

Jonas Beermann Kristiansen  
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SDU Nano Optics  
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## CV

Name: **Jonas Beermann**

Appointment: Associate Professor.

Place of work: Mads Clausen Institute (MCI), University of Southern Denmark, Campusvej 55, DK-5230 Odense M, Denmark.

Responsible for the lab facility on Nonlinear Scanning Optical Microscopy, Spectroscopy and Surface Enhanced Microscopy.

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**Foreign Languages:**Fluent in English (spoken and written), German (spoken and written).

### Education:

June 28th, 2001 - Cand. Scient. in Physics and Mathematics (Optics Engineer). M.Sc. project "Nonlinear optical properties of porous silicon". Institute of Physics, Aalborg University (AAU), Denmark.

May 3rd, 2006 - PhD Scient. for the thesis "Nonlinear far- and near-field scanning optical microscopy of nanostructures". Department of Physics and Nanotechnology, AAU, Denmark.

### Appointments:

Aug. 2001 – Feb. 2005: PhD.-student at Department of Physics and Nanotechnology, AAU, "Nonlinear optical microscopy of nanostructures".

Feb. 2002 – July 2002: Leave of absence, military service, 6 months.

Feb. 2005 – July 2006: Post doc. at Department of Physics and Nanotechnology, AAU, "Field enhancement via multiple scattering of surface plasmon polaritons". The European Network of Excellence (NoE), project Plasm Nano-Devices (FP6-2002-IST-1-507879).

Aug. 2006 – Jan 2008: Post doc. at Department of Physics and Nanotechnology, AAU, "Plasmo-optical chip technology and spectroscopy". The Strategic Research Council, program committee for Nanoscience and technology, Biotechnology and IT (NABIIT), (Contract no. 2106-05-033).

Feb. 2008 – Dec 2010: Assistant Professor at Institute of Sensors, Signals and Electrotechnics (SENSE), University of Southern Denmark (SDU).

Jan. 2011 – Oct. 2011: Assistant Professor at ITI, SDU.

Oct. 2011 – Dec. 2011: Paternity leave, 3 months.

Nov. 2011 – May 2013: Associate Professor at ITI, SDU.

May 2013 – Present: Associate Professor, Center for Nano Optics, MCI, SDU.

**Programming:**Matlab, Labview, Comsol, LaTeX, Origin, AutoCAD, C++ (Turbo Pascal).

### Project Management and Supervision:

1996 – 2001: Engaged member in 8 full-semester group-projects and 2 full-semester individual projects during the Cand. Scient. Study at Institute of Physics, AAU.

2003 – 2007: Principal supervisor on 3 student projects from 3rd – 6th sem., Co-supervisor on 4 student projects up to 8th sem. at Department of Physics and Nanotechnology, AAU.

2008 – 2011: Co-supervisor on 1 master project with optimization of laser diode properties and 2 bachelor projects at SENSE, SDU.

2012 – Present: Co-supervisor on two master projects (Solar Cells and Nanooptics), Supervisor on four bachelor projects, at least nine 2nd sem. student projects (Energy conversion) and five 1st sem. projects (Windmills) at ITI and MCI, SDU.

**Lecturing:** 2001 – Present: Teaching 11 courses in: Basic Physics; Fiber Optics; Lab work; Spectroscopy; Electro physics; Electro mechanics: (strengths, deformations, thermal designs and cooling); Advanced Mathematics; Signal processing; Fundamental and experimental Acoustics and Optics; Mathematics and Modeling; Physics; Mathematics.

**Memberships:** 2008 – Present: The Danish Optical Society (DOPS).

2008 – Present: The Material Research Society (MRS).

2008 – Present: The International Society for Optical Engineering (SPIE).

**Reviewing:** 2006 – Present: Reviewer for American Physical Society (APS) (Physical Review Letters, Physical Review A, Physical Review B, Physical Review E), American Chemical Society (ACS) (Nanoletters), Optical Society of America (OSA)(Optic Letters, Applied Optics, Optics Express), Material Research Society (MRS), Elsevier (Optics Communications, Optics and Lasers in Engineering), Springer (Journal of Infrared, Millimeter and Terahertz Waves), World Scientific Publishing (Surface Review Letters), Institute of Physics Publishing (Journal of Optics A: Pure and Applied Optics).

**Scientific papers:**52 articles in peer-reviewed international journals, incl. 1 Nature Communications and 4 Nanoletters. +14 articles in popular journals and conference proceedings.

**Web of Knowledge:**H-index 19, Authored items found 68, Number of citations 1156 [by April, 2019]. Researcher ID is F-5471-2013. ORCID ID: 0000-0001-9809-2430. Scopus ID: 55940956400

**Presentations:** 35 talks (15 invited) and 31 posters presented at international conferences.

**Prizes:**3 prizes for best poster presentation (2002, 2003, 2004), Awarded 2nd place in Business talent of Funen 2011 (“Årets fynske erhverstalent”) and among the 6 best in 2008.

**Research interests:**Nonlinear far- and near-field scanning optical microscopy; Field enhancements in metal nanostructures; Nano-optics and Plasmonics; Spectroscopy and Sensing; Raman microscopy; (Thermal)-Photovoltaics, and Absorption Engineering; Plasmonic Color Printing.

## Ansættelse

### Mads Clausen Instituttet (MCI)

SDU

Sønderborg

1. jul. 2023 → present

### Lektor

SDU Nano Optics

SDU

Odense M

1. jul. 2023 → present

## Publikationer

### Vis-SWIR hyperspectral microscopy imaging of plasmonic color printed arrays

Peters, M. S., Yezekyan, T., Eriksen, R. L., Beermann, J., Jørgensen, B. & Bozhevolnyi, S. I., 1. jan. 2025, I: Optics Communications. 574, 5 s., 131135.

### Anapole states in gap-surface plasmon resonators

Yezekyan, T., Zenin, V. A., Beermann, J. & Bozhevolnyi, S. I., 10. aug. 2022, I: Nano Letters. 22, 15, s. 6098-6104

**CheckNano: Nanoparticle detection and sizing**

Fiutowski, J., Gupta, P., Laghrissi, A., Adam, J., Rubahn, H.-G., Beermann, J., Yezekyan, T., Rehmann, H. & Labes, A., 5. aug. 2021.

**Gap-surface plasmon metasurfaces for broadband circular-to-linear polarization conversion and vector vortex beam generation**

Heiden, J. T., Ding, F., Linnet, J., Yang, Y., Beermann, J. & Bozhevolnyi, S. I., 3. maj 2019, I: *Advanced Optical Materials*. 7, 9, 9 s., 1801414.

**Laser Writing of Bright Colors on Near-Percolation Plasmonic Reflector Arrays**

Roberts, A. S., Novikov, S. M., Yang, Y., Chen, Y., Boroviks, S., Beermann, J., Mortensen, N. A. & Bozhevolnyi, S. I., 2019, I: *ACS Nano*. 13, 1, s. 71-77

**Highly stable silver nanoparticles for SERS applications**

Novikov, S. M., Popok, V. N., Evlyukhin, A. B., Hanif, M., Morgen, P., Fiutowski, J., Beermann, J., Rubahn, H. G. & Bozhevolnyi, S. I., 1. jan. 2018, I: *Journal of Physics: Conference Series*. 1092, s. 1-6 012098.

**Highly Stable Monocrystalline Silver Clusters for Plasmonic Applications**

Novikov, S. M., Popok, V. N., Evlyukhin, A. B., Hanif, M., Morgen, P., Fiutowski, J., Beermann, J., Rubahn, H. G. & Bozhevolnyi, S. I., 2017, I: *Langmuir*. 33, 24, s. 6062-6070

**Numerical simulations of nanostructured gold films**

Repan, T., Frydendahl, C., Novikov, S. M., Beermann, J., Bozhevolnyi, S. I., Mortensen, N. A., Stenger, N., Willatzen, M. & Lavrinenko, A., 2017, *Proceedings of the 17th International Conference on Numerical Simulation of Optoelectronic Devices, NUSOD 2017*. IEEE, s. 5-6 8009963

**Optical reconfiguration and polarization control in semi-continuous gold films close to the percolation threshold**

Beermann, J., Novikov, S. M., Bozhevolnyi, S. I., Mortensen, N. A., Frydendahl, C., Repän, T., Geisler, M., Lavrinenko, A. V., Xiao, S. & Stenger, N., 2017, I: *Nanoscale*. 9, 33, s. 12014-12024

**White Light Generation and Anisotropic Damage in Gold Films near Percolation Threshold**

Novikov, S. M., Frydendahl, C., Beermann, J., Zenin, V., Stenger, N., Coello, V., Mortensen, N. A. & Bozhevolnyi, S. I., 2017, I: *ACS Photonics*. 4, 5, s. 1207-1215

**Light extinction and scattering from individual and arrayed high-aspect-ratio trenches in metals**

Roberts, A. S., Søndergaard, T., Chirumamilla, M., Pors, A. L., Beermann, J., Pedersen, K. & Bozhevolnyi, S. I., 4. feb. 2016, I: *Physical Review B*. 93, 7, s. 1-14 075413.

**Enhancement of two-photon photoluminescence and SERS for low-coverage gold films**

Novikov, S. M., Beermann, J., Frydendahl, C., Stenger, N., Coello, V., Mortensen, N. A. & Bozhevolnyi, S. I., 2016, I: *Optics Express*. 24, 15, s. 16743-16751

**Plasmonic channel waveguides in random arrays of metallic nanoparticles**

Pisano, E., Coello, V., García Ortíz, C. E., Chen, Y., Beermann, J. & Bozhevolnyi, S. I., 2016, I: *Optics Express*. 24, 15, s. 17080-17089

**Scattering and extinction from high-aspect-ratio trenches**

Roberts, A. S., Søndergaard, T., Chirumamilla, M., Pors, A. L., Beermann, J., Pedersen, K. & Bozhevolnyi, S. I., 19. nov. 2015. 1 s.

**On-chip detection of radiation guided by dielectric-loaded plasmonic waveguides**

Han, Z., Radko, I. P., Mazurski, N., Desiatov, B., Beermann, J., Albrektsen, O., Levy, U. & Bozhevolnyi, S. I., 2015, I: *Nano Letters*. 15, 1, s. 476-480

**Plasmonic black metals via radiation absorption by two-dimensional arrays of ultra-sharp convex grooves**

Beermann, J., Eriksen, R. L., Holmgaard, T., Pedersen, K. & Bozhevolnyi, S. I., 4. nov. 2014, I: *Scientific Reports*. 4, 7 s., 6904.

**Optical spectroscopy of single Si nanocylinders with magnetic and electric resonances**

Evlyukhin, A. B., Eriksen, R. L., Cheng, W., Beermann, J., Reinhardt, C., Petrov, A., Prorok, S., Eich, M., Chichkov, B. N. & Bozhevolnyi, S. I., 2014, I: *Scientific Reports*. 4, 7 s., 4126.

**Plasmonic black metal polarizers for ultra-short laser pulses**

Søndergaard, T., Skovsen, E., Lemke, C., Holmgaard, T., Leißner, T., Eriksen, R. L., Beermann, J., Bauer, M., Pedersen, K. & Bozhevolnyi, S. I., 2014, *Plasmonics: Metallic Nanostructures and Their Optical Properties XII*. Boardman, A. D. (red.). SPIE - International Society for Optical Engineering, Bind 9163. 11 s. 916308. (Proceedings of SPIE, the International Society for Optical Engineering).

**Plasmonic black gold based broadband polarizers for ultra-short laser pulses**

Skovsen, E., Søndergaard, T., Lemke, C., Holmgaard, T., Leißner, T., Eriksen, R. L., Beermann, J., Bauer, M., Pedersen, K., Bozhevolnyi, S. I. & Søndergaard, T., 18. nov. 2013, I: *Applied Physics Letters*. 103, 21, 211102.

**Highly efficient absorption of visible and near infrared light in convex gold and nickel grooves**

Eriksen, R. L., Beermann, J., Søndergaard, T., Holmgaard, T., Pedersen, K. & Bozhevolnyi, S. I., 28. maj 2013. 1 s.

**Plasmonic black metals by broadband light absorption in ultra-sharp convex grooves**

Beermann, J., Eriksen, R. L., Søndergaard, T., Holmgaard, T., Pedersen, K. & Bozhevolnyi, S. I., 2013, I: *New Journal of Physics*. 15, 1, 16 s., 073007.

**Extraordinary optical transmission with tapered slits: effect of higher diffraction and slit resonance orders**

Søndergaard, T., Bozhevolnyi, S. I., Beermann, J., Novikov, S. M., Devaux, E. & Ebbesen, T. W., 2012, I: *Journal of the Optical Society of America B: Optical Physics*. 29, 1, s. 130-137

**Field Enhancement in Plasmonic Gold Nanostructures on Templates of Anodized Aluminum for Sensor Applications**

Nielsen, P., Albrektsen, O., Beermann, J. & Morgen, P., 2012, *Nanotechnological Basis for Advanced Sensors*. Reithmaier, J. P., Paunovic, P., Kulisch, W., Popov, C. & Petkov, P. (red.). 1. Edition udg. berlin: Springer, s. 275-280 (NATO Science for Peace and Security Series B: Physics and Biophysics).

**Identification of Abnormal Stem Cells Using Raman Spectroscopy**

Harkness, L., Novikov, S. M., Beermann, J., Bozhevolnyi, S. I. & Kassem, M., 2012, I: *Stem Cells and Development*. 21, 12, s. 2152-9 s.

**Optical properties of spherical gold mesoparticles**

Evlyukhin, A. B., Kuznetsov, A. I., Novikov, S. M., Beermann, J., Reinhardt, C., Kiyani, R., Bozhevolnyi, S. I. & Chichkov, B. N., 2012, I: *Applied Physics B*. 106, 4, s. 841-848

**Plasmonic black gold by adiabatic nanofocusing and absorption of light in ultra-sharp convex grooves**

Søndergaard, T., Novikov, S. M., Holmgaard, T., Eriksen, R. L., Beermann, J., Han, Z. H., Pedersen, K. & Bozhevolnyi, S. I., 2012, I: *Nature Communications*. 3, s. 969

**Polarization-resolved two-photon luminescence microscopy of V-groove arrays**

Beermann, J., Novikov, S. M., Holmgaard, T., Eriksen, R. L., Albrektsen, O., Pedersen, K. & Bozhevolnyi, S. I., 2012, I: *Optics Express*. 20, 1, s. 654-662

**Surface-enhanced Raman microscopy of hemispherical shells stripped from templates of anodized aluminum**

Nielsen, P., Novikov, S. M., Beermann, J., Morgen, P., Bozhevolnyi, S. I. & Albrektsen, O., 2012, I: *Journal of Raman Spectroscopy*. 43, 7, s. 834-841

**Field enhancement and extraordinary optical transmission by tapered periodic slits in gold films**

Beermann, J., Søndergaard, T., Novikov, S. M., Bozhevolnyi, S. I., Devaux, E. & Ebbesen, T., 2011, I: New Journal of Physics. 13, 11, 17 s., 063029.

**Localized field enhancements in two-dimensional V-groove metal arrays**

Beermann, J., Novikov, S. M., Søndergaard, T., Rafaelsen, J., Pedersen, K. & Bozhevolnyi, S. I., 2011, I: Journal of the Optical Society of America B: Optical Physics. 28, 3, s. 372-378

**Tuning surface plasmons in interconnected hemispherical Au shells**

Nielsen, P., Novikov, S. M., Beermann, J., Morgen, P., Bozhevolnyi, S. I. & Albrektsen, O., 2011, I: Optics Express. 20, 1, s. 534-546

**Two-photon luminescence microscopy of large-area gold nanostructures on templates of anodized aluminum**

Nielsen, P., Beermann, J., Albrektsen, O., Hassing, S., Morgen, P. & Bozhevolnyi, S. I., 2. aug. 2010, I: Optics Express. 18, 16, s. 17040-52

**Extraordinary optical transmission enhanced by nanofocusing**

Søndergaard, T., Bozhevolnyi, S. I., Novikov, S. M., Beermann, J., Deavux, E. & Ebbesen, T., 2010, I: Nano Letters. 10, 8, s. 3123-3128

**Field Enhancement in Plasmonic Gold Nanostructures on Templates of Anodized Aluminum for Sensor Applications**

Nielsen, P., Albrektsen, O., Beermann, J. & Morgen, P., 2010.

**Raman microscopy of individual living human embryonic stem cells**

Novikov, S. M., Beermann, J., Bozhevolnyi, S. I., Harkness, L. & Kassem, M., 2010, I: Proceedings of SPIE, the International Society for Optical Engineering. 7715, 771537.

**Resonant plasmon nanofocusing by closed tapered gaps**

Søndergaard, T., Bozhevolnyi, S. I., Beermann, J., Novikov, S. M., Devaux, E. & Ebbesen, T. W., 2010, I: Nano Letters. 10, 1, s. 291-295

**Two-Photon Luminescence Microscopy of Tunable Gold Nanostructures Randomly Distributed on Templates of Anodized Aluminum**

Nielsen, P., Albrektsen, O., Beermann, J., Hassing, S., Morgen, P. & Bozhevolnyi, S. I., 2010.

**Two-Photon Luminescence Microscopy of Tunable Gold Nanostructures Randomly Distributed on Templates of Anodized Aluminum**

Nielsen, P., Beermann, J., Albrektsen, O., Hassing, S., Bozhevolnyi, S. I. & Morgen, P., 2010. 7 s.

**Two-Photon Luminescence Microscopy of Tunable Gold Nanostructures Randomly Distributed on Templates of Anodized Aluminum**

Nielsen, P., Albrektsen, O., Morgen, P., Beermann, J., Hassing, S. & Bozhevolnyi, S. I., 2010.

**Plasmonic metasurfaces for waveguiding and field enhancement**

Radko, I., Volkov, V. S., Beermann, J., Evlyukhin, A. B., Søndergaard, T., Boltasseva, A. & Bozhevolnyi, S. I., 1. jan. 2009, I: Laser & Photonics Reviews. 3, 6, s. 575-590

**Surface enhanced Raman microscopy with metal nanoparticle arrays**

Beermann, J., Novikov, S. M., Leosson, K. & Bozhevolnyi, S. I., 1. jan. 2009, I: Journal of Optics A: Pure and Applied Optics. 11, 7, 5 s., 075004.

**Two-photon imaging of field enhancement by groups of gold nanostrip antennas**

Novikov, S. M., Beermann, J., Søndergaard, T., Boltasseva, A. & Bozhevolnyi, S. I., 1. jan. 2009, I: Journal of the Optical Society of America B: Optical Physics. 26, 11, s. 2199-2203

**Surface enhanced Raman imaging: periodic arrays and individual metal nanoparticles**

Beermann, J., Novikov, S. M., Leosson, K. & Bozhevolnyi, S. I., 2009, I: Optics Express. 17, 15, s. 12698-12705

**Surface-enhanced Raman imaging of fractal shaped periodic metal nanostructures**

Beermann, J., Novikov, S. M., Albrektsen, O., Nielsen, M. G. & Bozhevolnyi, S. I., 2009, I: Journal of the Optical Society of America B: Optical Physics. 26, 12, s. 2370-2376

**Theoretical analysis and experimental demonstration of resonant light scattering from metal nanostrips on quartz**

Jung, J., Søndergaard, T., Beermann, J., Boltasseva, A. & Bozhevolnyi, S. I., 2009, I: Journal of the Optical Society of America B: Optical Physics. 26, 1, s. 121-124

**Nonlinear microscopy of localized field enhancements in fractal shaped periodic metal nanostructures**

Beermann, J., Evlyukhin, A., Boltasseva, A. & Bozhevolnyi, S. I., 2008, I: Journal of the Optical Society of America B: Optical Physics. 25, 10, s. 1585-1592

**Slow-plasmon resonant-nanostrip antennas: Analysis and demonstration**

Søndergaard, T., Beermann, J., Boltasseva, A. & Bozhevolnyi, S. I., 2008, I: Physical Review B. 77, 11, 115420.

**Two-photon mapping of localized field enhancements in thin nanostrip antennas**

Beermann, J., Novikov, S. M., Søndergaard, T., Boltasseva, A. & Bozhevolnyi, S. I., 2008, I: Optics Express. 16, 22, s. 17302-17309

**Comparison of finite-difference time-domain simulations and experiments on the optical properties of gold nanoparticle arrays on gold film**

Hohenau, A., Krenn, J. R., García-Vidal, F., Rodrigo, S. G., Martín-Moreno, L., Beermann, J. & Bozhevolnyi, S., 1. sep. 2007, I: Journal of Optics A: Pure and Applied Optics. 9, 9, s. 366-371

**Spectroscopy and nonlinear microscopy of gold nanoparticle arrays on gold films**

Hohenau, A., Krenn, J. R., Garcia-Vidal, F., Rodrigo, S. G., Martin-Moreno, L., Beermann, J. & Bozhevolnyi, S., 1. feb. 2007, I: Physical Review B. 75, 8, 085104.

**Modeling of second-harmonic scanning optical microscopy of molecular quasi-one-dimensional aggregates**

Lozovski, V. Z., Beermann, J. & Bozhevolnyi, S., 1. jan. 2007, I: Physical Review B. 75, 4, 045438.

**Localized field enhancements in fractal shaped periodic metal nanostructures**

Beermann, J., Radko, I., Boltasseva, A. & Bozhevolnyi, S. I., 2007, I: Optics Express. 15, 23, s. 15234-15241

**Spectroscopy and nonlinear microscopy of Au nanoparticle arrays: Experiment and theory**

Hohenau, A., Krenn, J. R., Beermann, J., Bozhevolnyi, S., Rodrigo, S. G., Martin-Moreno, L. & Garcia-Vidal, F., 1. apr. 2006, I: Physical Review B. 73, 15, s. 155404

**Modeling of nonlinear microscopy of localized field enhancements in random metal nanostructures**

Beermann, J., Bozhevolnyi, S. I. & Coello, V., 13. mar. 2006, I: Physical Review B. 73, 11, 115408.

**Resolution measurements with scanning far- and near-field optical second-harmonic microscopes**

Beermann, J., Vohnsen, B. & Bozhevolnyi, S., 2006.

**Second-harmonic far-field microscopy of random metal nanostructures**

Beermann, J., Coello, V. & Bozhevolnyi, S., 2006.

**Second-harmonic far-field microscopy of random metal nanostructures**

Beermann, J., Coello, V. & Bozhevolnyi, S., 2006.

**Second-harmonic far-field microscopy of random metal nanostructures**

Beermann, J., Bozhevolnyi, S. & Coello, V., 2006.

**Second-harmonic far-field microscopy of random nanostructures**

Beermann, J., Coello, V. & Bozhevolnyi, S., 2006.

**Second-harmonic microscopy of poled glasses**

Beermann, J. & Bozhevolnyi, S., 2006.

**Two-photon luminescence microscopy of field enhancement at gold nanoparticles**

Beermann, J. & Bozhevolnyi, S. I., 29. nov. 2005, I: Physica Status Solidi. C, Current topics in solid state physics. 2, 12, s. 3983-3987

**Two-photon near-field mapping of local molecular orientations in hexaphenyl nanofibers**

Beermann, J., Bozhevolnyi, S., Balzer, F. & Rubahn, H.-G., 1. okt. 2005, I: Laser Physics Letters. 2, 10, s. 480-484

**Two-photon near-field characterization of hexaphenyl nanofibers**

Bozhevolnyi, S. I. & Beermann, J., 1. aug. 2005, I: Journal of the Korean Physical Society. 47, 9(1), s. 157-161 5 s.

**Modelling of second-harmonic microscopy of random metal nanostructures**

Beermann, J., Coello, V. & Bozhevolnyi, S., 2005.

**Nonlinear microscopy of enhancement effects in periodic metal nanostructures**

Beermann, J. & Bozhevolnyi, S., 2005.

**Nonlinear microscopy of enhancement effects in periodic metal nanostructures**

Beermann, J. & Bozhevolnyi, S., 2005.

**Second-harmonic microscopy of enhancement effects in periodic metal nanostructures**

Beermann, J. & Bozhevolnyi, S., 2005.

**Two-photon mapping of molecular orientations in hexaphenyl microrings**

Beermann, J., Marquart, C. & Bozhevolnyi, S., 1. maj 2004, I: Laser Physics Letters. 1, 5, s. 264-268 5 s.

**Second-harmonic near-field optical microscopy of periodic nanoholes in metal films**

Beermann, J. & Bozhevolnyi, S. I., 27. apr. 2004, I: Laser Physics Letters. 1, 12, s. 592-597 6 s.

**Microscopy of localized second-harmonic enhancement in random metal nanostructures**

Beermann, J. & Bozhevolnyi, S., 1. apr. 2004, I: Physical Review B. 69, 15, 155429.

**Two-photon mapping of local molecular orientations in hexaphenyl nanofibers**

Beermann, J., Bozhevolnyi, S. I., Bordo, V. & Rubahn, H.-G., 2004, I: Optics Communications. 237, 4-6, s. 423-429

**Two-photon near-field mapping of molecular orientations in hexaphenyl nanofibers**

Beermann, J. & Bozhevolnyi, S., 2004.

**Two-photon near-field mapping of molecular orientations in hexaphenyl nanofibers**

Beermann, J. & Bozhevolnyi, S., 2004.

### **Optically active organic microrings**

Balzer, F., Beermann, J., Bozhevolnyi, S. I., Simonsen, A. C. & Rubahn, H.-G., 1. sep. 2003, I: Nano Letters. 3, 9, s. 1311-1314

### High-resolution second-harmonic microscopy of poled silica waveguides

Beermann, J., Bozhevolnyi, S. I., Pedersen, K. & Fage-Pedersen, J., 15. jun. 2003, I: Optics Communications. 221, 4-6, s. 295-300

### Direct observation of localized second-harmonic enhancement in random metal nanostructures

Bozhevolnyi, S. I., Beermann, J. & Coello, V., 16. maj 2003, I: Physical Review Letters. 90, 19, 197403.

### **Optically Active Organic Microrings**

Balzer, F., Beermann, J., Bozhevolnyi, S. I., Simonsen, A. C. & Rubahn, H.-G., 2003, I: Nano Letters. 3, 9, s. 1311-1314

### **Second-harmonic far-field microscopy of random metal nanostructures**

Beermann, J., Bozhevolnyi, S. & Coello, V., 2003, I: DOPS-Nyt. 18, s. 16-20

### **Second-harmonic far-field microscopy of random metal nanostructures**

Beermann, J., Bozhevolnyi, S. & Coello, V., 2003, *Proceedings of SPIE*. s. 530-540 10 s.

### **Second-harmonic far-field microscopy of random nanostructured gold surfaces**

Coello, V., Beermann, J. & Bozhevolnyi, S., 2003, I: Physica Status Solidi. C, Current topics in solid state physics. 8, s. 3070-3074

### **Two-photon mapping of molecular orientations in hexaphenyl nanofibers and nanorings**

Beermann, J., Bozhevolnyi, S. & Rubahn, H.-G., 2003.

### **Second-harmonic microscopy of poled silica waveguides**

Bozhevolnyi, S., Beermann, J. & Pedersen, K., 2002, I: DOPS-Nyt. 17, 2, s. 26-29 4 s.

## **Aktiviteter**

### **Anapole states in gap-surface plasmon resonators**

Yezekyan, T. (Oplægsholder), Zenin, V. (Medforfatter), Kristiansen, J. B. (Medforfatter) & Bozhevolnyi, S. I. (Medforfatter)  
25. okt. 2022

### **SDU Nano Optics – Main research directions and highlights**

Kristiansen, J. B. (Underviser)  
18. mar. 2022

### **Plasmonics for structural color printing**

Kristiansen, J. B. (Underviser)  
11. nov. 2021

### **Colours and Optics**

Beermann, J. (Foredragsholder)  
3. okt. 2019

### **Optical sensor possibilities in simple gold structure?**

Beermann, J. (Foredragsholder)  
22. feb. 2017



**Enhancement of two-photon photoluminescence and SERS for low-coverage gold films**

Beermann, J. (Foredragsholder)

18. nov. 2016

**Nanooptics: Micro and Nanotechnologies across the borders**

Beermann, J. (Foredragsholder)

28. apr. 2015

**Plasmonic Black metals by broadband light absorption in ultra-sharp convex grooves**

Beermann, J. (Foredragsholder)

1. maj 2014

**Plasmonic black metals**

Beermann, J. (Foredragsholder)

22. aug. 2013

**Plasmonic Black Gold and Black Nickel**

Beermann, J. (Foredragsholder)

14. aug. 2012

**Localized field enhancement in periodic arrays of V-grooves and tapered metal slits**

Beermann, J. (Foredragsholder)

22. sep. 2011

**Localized field enhancements in two-dimensional V-groove metal arrays**

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