

Hans-A Bachor

List of Publications by Year in descending order

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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	Spatio-temporal parameters for optical probing of neuronal activity. Biophysical Reviews, 2021, 13, 13-33.	3.2	2
2	Using a laser scalpel to analyze dendritic spikes. , 2021, , .		0
3	Analyzing Branchâ€™specific Dendritic Spikes Using an Ultrafast Laser Scalpel. Frontiers in Physics, 2020, 8, .	2.1	3
4	Optimal functional imaging of dendritic activity via oblique single-photon excitation of voltage indicators. , 2020, , .		0
5	Improving Focal Photostimulation of Cortical Neurons with Pre-derived Wavefront Correction. Frontiers in Cellular Neuroscience, 2017, 11, 105.	3.7	6
6	Efficient multi-site two-photon functional imaging of neuronal circuits. Biomedical Optics Express, 2016, 7, 5325.	2.9	16
7	Targeted pruning of a neuronâ€™s dendritic tree via femtosecond laser dendrotomy. Scientific Reports, 2016, 6, 19078.	3.3	18
8	Efficient holographic multi-site two-photon fluorescence for functional calcium imaging of neuronal circuits. , 2016, , .		0
9	Improved two-photon imaging of living neurons in brain tissue through temporal gating. Biomedical Optics Express, 2015, 6, 4027.	2.9	15
10	Using light to probe neuronal function. Europhysics Letters, 2015, 111, 38001.	2.0	9
11	Multipartite Einsteinâ€™Podolskyâ€™Rosen steering and genuine tripartite entanglement with optical networks. Nature Physics, 2015, 11, 167-172.	16.7	249
12	Asymmetric EPR entanglement in continuous variable systems. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 225502.	1.5	5
13	Subdiffraction-Limited Quantum Imaging within a Living Cell. Physical Review X, 2014, 4, .	8.9	46
14	Quantum enhanced microrheology of a living cell. , 2013, , .		0
15	Biological measurement beyond the quantum limit. Nature Photonics, 2013, 7, 229-233.	31.4	411
16	Biological measurement beyond the quantum limit. , 2013, , .		1
17	Multi-mode quantum networks. , 2013, , .		0
18	Four-dimensional multi-site photolysis of caged neurotransmitters. Frontiers in Cellular Neuroscience, 2013, 7, 231.	3.7	31

#	ARTICLE	IF	CITATIONS
19	Quantum probing of living cells. , 2013, , .		0
20	Programmable multimode quantum networks. Nature Communications, 2012, 3, 1026.	12.8	130
21	Patterned illumination for analysing neuronal function in 3D. Proceedings of SPIE, 2012, , .	0.8	0
22	Simultaneous multi-site two-photon photostimulation in three dimensions. Journal of Biophotonics, 2012, 5, 745-753.	2.3	35
23	Non-linear transfer of orbital angular momentum. , 2011, , .		0
24	Optimal complex field holographic projection. Optics Letters, 2011, 36, 3073.	3.3	16
25	Spatial reshaping of a squeezed state of light. , 2011, , .		0
26	Simultaneous transfer of linear and orbital angular momentum to multiple low-index particles. Journal of Optics (United Kingdom), 2011, 13, 044004.	2.2	14
27	Spatial reshaping of a squeezed state of light. , 2011, , .		0
28	Editorial: Laser & Photonics Review 4(2)/2010. Laser and Photonics Reviews, 2010, 4, A19-A20.	8.7	0
29	Dynamic complex optical fields for optical manipulation, 3D microscopy, and photostimulation of neurotransmitters. Proceedings of SPIE, 2010, , .	0.8	0
30	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
31	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
32	Four-dimensional multi-site two-photon excitation. Proceedings of SPIE, 2010, , .	0.8	0
33	Optical entanglement of co-propagating modes. Nature Photonics, 2009, 3, 399-402.	31.4	60
34	<i>Colloquium</i>: The Einstein-Podolsky-Rosen paradox: From concepts to applications. Reviews of Modern Physics, 2009, 81, 1727-1751.	45.6	518
35	Arbitrary multisite two-photon excitation in four dimensions. Applied Physics Letters, 2009, 95, .	3.3	47
36	Spin entanglement, decoherence and Bohm's EPR paradox. Optics Express, 2009, 17, 18693.	3.4	33

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37	Räumlich verschränkte Laserstrahlen. Physik in Unserer Zeit, 2008, 39, 268-269.	0.0	0
38	Pick the best and ignore the rest. Nature Physics, 2008, 4, 909-910.	16.7	1
39	Entangling the Spatial Properties of Laser Beams. Science, 2008, 321, 541-543.	12.6	81
40	Quantum noise detection: A portable and educational system. American Journal of Physics, 2008, 76, 1022-1025.	0.7	1
41	Delay of squeezing and entanglement using electromagnetically induced transparency in a vapour cell. Optics Express, 2008, 16, 7369.	3.4	24
42	Quantum limits in image processing. Europhysics Letters, 2008, 81, 44001.	2.0	47
43	Observation of a comb of optical squeezing over many gigahertz of bandwidth. Optics Express, 2007, 15, 5310.	3.4	16
44	Spatial mode discrimination using second harmonic generation. Optics Express, 2007, 15, 5815.	3.4	21
45	Editorial: Laser & Photon. Rev. 1 No. 3 (2007). Laser and Photonics Reviews, 2007, 1, 219-219.	8.7	0
46	Quantum Imaging Techniques for Improving Information Extraction from Images. , 2007, , 323-343.		0
47	Quantum Imaging by Synthesis of Multimode Quantum Light. , 2007, , 67-78.		0
48	A Quantum Study of Multibit Phase Coding for Optical Storage. IEEE Journal of Quantum Electronics, 2006, 42, 1001-1007.	1.9	19
49	Quantum Study of Information Delay in Electromagnetically Induced Transparency. Physical Review Letters, 2006, 97, 183601.	7.8	59
50	Quantum measurements of spatial conjugate variables: displacement and tilt of a Gaussian beam. Optics Letters, 2006, 31, 1537.	3.3	31
51	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
52	<title>Using quantum correlations and entanglement in continuous laser beams</title>. , 2006, , .		0
53	Spatial quantum effects with continuous-wave laser beams. Journal of Modern Optics, 2006, 53, 597-611.	1.3	3
54	GAINING CONTROL IN QUANTUM OPTICS. , 2006, , .		0

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55	Manipulating the quantum properties of continuous laser beams. Applied Physics B: Lasers and Optics, 2005, 81, 889-896.	2.2	0
56	Teaching a laser beam to go straight. Contemporary Physics, 2005, 46, 395-405.	1.8	2
57	Nano-displacement measurements using spatially multimode squeezed light. Journal of Optics B: Quantum and Semiclassical Optics, 2004, 6, S664-S674.	1.4	38
58	Squeezed light at sideband frequencies below 100 kHz from a single OPA. Optics Communications, 2004, 240, 185-190.	2.1	23
59	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
60	Experimental investigation of continuous-variable quantum teleportation. Physical Review A, 2003, 67, .	2.5	280
61	A Quantum Laser Pointer. Science, 2003, 301, 940-943.	12.6	263
62	Stokes-operator-squeezed continuous-variable polarization states. Physical Review A, 2003, 67, .	2.5	41
63	Polarization Squeezing of Continuous Variable Stokes Parameters. Physical Review Letters, 2002, 88, 093601.	7.8	104
64	Images of evaporative cooling to Bose-Einstein condensation. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, 57-61.	1.4	6
65	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
66	Recovery of continuous wave squeezing at low frequencies. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, 421-424.	1.4	37
67	Quantum information processing in optical images. Superlattices and Microstructures, 2002, 32, 323-329.	3.1	1
68	Squeezing more from a quantum nondemolition measurement. Physical Review A, 2001, 65, .	2.5	25
69	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
70	Kerr noise reduction and squeezing. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 553-561.	1.4	13
71	Phase modulation spectroscopy: a non-destructive probe of Bose-Einstein condensates. Journal of Optics B: Quantum and Semiclassical Optics, 1999, 1, 402-407.	1.4	20
72	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

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73	Feedback control of the intensity noise of injection locked lasers. Optics Communications, 1998, 145, 359-366.	2.1	14
74	Photodetector designs for low-noise, broadband, and high-power applications. Review of Scientific Instruments, 1998, 69, 3755-3762.	1.3	54
75	Classical and quantum signatures of competing $\chi^{(2)}$ nonlinearities. Physical Review A, 1997, 55, 4511-4515.	2.5	31
76	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
77	Intensity-noise dependence of Nd:YAG lasers on their diode-laser pump source. Journal of the Optical Society of America B: Optical Physics, 1997, 14, 2936.	2.1	41
78	External phase-modulation interferometry. Applied Optics, 1996, 35, 1623.	2.1	12
79	Active versus passive squeezing by second-harmonic generation. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 1337.	2.1	15
80	Intensity-noise properties of injection-locked lasers. Physical Review A, 1996, 54, 4370-4382.	2.5	59
81	Intensity noise of injection-locked lasers: Quantum theory using a linearized input-output method. Physical Review A, 1996, 54, 4359-4369.	2.5	47
82	Experimental test of modular noise propagation theory for quantum optics. Physical Review A, 1996, 54, 3400-3404.	2.5	12
83	Noiseless amplification of the coherent amplitude of bright squeezed light using a standard laser amplifier. Optics Communications, 1995, 119, 301-304.	2.1	5
84	Interferometers with Internal and External Phase Modulation: Experimental and Analytical Comparison. Australian Journal of Physics, 1995, 48, 971.	0.6	6
85	Feedback-enhanced squeezing in second-harmonic generation. Physical Review A, 1995, 51, 3227-3233.	2.5	23
86	Squeezed light from second-harmonic generation: experiment versus theory. Optics Letters, 1995, 20, 1316.	3.3	30
87	Intensity feedback effects on quantum-limited noise. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1792.	2.1	48
88	Bright squeezed light from a singly resonant frequency doubler. Physical Review Letters, 1994, 72, 3807-3810.	7.8	101
89	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
90	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

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91	Quantum-noise-limited interferometric phase measurements. Applied Optics, 1993, 32, 3481.	2.1	39
92	Harmonic demodulation of nonstationary shot noise. Optics Letters, 1993, 18, 759.	3.3	10
93	Observation of quadrature squeezing in a cavity-atom system. Physical Review A, 1992, 46, R1181-R1184.	2.5	23
94	Experimental observation of spatial polarisation separation by absorptive self-focussing. Optics Communications, 1991, 84, 184-188.	2.1	11
95	Cross-quadrature modulation with the Raman-induced Kerr effect. Physical Review A, 1991, 44, 2023-2035.	2.5	11
96	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
97	Practical Implications of Quantum Noise. Journal of Modern Optics, 1990, 37, 1727-1740.	1.3	14
98	Reflection and diffraction of sodium atoms by evanescent laser light fields. Optics Communications, 1989, 73, 331-336.	2.1	32
99	Quantum nondemolition measurements in an optical-fiber ring resonator. Physical Review A, 1988, 38, 180-190.	2.5	47
100	Spectral line interferometry with temporal and spatial resolution. Optics Communications, 1986, 57, 39-44.	2.1	3
101	Investigation of the dynamic Stark effect in a three-level system. III. The strong-probe case. Physical Review A, 1986, 34, 4762-4769.	2.5	15
102	Investigation of the dynamic Stark effect in a three-level system. II. Theoretical description. Physical Review A, 1986, 33, 2424-2435.	2.5	14
103	Investigation of the dynamic Stark effect in a three-level system. I. Experiment. Physical Review A, 1986, 33, 2418-2423.	2.5	35
104	Optogalvanic detection as a quantitative method in spectroscopy. Optics Communications, 1982, 43, 337-342.	2.1	24