Research outputs:

The aesthetic nature of the birthing room environment may alter the need for obstetrical interventions – an observational retrospective cohort study
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

Enhanced emission from near ultraviolet LED with highly-reflective p-(Al)GaN layer
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2019 › Research › peer-review

UV light assisted antibiotics for eradication of in vitro biofilms
Argyraki, A., Markvart, M., Stavnsbjerg, C., Kragh, K. N., Ou, Y., Bjørndal, L., Bjarnsholt, T. & Petersen, P. M., 1 Dec 2018, In : Scientific Reports. 8, 1, 10 p., 16360.
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Dynamics of a green high-power tunable broad-area GaN diode laser with external-cavity feedback
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2018 › Research › peer-review

Diode laser systems based on nonlinear frequency conversion
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2018 › Research › peer-review

Dynamics of a green high-power tunable external-cavity broad-area GaN diode laser
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Efficiency enhancement of InGaN amber MQWs using nanopillar structures
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Introduction to semiconductor light sources and their biomedical applications
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2018 › Research › Communication

LED Technology for Dental Applications
Room-Light 1:1-Light Simulation Using a Mock-Up of Patient Bedrooms in the Projected New Psychiatric Hospital Bispebjerg

Saturation in ceramic phosphors illuminated by a blue laser diode

Semiconductor Lasers and Diode-based Light Sources for Biophotonics

Tunable High-Power External-Cavity GaN Diode Laser Systems in the Visible Spectral Range

Two-color interpolation of the absorption response for quantitative acousto-optic imaging

Vitamin D enhanced pork from pigs exposed to artificial UVB light in indoor facilities
Barnkob, L. L., Petersen, P. M., Nielsen, J. P. & Jakobsen, J., 2018, In: European Food Research and Technology. 245, 2, p. 411-418

3.5 W of diffraction-limited green light at 515 nm from SHG of a single-frequency tapered diode laser

Depressed Patients Hospitalized in Southeast-Facing Rooms Are Discharged Earlier than Patients in Northwest-Facing Rooms

Effective optimization of surface passivation on porous silicon carbide using atomic layer deposited Al2O3

Effect of dopants on the morphology of porous SiC

Efficient generation of 3.5W laser light at 515nm by frequency doubling a single-frequency high power DBR tapered diode laser
High power diode lasers converted to the visible

How to treat Alzheimer's with new LED light technology

Inactivation of Pseudomonas aeruginosa biofilm after ultraviolet light-emitting diode treatment: a comparative study between ultraviolet C and ultraviolet B

Investigation of saturation effects in ceramic phosphors for laser lighting

Light interventions: a novel approach for sustaining sleep quality and quantity of elite swimmers under conditions of shifted circadian rhythm

New dental applications with LEDs

Phosphor converted laser diode light source for endoscopic diagnostics

Phosphor converted laser diode light source for endoscopic diagnostics
UVB irradiation has a greater efficacy than photodynamic therapy on Enterococcus faecalis
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2018 › Research › peer-review

White light emission from fluorescent SiC with porous surface
Research output: Contribution to journal › Journal article – Annual report year: 2017 › Research › peer-review

Lamp for sunshine simulation
Research output: Patent › Patent – Annual report year: 2016 › Research

340 nm pulsed UV LED system for europium-based time-resolved fluorescence detection of immunoassays
Rodenko, O., Fodgaard, H., Tidemand-Lichtenberg, P., Petersen, P. M. & Pedersen, C., 2016, In : Optics Express. 24, 19, p. 22135-22143
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Combining surface plasmonic and light extraction enhancement on InGaN quantum-well light-emitters
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Comparison of UVB and UVC irradiation disinfection efficacies on Pseudomonas Aeruginosa biofilm
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Does correlated color temperature affect the ability of humans to identify veins?
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Fabrication and surface passivation of porous 6H-SiC by atomic layer deposited films
Lu, W., Ou, Y., Petersen, P. M. & Ou, H., 2016, In : Optical Materials Express. 6, 6, p. 1956-1963
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Glass Quality and Health in Public Housing
Research output: Contribution to conference › Poster – Annual report year: 2016 › Research

Green high-power tunable external-cavity GaN diode laser at 515 nm
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

High-flux focusable color-tunable and efficient white-light-emitting diode light engine for stage lighting
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review
Hybrid surface structures for efficiency enhancement of fluorescent SiC for white LED application
Research output: Contribution to conference › Paper – Annual report year: 2016 › Research › peer-review

Investigation of the effect of UV-LED exposure conditions on the production of vitamin D in pig skin
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Laser diode based lighting for biomedical applications
Research output: Contribution to conference › Poster – Annual report year: 2016 › Research › peer-review

Photoluminescence Enhancement in Nanotextured Fluorescent SiC Passivated by Atomic Layer Deposited Al2O3 Films
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Photoluminescence enhancement in porous SiC passivated by atomic layer deposited Al2O3 films
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Saturation effects of phosphor converted laser diodes
Research output: Contribution to conference › Poster – Annual report year: 2016 › Research › peer-review

Surface passivation of nano-textured fluorescent SiC by atomic layer deposited TiO2
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Tunable high-power narrow-linewidth green external-cavity GaN diode laser
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2016 › Research › peer-review

Tuning range and output power optimization of an external-cavity GaN diode laser at 455 nm
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review

Laser Apparatus with Cascade of Nonlinear Frequency Mixers

5.5 W of Diffraction-Limited Green Light Generated by SFG of Tapered Diode Lasers in a Cascade of Nonlinear Crystals
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

Concept for power scaling second harmonic generation using a cascade of nonlinear crystals
Development of LED Light Sources for Improved Visualization of Veins: a statistical approach
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2015 › Research › peer-review

Dielectric coating and surface plasmon enhancement of multi-color quantum-well structures
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2015 › Research › peer-review

Fabrication and improvement of nanopillar InGaN/GaN light-emitting diodes using nanosphere lithography
Research output: Contribution to journal › Journal article – Annual report year: 2015 › Research › peer-review

Highly efficient single-pass sum frequency generation by cascaded nonlinear crystals
Research output: Contribution to journal › Journal article – Annual report year: 2015 › Research › peer-review

High-power non linear frequency converted laser diodes
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

Photoluminescence enhancement in nano-textured fluorescent SiC passivated by atomic layer deposited Al2O3 films
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2015 › Research › peer-review

Scalable nanostructuring on polymer by a SiC stamp: optical and wetting effects
Argyraki, A., Lu, W., Petersen, P. M. & Ou, H., 2015
Research output: Non-textual form › Sound/Visual production (digital) – Annual report year: 2015 › Research

Wavelength-conversion efficiency enhancement in nano-textured fluorescent 6H-SiC passivated by atomic layer deposited titanium oxide
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2015 › Research › peer-review
Compact green-diode-based lasers for biophotonic bioimaging
Research output: Contribution to journal › Journal article – Annual report year: 2014 › Research › peer-review

A high power directly diode pumped Ti:sapphire laser with synchronized Yb-fiber amplifier for nonlinear optical microscopy and optical coherence tomography
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

A new approach to sum frequency generation of single-frequency blue light in a coupled ring cavity
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Development of New LED Light Sources for Improved Visualization of Bio-samples
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2014 › Research › peer-review

Dynamic behaviors of a broad-area diode laser with lateral-mode-selected external feedback
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2015 › Research › peer-review

Dynamics of a broad-area diode laser with lateral-mode-selected long-cavity feedback
Research output: Contribution to journal › Journal article – Annual report year: 2014 › Research › peer-review

Future Solid State Lighting Based on Light Emitting Laser Diodes
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2014 › Research › peer-review

Future Solid State Lighting using LEDs and Diode Lasers
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2014 › Research › peer-review

Generation of 3.5 W of diffraction-limited green light from SHG of a single tapered diode laser in a cascade of nonlinear crystals
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Power Scaling of Nonlinear Frequency Converted Tapered Diode Lasers for Biophotonics
Research output: Contribution to journal › Journal article – Annual report year: 2014 › Research › peer-review
Slutrapport for Hybrid belysning på skolebænken
Research output: Book/Report › Report – Annual report year: 2014 › Research › peer-review

Surface plasmon coupling dynamics in InGaN/GaN quantum-well structures and radiative efficiency Improvement
Research output: Contribution to journal › Journal article – Annual report year: 2014 › Research › peer-review

Degradation Processes in High-Power Diode Lasers under External Optical Feedback
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2013 › Research › peer-review

Dynamic miniature lighting system with low correlated colour temperature and high colour rendering index for museum lighting of fragile artefacts
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2013 › Research › peer-review

Efficient concept generating 3.9 W of diffraction-limited green light with spectrally combined tapered diode lasers
Research output: Contribution to journal › Conference article – Annual report year: 2013 › Research › peer-review

Generation of single-frequency tunable green light in a coupled ring tapered diode laser cavity
Jensen, O. B. & Petersen, P. M., 2013, In : Optics Express. 21, 5, p. 6076-6081
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Green, compact diode laser-based systems for biophotonics application
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2013 › Research › peer-review

Green, compact diode laser-based systems for biophotonics application
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2013 › Research › peer-review

How does external feedback cause AlGaAs-based diode lasers to degrade?
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Intelligent styring af dynamisk LED belysning
Research output: Book/Report › Report – Annual report year: 2013 › Research

Method of stabilizing a laser apparatus with wavelength converter
Origin of low quantum efficiency of photoluminescence of InP/ZnS nanocrystals

Resonant Plasmonic Enhancement of InGaN/GaN LED using Periodically Structured Ag Nanodisks

Simulation Tool for Designing off-Grid PV Applications for the Urban Environments

Single-frequency blue light generation by single-pass sum-frequency generation in a coupled ring cavity tapered laser

Spectral properties of a broad-area diode laser with off-axis external-cavity feedback

The impact of external optical feedback on the degradation behavior of high-power diode lasers

CO₂ neutralt armatur – CopenHybride

Dansk LED - Museumsbelysning

Dual-wavelength high-power diode laser system based on an external-cavity tapered amplifier with tunable frequency difference

Efficient concept for generation of diffraction-limited green light by sum-frequency generation of spectrally combined tapered diode lasers
Widely Tunable High-Power Tapered Diode Laser at 1060 nm
Research output: Contribution to journal › Journal article – Annual report year: 2011 › Research › peer-review

1.38 W tunable high-power narrow-linewidth external-cavity tapered amplifier at 670 nm
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2010 › Research › peer-review

All passive synchronized Q-switching of a quasi-three-level and a four-level Nd:YAG laser
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Autofluorescence of pigmented skin lesions using a pulsed UV laser with synchronized detection: clinical results
Research output: Contribution to journal › Conference article – Annual report year: 2010 › Research › peer-review

Efficient quasi-three-level Nd:YAG laser at 946 nm pumped by a tunable external cavity tapered diode laser
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

High-power green light generation by second harmonic generation of single-frequency tapered diode lasers
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2010 › Research › peer-review

‘No blue’ LED solution for photolithography room illumination
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2010 › Research › peer-review

‘No Blue’ White LED
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2010 › Research › peer-review

Photonics activities at DTU Fotonik
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review

Tunable high-power narrow-spectrum external-cavity diode laser based on tapered amplifier at 668 nm
Research output: Contribution to journal › Journal article – Annual report year: 2010 › Research › peer-review
Two-wave mixing in broad-area semiconductor amplifier

1.5 W green light generation by single-pass second harmonic generation of a single-frequency tapered diode laser

A general theory of two-wave mixing in nonlinear media

A new approach to assymmetric feedback in a segmented broad area diode laser

A new LED light source for display cases

Catastrophic optical mirror damage in diode lasers monitored during single-pulse operation

Design and Simulation of Next-Generation High-Power, High-Brightness Laser Diodes

External cavity tapered diode pumped laser to generate pulsed UV light for autofluorescence diagnostics

Light emitting diodes as an alternative ambient illumination source in photolithography environment

New light with diodes: light for a brighter future

Photonics engineering in a new light
808 nm tapered diode lasers optimized for high output power and nearly diffraction-limited beam quality in pulse mode operation
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

External cavity second harmonic generation of an external cavity tapered laser (poster)
Research output: Contribution to conference › Poster – Annual report year: 2007 › Research

Generation of more than 300 mW diffraction-limited light at 405 nm by second-harmonic generation of a tapered diode laser with external cavity feedback
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

New LED light sources and lamps for general illumination
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

Novel low-loss 3-element ring resonator for second-harmonic generation of 808nm into 404nm using periodically poled KTP
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research › peer-review

Structure, stability, and spectra of lateral modes of a broad-area semiconductor laser
Research output: Contribution to journal › Journal article – Annual report year: 2007 › Research › peer-review

Two-wave mixing in a broad-area semiconductor amplifier
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2007 › Research

Udvikling af LED lyskilder og lamper. Slutrapport for PSO 337-068
Research output: Book/Report › Report – Annual report year: 2007 › Research

BRIGHTER EU-projekt
Petersen, P. M., 2006.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2006 › Research

External cavity setups for improving the beam quality of broad-stripe diode lasers
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2006 › Research
Near-diffraction-limited segmented broad area diode laser based on off-axis spectral beam combining
Research output: Contribution to journal › Journal article – Annual report year: 2006 › Research › peer-review

Two-wave mixing in a broad-area semiconductor amplifier
Research output: Contribution to journal › Journal article – Annual report year: 2006 › Research › peer-review

An external-cavity laser diode at 635 nm for laser display applications
Research output: Contribution to journal › Journal article – Annual report year: 2005 › Research › peer-review

Efficiency improvements
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2005 › Research

Einsteins teorier bag udviklingen af laseren
Petersen, P. M., 2005, In : Kvant. 16, 2, p. 13-16
Research output: Contribution to journal › Journal article – Annual report year: 2005 › Communication

External cavity setup for beam quality improvement of a broad-stripe segmented diode laser
Thestrup, B. & Petersen, P. M., 2005.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2005 › Research

Guiding of laser modes based on self-pumped four-wave mixing in a semiconductor amplifier
Research output: Contribution to journal › Journal article – Annual report year: 2005 › Research › peer-review

LED-forskning og udvikling i Danmark
Petersen, P. M., 2005.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2005 › Research

New diode laser architectures and their applications in medicine
Petersen, P. M., 2005.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2005 › Research

Nye LED-lyskilder
Petersen, P. M., 2005.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2005 › Research

Optics and Plasma Research Department annual progress report for 2004
Research output: Book/Report › Report – Annual report year: 2005 › Research

Second-harmonic generation of 405-nm light using periodically poled KTiOPO4 pumped by external-cavity laser diode with double grating feedback
Research output: Contribution to journal › Journal article – Annual report year: 2005 › Research › peer-review
Self-injection locking of an extraordinarily wide broad-area diode laser with a 1000-μm-wide emitter
Research output: Contribution to journal › Journal article – Annual report year: 2005 › Research › peer-review

Tunable high-power narrow-linewidth semiconductor laser based on an external-cavity tapered amplifier
Research output: Contribution to journal › Journal article – Annual report year: 2005 › Research › peer-review

Udvikling af fremtidens LED-lyskilder
Petersen, P. M. & Dam-Hansen, C., 2005.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2005 › Research

Excitation and amplification of lateral array modes in a broad area laser diode using asymmetric feedback
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2004 › Research

Improvement of spatial and temporal coherence of a broad area laser diode using an external-cavity design with double grating feedback
Research output: Contribution to journal › Journal article – Annual report year: 2004 › Research › peer-review

Improvement of the beam quality of a 1000 μm wind broad-area diode laser with self-injection phase locking in an external cavity
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2004 › Research › peer-review

Improvement of the beam quality of a broad-area diode laser using double feedback from two external mirrors
Research output: Contribution to journal › Journal article – Annual report year: 2004 › Research › peer-review

Lateral mode selection in a broad area laser diode by self-injection locking with a mirror stripe
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2004 › Research › peer-review

Nonlinear optical effects in high power diode lasers (invited lecture)
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2004 › Research

Optics and Fluid Dynamics Department annual progress report for 2003
Bindslev, H., Hanson, S. G., Lynov, J-P., Petersen, P. M. & Skaarup, B., 2004, Roskilde: Risø National Laboratory. 112 p. (Denmark. Forskningscenter Risoe. Risoe-R; No. 1453(EN)).
Research output: Book/Report › Report – Annual report year: 2004 › Research

Spatial and spectral control of high-power diode lasers using phase conjugate mirrors
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2004 › Research › peer-review
Phase locking of laser diode with microlens (poster)
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2002 › Research

Polarization coupling of two broad area laser diodes with external feedback (poster)
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2002 › Research

Power coupling of two broad area laser diodes with external feedback
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2002 › Research

A novel diode laser system for photodynamic therapy
Research output: Contribution to journal › Journal article – Annual report year: 2001 › Communication

Center for Biomedical Optics and New Laser Systems
Petersen, P. M., 2001, In : DOPS-Nyt. 16, 4, p. 46
Research output: Contribution to journal › Journal article – Annual report year: 2001 › Communication

Development of diode laser systems for photodynamic therapy (poster)
Research output: Contribution to conference › Poster – Annual report year: 2001 › Research

Fotorefraktive materialer - et skoleeksempel inden for den ikke-lineære optik
Research output: Contribution to journal › Journal article – Annual report year: 2001 › Research › peer-review

New diode laser architectures using phase conjugators
Petersen, P. M., 2000.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2000 › Research

Nonlinear cross talk between gratings recorded in BaTiO3 by mutually incoherent beam pairs
Research output: Contribution to journal › Journal article – Annual report year: 2000 › Research › peer-review

Phase conjugate high power laser diode arrays (Invited talk)
Petersen, P. M., 2000.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2000 › Research
Stability of the single-mode output of a laser diode array with phase conjugate feedback
Research output: Contribution to journal › Journal article – Annual report year: 2000 › Research › peer-review

A high power laser diode array with external phase conjugate feedback
Petersen, P. M., 1999.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1999 › Research

Experimental observation of nonlinear grating cross talk in multibeam photorefractive recording
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1999 › Research

High-power lasers for photodynamic therapy
Petersen, P. M., 1999.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1999 › Research

Nonlinear grating interactions in multibeam photorefractive recording: Theoretical investigation
Research output: Contribution to journal › Journal article – Annual report year: 1999 › Research › peer-review

Optics in Denmark 1999: DOPS white book
Research output: Book/Report › Book – Annual report year: 1999 › Research › peer-review

Phase locking and frequency doubling of laser diode arrays
Petersen, P. M., 1999.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1999 › Research

Phase locking of laser diode arrays using a photorefractive Rh:BaTiO3 crystal (Invited paper)
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1999 › Research

Photorefractive holographic storage: Fundamental limits and new materials
Johansen, P. M. & Petersen, P. M., 1999.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1999 › Research

Physical origin of laser frequency scanning induced by photorefractive phase-conjugate feedback
Research output: Contribution to journal › Journal article – Annual report year: 1999 › Research › peer-review

Progress in high brightness laser diode arrays
Petersen, P. M., 1999.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1999 › Research

Reduction of photoexcited carriers modulation due to a long distance photoelectron pass in photorefractive Bi12SiO20
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1999 › Research
Single mode laser diode array with external feedback
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 1999 › Research

Kinetics of higher order combinational gratings in photorefractive media: Diffusion regime
Research output: Contribution to journal › Journal article – Annual report year: 1998 › Research › peer-review

New laser systems using phase conjugate feedback
Petersen, P. M., 1998.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1998 › Research

Nonlinear cross talk between mutually incoherently recorded gratings in BaTiO3
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 1998 › Research

Nonlinear self-defocusing in doped silica sono-gels (vol 81, pg 7728, 1997)
Research output: Contribution to journal › Journal article – Annual report year: 1998 › Research › peer-review

Optical storage in photorefractive materials
Petersen, P. M., 1998.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1998 › Research

Optics for medical diagnostics
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 1998 › Research

Single-mode high-power semiconductor lasers using phase conjugation
Research output: Contribution to journal › Journal article – Annual report year: 1998 › Communication

Single-mode operation of a laser-diode array with frequency-selective phase-conjugate feedback
Research output: Contribution to journal › Journal article – Annual report year: 1998 › Research › peer-review

Single mode operation of laser diode arrays using frequency selective phase conjugate feedback
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 1998 › Research

Single-mode operation of laser diode arrays using photorefractive phase conjugators (Invited paper)
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 1998 › Research

Suppressing self-induced frequency scanning of a phase conjugate diode laser array with using counterbalance dispersion
Tunable single-mode operation of a high-power laser-diode array by use of an external cavity with a grating and a photorefractive phase-conjugate mirror
Research output: Contribution to journal › Journal article – Annual report year: 1998 › Research › peer-review

Dynamic grating formation in LiNbO₃:Fe crystals under influence of an externally applied magnetic field
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1997 › Research

En ny optikuddannelse i Danmark?
Petersen, P. M., 1997, In : DOPS-Nyt. 12, 1, p. 6
Research output: Contribution to journal › Journal article – Annual report year: 1997 › Communication

Krystaller som harddiske
Petersen, P. M., Dam-Hansen, C. & Johansen, P. M., 1997, In : Geologisk Nyt. 4, p. 6-8
Research output: Contribution to journal › Journal article – Annual report year: 1997 › Communication

Laseren og nye perspektiver for vekselvirkning mellem lys og stof
Petersen, P. M., 1997.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1997 › Research

Lasers with phase conjugate feedback
Petersen, P. M., 1997.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1997 › Research

Local diffuse reflectance from three-layered skin tissue structures
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1997 › Research

New strong higher order spatial harmonic gratings induced by multiwave interaction in photorefractive Bi₄SiO₁₂-SiO₂
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1997 › Research

Nonlinear optics - a new field for organic and inorganic materials
Petersen, P. M., 1997.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1997 › Research

Nonlinear self-defocusing in doped silica sono-gels
Research output: Contribution to journal › Journal article – Annual report year: 1997 › Research › peer-review

Optisk datalagring i ulineære materialer
Petersen, P. M., Dam-Hansen, C. & Johansen, P. M., 1997, In : DOPS-Nyt. 12, 4, p. 4-7
Research output: Contribution to journal › Journal article – Annual report year: 1997 › Research
Laseren og nye perspektiver for vekselvirkning mellem lys og stof
Petersen, P. M., 1996.
Research output: Contribution to journal – Journal article – Annual report year: 1996 – Communication

Lysudbredelse i humant væv
Research output: Contribution to journal – Journal article – Annual report year: 1996 – Communication

Magnetophotorefractive effect in LiNbO₃:Fe crystals: theory and experiments

Nonlinear crosstalk in photorefractive storage
Petersen, P. M. & Johansen, P. M., 1996.
Research output: Contribution to conference – Conference abstract for conference – Annual report year: 1996 – Research

Nonlinear self-refraction of Gaussian laser beams in silica sono-gels
Petersen, P. M., 1996.
Research output: Contribution to conference – Conference abstract for conference – Annual report year: 1996 – Research

Nonlinear self-refraction of Gaussian laser beams in silica sono-gels doped with copper tetrasulfonated phthalocyanine
Research output: Contribution to conference – Conference abstract for conference – Annual report year: 1996 – Research

Strong coupling between coherent gratings due to nonlinear spatial frequency mixing in Bi₁₂SiO₂₀
Andersen, P. E., Buchhave, P. & Petersen, P. M., 1996, In : Optics Communications. 128, p. 185-192

Theory of nonlinear multiple-grating interaction in diffusion-dominated photorefractive media

Twin-laser biosensor
Petersen, P. M., 1996.
Research output: Contribution to conference – Conference abstract for conference – Annual report year: 1996 – Research

Valg af optiske komponenter
Petersen, P. M., 1996.
Research output: Contribution to conference – Conference abstract for conference – Annual report year: 1996 – Research

Basale mekanismer for lysudbredelse i væv
Petersen, P. M., 1995.
Research output: Contribution to conference – Conference abstract for conference – Annual report year: 1995 – Research
Enhanced nonlinear interaction between gratings in drift-dominated photorefractive Bi$_{12}$SiO$_{20}$

Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1995 › Research

Fundamental properties of nonlinear combinations of gratings in Bi$_{12}$SiO$_{20}$ and their applications

Research output: Contribution to journal › Journal article – Annual report year: 1996 › Research

Fundamental properties of photorefractive storage
Petersen, P. M., 1995.

Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1995 › Research

Influence of an externally applied magnetic field on vectorial interaction in LiNbO$_3$:Fe crystals

Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1995 › Research

Magnetic field effect on holographic grating formation in Fe:LiNbO$_3$

Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1995 › Research

Magnetic field enhancement of photovoltaic grating formation in iron-doped lithium niobate crystals

Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 1995 › Research

Nonlinear combinations of gratings in Bi$_{12}$SiO$_{20}$: theory and experiments

Research output: Contribution to journal › Journal article – Annual report year: 1995 › Research › peer-review

Nonlinear combinations of gratings in drift-dominated recording in Bi$_{12}$SiO$_{20}$

Research output: Contribution to journal › Journal article – Annual report year: 1995 › Research › peer-review

Nonlinear grating interaction in photorefractive Bi$_{12}$SiO$_{20}$

Research output: Contribution to journal › Journal article – Annual report year: 1995 › Research › peer-review

Nonlinear optical properties of photorefractive materials

Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 1995 › Research › peer-review

Nonlinear optics at Risø National Laboratory
Petersen, P. M., 1995.

Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1995 › Research
Optical phase conjugation and optical signal processing in photorefractive materials
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1995 › Research

Photorefractive devices
Research output: Contribution to journal › Journal article – Annual report year: 1995 › Research

Properties of photorefractive materials: Linear- and nonlinear aspects
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1995 › Research

Temperature properties of laser-induced interference filters in lithium niobate
Research output: Contribution to journal › Journal article – Annual report year: 1995 › Research › peer-review

The influence of nonlinear interaction between gratings on light amplification in photorefractive BaTiO3
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1995 › Research

Amplitude and phase measurements in photorefractive time average interferometry
Petersen, P. M., 1994.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Crosstalk in dynamic optical interconnects in photorefractive crystals
Research output: Contribution to journal › Journal article – Annual report year: 1994 › Research › peer-review

Crosstalk in photorefractive optical interconnects due to nonlinear mixing of gratings
Research output: Contribution to journal › Journal article – Annual report year: 1994 › Communication

Four-wave mixing in solid
Petersen, P. M., 1994.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Multiple grating interactions in photorefractive interconnects
Andersen, P. E., Petersen, P. M. & Buchhave, P., 1994, Conference on lasers and electro-optics Europe. Piscataway, NJ: The Institute of Electrical and Electronics Engineers, p. 65-66
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1994 › Research

Nonlinear combinations of gratings in BSO
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Nonlinear grating interaction in photorefractive materials
Petersen, P. M., 1994.
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research
Nonlinear interactions between gratings in photorefractive crystals
Petersen, P. M., 1994. 
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Optical processing with photorefractive crystals
Petersen, P. M., 1994. 
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Photorefractive time-average interferometry and holographic optical elements for industrial sensors
Petersen, P. M. & Hanson, S. G., 1994. 
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Polarization properties of a photorefractive Bi_{12}SiO_{20} crystal and their application in an optical correlator
Research output: Contribution to journal › Journal article – Annual report year: 1994 › Research › peer-review

Properties of laser induced gratings in lithium niobate crystals
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 1994 › Research

Quantitative measurement of the vibrational amplitude and phase in photorefractive time-average interferometry: A comparison with electronic speckle pattern interferometry
Rohleder, H., Petersen, P. M. & Marrakchi, A., 1994, In : Journal of Applied Physics. 76, 1, p. 81-84 
Research output: Contribution to journal › Journal article – Annual report year: 1994 › Research › peer-review

Ulineær optik
Research output: Book/Report › Book – Annual report year: 1994 › Research › peer-review

Higher spatial harmonics in nonlinear photorefractive interference filters
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1993 › Research

Photorefractive interference filters: Theory and application
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 1992 › Research

Simple Theory for Degenerate Four-Wave Mixing in Photorefractive Media
Research output: Contribution to journal › Journal article – Annual report year: 1988 › Research › peer-review

Projects:

New light sources based on the nonlinearieties of silicon carbide
Shi, X., Ou, H., Petersen, P. M. & Rottwitt, K. 
01/12/2018 → 30/11/2021 
Project: PhD
PhD Project in Photonics Tecnologies for Treatment & Diagnostics of Alzheimer’s and Dementia
Carstensen, M. S., Petersen, P. M. & Broeng, J.
01/12/2018 → 30/11/2021
Project: PhD

D-Light, Energibesparende diodelaser belysning
Jensen, O. B., Petersen, P. M. & Thorseth, A.
01/09/2014 → 01/09/2017
Project: Research

PigLED: PigLED - Optimal lighting system for pigs
Jakobsen, J., Bang-Berthelsen, I. & Petersen, P. M.
01/01/2017 → 30/09/2020
Project: Research

Tunbare lasers i det synlige og ultraviolette område
Mortensen, J. L., Tidemand-Lichtenberg, P., Buchhave, P., Lodahl, P., Arie, A. & Petersen, P. M.
Forskningsrådsfinansiering
01/06/2003 → 20/11/2006
Project: PhD

Ulineær Dynamik i Halvlederlasere
Blaaberg, S., Rottwitt, K., Petersen, P. M., Tromborg, B., Mørk, J., Willatzen, M. & Grisen, G.
Risø (Løn)
01/11/2002 → 30/01/2007
Project: PhD

Diode laser based lighting
Krasnoshchoka, A., Jensen, O. B. & Petersen, P. M.
Technical University of Denmark
15/04/2016 → 08/06/2019
Project: PhD

UV light source for next generation immunoassay analyzer
Industrial PhD
01/06/2015 → 30/09/2018
Project: PhD

Innovative White Light-emitting Diodes Light Source
Lu, W., Ou, H., Ou, Y., Petersen, P. M., Jensen, F., Chaussende, D. & Friedel, B.
Samfinansieret - Andet
01/09/2014 → 06/12/2017
Project: PhD

Active Photonic Crystal Fibres for High Power Applications
Olausson, C. B. T., Bjarklev, A. O., Hansen, K. P., Petersen, P. M., Ramachandran, S. & Scott, A. M.
ErhvervsPhD-ordningen VTU
01/11/2007 → 24/08/2011
Project: PhD

Syntetisering af nye typer interferensfiltre i fotorefaktive medier.
Dam-Hansen, C., Petersen, P. M., Johansen, P. M., Skeptrup, T. & Bozhevolnyi, S. I.
Risø (Løn)
01/03/1993 → 07/06/1996
**Project: PhD**

**Novel concepts for improving swept sources for Optical Coherence Tomography**
Marschall, S., Andersen, P. E., Pedersen, C., Petersen, P. M., Wojtkowski, M. & Andersson-Engels, S.
EU-finansieret
01/11/2008 → 23/05/2012
Project: PhD

**Hybrid light emitting diode enhanced with emissive nanocrystals**
Kopylov, O., Yvind, K., Kardynal, B., Petersen, P. M., Ohlsson, B. J. & Knoch, J.
Forskningsrådsfinansiering
15/01/2010 → 15/01/2014
Project: PhD

**Fabrication and Characterization of Semiconductor Optical Devices**
Larsson, D., Hvam, J. M., Yvind, K., Kristensen, A., McInerney, J. & Petersen, P. M.
Forskningsrådsfinansiering
15/01/2003 → 30/04/2007
Project: PhD

**Window Pane Coating for photon harvesting**
Buss, T., Kristensen, A., Smith, C., Petersen, P. M., Buchwald, K. & Turnbull, G. A.
Institut, samfinansiering
15/11/2009 → 04/04/2013
Project: PhD

**Pulsed Blue and Ultraviolet Laser System for Fluorescence Diagnostics based on Nonlinear Frequency Conversion**
Cheng, H. P. H., Pedersen, C., Andersen, P. E., Jensen, O. B., Petersen, P. M., Rottwitt, K., Laurell, F. & Thomsen, J. W.
Institut, samfinansiering
15/01/2008 → 22/06/2011
Project: PhD

**Forster energy transfer in hybrid light emitting diode**
Shirazi, R., Petersen, P. M., Kardynal, B., Forchhammer, S., Fontoyont, M. & Miller, P.
1/3 DTU-stip, 2/3 FUR/andet
01/08/2009 → 23/09/2013
Project: PhD

**Polymer Based Nano Optics for Lab-On-A-Chip Micro System**
Gersborg-Hansen, M., Kristensen, A., Petersen, P. M., Drewsen, M. & Levy, U.
DTU-lønnet stipendie
15/12/2004 → 30/04/2008
Project: PhD

**Halvlederkomponenter til optisk kommunikation**
Yvind, K., Hvam, J. M., Birkedal, D., Hansen, O., Petersen, P. M. & White, I. H.
DTU-lønnet stipendie
01/10/1999 → 12/01/2004
Project: PhD

**Composite fibre and solid-state visible light source**
Andersen, M. T., Tidemand-Lichtenberg, P., Pedersen, C., Petersen, P. M., Arie, A. & Dunn, M.
DTU, Samfinansiering
01/03/2006 → 23/09/2009
Project: PhD
Development of high-power diode laser sources for medical and industrial applications
Vijayakumar, D., Petersen, P. M., Jensen, O. B., Thstrup Nielsen, B., Tidemand-Lichtenberg, P., Drewsen, M. & Krakowski, M.
Offentlig finansiering
01/01/2008 → 22/06/2011
Project: PhD

Super bright light-emitting diode
Fadil, A., Ou, H., Dam-Hansen, C., Petersen, P. M., Schmidt, M. S., Paiella, R. & Ohkawa, K.
Forskningsrådfinansiering
01/07/2012 → 17/02/2016
Project: PhD

Thin-film deposition an characterization of new solar cell materials
Cazzaniga, A. C., Schou, J., Pryds, N., Petersen, P. M., Lunney, J. & Siebentritt, S.
Forskningsrådfinansiering
01/06/2013 → 30/09/2016
Project: PhD

Non-contact assessment of food quality using optical imaging methods
Kamran, F., Andersen, P. E., Petersen, P. M., Carstensen, J. M. & Spigulis, J.
Forskningsrådfinansiering
15/01/2011 → 20/08/2015
Project: PhD

New light Sources for Biomedical Applications
Argyraki, A., Petersen, P. M., Dam-Hansen, C., Pedersen, C., Spigulis, J. & Martiny, K. P. J.
Samfinansieret - Andet
15/12/2013 → 11/01/2018
Project: PhD

Advanced optical design for multicolored LED systems for lighting applications
Chakrabarti, M., Dam-Hansen, C., Petersen, P. M., Rottwitt, K., Martinsons, C. & Pedersen, K.
Technical University of Denmark
01/01/2013 → 15/08/2016
Project: PhD

High-power green-yellow diode lasers for medical applications
Müller, A., Petersen, P. M., Andersen, P. E., Jensen, O. B., Rottwitt, K., Drewsen, M. & Rafailov, E.
Technical University of Denmark
01/03/2010 → 15/08/2013
Project: PhD

Daylight as a Driver for Healthier Energy Optimization
Volf, C., Petersen, P. M., Thorseth, A., Markvart, J. & Martiny, K.
01/03/2016 → 30/06/2018
Project: Research

D-Light: Energibesparende diodelaser belysning
Jensen, O. B., Petersen, P. M. & Dam-Hansen, C.
Energiteknologisk Udviklings- og Demonstrationsprogram
01/09/2014 → 30/09/2017
Project: Research

LEDMET: Center for LED metrology
Dam-Hansen, C., Thorseth, A., Lindén, J., Poulsen, P. B. & Petersen, P. M.
01/01/2014 → 31/12/2017
Project: Research
Energibesparende LED farveblandings belysningssystem med høj lyskvalitet
DTU project - Proof of concept
01/01/2012 → 31/12/2013
Project: Research

WWW.BRIGHTER.EU : Brighter - 1705125
Petersen, P. M., Jensen, O. B., Andersen, P. E., Nielsen, B. T. & Chi, M.
Fors. EU - Rammeprogram
01/10/2006 → 31/01/2010
Project: Research

WWW.BRIGHT.EU
Petersen, P. M., Jensen, O. B., Chi, M., Andersen, P. E. & Thestrup Nielsen, B.
Forskningsprojekter - Andre ministerier og styrelser
01/06/2004 → 30/09/2006
Project: Research

A high-brightness diode laser bar system for industrial test
Petersen, P. M., Jensen, O. B. & Thestrup Nielsen, B.
Forskningsprojekter - Andre ministerier og styrelser
01/01/2007 → 30/06/2008
Project: Research

Etablering af LED-belysning i Rosenborg Skatkammer
Nyström, H., Markussen, B., Petersen, P. M., Dam-Hansen, C., Poulsen, P. B. & Thorseth, A.
Forsk. Private danske - Fonde
01/02/2010 → 31/12/2010
Project: Research

A new monolithic semiconductor laser based on nonlinear gain and refractive index : 1705114-1 STVF
Petersen, P. M.
Forskningsprojekter - Andre ministerier og styrelser
03/11/2008 → 18/11/2008
Project: Research

Intelligent styring af dynamisk LED belysning
Forsk. EU - Andre EU-midler
01/01/2011 → 31/12/2012
Project: Research

Danish LED Network
Petersen, P. M., Dam-Hansen, C., Poulsen, P. B., Corell, D. D., Hansen, S. S. & Thorseth, A.
Forsk. Andre statslige danske i øvrigt
15/02/2010 → 31/12/2011
Project: Research

Combined daylight and intelligent LED lighting : Getting the daylight into the buildings
Dam-Hansen, C., Poulsen, P. B., Petersen, P. M., Corell, D. D., Hansen, S. S., Thorseth, A., Traberg-Borup, S., Logadóttir, Á., Orton, I. W., Pedersen, J. E. & Skovsgaard, T.
Forsk. Andre statslige danske i øvrigt
15/02/2010 → 31/12/2011
Project: Research
Hybrid lighting goes to school
Forsk. Private danske - Andre
01/04/2011 → 31/03/2014
Project: Research

Kompakt og effektivt grønt diodelasersystem til medicinske anvendelser
Jensen, O. B., Petersen, P. M., Andersen, P. E. & Müller, A.
Forsk. Andre statslige danske i øvrigt
01/10/2011 → 31/03/2013
Project: Research

Nyt kompakt lasersystem til fremtidens højkvalitets displays
Thestrup Nielsen, B., Jensen, O. B. & Petersen, P. M.
Forsk. Andre statslige danske i øvrigt
30/06/2010 → 31/12/2011
Project: Research

Activities:

High power diode lasers converted to the visible
Ole Bjarlin Jensen (Invited speaker), Anders Kragh Hansen (Invited speaker), Peter E. Andersen (Guest lecturer), Mathias Christensen (Guest lecturer), André Müller (Invited speaker), Mahmoud Tawfieq (Invited speaker), Bernd Sumpf (Invited speaker), Paul Michael Petersen (Invited speaker)
11 Oct 2017
Activity: Talks and presentations › Conference presentations

UVB irradiation has a greater efficacy than photodynamic therapy on Enterococcus Faecalis
Merete Markvart (Speaker), Aikaterini Argyraki (Other), Paul Michael Petersen (Other), Thomas Bjarnsholt (Other), Lars Bjørndal (Other)
15 Sep 2017
Activity: Talks and presentations › Conference presentations

Energy efficient and high quality LED illumination in display cases: New lighting – New LEDs
Paul Michael Petersen (Speaker)
16 Mar 2010 → 17 Mar 2010
Activity: Talks and presentations › Conference presentations

LED - fremtidens belysning
Paul Michael Petersen (Organizer)
3 Dec 2009 → 4 Dec 2009
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

LED - fremtidens belysning
Paul Michael Petersen (Chairman)
3 Dec 2009 → 4 Dec 2009
Activity: Attending an event › Participating in or organising a conference

Press clippings:

Test af batteridrevne lys: De er dårlige, og det dårligste gik i stykker under testen
Paul Michael Petersen & Dennis Dan Corell
20/11/2018
1 item of media coverage
Press/Media: Press / Media