

# Hans-A Bachor

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1852859/publications.pdf>

Version: 2024-02-01

104  
papers

4,329  
citations

136950

32  
h-index

106344

65  
g-index

112  
all docs

112  
docs citations

112  
times ranked

2777  
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>Colloquium</i>: The Einstein-Podolsky-Rosen paradox: From concepts to applications. Reviews of Modern Physics, 2009, 81, 1727-1751.	45.6	518
2	Biological measurement beyond the quantum limit. Nature Photonics, 2013, 7, 229-233.	31.4	411
3	Observation of velocity-tuned resonances in the reflection of atoms from an evanescent light grating. Physical Review A, 1994, 49, R16-R19.	2.5	347
4	Experimental investigation of continuous-variable quantum teleportation. Physical Review A, 2003, 67, .	2.5	280
5	A Quantum Laser Pointer. Science, 2003, 301, 940-943.	12.6	263
6	Multipartite Einstein-â€œPodolsky-â€œRosen steering and genuine tripartite entanglement with optical-â€œnetworks. Nature Physics, 2015, 11, 167-172.	16.7	249
7	Programmable unitary spatial mode manipulation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 2524.	1.5	181
8	Programmable multimode quantum networks. Nature Communications, 2012, 3, 1026.	12.8	130
9	Polarization Squeezing of Continuous Variable Stokes Parameters. Physical Review Letters, 2002, 88, 093601.	7.8	104
10	Bright squeezed light from a singly resonant frequency doubler. Physical Review Letters, 1994, 72, 3807-3810.	7.8	101
11	Optimization and transfer of vacuum squeezing from an optical parametric oscillator. Journal of Optics B: Quantum and Semiclassical Optics, 1999, 1, 469-474.	1.4	94
12	Suppression of the intensity noise in a diode-pumped neodymium:YAG nonplanar ring laser. IEEE Journal of Quantum Electronics, 1994, 30, 2907-2913.	1.9	85
13	Entangling the Spatial Properties of Laser Beams. Science, 2008, 321, 541-543.	12.6	81
14	Optical entanglement of co-propagating modes. Nature Photonics, 2009, 3, 399-402.	31.4	60
15	Intensity-noise properties of injection-locked lasers. Physical Review A, 1996, 54, 4370-4382.	2.5	59
16	Quantum Study of Information Delay in Electromagnetically Induced Transparency. Physical Review Letters, 2006, 97, 183601.	7.8	59
17	Photodetector designs for low-noise, broadband, and high-power applications. Review of Scientific Instruments, 1998, 69, 3755-3762.	1.3	54
18	Intensity feedback effects on quantum-limited noise. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1792.	2.1	48

#	ARTICLE	IF	CITATIONS
19	Quantum nondemolition measurements in an optical-fiber ring resonator. <i>Physical Review A</i> , 1988, 38, 180-190.	2.5	47
20	Intensity noise of injection-locked lasers: Quantum theory using a linearized input-output method. <i>Physical Review A</i> , 1996, 54, 4359-4369.	2.5	47
21	Quantum limits in image processing. <i>Europhysics Letters</i> , 2008, 81, 44001.	2.0	47
22	Arbitrary multisite two-photon excitation in four dimensions. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	47
23	Subdiffraction-Limited Quantum Imaging within a Living Cell. <i>Physical Review X</i> , 2014, 4, .	8.9	46
24	Intensity-noise dependence of Nd:YAG lasers on their diode-laser pump source. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1997, 14, 2936.	2.1	41
25	Stokes-operator-squeezed continuous-variable polarization states. <i>Physical Review A</i> , 2003, 67, .	2.5	41
26	Quantum-noise-limited interferometric phase measurements. <i>Applied Optics</i> , 1993, 32, 3481.	2.1	39
27	Nano-displacement measurements using spatially multimode squeezed light. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S664-S674.	1.4	38
28	Recovery of continuous wave squeezing at low frequencies. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2002, 4, 421-424.	1.4	37
29	Investigation of the dynamic Stark effect in a three-level system. I. Experiment. <i>Physical Review A</i> , 1986, 33, 2418-2423.	2.5	35
30	Simultaneous multi-site two-photon photostimulation in three dimensions. <i>Journal of Biophotonics</i> , 2012, 5, 745-753.	2.3	35
31	Spin entanglement, decoherence and Bohm's EPR paradox. <i>Optics Express</i> , 2009, 17, 18693.	3.4	33
32	Reflection and diffraction of sodium atoms by evanescent laser light fields. <i>Optics Communications</i> , 1989, 73, 331-336.	2.1	32
33	Classical and quantum signatures of competing nonlinearities. <i>Physical Review A</i> , 1997, 55, 4511-4515.	2.5	31
34	Quantum measurements of spatial conjugate variables: displacement and tilt of a Gaussian beam. <i>Optics Letters</i> , 2006, 31, 1537.	3.3	31
35	Four-dimensional multi-site photolysis of caged neurotransmitters. <i>Frontiers in Cellular Neuroscience</i> , 2013, 7, 231.	3.7	31
36	Squeezed light from second-harmonic generation: experiment versus theory. <i>Optics Letters</i> , 1995, 20, 1316.	3.3	30

#	ARTICLE	IF	CITATIONS
37	Squeezing more from a quantum nondemolition measurement. <i>Physical Review A</i> , 2001, 65, .	2.5	25
38	Optogalvanic detection as a quantitative method in spectroscopy. <i>Optics Communications</i> , 1982, 43, 337-342.	2.1	24
39	Delay of squeezing and entanglement using electromagnetically induced transparency in a vapour cell. <i>Optics Express</i> , 2008, 16, 7369.	3.4	24
40	Observation of quadrature squeezing in a cavity-atom system. <i>Physical Review A</i> , 1992, 46, R1181-R1184.	2.5	23
41	Feedback-enhanced squeezing in second-harmonic generation. <i>Physical Review A</i> , 1995, 51, 3227-3233.	2.5	23
42	Squeezed light at sideband frequencies below 100 kHz from a single OPA. <i>Optics Communications</i> , 2004, 240, 185-190.	2.1	23
43	Spatial mode discrimination using second harmonic generation. <i>Optics Express</i> , 2007, 15, 5815.	3.4	21
44	Phase modulation spectroscopy: a non-destructive probe of Bose-Einstein condensates. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 1999, 1, 402-407.	1.4	20
45	A Quantum Study of Multibit Phase Coding for Optical Storage. <i>IEEE Journal of Quantum Electronics</i> , 2006, 42, 1001-1007.	1.9	19
46	Targeted pruning of a neuron's dendritic tree via femtosecond laser dendrotomy. <i>Scientific Reports</i> , 2016, 6, 19078.	3.3	18
47	Observation of a comb of optical squeezing over many gigahertz of bandwidth. <i>Optics Express</i> , 2007, 15, 5310.	3.4	16
48	Optimal complex field holographic projection. <i>Optics Letters</i> , 2011, 36, 3073.	3.3	16
49	Efficient multi-site two-photon functional imaging of neuronal circuits. <i>Biomedical Optics Express</i> , 2016, 7, 5325.	2.9	16
50	Investigation of the dynamic Stark effect in a three-level system. III. The strong-probe case. <i>Physical Review A</i> , 1986, 34, 4762-4769.	2.5	15
51	Active versus passive squeezing by second-harmonic generation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1996, 13, 1337.	2.1	15
52	Improved two-photon imaging of living neurons in brain tissue through temporal gating. <i>Biomedical Optics Express</i> , 2015, 6, 4027.	2.9	15
53	Investigation of the dynamic Stark effect in a three-level system. II. Theoretical description. <i>Physical Review A</i> , 1986, 33, 2424-2435.	2.5	14
54	Practical Implications of Quantum Noise. <i>Journal of Modern Optics</i> , 1990, 37, 1727-1740.	1.3	14

#	ARTICLE	IF	CITATIONS
55	Feedback control of the intensity noise of injection locked lasers. Optics Communications, 1998, 145, 359-366.	2.1	14
56	Simultaneous transfer of linear and orbital angular momentum to multiple low-index particles. Journal of Optics (United Kingdom), 2011, 13, 044004.	2.2	14
57	Kerr noise reduction and squeezing. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 553-561.	1.4	13
58	External phase-modulation interferometry. Applied Optics, 1996, 35, 1623.	2.1	12
59	Experimental test of modular noise propagation theory for quantum optics. Physical Review A, 1996, 54, 3400-3404.	2.5	12
60	Experimental observation of spatial polarisation separation by absorptive self-focussing. Optics Communications, 1991, 84, 184-188.	2.1	11
61	Cross-quadrature modulation with the Raman-induced Kerr effect. Physical Review A, 1991, 44, 2023-2035.	2.5	11
62	Harmonic demodulation of nonstationary shot noise. Optics Letters, 1993, 18, 759.	3.3	10
63	Using light to probe neuronal function. Europhysics Letters, 2015, 111, 38001.	2.0	9
64	Optics for Neutral Atomic Beams: Reflection and Diffraction of Sodium Atoms by Evanescent Laser Light Fields. Journal of Modern Optics, 1990, 37, 1839-1848.	1.3	6
65	Interferometers with Internal and External Phase Modulation: Experimental and Analytical Comparison. Australian Journal of Physics, 1995, 48, 971.	0.6	6
66	Images of evaporative cooling to Bose-Einstein condensation. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, 57-61.	1.4	6
67	Improving Focal Photostimulation of Cortical Neurons with Pre-derived Wavefront Correction. Frontiers in Cellular Neuroscience, 2017, 11, 105.	3.7	6
68	Noiseless amplification of the coherent amplitude of bright squeezed light using a standard laser amplifier. Optics Communications, 1995, 119, 301-304.	2.1	5
69	Optical experiments beyond the quantum limit: Squeezing, entanglement, and teleportation. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2003, 94, 651-665.	0.6	5
70	Asymmetric EPR entanglement in continuous variable systems. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 225502.	1.5	5
71	Quantum nondemolition measurement with a nonclassical meter input and an electro-optic enhancement. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, S229-S237.	1.4	4
72	Spectral line interferometry with temporal and spatial resolution. Optics Communications, 1986, 57, 39-44.	2.1	3

#	ARTICLE	IF	CITATIONS
73	Third-harmonic generation and laser-induced continuum structure in sodium. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 470-475.	1.4	3
74	Demonstration and characterization of a detector for minimally destructive detection of Bose condensed atoms in real time. Applied Optics, 2006, 45, 3415.	2.1	3
75	Spatial quantum effects with continuous-wave laser beams. Journal of Modern Optics, 2006, 53, 597-611.	1.3	3
76	Analyzing Branch-specific Dendritic Spikes Using an Ultrafast Laser Scalpel. Frontiers in Physics, 2020, 8, .	2.1	3
77	Teaching a laser beam to go straight. Contemporary Physics, 2005, 46, 395-405.	1.8	2
78	Optical pattern recognition via adaptive spatial homodyne detection. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 2583.	1.5	2
79	Spatio-temporal parameters for optical probing of neuronal activity. Biophysical Reviews, 2021, 13, 13-33.	3.2	2
80	Quantum information processing in optical images. Superlattices and Microstructures, 2002, 32, 323-329.	3.1	1
81	Pick the best and ignore the rest. Nature Physics, 2008, 4, 909-910.	16.7	1
82	Quantum noise detection: A portable and educational system. American Journal of Physics, 2008, 76, 1022-1025.	0.7	1
83	Biological measurement beyond the quantum limit. , 2013, , .		1
84	Comment on "Noiseless amplification in cavity-based optical systems with an internal two-photon process. II. Self-frequency-doubling laser and second-harmonic generation, self-down-converting laser"™. Journal of Modern Optics, 1997, 44, 651-652.	1.3	0
85	Manipulating the quantum properties of continuous laser beams. Applied Physics B: Lasers and Optics, 2005, 81, 889-896.	2.2	0
86	<title>Using quantum correlations and entanglement in continuous laser beams</title>. , 2006, , .		0
87	Editorial: Laser & Photon. Rev. 1 No. 3 (2007). Laser and Photonics Reviews, 2007, 1, 219-219.	8.7	0
88	Räumlich verschränkte Laserstrahlen. Physik in Unserer Zeit, 2008, 39, 268-269.	0.0	0
89	Editorial: Laser & Photonics Review 4(2)/2010. Laser and Photonics Reviews, 2010, 4, A19-A20.	8.7	0
90	Dynamic complex optical fields for optical manipulation, 3D microscopy, and photostimulation of neurotransmitters. Proceedings of SPIE, 2010, , .	0.8	0

#	ARTICLE	IF	CITATIONS
91	Four-dimensional multi-site two-photon excitation. Proceedings of SPIE, 2010, , .	0.8	0
92	Non-linear transfer of orbital angular momentum. , 2011, , .		0
93	Spatial reshaping of a squeezed state of light. , 2011, , .		0
94	Patterned illumination for analysing neuronal function in 3D. Proceedings of SPIE, 2012, , .	0.8	0
95	Quantum enhanced microrheology of a living cell. , 2013, , .		0
96	Multi-mode quantum networks. , 2013, , .		0
97	Efficient holographic multi-site two-photon fluorescence for functional calcium imaging of neuronal circuits. , 2016, , .		0
98	GAINING CONTROL IN QUANTUM OPTICS. , 2006, , .		0
99	Quantum Imaging Techniques for Improving Information Extraction from Images. , 2007, , 323-343.		0
100	Spatial reshaping of a squeezed state of light. , 2011, , .		0
101	Quantum probing of living cells. , 2013, , .		0
102	Optimal functional imaging of dendritic activity via oblique single-photon excitation of voltage indicators. , 2020, , .		0
103	Using a laser scalpel to analyze dendritic spikes. , 2021, , .		0
104	Quantum Imaging by Synthesis of Multimode Quantum Light. , 2007, , 67-78.		0