Ole Bang - DTU Orbit (01/04/2019)
Bang, Ole
oban@fotonik.dtu.dk
Department of Photonics Engineering - Professor, Group Leader
Fiber Sensors & Supercontinuum

Research outputs:

Real-time high-resolution mid-infrared optical coherence tomography
Research output: Research - peer-review › Journal article – Annual report year: 2019

Effects of Solvent Etching on PMMA Microstructured Optical Fiber Bragg Grating
Research output: Research - peer-review › Journal article – Annual report year: 2019

GLS and GLSSe ultrafast laser inscribed waveguides for mid-IR supercontinuum generation
Research output: Research - peer-review › Journal article – Annual report year: 2019

Monitoring of ammonia in an aqueous environment using a supercontinuum-based photoacoustic sensing system
Research output: Research - peer-review › Article in proceedings – Annual report year: 2019

Multispectral photoacoustic sensing for accurate glucose monitoring using a supercontinuum laser
Research output: Research - peer-review › Journal article – Annual report year: 2019

Polymer Optical Fiber Tip Mass Production Etch Mechanism to Achieve CPC Shape for Improved Biosensor Performance
Research output: Research - peer-review › Journal article – Annual report year: 2019

Scaling power, bandwidth, and efficiency of mid-infrared supercontinuum source based on a GeO2-doped silica fiber
Research output: Research - peer-review › Journal article – Annual report year: 2019

Towards Accurate and Label-free Monitoring of Bio-analytes using Supercontinuum based Multispectral Photoacoustic Spectroscopy in the Extended Near-infrared Wavelength regime
Research output: Research - peer-review › Article in proceedings – Annual report year: 2019

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., Israelsen, 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 Journal. 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
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Ge22As20Se58 glass ultrafast laser inscribed waveguides for mid-IR integrated optics
Research output: Research - peer-review › Journal article – Annual report year: 2018

Effects of Solvent Etching on PMMA Microstructured Optical Fiber Bragg Grating
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

High-pulse energy supercontinuum laser for high-resolution spectroscopic photoacoustic imaging of lipids in the 1650-1850 nm region
Dasa, M. K., Markos, C., Maria, M., Petersen, C. R., Moselund, P. M. & Bang, O. 2018 In : Biomedical Optics Express. 9, 4, 9 p., #320585
Research output: Research - peer-review › Journal article – Annual report year: 2018
High Pulse Energy Supercontinuum Laser for Photoacoustic Detection and Identification of Lipids in the 1650-1850 nm Wavelength Region
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Hot water-assisted fabrication of chirped polymer optical fiber Bragg gratings
Research output: Research - peer-review › Journal article – Annual report year: 2018

Influence of the Cladding Structure in PMMA mPOFs Mechanical Properties for Strain Sensors Applications
Research output: Research - peer-review › Journal article – Annual report year: 2018

Largely tunable dispersion chirped polymer FBG
Research output: Research - peer-review › Journal article – Annual report year: 2018

LPG inscription in mPOF for optical sensing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Mechanical characterization of drawn Zeonex, Topas, polycarbonate and PMMA microstructured polymer optical fibres
Research output: Research - peer-review › Journal article – Annual report year: 2018

Microstructured PMMA POF chirped Bragg gratings for strain sensing
Research output: Research - peer-review › Journal article – Annual report year: 2018

Mid-infrared fiber-coupled supercontinuum spectroscopic imaging using a tapered chalcogenide photonic crystal fiber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Mid-infrared multispectral tissue imaging using a chalcogenide fiber supercontinuum source
Research output: Research - peer-review › Journal article – Annual report year: 2018

Mid-IR Supercontinuum Generation in Ultrafast Laser Inscribed Waveguides
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Moiré phase-shifted fiber Bragg gratings in polymer optical fibers
Research output: Research - peer-review › Journal article – Annual report year: 2018
Polarization noise places severe constraints on coherence of all-normal dispersion femtosecond supercontinuum generation
Bravo Gonzalo, I., Engelsholm, 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

Prospective on using fibre mid-infrared supercontinuum laser sources for in vivo spectral discrimination of disease
Seddon, A. B., Napier, B., Lindsay, I., Lamrini, S., Moselund, P. M., Stone, N., Bang, O. & Farries, M. 2018 In : Analyst. 143, 24, p. 5874-5887
Research output: Research - peer-review › Journal article – Annual report year: 2018

Recovering distance information in spectral domain Interferometry
Bradu, A., Israelsen, N. M., Maria, M., Marques, M. J., Rivet, S., Feuchter, T., Bang, O. & Podoleanu, A. 2018 In : Scientific Reports. 8, 1, 16 p., 15445
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

Thermal stability of fiber Bragg gratings inscribed in microstructured polymer optical fibers with a single UV laser pulse
Research output: Research - peer-review › Paper – Annual report year: 2019

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 In : 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 In : Journal of Biophotonics. 11, 9, 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 - peer-review › 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 - peer-review › 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 - peer-review › Article in proceedings – Annual report year: 2017

BDK-doped core microstructured PMMA optical fiber for effective Bragg grating photo-inscription
Research output: Research - peer-review › Letter – 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 - peer-review › Journal article – Annual report year: 2017

Compact multichannel MEMS based spectrometer for FBG sensing
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017
Curvature and position of nested tubes in hollow-core anti-resonant fibers
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Dispersion free full range spectral intensity optical coherence tomography
Research output: Research - peer-review › 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 - peer-review › Article in proceedings – Annual report year: 2017

Efficient Mid-Infrared Supercontinuum Generation in Tapered Large Mode Area Chalcogenide Photonic Crystal Fibers
Research output: Research - peer-review › 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

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

3-D printed sensing patches with embedded polymer optical fibre Bragg gratings
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: 2016

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

High-power picosecond pulse delivery through hollow core photonic band gap fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Hollow-core fibers for high power pulse delivery
Research output: Research - peer-review › Journal article – Annual report year: 2016

Intrinsic pressure response of a single mode cyclo olefin polymer fiber bragg grating
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

Investigation of the in-solution relaxation of polymer optical fibre Bragg gratings
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Low-Loss Hollow-Core Anti-Resonant Fibers With Semi-Circular Nested Tubes
Research output: Research - peer-review › Journal article – Annual report year: 2016

Low loss mid-IR transmission bands using silica hollow-core anisotropic anti-resonant fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Low-loss single-mode hollow-core fiber with anisotropic anti-resonant elements
Habib, S., Bang, O. & Bache, M. 2016 In : Optics Express. 24, 8, 8 p.
Research output: Research - peer-review › Journal article – Annual report year: 2016
Mid-infrared Spectroscopy/Bioimaging: Moving toward MIR optical biopsy
Research output: Research - peer-review › Journal article – Annual report year: 2016

Mid-IR supercontinuum generation beyond 7 μm using a silica-fluoride-chalcogenide fiber cascade
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Modulation-instability biosensing using an As2S3 chalcogenide tapered fiber
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

M-type fiber for exploiting higher-order-modes dispersion for application in mid-IR supercontinuum generation
Research output: Research - peer-review › Article in proceedings – 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 100ºC
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
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

Study of doping non-PMMA polymer fibre canes with UV photosensitive compounds

Temperature insensitive hysteresis free highly sensitive polymer optical fiber Bragg grating humidity sensor

Towards supercontinuum-driven hyperspectral microscopy in the mid-infrared

Towards the mid-infrared optical biopsy

Zeonex microstructured Polymer Optical Fiber 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
Markos, C., Nielsen, K. & Bang, O. 2015 In : Journal of Optics. 17, 10, 8 p., 105603

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
Bundalo, I-L., Nielsen, K. & Bang, O. 2015

Fiber-based portable optical frequency standard for telecommunication

Fiber-optic liquid level monitoring system using microstructured polymer fiber Bragg grating array sensors: performance analysis

High performance liquid-level sensor based on mPOFBG for aircraft applications

High-power picosecond pulse delivery through hollow core photonic band gap fibers

Humidity insensitive step-index polymer optical fibre Bragg grating sensors

Improved Low-loss Hollow Core Anti-Resonant Silica Mid-IR Fibers

Long term strain behavior of PMMA based polymer optical fibers
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.
Research output: Research - peer-review › Journal article – Annual report year: 2015

Polymer Optical Fibre Sensors for Endoscopic Opto-Acoustic Imaging
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Production and Characterization of Polycarbonate Microstructured Polymer Optical Fiber Bragg Grating Sensor
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Robust and accurate detection algorithm for multimode polymer optical FBG sensor system
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Simple Room Temperature Method for Polymer Optical Fibre Cleaving
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 › Article in proceedings – 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: 2016

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
Mid-infrared supercontinuum generation in chalcogenide step-index fibers pumped at 2.9 and 4.5μm
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Mid-infrared supercontinuum generation in concatenated fluoride and chalcogenide glass fibers covering more than three octaves
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

Mid-infrared supercontinuum generation to 12.5μm in large NA chalcogenide step-index fibres pumped at 4.5μm
Research output: Research - peer-review › Journal article – Annual report year: 2014

Photo-acoustic imaging of coronary arteries with polymer optical fibers
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

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

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
Research output: Research - peer-review › Journal article – Annual report year: 2014

THz Tube Waveguides With Low Loss, Low Dispersion, and High Bandwidth
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

THz waveguides, devices and hybrid polymer-chalcogenide photonic crystal fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

THz Waveguides, Devices and Hybrid Polymer-chalcogenide Photonic Crystal Fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2014

UV-Induced prevention of biofilm formation inside medical tubes and catheters
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Coherent and Incoherent Rogue Waves in Seeded Supercontinuum Generation
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Connectorization of fibre Bragg grating sensors recorded in microstructured polymer optical fibre
Research output: Research - peer-review › Conference article – Annual report year: 2013

Fabrication and characterization of porous-core honeycomb bandgap THz fibers
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Gain-switched all-fiber lasers and quasi-continuous wave supercontinuum generation
Research output: Research - peer-review › Ph.D. thesis – Annual report year: 2014
Gain-switched all-fiber laser with narrow bandwidth
Larsen, C., Giesberts, M., Nyga, S., Fitzau, O., Hoffmann, H. D. & Bang, O. 2013 In : Optics Express. 21, 10, p. 12302-12308
Research output: Research - peer-review › Journal article – Annual report year: 2013

Gain-switched, Yb-doped, all-fiber laser with narrow bandwidth
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Highly photosensitive polymethyl methacrylate microstructured polymer optical fiber with doped core
Sáez-Rodríguez, D., Nielsen, K., Rasmussen, H. K., Bang, O. & Webb, D. J. 2013 In : Optics Letters. 38, 19, p. 3769-3772
Research output: Research - peer-review › Journal article – Annual report year: 2013

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
Marko, 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

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
Research output: Research - peer-review › Article in proceedings – Annual report year: 2013

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
Sørensen, S. T., Bang, O., Wetzel, B. & Dudley, J. M. 2012 In : Optics Communications. 285, 9, p. 2451-2455
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

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
Supercontinuum Generation in Uniform and Tapered Photonic Crystal Fibers

Supercontinuum generation in ZBLAN fibers—detailed comparison between measurement and simulation

Tapered photonic crystal fibers for blue-enhanced supercontinuum generation

Temperature compensated, humidity insensitive, high-T, TOPAS FBGs for accelerometers and microphones

The role of phase coherence in seeded supercontinuum generation

THz Photonic Band-Gap Prisms Fabricated by Fiber Drawing

Tunable Polymer Fiber Bragg Grating (FBG) Inscription: Fabrication of Dual-FBG Temperature Compensated Polymer Optical Fiber Strain Sensors
Yuan, S. W., Stefani, A. & Bang, O. 2012 In : I E E E Photonics Technology Letters. 24, 5, p. 401-403

Polymer fiber waveguides for terahertz radiation

870nm Bragg grating in single mode TOPAS microstructured polymer optical fibre

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
Dark solitons in nonlinear media with arbitrary degree of non locality
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Direct probing of evanescent field for characterization of porous terahertz fibers
Research output: Research - peer-review › Journal article – Annual report year: 2011

Gain-switched CW fiber laser for improved supercontinuum generation in a PCF
Research output: Research - peer-review › Journal article – Annual report year: 2011

Group-Acceleration Matching in Tapered Optical Fibers for Maximising the Power in the Blue-Edge of a Supercontinuum
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Higher order moment description of supercontinuum noise and rogue wave statistics
Sørensen, S. T., Bang, O. & Dudley, J. M. 2011
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2011

Highly sensitive and simple method for refractive index sensing of liquids in microstructured optical fibers using four-wave mixing
Frosz, M. H., Stefani, A. & Bang, O. 2011 In : Optics Express. 19, 11, p. 10471-10484
Research output: Research - peer-review › Journal article – Annual report year: 2011

Humidity insensitive TOPAS polymer fiber Bragg grating sensor
Yuan, S. W., Khan, L., Webb, D. J., Kalli, K., Rasmussen, H. K., Stefani, A. & Bang, O. 2011 In : Optics Express. 19, 20, p. 19731-19739
Research output: Research - peer-review › Journal article – Annual report year: 2011

Humidity sensitivity of TOPAS optical fibre Bragg grating
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2011

Improved thermal and strain performance of annealed polymer optical fiber Bragg gratings
Research output: Research - peer-review › Journal article – Annual report year: 2011

Influence of Two Photon Absorption on Soliton Self-Frequency Shift
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Label-free biosensing with high sensitivity in dual-core microstructured polymer optical fibers
Markos, C., Yuan, W., Vlachos, K., Town, G. E. & Bang, O. 2011 In : Optics Express. 19, 8, p. 7790-7798
Research output: Research - peer-review › Journal article – Annual report year: 2011
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

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 fibre Bragg grating recorded in TOPAS cyclic olefin copolymer
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

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 › Conference 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]
Bache, M., Bang, O., Zhou, B., Krolikowski, W. & Wise, F. W. 2010 Proceedings WLMI.
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

Fiber-optical microphones and accelerometers based on polymer optical fiber Bragg gratings: [invited]
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
Town, G. E., McCosker, R., Yuan, S. W. & Bang, O. 2010 In : Optics Letters. 35, 6, p. 856-858
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)ODEX.
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

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

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

Dispersion-engineered and highly-nonlinear microstructured polymer optical fibres
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, CLEO/Europe - EQEC. IEEE
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Low-loss and bendable THz fiber with tailored dispersion
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

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

Multi-order nonlinear diffraction in second harmonic generation
Saltiel, S. M., Neshev, D., Krolikowski, W., Arie, A., Bang, O. & Kivshar, Y. S. 2009
Research output: Research - peer-review › Poster – 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 › Article in proceedings – Annual report year: 2009

Ultrasensitive 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
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

Increasing the blue-shift of a supercontinuum by modifying the fiber glass composition
Frosz, M. H., Moselund, P. M., Rasmussen, P. D., Thomsen, C. L. & Bang, O. 2008 In : Optics Express. 16, 25, p. 21076-21086
Research output: Research - peer-review › Journal article – Annual report year: 2008

Label-free and selective nonlinear fiber-optical biosensing
Research output: Research - peer-review › Journal article – Annual report year: 2008

Limits to compression with cascaded quadratic soliton compressors
Bache, M., Bang, O., Krolikowski, W., Moses, J. & Wise, F. W. 2008 In : Optics Express. 16, 5, p. 3273-3287
Research output: Research - peer-review › Journal article – Annual report year: 2008
Finite-difference modeling of Bragg fibers with ultrathin cladding layers via adaptive coordinate transformation
Shyroki, D., Lægsgaard, J., Bang, O. & Skorobogatyi, M. 2007
Research output: Research - peer-review › Poster – Annual report year: 2007

General covariance in computational electrodynamics
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2007

Infiltrated microstructured fibers as tunable and nonlinear optical devices
Rosberg, C. R., Bennet, F., Neshev, D. N., Sukhorukov, A. A., Krolikowski, 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: 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

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 soliton pulse compression
Bache, M., Bang, O., Moses, J. & Wise, F. 2007 Technical Digest OSA Nonlinear Optics. OSA, p. TuC5
Research output: Research - peer-review › Article in proceedings – 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

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
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
Rindorf, L. H. & Bang, O. 2007
Research output: Research - peer-review » Poster – Annual report year: 2007

Soliton compression to few-cycle pulses by cascaded quadratic nonlinearities
Research output: Research - peer-review » Article in proceedings – Annual report year: 2007

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

Supercontinuum generation in photonic crystal fibers using quasi-CW pumping
Frosz, M. H., Bang, O. & Bjarklev, A. O. 2007
Research output: Research - peer-review » Conference abstract for conference – Annual report year: 2007

Temporal nonlinear beam dynamics in infiltrated photonic crystal fibers
Bennet, F., Rosberg, C. R., Neshev, D. N., Rasmussen, P. D., Bang, O., Krolikowski, W., Bjarklev, A. O. & Kivshar, Y. S. 2007
Research output: Research - peer-review » Poster – Annual report year: 2007

The role of the second zero-dispersion wavelength in generation of supercontinua and bright-bright soliton-pairs across the zero-dispersion wavelength: erratum
Frosz, M. H., Falk, P. A. & Bang, O. 2007 In : Optics Express. 15, 8, p. 5262-5263
Research output: Research - peer-review » Journal article – Annual report year: 2007

Tunable all-optical devices based on liquid-filled photonic crystal fibers
Rosberg, C. R., Bennet, F., Neshev, D. N., Rasmussen, P. D., Bang, O., Krolikowski, W., Bjarklev, A. O. & Kivshar, Y. S. 2007
Research output: Research - peer-review » Conference abstract for conference – Annual report year: 2007

Tunable Beam Diffraction in Infiltrated Microstructured Fibers
Research output: Research - peer-review » Conference abstract for conference – Annual report year: 2007
Tunable diffraction and self-defocusing in liquid-filled photonic crystal fibers
Rosberg, C. R., Bennet, F. H., Neshev, D. N., Rasmussen, P. D., Bang, O., Krolikowski, W., Bjarklev, A. O. & Kivshar, Y. S. 2007 In : Optics Express. 15, 19, p. 12145-12150
Research output: Research - peer-review › Journal article – Annual report year: 2007

Tunable nonlinear beam defocusing in infiltrated photonic crystal fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2007

A microstructured Polymer Optical Fiber Biosensor
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

Biosensing using microstructured polymer optical fibers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

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

Localized biosensing with Topas microstructured polymer optical fiber

Microstructured Optical Fibers, fundamental properties and biosensor applications
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

Microstructured polymer optical fiber biosensors for detection of DNA and antibodies

Modulational instability in generalized nonlinear optical media
Research output: Research - peer-review › Book chapter – Annual report year: 2006

MPOF Biosensors
Bang, O. 2006 Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2006

Nanoengineering of photonic crystal fibers for supercontinuum spectral shaping
Frosz, M. H., Sørensen, T. & Bang, O. 2006 In : Journal of the Optical Society of America - B. 23, 8, p. 1692-1699
Research output: Research - peer-review › Journal article – Annual report year: 2006
Nonlocal description of X waves in quadratic nonlinear materials
Research output: Research - peer-review › Journal article – Annual report year: 2006

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

Soliton collision and Raman gain regimes in continuous-wave pumped supercontinuum generation
Frosz, M. H., Bang, O. & Bjarklev, A. O. 2006 In : Optics Express. 14, 20, p. 9391-9407
Research output: Research - peer-review › Journal article – Annual report year: 2006

Stability of two-dimensional spatial solitons in nonlocal nonlinear media
Research output: Research - peer-review › Journal article – Annual report year: 2006

Stable rotating dipole solitons in nonlocal optical media
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2006

Supercontinuum generation in fibers infiltrated with liquid crystals
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2006

The influence of input pump polarization on supercontinuum generation in photonic crystal fibers
Towards biochips using microstructured optical fiber sensors
Rindorf, L. H., Hoiby, P. E., Jensen, J. B., Pedersen, L. H., Bang, O. & Geschke, O. 2006 In : Analytical and Bioanalytical Chemistry. 385, 8, p. 1370-1375
Research output: Research - peer-review › Journal article – Annual report year: 2006

Tuning quadratic nonlinear photonic crystal fibers for zero group-velocity mismatch
Research output: Research - peer-review › Article in proceedings – Annual report year: 2006

Tuning quadratic nonlinear photonic crystal fibers for zero group-velocity mismatch
Research output: Research - peer-review › Journal article – Annual report year: 2006

Biomolecule detection with integrated photonic crystal fiber sensor
Research output: Research - peer-review › Article in proceedings – Annual report year: 2005

Dark soliton formation and interaction in nonlocal nonlinear thermal media
Petersen, D. E., Krolikowski, W. Z., Neshev, D., Bang, O. & Wyller, J. 2005
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2005

Escape angles for out-of-phase nematicons
Rasmussen, P. D., Bang, O. & Krolikowski, W. Z. 2005
Research output: Research - peer-review › Poster – Annual report year: 2005

High-resolution, real-time imaging using a fiber-based optical coherence tomography system
Research output: Research - peer-review › Poster – Annual report year: 2005

Modulation instability in nonlocal chi2-model
Wyller, J., Krolikowski, W. Z., Bang, O., Petersen, D. E. & Rasmussen, J. J. 2005
Research output: Research - peer-review › Poster – Annual report year: 2005

Nano-engineering of photonic crystal fibers for supercontinuum generation
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2005

Nonlinear wave dynamics in nonlocal media
Rasmussen, J. J., Bang, O., Krolikowski, W. & Wyller, J. 2005
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2005

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

Observation of attraction of dark solitons
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
Attraction of nonlocal dark optical solitons
Research output: Research - peer-review » Journal article – Annual report year: 2004

A nonlocal description of two-color parametric solitons
Nikolov, N. I., Neshev, D., Bang, O., Krolikowski, W. Z. & Wyller, J. 2004
Research output: Research - peer-review » Poster – Annual report year: 2004

Bubble generation in a twisted and bent DNA-like model
Research output: Research - peer-review » Journal article – Annual report year: 2004

Cob-web microstructured fibers optimized for supercontinuum generation with picosecond pulses
Research output: Research - peer-review » Journal article – Annual report year: 2004

Complete modulational-instability gain spectrum of nonlinear quasi-phase-matching gratings
Research output: Research - peer-review » Journal article – Annual report year: 2004

Dispersion engineered cob-web photonic crystal fibers for efficient supercontinuum generation
Research output: Research - peer-review » Article in proceedings – Annual report year: 2004

Dispersion engineered nano-structured cob-web photonic crystal fibres for efficient supercontinuum generation
Sørensen, N. T., Nikolov, N. I., Frosz, M. H., Bang, O., Bjarklev, A. O. & Rasmussen, J. J. 2004
Research output: Research - peer-review » Poster – Annual report year: 2004

Energy funneling in a bent chain of Morse oscillators with long-range coupling
Research output: Research - peer-review » Journal article – Annual report year: 2004

Modulation instability in a nonlocal x(2) – model
Wyller, J., Krolikowski, W., Bang, O. & Rasmussen, J. J. 2004
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 » Journal article – 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 › 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 › Journal article – 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
Research output: Research - peer-review › Article in proceedings – Annual report year: 2004

Second-harmonic generation in microstructured fibres: simultaneous phase-and groupvelocity matching
Nielsen, H., Lægsgaard, J., Bang, O. & Bjarklev, A. O. 2004
Research output: Research - peer-review › Poster – Annual report year: 2004

Simultaneous phase- and group-velocity matching in photonic crystal fibres
Nielsen, H., Lægsgaard, J., Bang, O. & Bjarklev, A. O. 2004
Research output: Research - peer-review › Paper – Annual report year: 2004

Designing the dispersion for optimum supercontinuum bandwidth using picosecond pulses
Research output: Research - peer-review › Article in proceedings – Annual report year: 2003

Improving efficiency of supercontinuum generation in photonic crystal fibers
Improving efficiency of supercontinuum generation in photonic crystal fibres by direct degenerate four-wave mixing

Large amplitude spatial fluctuations in the boundary region of the Bose-Einstein condensate in the Gross-Pitaevskii regime

Nonlinear waves in nonlocal media
Krolikowski, W., Bang, O., Wyller, J. & Rasmussen, J. J. 2003

Nonlocal solitons

Optical Beams in Nonlocal Nonlinear Media

Quadratic solitons as nonlocal solitons
Krolikowski, W., Bang, O., Neshev, D. & Nikolov, N. I. 2003

Quadratic solitons described as nonlocal solitons
Nikolov, N. I., Neshev, D., Bang, O. & Krolikowski, W. 2003

Collapse arrest and soliton stabilization in nonlocal nonlinear media

Complete description of all modulational instability gain bands generated by nonlinear QPM gratings

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

Escape angles in bulk chi(2) soliton interactions
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
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

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

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-stretch 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

Supercontinuum generation with rugged femtosecond fibre lasers
Rao Delanthabettu Shivarama, S., Bache, M., Moselund, P. M., Zhou, B. & Bang, O.
Anden EU-finansiering
15/02/2017 → 14/02/2020
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
Bravo Gonzalo, I., Bang, O., Sørensen, M. P., Lægsgaard, J., Dudley, J. M. & Genty, G.
Grundforskningsfonden
01/09/2015 → 07/11/2018
Project: PhD

Low-noise supercontinuum lasers for Optical Coherence Tomography systems
Engelsholm, R. D., Bang, O., Thomsen, C. L., Lægsgaard, J., Buczynski, R., Horak, P. & Markos, C.
Technical University of Denmark
01/05/2015 → 23/01/2019
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
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.  
Technical University of Denmark  
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., Schuster, K. & Kalli, 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., Schuster, K. & Keiding, S. R.  
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., Tromborg, B., Firth, W. J., Saffman, M. & 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.
Technical University of Denmark
15/10/2009 → 18/12/2012
Project: PhD

THz-BREW: Terahertz Broadband Relaxation Dynamics of Electrons in Water
Wang, T., Jepsen, P. U., Cooke, D., Bang, O., Zeitler, J. A. & Planken, P. C. M.
Eksternt finansieret virksomhed
15/06/2012 → 09/11/2015
Project: PhD

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

Hollow-core fibers for high power laser applications
Michielotto, M., Bang, O., Lyngsøe, J. K., Lægsgaard, J., Bache, M., Correra, R. A. & Belardi, W.
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., Koch, M. & Keiding, S. R.
Technical University of Denmark
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., Taylor, J. R. & Keiding, S. 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., Minardi, S. & Jedrkiewicz, O.
Technical University of Denmark
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.
Technical University of Denmark
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., Town, G. & Koch, M.
Technical University of Denmark
15/11/2011 → 27/02/2015
Project: PhD

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.
Technical University of Denmark
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., Ul Alam, S. & Ludvigsen, H.
Technical University of Denmark
01/08/2010 → 19/03/2014
Project: PhD
Deep-blue Supercontinuum Light Sources based on Tapered Photonic Crystal Fibres
Sørensen, S. T., Bang, O., Lægsgaard, J., Thomsen, C. L., Travers, J. C. & Genty, G.
Technical University of Denmark
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.
Technical University of Denmark
01/09/2009 → 21/06/2013
Project: PhD

Technology for POFBG fabrication and interrogation
Ganziy, D., Bang, O., Rose, B., Jepsen, P. U., Caucheteur, C. & Albert, J.
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: Mld- 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
Jacobsen, T., Rose, B., Sørensen, O. B., Nielsen, F. K., Hübner, J. & Bang, O.
Forsk. Andre offentlige og private - Nordiske
01/09/2008 → 31/08/2011
Project: Research

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.
Forskningsrådene - STVF
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)
8 Dec 2017
Activity: Talks and presentations › Conference presentations

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 Arbejdslæg
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.