
Yuan, S. W., Stefani, A., Andresen, S. & Bang, O. 2010 Proceedings OECC. p. 9C4-1  
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Theory of dispersive wave frequency shift via trapping by a soliton in an axially nonuniform optical fiber  
Research output: Research - peer-review › Journal article – Annual report year: 2010

Thulium pumped high power supercontinuum in loss-determined optimum lengths of tellurite photonic crystal fiber  
Research output: Research - peer-review › Journal article – Annual report year: 2010

Long-pulse Supercontinuum Light Sources  
Moselund, P. M., Bang, O. & Thomsen, C. L. Sep 2009 Kgs. Lyngby, Denmark: Technical University of Denmark (DTU). 142 p.  
Research output: Research › Ph.D. thesis – Annual report year: 2009

Bendable, low-loss Topas fibers for the terahertz frequency range  
Nielsen, K., Rasmussen, H. K., Adam, A. J. L., Planken, P. C. M., Bang, O. & Jepsen, P. U. 2009 In : Optics Express. 17, 10, p. 8592-8601  
Research output: Research - peer-review › Journal article – Annual report year: 2009

Broadband THz waveguiding and high-precision broadband time-resolved spectroscopy: [Invited]  
Cooke, D., Iwaszczuk, K., Nielsen, K., Bang, O. & Jepsen, P. U. 2009 TeraTech. p. 2I-B5  
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

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Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Dispersion-tailored, low-loss photonic crystal fibers for the THz range  
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Dispersive waves in fs cascaded second-harmonic generation  
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009
Enhanced soliton self-frequency shift in a longitudinally varying taper
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2009

Infiltration liquid crystal in microstructured polymer optical fibers
Yuan, S. W., Wei, L. & Bang, O. 2009 Conference proceedings, CLEOEurope - EQEC. IEEE
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Low-loss and bendable THz fiber with tailored dispersion
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Multiorder nonlinear diffraction in frequency doubling processes
Saltiel, S. M., Neshev, D. N., Krolikowski, W., Arie, A., Bang, O. & Kivshar, Y. S. 2009 In : Optics Letters. 34, 6, p. 848-850
Research output: Research - peer-review › Journal article – Annual report year: 2009

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Research output: Research - peer-review › Poster – Annual report year: 2009

Noise reduction of high-power supercontinuum sources by back seeding
Moselund, P. M., Frosz, M. H., Thomsen, C. L. & Bang, O. 2009 Conference abstract series, CLEOEurope - EQEC. IEEE, p. 1-1
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Observation of two-dimensional nonlocal gap solitons
Research output: Research - peer-review › Journal article – Annual report year: 2009

Optical rogue waves and soliton turbulence in nonlinear fibre optics
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Optimization of the soliton self-frequency shift in a tapered photonic crystal fiber
Research output: Research - peer-review › Journal article – Annual report year: 2009

Periodic refractive index modifications inscribed in polymer optical fibre by focussed IR femtosecond pulses
Stecher, M., Williams, R. J., Bang, O., Marschall, G. D., Withford, M. J. & Town, G. E. 2009
Research output: Research - peer-review › Paper – Annual report year: 2009

Thermal tunability of photonic bandgaps in liquid crystal infiltrated microstructured polymer optical fibers
Yuan, S. W., Wei, L., Alkeskjold, T. T., Bjarklev, A. O. & Bang, O. 2009 In : Optics Express. 17, 22, p. 19356-19364
Research output: Research - peer-review › Journal article – Annual report year: 2009

Ultrasonic refractive index sensor based on twin-core photonic bandgap fibers
Yuan, S. W., Town, G. E. & Bang, O. 2009
Research output: Research - peer-review › Paper – Annual report year: 2009
Ultrasensitive twin-core photonic bandgap fiber refractive index sensor
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Light propagation in Liquid-infiltrated Microstructured Optical Fibres
Research output: Research › Ph.D. thesis – Annual report year: 2008

Photonic crystal fiber long-period gratings for biosensing
Research output: Research › Ph.D. thesis – Annual report year: 2008

Backseeded high-order parametric gain in supercontinuum generation
Moselund, P. M., Frosz, M. H., Thomsen, C. L. & Bang, O. 2008 In : Optics & Photonics News. 12, 35
Research output: Research - peer-review › Journal article – Annual report year: 2008

Backseeding of higher order gain processes in picosecond supercontinuum generation
Moselund, P. M., Frosz, M. H., Thomsen, C. L. & Bang, O. 2008 In : Optics Express. 16, 16, p. 11954-11968
Research output: Research - peer-review › Journal article – Annual report year: 2008

Back seeding of picosecond supercontinuum generation in photonic crystal fibres
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Broadband light generation at ~1300 nm through spectrally recoiled solitons and dispersive waves
Research output: Research - peer-review › Journal article – Annual report year: 2008

Compression limits in cascaded quadratic soliton compression
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Controllable nonlocal behaviour by cascaded second-harmonic generation of fs pulses
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Degenerate four wave mixing in solid core photonic bandgap fibers
Rasmussen, P. D., Lægsgaard, J. & Bang, O. 2008 In : Optics Express. 16, 6, p. 4059-4068
Research output: Research - peer-review › Journal article – Annual report year: 2008

Geometry and transport in a model of two coupled quadratic nonlinear waveguides
Research output: Research - peer-review › Journal article – Annual report year: 2008

Highly sensitive refractometer with a photonic-crystal-fiber long-period grating
Research output: Research - peer-review › Journal article – Annual report year: 2008
Bragg gratings in Topas
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Cascaded quadratic soliton compression at 800 nm
Bache, M., Bang, O., Moses, J. & Wise, F. 2007 OSA, Technical Digest, Nonlinear Photonics. p. NWA3
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

Designing quadratic nonlinear photonic crystal fibers for soliton compression to few-cycle pulses
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

Enhanced stability of nonlocal solitons in saturable focusing media
Skupin, S., Saffman, M., Krollikowski, W. & Bang, O. 2007
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Finite-difference modeling of Bragg fibers with ultrathin cladding layers via adaptive coordinate transformation
Shyroki, D., Lægsgaard, J., Bang, O. & Skorobogatiy, M. 2007
Research output: Research - peer-review › Poster – Annual report year: 2007

General covariance in computational electrodynamics
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Infiltrated microstructured fibers as tunable and nonlinear optical devices
Rosberg, C. R., Bennet, F., Neshev, D. N., Sukhorukov, A. A., Krollikowski, W., Kivshar, Y. S., Bang, O. & Bjarklev, A. O. 2007
Research output: Research - peer-review › Poster – Annual report year: 2007

Kraftig som en laser, hvidere end solen: Superkontinuumsgenerering - den ultimative hvidlyskilde
Research output: Research - peer-review › Book chapter – Annual report year: 2007

Localized biosensing with Topas microstructured polymer optical fiber
Research output: Research - peer-review › Journal article – Annual report year: 2007

Localized biosensing with Topas microstructured Polymer Optical Fiber
Research output: Research - peer-review › Journal article – Annual report year: 2007

Localized biosensing with Topas microstructured polymer optical fiber: Erratum
Research output: Research - peer-review › Journal article – Annual report year: 2007

Methods of supercontinuum generation for effective down-conversion in photonic crystal fibers
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2007
Modulational instability in the nonlocal chi(2)-model
Research output: Research - peer-review › Journal article – Annual report year: 2007

Multi-antibody biosensing with Topas microstructured polymer optical fiber
Research output: Research - peer-review › Poster – Annual report year: 2007

Nonlocal explanation of stationary and nonstationary regimes in cascaded pulse compression
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

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Research output: Research - peer-review › Journal article – Annual report year: 2007

Photonic crystal fiber gratings: prospects for label-free biosensors
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Recent developments of Bragg gratings in PMMA and TOPAS polymer optical fibers
Research output: Research - peer-review › Poster – Annual report year: 2007

Rigorous modeling of cladding modes in photonic crystal fibers
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Solitron compression to few-cycle pulses by cascaded quadratic nonlinearities
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Soliton compression to few-cycle pulses using quadratic nonlinear photonic crystal fibers: A design study
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

Soliton compression to ultra-short pulses using cascaded quadratic nonlinearities in silica photonic crystal fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

Spiralling solitons and multipole localized modes in nonlocal nonlinear media
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Supercontinuum generation in photonic crystal fibers using quasi-CW pumping
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Temporal nonlinear beam dynamics in infiltrated photonic crystal fibers
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Tunable all-optical devices based on liquid-filled photonic crystal fibers
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Tunable defraction and self-defocusing in liquid-filled photonic crystal fibers
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A microstructured Polymer Optical Fiber Biosensor
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Biosensing using microstructured polymer optical fibers
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Chromatic dispersion of liquid crystal infiltrated capillary tubes and photonic crystal fibers
Research output: Research - peer-review › Journal article – Annual report year: 2006

Group-velocity matched nonlinear photonic crystal fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

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Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2006

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Research output: Research - peer-review › Article in proceedings – Annual report year: 2006
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Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2006

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Research output: Research - peer-review › Book chapter – Annual report year: 2006

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Research output: Research - peer-review › Journal article – Annual report year: 2006

Nonlocal description of X waves in quadratic nonlinear materials
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Observation of attraction between dark solitons
Research output: Research - peer-review › Journal article – Annual report year: 2006

Photonic crystal fiber long-period gratings for biochemical sensing
Research output: Research - peer-review › Journal article – Annual report year: 2006

Second-harmonic generation with zero group-velocity mismatch in nonlinear photonic crystal fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

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Stable rotating dipole solitons in nonlocal media
Stable rotating dipole solitons in nonlocal optical media

Supercontinuum generation in fibers infiltrated with liquid crystals

The influence of input pump polarization on supercontinuum generation in photonic crystal fibers

Towards biochips using microstructured optical fiber sensors
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Tuning quadratic nonlinear photonic crystal fibers for zero group-velocity mismatch

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Escape angles for out-of-phase nematicons
Rasmussen, P. D., Bang, O. & Krolikowski, W. Z. 2005

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Modulation instability in nonlocal chi2-model
Wyller, J., Krolikowski, W. Z., Bang, O., Petersen, D. E. & Rasmussen, J. J. 2005

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Nonlinear wave dynamics in nonlocal media
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Observation of attraction forces between dark solitons
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2005

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Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Ring vortex solitons in nonlocal nonlinear media
Research output: Research - peer-review › Journal article – Annual report year: 2005

Ring vortex solitons in nonlocal nonlinear media
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Ring vortex solitons in nonlocal nonlinear media
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Selective detection of antibodies in microstructured polymer optical fibers
Research output: Research - peer-review › Journal article – Annual report year: 2005

Soliton interactions in nematic liquid crystals (NLC)
Rasmussen, P. D., Bang, O. & Krolikowski, W. Z. 2005
Research output: Research - peer-review › Poster – Annual report year: 2005

Supercontinuum generation in a photonic crystal fiber tapered to normal dispersion for all wavelengths
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Supercontinuum generation in photonic crystal fibers: The role of the second zero dispersion wavelength
Research output: Research › Conference abstract in proceedings – Annual report year: 2005

Supercontinuum generation in untapered and tapered photonic crystal fibers with two zero dispersion wavelengths
Supercontinuum generation in untapered and tapered photonic crystal fibers with two zero dispersion wavelengths

Theory of nonlocal soliton interaction in nematic liquid crystals

The role of tapering and second zero dispersion wavelength for supercontinuum generation in Photonic Crystal Fibers
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The role of the second zero-dispersion wavelength in generation of supercontinua and bright-bright soliton-pairs across the zero-dispersion wavelength

Attraction of nonlocal dark optical solitons

A nonlocal description of two-color parametric solitons
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Bubble generation in a twisted and bent DNA-like model

Dispersion engineered cob-web photonic crystal fibers for efficient supercontinuum generation with picosecond pulses

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Energy funneling in a bent chain of Morse oscillators with long-range coupling
Modulation instability in a nonlocal x(2) - model
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Research output: Research - peer-review › Poster – Annual report year: 2004

Modulation instability, solitons and beam propagation in spatially nonlocal nonlinear media
Research output: Research - peer-review › Journal article – Annual report year: 2004

Nonlinear wave propagation in nonlocal media
Rasmussen, J. J., Bang, O., Krolikowski, W. & Wyller, J. 2004
Research output: Research - peer-review › Paper – Annual report year: 2004

Nonlocal incoherent solitons
Krolikowski, W. Z. & Bang, O. 2004
Research output: Research - peer-review › Paper – Annual report year: 2004

Nonlocal incoherent solitons
Research output: Research - peer-review › Journal article – Annual report year: 2004

Nonlocal incoherent solitons in materials with a logarithmic nonlinearity
Bang, O., Wyller, J. & Krolikowski, W. 2004
Research output: Research - peer-review › Paper – Annual report year: 2004

Nonlocal solitons
Bang, O. 2004
Research output: Research › Paper – Annual report year: 2004

Optical beams and spatial solitons in nonlocal nonlinear media
Research output: Research - peer-review › Paper – Annual report year: 2004

Phase- and group velocity matching in triangular photonic crystal fibres
Nielsen, H., Lægsgaard, J., Bang, O. & Bjarklev, A. O. 2004 In : DOPS NYT. 19, 4, p. 5-7
Research output: Research › Journal article – Annual report year: 2004

Photonic crystal fiber based antibody detection
Research output: Research - peer-review › Paper – Annual report year: 2004

Photonic crystal fiber based antibody detection
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

Photonic crystal fiber design for broadband directional coupling
Lægsgaard, J., Bang, O. & Bjarklev, A. O. 2004 In : Optics Letters. 29, 21, p. 2473-2475
Research output: Research - peer-review › Journal article – Annual report year: 2004

Photonic crystal structures in sensing technology
All-optical signal processing in quadratic nonlinear materials
Johansen, S. K., Sørensen, M. P. & Bang, O. Nov 2002
Research output: Research › Ph.D. thesis – Annual report year: 2002

Collapse arrest and soliton stabilization in nonlocal nonlinear media
Research output: Research › peer-review › Journal article – Annual report year: 2002

Complete description of all modulational instability gain bands generated by nonlinear QPM gratings
Research output: Research › Article in proceedings – Annual report year: 2002

Engineering of spatial solitons in two-period QPM structures
Johansen, S. K., Carrasco, S., Torner, L. & Bang, O. 2002 In : Optics Communications. 203, 3-6, p. 393-402
Research output: Research › peer-review › Journal article – Annual report year: 2002

Escape angles in bulk ch(2) soliton interactions
Research output: Research › peer-review › Journal article – Annual report year: 2002

Generic features of modulational instability in nonlocal Kerr media
Research output: Research › peer-review › Journal article – Annual report year: 2002

Improving efficiency of supercontinuum generation in photonic crystal fibers by direct degenerate four-wave-mixing
Research output: Research › peer-review › Article in proceedings – Annual report year: 2002

Modulational-instability gain bands in quasi-phase-matched materials
Research output: Research › Article in proceedings – Annual report year: 2002

Plane waves in periodic, quadratically nonlinear slab waveguides: stability and exact Fourier structure
Research output: Research › peer-review › Journal article – Annual report year: 2002

Soliton engineering with two-period QPM gratings
Research output: Research › Article in proceedings – Annual report year: 2002

Soliton interaction in weakly nonlocal nonlinear media
Research output: Research › Article in proceedings – Annual report year: 2002

Accurate switching intensities and length scales in quasi-phase-matched materials
Research output: Research › peer-review › Journal article – Annual report year: 2001
Accurate switching intensities and length scales in quasi-phase-matched materials
Research output: Research › Article in proceedings – Annual report year: 2001

Asymmetric induced cubic nonlinearities in homogeneous and quasi-phase-matched quadratic materials: signature and importance
Bang, O. & Corney, J. F. 2001 In : Optics & Photonics News. 12, 12, p. 42
Research output: Research - peer-review › Journal article – Annual report year: 2001

Determination of escape angles in quadratic bulk experiments with two identical solitons
Research output: Research - peer-review › Article in proceedings – Annual report year: 2001

Modulational instability in nonlocal Kerr media
Research output: Research › Article in proceedings – Annual report year: 2001

Modulational instability in nonlocal nonlinear Kerr media
Research output: Research - peer-review › Journal article – Annual report year: 2001

Modulational instability in periodic quadratic nonlinear materials
Research output: Research - peer-review › Journal article – Annual report year: 2001

Nonlinearity and disorder: Classification and stability of nonlinear impurity modes
Research output: Research - peer-review › Journal article – Annual report year: 2001

Nonlinearity and disorder: Theory and applications
Research output: Research - peer-review › Book – Annual report year: 2001

Parametric localized modes in quadratic nonlinear photonic structures
Research output: Research - peer-review › Journal article – Annual report year: 2001

Rigorous proof of soliton stability and absence of collapse in Kerr media and Bose-Einstein condensates with a general nonlocal nonlinearity
Research output: Research › Article in proceedings – Annual report year: 2001
Solitons in nonlocal nonlinear media: Exact solutions
Research output: Research - peer-review › Journal article – Annual report year: 2001

Solitons in quadratic nonlinear photonic crystals
Research output: Research - peer-review › Journal article – Annual report year: 2001

Collapse suppression and soliton stabilization through nonlocality in bulk Kerr media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Effective nonlinearities and multi-wavelength second-harmonic generation in modulated quasi-phase-matching gratings
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Effective nonlinearities in modulated QPM gratings
Bang, O. & Clausen, C. A. B. 2000 In : DOPS Nyt - Danish Optical Society News, Special issue on Northern Optics. 15, p. 5-6
Research output: Research - peer-review › Journal article – Annual report year: 2000

Effects of linear gratings in quasi-phased-matched quadratic materials with induced Kerr effects
Research output: Research › Journal article – Annual report year: 2000

Engineering of effective quadratic and cubic nonlinearities in two-period QPM gratings
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Fusion arrest and collapse phenomena due to Kerr-nonlinearity in quadratic media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Influence of Four-Wave Mixing and Walk-Off on the Self-Focusing of Coupled Waves
Research output: Research - peer-review › Journal article – Annual report year: 2000

Modulational stability and dark solitons in periodic quadratic nonlinear media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Multi-component optical solitary waves
Research output: Research - peer-review › Journal article – Annual report year: 2000

Multi-wavelength and multi-colour temporal and spatial optical solitons
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000
Optical spatial solitons in nonlocal nonlinear medium
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Robustness of quadratic solitons with periodic gain
Torner, L., Torres, J. P. & Bang, O. 2000 In : Optics Communications. 185, p. 479-485
Research output: Research - peer-review › Journal article – Annual report year: 2000

Soliton collisions in quadratic bulk media with a nonvanishing Kerr non-linearity
Research output: Research › Journal article – Annual report year: 2000

Soliton interaction in quadratic and cubic bulk media
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Soliton collisions in quadratic bulk media with a nonvanishing Kerr non-linearity
Research output: Research › Journal article – Annual report year: 2000

Spatial solitons in nonlinear photonic crystals
Research output: Research - peer-review › Article in proceedings – Annual report year: 2000

Unified model for partially coherent solitons in logarithmically nonlinear media
Research output: Research - peer-review › Journal article – Annual report year: 2000

Collapse of Incoherent Light Beams in Inertial Bulk Kerr Media
Research output: Research - peer-review › Journal article – Annual report year: 1999

Engineering competing nonlinearities
Research output: Research - peer-review › Journal article – Annual report year: 1999

Fusion, collapse, and stationary bound states of incoherently coupled waves in bulk cubic media
Research output: Research - peer-review › Journal article – Annual report year: 1999

Quasiperiodic Envelope Solitons
Research output: Research - peer-review › Journal article – Annual report year: 1999

Two-Color Nonlinear Localized Modes in Photonic Crystals
Sukhorukov, A. A., Kivshar, Y. S., Bang, O., Martorell, J., Trull, J. & Vilaseca, R. 1999 In : Optics & Photonics News. 10, 12, p. 34-35
Research output: Research - peer-review › Journal article – Annual report year: 1999

Two-color nonlinear localized photonic modes
Research output: Research - peer-review › Journal article – Annual report year: 1999
Stationary solutions and self-trapping in discrete quadratic nonlinear systems
Research output: Research - peer-review › Journal article – Annual report year: 1998

Spatial Solitons and Induced Kerr Effects in Quasi-Phase-Matched Quadratic Media
Research output: Research - peer-review › Journal article – Annual report year: 1997

Temperature effects in a nonlinear model of monolayer Scheibe aggregates
Research output: Research - peer-review › Journal article – Annual report year: 1994

Projects:

High-Speed Time-strecth Optical coherence tomography
Jensen, M., Bang, O. & Israelsen, N. M.
Samfinansierede - Virksomhed
01/09/2017 → 31/08/2020
Project: PhD

Polymer Optical Fiber Bragg Gratings for high sensitivity distributed biochemical sensors
Inglev, R., Bang, O., Janting, J. & Nielsen, K.
Samfinansieret - Andet
01/09/2017 → 31/08/2020
Project: PhD

Gas-filled Hollow-Core Photonic Crystal Fibers for sensing applications and ultrafast non-linear optics
Adamu, A. I., Markos, C. & Bang, O.
Forskningsrådsfinansiering
01/08/2017 → 31/07/2020
Project: PhD

Multi-tone supercontinuum sources for food control applications with IR spectroscopy
Kwarkye, K. & Bang, O.
Marie Curie (EU-stipendium)
01/06/2017 → 31/05/2020
Project: PhD

High-power visible-near-IR Supercontinuum sources for spectroscopic photoacoustic microscopy
Dasa, M. K., Bang, O., Jain, D. & Markos, C.
Marie Curie (EU-stipendium)
01/02/2017 → 31/01/2020
Project: PhD

Rekonfigurérbare optiske bølgelederstrukturer genereret ved solitonvekselvirkning
Larsen, P. U. V., Sørensen, M. P., Bang, O., Christiansen, P. L., Hjorth, P. G., Rasmussen, J. J. & Wyller, J. A.
DTU-lønnet stipendie
01/09/2002 → 15/05/2006
Project: PhD

Modellering og udvikling af fotoniske krystal bølgeledere
Bergbäck Knudsen, E., Bjarklev, A. O., Broeng, J., Bang, O., Andersen, P. E. & Andrés, M. V.
DTU-lønnet stipendie
01/02/2000 → 31/07/2003
Project: PhD

**Low noise femtosecond supercontinuum sources**
Grundforskningsfonden
01/09/2015 → 31/08/2018
Project: PhD

**Low-noise supercontinuum lasers for Optical Coherence Tomography systems**
Engelsholm, R. D., Bang, O. & Thomsen, C. L.
Institut stipendie (DTU)
01/05/2015 → 31/10/2018
Project: PhD

**Design and fabrication of UV waveguiding polymer tube**
Pedersen, J. K. M., Nielsen, K., Bang, O., Lindvold, L. R., Kalli, K. & Webb, D. J.
Samfinansieret - Andet
01/09/2014 → 11/01/2018
Project: PhD

**Ultrafast mid-IR nonlinear optics in gas-filled hollow-core photonic crystal fibers**
Habib, S., Bache, M., Bang, O., Lægsgaard, J., Biancalana, F. & Joly, N.
Institut stipendie (DTU)
15/04/2014 → 14/06/2017
Project: PhD

**Speciality and Microstructured Polymer Optical FBG Sensors**
Woyessa, G., Bang, O., Markos, C., Nielsen, K., Lindvold, L. R., Kalli, K. & Schuster, K.
Marie Curie (EU-stipendium)
01/03/2014 → 23/08/2017
Project: PhD

**POF based Glucose Sensor Incorporating Grating Wavelength Filters**
Hassan, H. U., Bang, O., Aasmul, S., Nielsen, K., Jepsen, P. U., Selleri, S. & Sugden, K.
Eksternt EU-finansieret
15/01/2014 → 08/03/2017
Project: PhD

**Optical Fiber based Biosensors**
InnovationsPhD
01/11/2004 → 29/01/2008
Project: PhD

**Polymer fiber-optical microphones**
Stefani, A., Bang, O., Yuan, S. W., Rottwitt, K., Keiding, S. R. & Schuster, K.
Offentlig finansiering
01/01/2009 → 22/03/2012
Project: PhD

**Photonic crystal rod amplifiers: Understanding a new class of active optical waveguides**
Hansen, K. R., Lægsgaard, J., Broeng, J., Bang, O., Bischoff, S. & Dajani, I. A.
Forskningsrådsfinansiering
01/01/2010 → 04/04/2013
Project: PhD
Coherent energy transport, thermal effects, and radiative decay in ordered molecular monolayers by nonlinear dynamical models
Bang, O.
Gammel ordning u/skema-SU
01/08/1991 → 01/01/1995
Project: PhD

Spatial solitons, vortices, and patterns in non-linear optical media
Bache, M., Christiansen, P. L., Bang, O., Rasmussen, J. J., Saffman, M., Tromborg, B., Firth, W. J. & Pedersen, T. G.
DTU, Samfinansiering
01/04/1999 → 08/11/2002
Project: PhD

Nonlinear Photonic Crystals
DTU, Samfinansiering
01/02/2001 → 18/08/2004
Project: PhD

Nonlinear dynamics of optical polymers
Johansen, S. K., Bang, O., Sørensen, M. P., Torner, L., Bjarklev, A. O., Baldi, P. & Rasmussen, J. J.
DTU, Samfinansiering
01/06/1999 → 15/11/2002
Project: PhD

Fibre Laser based broadband THz imaging systems
Eichhorn, F., Jepsen, P. U., Pedersen, J. E., Bang, O., Keil, U. D. F. & Koch, M.
1/3 DTU-stip, 2/3 FUR/andet
01/08/2006 → 03/03/2010
Project: PhD

Biomedical Applications of Photonic Crystal Fibres
Frosz, M. H., Bjarklev, A. O., Andersen, P. E., Bang, O., Broeng, J., Rottwitt, K., Dudley, J. M. & Keiding, S. R.
DTU-lønnet stipendie
01/09/2003 → 05/02/2007
Project: PhD

Liquid Crystal Filled Microstructured Polymer Optical Fibres
Rasmussen, P. D., Bang, O., Lægsgaard, J., Rottwitt, K., Broeng, J. & Skryabin, D. V.
DTU-lønnet stipendie
01/08/2005 → 25/09/2008
Project: PhD

Advanced devices for ultra-high capacity optical communication systems
Öhman, F., Mørk, J., Bischoff, S., Tromborg, B., Bang, O., Jacobsen, G. & Shtaif, M.
DTU-lønnet stipendie
01/09/2001 → 18/03/2005
Project: PhD

Infrared Supercontinuum Generation in Soft Glass Fibers
Agger, C., Bang, O., Lægsgaard, J., Vlachos, K. G. & Wyller, J. A.
Institut stipendie (DTU) Samf.
15/10/2009 → 18/12/2012
Project: PhD
THz-BREW: Terahertz Broadband Relaxtion dynamics of Electons in Water
Wang, T., Jepsen, P. U., Cooke, D., Bang, O., Planken, P. C. M. & Zeitler, J. A.
Eksternt finansieret virksomhed
15/06/2012 → 09/11/2015
Project: PhD

Long-pulse Super-continuum Light Sources
Moselund, P. M., Bang, O., Thomsen, C. L., Dudley, J. M., Keiding, S. R. & Rottwitt, K.
1/3 DTU-stip, 2/3 FUR/andet
01/04/2006 → 23/09/2009
Project: PhD

Hollow-core fibers for high power laser applications
Michieletto, M., Bang, O., Lyngsøe, J. K., Lægsgaard, J., Bache, M., Belardi, W. & Correra, R. A.
Eksternt EU-finansieret
01/01/2013 → 30/09/2016
Project: PhD

Laser frequency standards based on gas-filled hollow-core fibres
Triches, M., Bang, O., Hald, J., Lægsgaard, J., Bache, M., Arlt, J. & Corwin, K.
Eksternt EU-finansieret
01/02/2013 → 02/11/2016
Project: PhD

2-10um mid-infrared supercontinuum light sources
Petersen, C. R., Bang, O., Møller, U. V., Bache, M., Buczynski, R. & Dudley, J. M.
Offentlig finansiering
01/08/2013 → 02/11/2016
Project: PhD

Topas microstructured polymer optical fibers for biosensing and terahertz waveguides
Nielsen, K., Bang, O., Jepsen, P. U., Rasmussen, H. K., Lægsgaard, J., Keiding, S. R. & Koch, M.
Institut stipendie (DTU) Samf.
01/02/2008 → 20/04/2011
Project: PhD

Modelling of Mid-ir supercontinuum Generation in Chalcogendie Fibers
Kubat, I., Bang, O., Møller, U. V., Lægsgaard, J., Keiding, S. R. & Taylor, J. R.
Institut, samfinansiering
01/11/2012 → 27/01/2016
Project: PhD

Femtosecond few-cycle mid-infrared laser pulses
Liu, X., Bache, M., Zhou, B., Bang, O., Jedrkievicz, O. & Minardi, S.
Institut stipendie (DTU) Samf.
15/10/2012 → 15/06/2016
Project: PhD

Modal instabilities in large mode area fiber amplifiers and lasers
Johansen, M. M., Lægsgaard, J., Alkeskjold, T. T., Bang, O., Dong, L. & Misas, C. J.
Institut stipendie (DTU)
01/01/2012 → 14/06/2017
Project: PhD

Photonic crystal THz fibres and functional fibres devices
Bao, H., Bang, O., Jepsen, P. U., Broeng, J., Koch, M. & Town, G.
Institut stipendie (DTU)
15/11/2011 → 27/02/2015
**Photonic Cristal Fiber based Sensors for Label-Free Detection of Biomolecules**
Emiliyanov, G. A., Bang, O., Jensen, J. B., Pedersen, L. H., Jepsen, P. U., Kristensen, M. L. & Ludvigsen, H.
1/3 DTU-stip, 2/3 FUR/andet
15/01/2005 → 29/05/2008
Project: PhD

**Fiber Bragg grating (FBG) strain sensors in all-solid microstructured polymer optical fibers**
Bundalo, I., Bang, O., Nielsen, K., Lægsgaard, J., Kalli, K. & Webb, D. J.
Institut stipendie (DTU)
01/03/2013 → 07/12/2016
Project: PhD

**Continuous Wave Supercontinuum Light Sources based on Tapered Photonic Crystal Fibres**
Larsen, C., Bang, O., Hansen, K. P., Mattsson, K. E., Bache, M., Alam, S. & Ludvigsen, H.
Institut stipendie (DTU) Samf.
01/08/2010 → 19/03/2014
Project: PhD

**Deep-blue Supercontinuum Light Sources based on Tapered Photonic Crystal Fibres**
Sørensen, S. T., Bang, O., Thomsen, C. L., Lægsgaard, J., Genty, G. & Travers, J. C.
Institut stipendie (DTU) Samf.
01/05/2010 → 21/06/2013
Project: PhD

**Nonlinear properties of soft glass waveguides**
Steffensen, H., Rottwitt, K., Bang, O., Jepsen, P. U., Lægsgaard, J., Dudley, J. M. & Planken, P. C. M.
Institut stipendie (DTU)
01/09/2009 → 21/06/2013
Project: PhD

**Technology for PQFBG fabrication and interrogation**
Ganziy, D., Bang, O., Rose, B., Jepsen, P. U., Albert, J. & Caucheteur, C.
Eksternt EU-finansieret
01/03/2014 → 14/06/2017
Project: PhD

**Light and Food**
Møller, U. V., Bang, O. & Petersen, C. R.
InnovationsFonden
01/05/2013 → 30/04/2017
Project: Research

**MINERVA: MId- to NEaR infrared spectroscopy for improVed medical diAgnostics (MINERVA)**
Bang, O., Møller, U. V. & Kubat, I.
01/11/2012 → 31/10/2016
Project: Research

**Femto-VINIR: Few-cycle femtosecond optical pulses in the visible and near-infrared**
Bache, M., Bang, O., Krolikowski, W., Jepsen, P. U., Cooke, D. & Wise, F. W.
Forskningsrådene - STVF
01/04/2009 → 31/03/2012
Project: Research

**Optical transducer systems: Optical microphones, accelerometers and pressure transducers based on FBG (Fiber Bragg Grating) technology and optical detectors**
Infrared high-power lasers and broadband light sources based on novel soft glass fiber technology
Thomsen, C. L., Broeng, J., Bang, O. & Keiding, S. R.
Forsk. Andre offentlige og private - Nordiske
01/09/2009 → 31/08/2012
Project: Research

ITRUS: Intelligent Tapers and Seeding for taming the optical Rogue wave and develop stable deep-blue Supercontinuum light sources
Bang, O., Frosz, M. H., Møller, U. V., Dudley, J. M., Thomsen, C. L. & Matsson, K.
Forskningsrådene - Andre
01/05/2010 → 30/04/2013
Project: Research

Polymer-fibre based biosensor based on nonlinear optical effects
Frosz, M. H., Bang, O., Dudley, J. & Pedersen, L.
Forskningsrådene - STVF
01/03/2008 → 01/03/2011
Project: Research

Træktårn til mikrostrukturerede optiske polymerfibre
Bang, O.
Forskningsrådene - STVF
01/10/2004 → 30/09/2005
Project: Research

Jorck og Hustrus Fond Pris
Bang, O.
Fors. Private danske - Fonde
01/07/2004 → 31/10/2010
Project: Research

All-Optical Signal Processing in Quadratic Nonlinear Materials
Bang, O. & Corney, J. F.
Ukendt
01/09/1999 → 31/03/2002
Project: Research

Activities:

Polarization noise study in all-normal dispersion fiber supercontinuum generation
Bravo Gonzalo, I. (Speaker), Engelsholm, R. D. (Other), Mieritz, A. F. (Other), Sørensen, M. P. (Other), Bang, O. (Other)
29 Jan 2018
Activity: Talks and presentations › Conference presentations

Ultra-low noise supercontinuum source for ultra-high resolution optical coherence tomography at 1300 nm
Bravo Gonzalo, I. (Speaker), Maria, M. (Other), Engelsholm, R. D. (Other), Thomas Feuchter (Other), Lasse Leick (Other), Peter Morten Moselund (Other), Adrian Podoleanu (Other), Bang, O. (Other)
28 Jan 2018
Activity: Talks and presentations › Conference presentations

Optical Coherence Tomography, General aspects and use in Laryngology
Israelsen, N. M. (Lecturer), Jain, D. (Other), Bang, O. (Other)
Phase estimation for global defocus correction in optical coherence tomography
Jensen, M. (Speaker), Israelsen, N. M. (Guest lecturer), Bang, O. (Guest lecturer), Adrian Podoleanu (Guest lecturer)
8 Sep 2017
Activity: Talks and presentations › Conference presentations

Versatile hand-held master-slave optical coherence tomography instrument for non-destructive testing
Manual Marques (Other), Adrian Bradu (Lecturer), Sylvain Rivet (Other), Ramona Cernat (Other), Israelsen, N. M. (Other), Bang, O. (Other), Adrian Podoleanu (Other)
8 Sep 2017
Activity: Talks and presentations › Conference presentations

Resolution dependence on phase extraction by the Hilbert transform in phase calibrated and dispersion compensated ultrahigh resolution spectrometer based OCT
Israelsen, N. M. (Lecturer), Maria, M. (Other), Thomas Feuchter (Other), Adrian Bradu (Other), Adrian Podoleanu (Other), Bang, O. (Other)
7 Sep 2017
Activity: Talks and presentations › Conference presentations

Noise study of all-normal dispersion supercontinuum sources for potential application in optical coherence tomography
Bravo Gonzalo, I. (Speaker), Engelsholm, R. D. (Other), Bang, O. (Other)
6 Sep 2017 → 9 Sep 2017
Activity: Talks and presentations › Conference presentations

Master/slave: a better tool for Gabor filtering optical coherence tomography imaging instruments
Ramona Cernat (Other), Adrian Bradu (Lecturer), Israelsen, N. M. (Other), Bang, O. (Other), Sylvain Rivet (Other), David-Garway Heath (Other), Ranjan Rajendram (Other), Adrian Podoleanu (Other)
29 Jun 2017
Activity: Talks and presentations › Conference presentations

Non-destructive testing of layer-to-layer fusion of a 3D print using ultrahigh resolution optical coherence tomography
Israelsen, N. M. (Lecturer), Michael Maria (Other), Thomas Feuchter (Other), Adrian Podoleanu (Other), Bang, O. (Other)
26 Jun 2017
Activity: Talks and presentations › Conference presentations

Hvorledes kan man udvikle en optiksensor i Danmark
Bang, O. (Speaker)
28 Oct 2010
Activity: Other

Optik i Arbejdstat
Bang, O. (Speaker)
28 Oct 2010
Activity: Talks and presentations › Conference presentations

2nd Workshop on Specialty Optical Fibers and Their Applications
Bang, O. (Speaker)
13 Oct 2010
Activity: Talks and presentations › Conference presentations

2nd Workshop on Specialty Optical Fibers and Their Applications
Bang, O. (Speaker)
13 Oct 2010 → 15 Oct 2010
Activity: Talks and presentations › Conference presentations
OSA Optics & Photonics Congress: Nonlinear Photonics  
Bang, O. (Organizer)  
21 Jun 2010 → 24 Jun 2010  
Activity: Attending an event › Participating in or organising a conference

COST Action 299, Optical Fibers for New Challenges Facing the Information Society  
Bang, O. (Speaker)  
15 Mar 2010 → 17 Mar 2010  
Activity: Talks and presentations › Conference presentations

Optical Fibers for New Challenges Facing the Information Society  
Bang, O. (Speaker)  
5 Mar 2010 → 17 Mar 2010  
Activity: Talks and presentations › Conference presentations

Biosensing with microstructured polymer optical fibers  
Bang, O. (Speaker)  
2 Apr 2009 → 3 Apr 2009  
Activity: Talks and presentations › Conference presentations

Enhanced soliton self-frequency shift by intelligent tapering  
Bang, O. (Participant)  
10 Feb 2009 → 13 Feb 2009  
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.