Curriculum vitae and lists of publications

1. Title and name		Prof. Dr. Oliver Benson
2. Year of birth		1965
3. Affiliation		Department of Physics, Humboldt University Berlin
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6. Current position		Full professor (W2)
7. University education	1986-1992	Study: Physics (Diplom) at Ludwig-Maximilians-Univ., Munich
	1992-1995	Doctorate: Max-Planck-Institute for Quantum Optics, Garching, and Ludwig-Maximilians-Univ., Munich
8.Professional experience	1992-1995	Staff Scientist, MPI for Quantum Optics, Garching, and Ludwig-Maximilians-Univ., Munich
	1995-1997	Postdoctoral researcher, Ludwig-Maximilians-Univ., Munich
	1997-1999	Postdoctoral researcher, Stanford Univ., Stanford, USA
	1999-2000	Postdoctoral researcher, 1999-2000: Univ. Konstanz
	2000-2001	Junior group leader within the Emmy-Noether-Programm of DFG
	2001-2006	C3-Professor for Experimental Physics at Humboldt-University Berlin
	since 2006	W2-Professor for Experimental Physics at Humboldt-University Berlin
9. Administrative experience	since 2004	Member of Institutsrat at Department of Physics
	2006-2010	Head of examination board at Department of Physics
	since 2007	member of Advisory Board of the ProFiL-Programme of TU, FU, HU
	since 2008	Faculty Advisor of the OSA and SPIE Berlin Optik Student Chapter
	since 2011	member of the Scientific Advisory Board of the Max-Born-Institute
	2010-2014	Director of the Department of Physics
10. Recent related research activities		single photon physics, entanglement distribution between different physical systems, quantum information, fundamental systems in cavity quantum electrodynamics, quantum plasmonics
11. Research fields		quantum optics and nanooptics with atoms, molecules, and solid-state systems; optics of single excitations; quantum information; quantum enhanced sensing
12. Honours, awards, grants, fellowships, memberships in professional societies	1996	Dissertation Prize of Ludwig-Maximilians-University Munich
	2000	Junior researcher in the Emmy-Noether-Program of DFG
	1997	Lynen-Postdoc-Fellowship of Alexander von Humboldt-Foundation
	2001; 2006; 2006	Declined offers for: C3-Professor at Univ. of Stuttgart; Full Professor at Leeds University, UK; W3-Professor at Univ. of Osnabrück
	2009	Guest Professor at University of Vienna
	2012	APS Outstanding Referee Award
	2014	Visiting Prof. at UFPE, Brazil, Science without Borders Program
		member of DPG, OSA
13. Reviewing activities		Adv. Mat, APL, Appl. Phys. A & B, Chem. Phys., IEEE, JOSA A & B, J. Appl. Phys A & B, J. Phys. Chem., Laser & Phot. Rev., Nano Lett., Nanotech., Nature, Nature Phot., Nature Phys., NJP, Opt. Comm., Opt. Expr., Opt. Lett., Phys. Rev. A & B, PRL, Rev. Sci. Instr., Rep. Progr. Phys. DFG, AvH, Zeiss-Stiftung, EU, NSF, GIF, SFI, SRC

Publications

Peer reviewed journals:

1. *Highly Efficient Coupling of Nanolight Emitters to a Ultra-wide Tunable Nanofibre Cavity*, A. Schell, H. Takashima, S. Kamioka, Y. Oe, M. Fujiwara, O. Benson, and S. Takeuchi, Scientific Reports 5, 9619 (2015)
2. *Investigation of Line Width Narrowing and Spectral Jumps of Single Stable Defect Centers in ZnO at Cryogenic Temperature*, O. Neitzke, A. Morfa, J. Wolters, A. Schell, G. Kewes, and O. Benson, Nano Letters 15, 30124 (2015)
3. *Micro-concave waveguide antenna for high photon extraction from nitrogen vacancy centers in nanodiamond*, R. Rajasekharan, G. Kewes, A. Djalalian-Assl, K. Ganesan, S. Tomljenovic-Hanic, J. McCallum, A. Roberts, O. Benson, and S. Prawer, Scientific Reports , (2015)
4. *Miniaturized Bragg-grating couplers for SiN-photonic crystal slabs*, C. Barth, J. Wolters, A. Schell, J. Probst, M. Schoengen, B. Löchel, S. Kowarik, and O. Benson, Optics InfoBase 23, (2015)
5. *On-Demand Electrostatic Coupling of Individual Precharacterized Nano- and Microparticles in a Segmented Paul Trap*, A. Kuhlicke, A. Rylke, and O. Benson, Nano Letters 15, (2015)
6. *Laser-written parabolic micro-antennas for efficient photon collection*, A. W. Schell, T. Neumer, Q. Shi, J. Kaschke, J. Fischer, M. Wegener, O. Benson, Appl. Phys. Lett. **105**, 231117 (2014)
7. *Broadband linear high-voltage amplifier for radio frequency ion traps*, Kuhlicke, A, Palis, K, and Benson, O, Review of Scientific Instruments **85**, (2014)
8. *Deterministic and robust entanglement of nitrogen-vacancy centers using low-Q photonic-crystal cavities*, Wolters, J, Kabuss, J, Knorr, A, and Benson, O, Physical Review A **89**, (2014)
9. *Evaluation of nitrogen- and silicon-vacancy defect centres as single photon sources in quantum key distribution*, Leifgen, M, Schröder, T, Gädeke, F, Riemann, R, Métillon, V, Neu, E, Hepp, C, Arend, C, Becher, C, and Lauritsen, K, New Journal of Physics **16**, (2014)
10. *Narrow-band single photon emission at room temperature based on a single nitrogen-vacancy center coupled to an all-fiber-cavity*, Albrecht, R, Bommer, A, Pauly, C, Mücklich, F, Schell, AW, Engel, P, Schröder, T, Benson, O, Reichel, J, and Becher, C, Applied Physics Letters **105**, (2014)
11. *Nitrogen vacancy center fluorescence from a submicron diamond cluster levitated in a linear quadrupole ion trap*, Kuhlicke, A, Schell, AW, Zoll, J, and Benson, O, Applied Physics Letters **105**, (2014)
12. *Numerical analysis of efficient light extraction with an elliptical solid immersion lens*, Schell, AW, Neumer, T, and Benson, O, Optics Letters **39**, 4639-4642 (2014)
13. *Scanning Single Quantum Emitter Fluorescence Lifetime Imaging: Quantitative Analysis of the Local Density of Photonic States*, Schell, AW, Engel, P, Werra, JFM, Wolff, C, Busch, K, and Benson, O, Nano Letters **14**, 2623 (2014)
14. *Tapered fiber coupling of single photons emitted by a deterministically positioned single nitrogen vacancy center*, Liebermeister, L, Petersen, F, v. Münchow, A, Burchardt, D, Hermelbracht, J, Tashima, T, Schell, AW, Benson, O, Meinhardt, T, Krueger, A, Stiebeiner, A, Rauschenbeutel, A, Weinfurter, H, and Weber, M, Applied Physics Letters **104**, (2014)
15. *Three-dimensional quantum photonic elements based on single nitrogen vacancy-centres in laser-written microstructures*, Schell, AW, Kaschke, J, Fischer, J, Henze, R, Wolters, J, Wegener, M, and Benson, O, Scientific Reports **3**, (2013)
16. *Thermo-optical response of photonic crystal cavities operating in the visible spectral range*, Wolters, J, Nikolay, N, Schoengen, M, Schell, AW, Probst, J, Löchel, B, and Benson, O, IOPScience Nanotechnology **24**, (2013)
17. *A monolithic polarization-independent frequency-filter system for filtering of photon pairs*, Ahlrichs, A, Berkemeier, C, Sprenger, B, and Benson, O, Applied Physics Letters **103**, 241110 (2013)
18. *Design and numerical optimization of an easy-to-fabricate photon-to-plasmon coupler for quantum plasmonics*, Kewes, G, Schell, AW, Henze, R, Schönfeld, RS, Burger, S, Busch, K, and Benson, O, Applied Physics Letters **102**, 051104 (2013)
19. *Fine-tuning of whispering gallery modes in on-chip silica microdisk resonators within a full spectral range*, Henze, R, Pyrlik, C, Thies, A, Ward, JM, Wicht, A, and Benson, O, Applied Physics Letters **102**, 041104 (2013)
20. *In Situ Observation of Plasmon Tuning in a Single Gold Nanoparticle during Controlled Melting*, Kuhlicke, A, Schietinger, S, Matyssek, C, Busch, K, and Benson, O, Nano Letters **13**, 2041–2046 (2013)
21. *Integrated multichannel photon timing instrument with very short dead time and high throughput*, Wahl, M, Röhlicke, T, Rahn, H, Erdmann, R, Kell, G, Ahlrichs, A, Kernbach, M, Schell, AW, and Benson, O, Review of Scientific Instruments **84**, (2013)

22. *Measurement of the ultrafast diffusion of optical spectral lines of nitrogen vacancy centers in nanosize diamonds using correlation interferometry*, Wolters, J, Sadzak, N, Schell, AW, Schroeder, T, and Benson, O, Physical Review Letters **110**, 027401 (2013)
23. *Observation of the Quantum Zeno Effect on a Single Solid State Spin*, Wolters, J, Strauß, M, Schönfeld, RS, and Benson, O, Phys. Rev. A **88**, 020101 (2013)
24. *Temperature independent tuning of whispering gallery modes in a cryogenic environment*, Henze, R, Ward, J, and Benson, O, Optics Express **21**, 675-680 (2013)
25. *Measurement of the ultrafast diffusion of optical spectral lines of nitrogen vacancy centers in nanosize diamonds using correlation interferometry*, *Wolters, J, Sadzak, N, Schell, AW, Schroeder, T, and Benson, O*, Physical Review Letters **110**, 027401 (2013)
26. *Single-photon emission from single InGaAs/GaAs quantum dots grown by droplet epitaxy at high substrate temperature*, Benyoucef, M, Zuerbig, V, Reithmaier, JP, Kroh, T, Schell, AW, Aichele, T, and Benson, O, Nanoscale Research Letters **7**, 493 (2012)
27. *Silica-coated Au/Ag nanorods with tunable surface plasmon bands for nanoplasmonics with single particles*, Wu, S, Schell, AW, Lublow, M, Kaiser, J, Aichele, T, Schietinger, S, Polzer, F, Kühn, S, Guo, X, Benson, O, Ballauff, M, and Lu, Y, Colloid and Polymer Science , (2012)
28. *Measuring the quantum nature of light with a single source and a single detector*, Steudle, GA, Schietinger, S, Höckel, D, Dorenbos, SN, Zadeh, IE, Zwiller, V, and Benson, O, Physical Review A **86**, 053814 (2012)
29. *A nanodiamond-tapered fiber system with high single-mode coupling efficiency*, Schroeder, T, Fujiwara, M, Noda, T, Zhao, H, Benson, O, and Takeuchi, S
Optics Express 20, 10490-10497 (2012)
30. *Coupling of single nitrogen-vacancy defect centers in diamond nanocrystals to optical antennas and photonic crystal cavities*, Wolters, J, Kewes, G, Schell, AW, Nüsse, N, Schoengen, M, Löchel, B, Hanke, T, Bratschitsch, R, Leitenstorfer, A, Aichele, T, and Benson, O, Phys. Status Solidi B 249, 918-924 (2012)
31. *Incoherent photon conversion in selectively infiltrated hollow-core photonic crystal fibers for single photon generation in the near infrared*, Jiang, P, Schroeder, T, Barth, M, Lesnyak, V, Gaponik, N, Eychmüller, A, and Benson, O, Optics Express 20, 11536-11547 (2012)
32. *Integrated and compact fiber-coupled single-photon system based on nitrogen-vacancy centers and gradient-index lenses*, Schroeder, T, Engel, P, Schmidt, E, and Benson, O
Optics Letters 37, 2901-2903 (2012)
33. *Assembly of hybrid photonic architectures from nanophotonic constituents*, O. Benson, Nature 480, 193-199 (2011)
34. *Tuning whispering gallery modes using internal aerostatic pressure*, R. Henze, T. Seifert, J. Ward Jonathan, O. Benson, Opt. Lett. 36, 4536-4538 (2011)
35. *Processing of photonic crystal nanocavity for quantum information in diamond*, I. Bayn, B. Meyler, A. Lahav, J. Salzman, R. Kalish, B. A. Fairchild, S. Prawer, M. Barth, O. Benson, T. Wolf, P. Siyushev, F. Jelezko, J. Wrachtrup, Diamond and Relat. Mat. 20, 937-943 (2011)
36. *Controlled coupling of NV defect centers to plasmonic and photonic nanostructures*, M. Barth, S. Schietinger, T. Schroeder, N. Nuesse, B. Loechel, T. Aichele, O. Benson, J. of Lum. 131, 1556 (2011)
37. *An ultrafast quantum random number generator with provably bounded output bias based on photon arrival time measurements*, M. Wahl, M. Leifgen, M. Berlin, T. Roehlicke, H.-J. Rahn, O. Benson, Appl. Phys. Lett. 98, 171105 (2011)
38. *A scanning probe-based pick-and-place procedure for assembly of integrated quantum optical hybrid devices*, a. W. Schell, G. Kewes, T. Schröder, J. Wolters, T. Aichele, and O. Benson, Review of Scientific Instruments 82, 073709 (2011)
39. *Experimental optimal maximum-confidence discrimination and optimal unambiguous discrimination of two mixed single-photon states*, G. A. Steudle, S. Knauer, U. Herzog, E. Stock, V. A. Haisler, D. Bimberg, and O. Benson, Physical Review A 83, 050304(R) (2011)
40. *Single defect centers in diamond nanocrystals as quantum probes for plasmonic nanostructures*, A. W. Schell, G. Kewes, T. Hanke, A. Leitenstorfer, R. Bratschitsch, O. Benson, and T. Aichele, Opt. Express 19, 7914-7920 (2011)
41. *Ultrabright and efficient single-photon generation based on nitrogen-vacancy centres in nanodiamonds on a solid immersion lens*, T. Schröder, F. Gaedeke, M. J. Banholzer, and O. Benson, New Journal of Physics 13, 055017 (2011)
42. *WGM microresonators: sensing, lasing and fundamental optics with microspheres*, J. Ward and O. Benson, Laser & Photonics Reviews 5, (2011)
43. *Direct measurement of heralded single-photon statistics from a parametric down-conversion source*, D. Höckel, L. Koch, and O. Benson, Physical Review A 83, 013802 (2011)

44. *Fiber-Integrated Diamond-Based Single Photon Source*, T. Schröder, A. W. Schell, G. Kewes, T. Aichele, and O. Benson, Nano Letters 11, 198–202 (2011)
45. *An ultranarrow bandpass filter system for single-photon experiments in quantum optics*, D. Höckel, E. Martin, and O. Benson, Review of Scientific Instruments 81, 026108 (2010)
46. *Controlled coupling of NV defect centers to plasmonic and photonic nanostructures*, M. Barth, S. Schietinger, T. Schröder, T. Aichele, and O. Benson, Journal of Luminescence 130, 1628-1634 (2010)
47. *Electromagnetically induced transparency in cesium vapor with probe pulses on the single photon level*, D. Höckel, and O. Benson, Physical Review Letters 105, 153605 (2010)
48. *Enhancement of the zero phonon line emission from a single nitrogen vacancy center in a nanodiamond via coupling to a photonic crystal cavity*, J. Wolters, A. W. Schell, G. Kewes, N. Nüsse, M. Schoengen, H. Döscher, T. Hannappel, B. Löchel, M. Barth, and O. Benson, Applied Physics Letters 97, 141108 (2010)
49. *Generalized measurements for optimally discriminating two mixed states and their linear-optical implementation*, U. Herzog, and O. Benson, Journal of Modern Optics 57, 188–197 (2010)
50. *An alignment-free fiber-coupled microsphere resonator for gas sensing applications*, M. Gregor, C. Pyrlik, R. Henze, A. Wicht, A. Peters, and O. Benson, Appl. Phys. Lett. 96, 231102 (2010)
51. *Nanoassembled Plasmonic-Photonic Hybrid Cavity for Tailored Light-Matter Coupling*, M. Barth, S. Schietinger, S. Fischer, J. Becker, N. Nüsse, T. Aichele, B. Löchel, C. Sönnichsen, and O. Benson, Nano Lett. 10, 891-895 (2010)
52. *Plasmon-Enhanced Upconversion in Single NaYF4:Yb3+/Er3+ Codoped Nanocrystals*, S. Schietinger, T. Aichele, H. Q. Wang T. Nann, and O. Benson, Nano Lett. 10, 134-138 (2010)
53. *Soft-landing and optical characterization of a preselected single fluorescent particle on a tapered optical fiber*, M. Gregor, A. Kuhlicke, and O. Benson, Opt. Express 17, 24234-24243 (2009)
54. *On-demand positioning of a preselected quantum emitter on a fiber-coupled toroidal microresonator*, M. Gregor, R. Henze, T. Schröder, and O. Benson, Appl. Phys. Lett. 95, 153110, (2009)
55. *An ultranarrow bandpass filter system for single-photon experiments in quantum optics*, D. Höckel, E. Martin, and O. Benson, Review of Scientific Instruments 81, 026108 (2010)
56. *Generalized measurements for optimally discriminating two mixed states and their linear-optical implementation*, U. Herzog and O. Benson, Journal of Modern Optics 57, 188–197 (2010)
57. *A hybrid approach towards nanophotonic devices with enhanced functionality*, Barth, M, Stingl, J, Kouba, J, Nüsse, N, Löchel, B, and Benson, O, physica status solidi (b) 246, 298-301 (2009)
58. *A robust phase-locked diode laser system for EIT experiments in Cesium*, Höckel, D, Scholz, M, and Benson, O, Applied Physics B 94, 429 (2009)
59. *Analytical treatment of spectral properties and signal–idler intensity correlations for a double-resonant optical parametric oscillator far below threshold*, Scholz, M, Koch, L, and Benson, O, Optics Communications 282, 3518-3523 (2009)
60. *Controlled coupling of a single-diamond nanocrystal to a photonic crystal cavity*, Barth, M, Nüsse, N, Löchel, B, and Benson, O, Optics Letters 34, 1108-1110 (2009)
61. *Coupling single NV-centres to high-Q whispering gallery modes of a pre-selected frequency-matched microresonators*, Schietinger, S and Benson, O, Journal of Physics B 42, 114001 (2009)
62. *Generalized measurements for optimally discriminating two mixed states and their linear-optical implementation*, Herzog, U and Benson, O, Journal of Modern Optics 56, 1362 (2009)
63. *Observation of size-dependence in multi-color upconversion in single Yb3+Er3+ codoped NaYF4 nanocrystals*, Schietinger, S, Menezes, LdS, Lauritzen, B, and Benson, O, Nano Letters 9, 2477–2481 (2009)
64. *Plasmon-Enhanced Single Photon Emission from a Nanoassembled Metal−Diamond Hybrid Structure at Room Temperature*, Schietinger, S, Barth, M, Aichele, T, and Benson, O, Nano Letters 9, 1694–1698 (2009)
65. *Single-mode operation of a high-brightness narrow-band single-photon source*, Scholz, M, Koch, L, Ullmann, R, and Benson, O, Applied Physics Letters 94, 201105 (2009)
66. *Statistics of Narrow-Band Single Photons for Quantum Memories Generated by Ultrabright Cavity-Enhanced Parametric Down-Conversion*, Scholz, M, Koch, L, and Benson, O, Physical Review Letters 102, 063603 (2009)
67. *Ultra-Narrow Bandwidth Spectral Filtering for Long Range Free-Space Quantum Key Distribution at Daytime*, Höckel, D, Koch, L, Martin, E, and Benson, O, Optics Letters 34, 3169 (2009)
68. *Emission properties of high-Q silicon nitride photonic crystal heterostructure cavities*, Barth, M, Nüsse, N, Stingl, J, Löchel, B, and Benson, O, Applied Physics Letters 93, 021112 (2008)
69. *One-by-One Coupling of Single Defect Centers in Nanodiamonds to High-Q Modes of an Optical Microresonator*, Schietinger, S, Schröder, T, and Benson, O, Nano Letters 8, 3911-3915 (2008)

70. *Preparation and Application of Functionalized Photonic Crystal Fibres*, Bartelt, H, Kirchhof, J, Kobelke, J, Schuster, K, Schwuchow, A, Mörl, K, Röpke, U, Leppert, J, Lehmann, H, Smolka, S, Barth, M, Benson, O, Taccheo, S, and D'Andrea, C, In: Nanophotonic Materials: Photonic Crystals, Plasmonics, and Metamaterials, ed. by R. B. Wehrspohn, H.-S. Kitzerow, and K. Busch. Wiley-VCH, chap. 16, pp. 291-312.
71. *Semiconductor Quantum Bits*, Henneberger, F. and Benson, O., World Scientific. (ISBN: 978-981-4241-05-2).
72. *Theory of biphoton generation in a single-resonant optical parametric oscillator far below threshold*, Ulrike Herzog, Matthias Scholz, and Oliver Benson, Phys. Rev. A77, 023826 (2008)
73. P*reparation and application of functionalized photonic crystal fibres,* H. Bartelt, J. Kirchhof, J. Kobelke, K. Schuster, A. Schwuchow, K. Mörl, U. Röpke, J. Leppert, H. Lehmann, S. Smolka, M.Barth, O. Benson, S. Taccheo and C. D'Andrea, Phys. Stat. Sol. (a) 204, 3805 (2007)
74. *Modification of visible spontaneous emission with silicon nitride photonic crystal nanocavities*, M. Barth, J. Koub, J. Stingl, B. Löchel, and O. Benson, Opt. Express 25, 17231 (2007)
75. *Narrow-Band Single Photons from a Single-Resonant Optical Parametric Oscillator Far Below Threshold*, M. Scholz, F. Wolfgramm, U. Herzog, and O. Benson, Appl. Phys. Lett., 91, 191104 (2007)
76. "Controlled coupling of counterpropagating whispering-gallery modes by a single Rayleigh scatterer: a classical problem in a quantum optical light", A. Mazzei, S. Götzinger, L. de S. Menezes, G. Zumofen, O. Benson, V. Sandoghdar, Phys. Rev. Lett. 99, 173603 (2007)
77. *Highly efficient fluorescence sensing with hollow core photonic crystal fibers*, S. Smolka, M. Barth, and O. Benson, Optics Express, 15, 12783 (2007)
78. *Non-classical light emission from a single electrically driven quantum dot*, M. Scholz, S. Büttner, and O. Benson, A. I. Toropov, A. K. Bakarov, and A. K. Kalagin, A. Lochmann, E. Stock, O. Schulz, F. Hopfer, V. A. Haisler, and D. Bimberg, Optics Express, 15, 9107 (2007)
79. *Selectively coated photonic crystal fiber for highly sensitive fluorescence detection*, S. Smolka, M. Barth, O. Benson, Appl. Phys. Lett., 90, 111101 (2007)
80. *Electrically Driven Quantum Dot Single Photon Source*, A. Lochmann, E. Stock, O. Schulz, F. Hopfer, D. Bimberg1, V. A. Haisler, A. I. Toropov, A. K. Bakarov, M. Scholz, S. Büttner, and O. Benson, Phys. Stat. Sol. (c) 4, 547-550 (2007)
81. *Manipulation of dielectric particles using photonic crystal cavities*, M. Barth and O. Benson, Appl. Phys. Lett. 89, 253114 (2006)
82. *Influence of a controllable scatterer on the lasing properties of an ultra-low threshold Raman microlaser*, A. Mazzei, H. Krauter, O. Benson, S. Götzinger, Appl. Phys. Lett. 89, 101105 (2006)
83. *Ultrafine Luminescent Structures Through Nanoparticle Selfassembly*, K. Prabhakaran, S. Götzinger, K. V. P. M. Shafi, A. Mazzei, S. Schietinger, O. Benson, Nanotechnology 17, 3802-3805 (2006)
84. *Deutsch-Jozsa Algorithm using Triggered Single Photons from a Single Quantum Dot*, M. Scholz, T. Aichele, S. Ramelow, O. Benson, Phys. Rev. Lett. 96, 180501 (2006)
85. *Controlled energy transfer between two individual nanoemitters via shared high-Q modes of a microsphere resonator*, S. Götzinger, L. de S. Menezes, V. Sandoghdar, O. Benson, Nano-Lett. 6, 1151 (2006)
86. *Non-Classical Light from Artificial Atoms*, T. Aichele, M. Scholz, S. Ramelow, O. Benson, in Adv. Atomic and Mol. Physics, Vol. 53, G. Rempe, M. Scully eds., 1-32 (2006)
87. *Optimizing the prism coupling to high-Q modes in a microsphere resonator using a near-field probe*, A. Mazzei, S. Götzinger, L. de S. Menezes, V. Sandoghdar, O. Benson, Opt. Comm. 250, 428-433 (2005)
88. *Growth of single quantum dots on preprocessed structures: single photon emitters on a tip*, V. Zwiller, T. Aichele, F. Hatami, W. T. Masselink, O. Benson, Appl. Phys. Lett. 86, 101908 (2005)
89. *CdSe/CdS/ZnS and CdSe/ZnSe/ZnS Core-Shell-Shell Nanocrystals,* Dmitri V. Talapin, Ivo Mekis, Stephan Götzinger, Andreas Kornowski, Oliver Benson, and Horst Weller, Journal of Physical Chemistry B, 108, 18826 (2004)
90. *Separating Cascaded Photons from a Single Quantum Dot: Demonstration of Multiplexd Quantum Cryptography*, T. Aichele,G. Reinaudi,O. Benson, Phys. Rev. B, 70, 235329 (2004)
91. *Investigation of Energy Transfer between CdTe Nanocrystals on Polystyrene Beads and Dye Molecules for FRET-SNOM Applications*, F. Müller, S. Götzinger, N. Gaponik, H. Weller, J. Mlynek, and O. Benson, Journal of Physical Chemistry B, 108, 14527 (2004)
92. *Three-photon cascade from single self-assembled InP quantum dots*, J. Persson, T. Aichele, V. Zwiller, L. Samuelson, O. Benson, Phys. Rev. B 69, 233314 (2004)
93. *Quantum optics with single quantum dot devices*, V Zwiller, T Aichele and O Benson, New Journal of Physics 6, 90 (2004)

94. *Visible single photon generation from semiconductor quantum dots*, T. Aichele, V. Zwiller, O. Benson, New Journal of Physics 6, 96 (2004)
95. *Single-photon Fourier spectroscopy of excitons and biexcitons in single quantum dots*, V. Zwiller, T. Aichele, and O. Benson, Phys. Rev. B, 69, 165307 (2004)
96. *Scanning near-field optical studies of photonic devices*, V. Sandoghdar, B. Buchler, P. Kramper, S. Götzinger, O. Benson, and M. Kafesaki, in Photonic Crystals, K. Busch, S. Lölkes, R. B. Wehrspohn, H. Föll (eds.), Wiley-VCH (2004)
97. *Confocal microscopy of nanocrystals on a high-Q microsphere resonator*, S. Götzinger, L. de S. Menezes, O. Benson, D. V. Talapin, N. Gaponik, H. Weller, A. L. Rogach, V. Sandoghdar, J. Opt. B 6, 154 (2004)
98. *Highly emissive colloidal CdSe/CdS heterostructures of mixed dimensionalty*, D. V. Talapin, R. Koeppe, S. Götzinger, A. Koronowski, J. M. Lupton, A. L. Rogach, O. Benson, J. Feldmann, H. Weller, Nano Lett., 3(12), 1677 (2003)
99. *Single CdSe quantum dots for high bandwidth single photon generation*, T. Aichele, V. Zwiller, O. Benson, I Akimov, F. Henneberger, JOSA B 20, 2189 (2003)
100. *Generating visible single photons on demand with single InP quantum dots*, V. Zwiller, T. Aichele, J. Persson, W. Seifert, O. Benson, Appl. Phys. Lett. 82, 1509 (2003)
101. *Triggered single photons and entangled photons from a quantum dot microcavity*, M. Pelton, C. Santori, G. S. Solomon, O. Benson, Y. Yamamoto, Eur. Phys. J. D 18, 179-190 (2002).
102. *Influence of a sharp fiber tip on high-Q modes of a microsphere resonator*, S. Götzinger, O.Benson, V. Sandoghdar, Opt. Lett. 27, 80-82 (2002).
103. *Regulated single photons and entangled photons from a quantum dot microcavity* , Y. Yamamoto, M. Pelton, C. Santori, G. S. Solomon, O. Benson, J. Vuckovic, and A. Scherer, *in Nanoscience and Technology: Semiconductor Spintronics and Quantum Computation* , edited by D. D. Awschalom, N. Samarth, and D. Loss, Berlin: Springer-Verlag, 2002.
104. *Towards controlled coupling between a high-Q whispering gallery mode and a single nanoparticle*, S. Götzinger, O. Benson, V. Sandoghdar, Appl. Phys. B 73, 825-828 (2001).
105. *Mapping and Manipulating Whispering Gallery Modes of a Microsphere Resonator with a Near-field Probe*, S. Götzinger, O. Benson, V. Sandoghdar, Journal of Microscopy, 202, 117-121 (2001).
106. *Quantum state reconstruction of the single-photon Fock state*, A. Lvovsky, H. Hansen, T. Aichele, O. Benson, J. Mlynek, S. Schiller, Phys. Rev. Lett. 87, 050402 (2001).
107. *Regulated and entangled photons from a single quantum dot*, O. Benson, C. Santori, M. Pelton, Y. Yamamoto, Phys. Rev. Lett. 84, 2513 (2000)
108. *Simultaneous Coulomb blockade for electrons and holes in p-n junctions: Observation of Coulomb staircase and turnstile operation*, O. Benson, J. Kim, H. Kan, and Y. Yamamoto, Physica E 8, 5 (2000)
109. *Master-equation model of a Single Quantum Dot Microsphere Laser*, O. Benson and Y. Yamamoto, Phys. Rev. A 59, 4756 (1999)
110. *Single-photon turnstile device*, J. Kim, O. Benson, and Y. Yamamoto, Nature 397, 500 (1999)
111. *Single-photon turnstile device: simultaneous Coulomb blockade for electrons and holes*, J. Kim, O. Benson, H. Kan, and Y. Yamamoto, Sci. Technol. 13, 1 (1998)
112. *From Maser to Mazer*, O. Benson, M. Weidinger, M. Löffler, and H. Walther, Fortschr. Phys. 46, 809 (1998)
113. *Entangled Atoms in Micromaser Physics*, B.-G. Englert, M. Löffler, O. Benson, B. Varcoe, M. Weidinger, and H. Walther, Fortschr. Phys. 46, 897 (1998)
114. *Atomic Interferometry in the Micromaser an Statistical Properties of the Micromaser Field*, O. Benson, M. Weidinger, G. Raithel, and H. Walther, Journal of Modern Optics Vol. 44, 2011 (1997)
115. *Photonenzählen im Resonator*, O. Benson, G. Raithel, and H. Walther, Physikalische Blätter 52 (1996) 653-654
116. *Dynamics of the Micromaser Field*, G. Raithel, O. Benson, and H. Walther, Laser Physics 6 (1996) 354-358
117. *Rubidium Rydberg atoms in strong fields*, O. Benson, G. Raithel, and H. Walther in "Quantum Chaos", ed. G. Casati and B. Chirikov, Cambridge Univ. Press, Cambridge (1995) 247-267
118. *From coherent to noise-induced microwave ionization*, O. Benson, A. Buchleitner, G. Raithel, M. Arndt, R. Mantegna, and H.Walther in Phys. Rev. A 51, 4862 (1995)
119. *Atomic Interferometry in the Micromaser*, G. Raithel, O.Benson, and H. Walther in Phys. Rev. Lett. 75, 3446 (1995)
120. *Quantum Jumps of the Micromaser Field*, O.Benson, G.Raithel, and H.Walther in Phys. Rev. Lett. 72, 3506 (1994)

> 50 invited talks (since 2000)

Patents

- German patent DE102012222898, "Wellenleiteranordnung", Rico Henze, Christoph Pyrlik, Andreas Thies, Andreas Wicht, Oliver Benson (2014)
- US patent US2014233885, „Photon-to-Plasmon Coupler“, Andreas W. Schell, Rico Henze, Oliver Benson, Günter Kewes (2013)
- US patent US2014302442 "Method and fabrication tools for fabricating optical devices", Andreas W. Schell, Joachim Fischer, Johannes Kaschke, Oliver Benson, Martin Wegener (2013)
- German patent DE102011005327 „Single photon emission system“, Tim Schröder, Oliver Benson, Andreas W. Schell, Philip Engel, Julian Moritz Banholzer, Friedemann Gädeke, Gerhard Birkl (2012)
- US patent 6,728,281 „Quantum-dot photon turnstile device“, Charles Santori, Oliver Benson, Yoshihisa Yamamoto, Matthew Pelton, Jungsang Kim (2004)