

# Martin Holthaus

## List of Publications by Year in descending order

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115  
papers

5,352  
citations

71102

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115  
all docs

115  
docs citations

115  
times ranked

2376  
citing authors

#	ARTICLE	IF	CITATIONS
1	Superfluid-Insulator Transition in a Periodically Driven Optical Lattice. <i>Physical Review Letters</i> , 2005, 95, 260404.	7.8	446
2	Collapse of minibands in far-infrared irradiated superlattices. <i>Physical Review Letters</i> , 1992, 69, 351-354.	7.8	398
3	Near-Field Heat Transfer in a Scanning Thermal Microscope. <i>Physical Review Letters</i> , 2005, 95, 224301.	7.8	356
4	On Bose-Einstein condensation in harmonic traps. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 208, 188-192.	2.1	203
5	Exploring dynamic localization with a Bose-Einstein condensate. <i>Physical Review A</i> , 2009, 79, .	2.5	180
6	Floquet engineering with quasienergy bands of periodically driven optical lattices. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 013001.	1.5	170
7	Quantum wells and superlattices in strong time-dependent fields. <i>Physical Review B</i> , 1993, 47, 6499-6508.	3.2	140
8	Mobility edges in bichromatic optical lattices. <i>Physical Review A</i> , 2007, 75, .	2.5	114
9	Analog of Photon-Assisted Tunneling in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2005, 95, 200401.	7.8	111
10	A semiclassical theory of quasienergies and Floquet wave functions. <i>Annals of Physics</i> , 1991, 211, 249-291.	2.8	103
11	Adiabatic processes in the ionization of highly excited hydrogen atoms. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1989, 11, 1-14.	1.0	102
12	Floquet theory for short laser pulses. <i>European Physical Journal D</i> , 1999, 5, 119-134.	1.3	99
13	Towards coherent control of a Bose-Einstein condensate in a double well. <i>Physical Review A</i> , 2001, 64, .	2.5	92
14	Pulse-shape-controlled tunneling in a laser field. <i>Physical Review Letters</i> , 1992, 69, 1596-1599.	7.8	90
15	Fluctuations of the Particle Number in a Trapped Bose-Einstein Condensate. <i>Physical Review Letters</i> , 1997, 79, 3557-3560.	7.8	88
16	Localization effects in ac-driven tight-binding lattices. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1996, 74, 105-137.	0.6	84
17	The quantum theory of an ideal superlattice responding to far-infrared laser radiation. <i>European Physical Journal B</i> , 1992, 89, 251-259.	1.5	83
18	Generalized ħ pulses. <i>Physical Review A</i> , 1994, 49, 1950-1960.	2.5	79

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19	ac-Field-Controlled Anderson Localization in Disordered Semiconductor Superlattices. Physical Review Letters, 1995, 75, 3914-3917.	7.8	79
20	Condensate Fluctuations in Trapped Bose Gases: Canonical vs. Microcanonical Ensemble. Annals of Physics, 1998, 270, 198-230.	2.8	78
21	Microcanonical fluctuations of a Bose system's ground state occupation number. Physical Review E, 1996, 54, 3495-3498.	2.1	77
22	$\hat{\mu}$ -Transition to the Bose-Einstein Condensate. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1995, 50, 921-930.	1.5	75
23	Fluctuations in Ideal and Interacting Bose-Einstein Condensates: From the Laser Phase Transition Analogy to Squeezed States and Bogoliubov Quasiparticles. Advances in Atomic, Molecular and Optical Physics, 2006, , 291-411.	2.3	74
24	Coherent control of the self-trapping transition. European Physical Journal B, 2001, 20, 451-467.	1.5	70
25	Bloch oscillations and Zener breakdown in an optical lattice. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 589-604.	1.4	68
26	AC-induced superfluidity. Europhysics Letters, 2007, 80, 50004.	2.0	58
27	Quantum phases and Landau-Zener transitions in oscillating fields. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 140, 507-512.	2.1	56
28	Bose-Hubbard phase diagram with arbitrary integer filling. Physical Review B, 2009, 79, .	3.2	54
29	Exploring a Metal-Insulator Transition with Ultracold Atoms in Standing Light Waves?. Physical Review Letters, 1997, 78, 2932-2935.	7.8	53
30	Improved variational principle for bounds on energy dissipation in turbulent shear flow. Physica D: Nonlinear Phenomena, 1997, 101, 178-190.	2.8	53
31	The role of avoided crossings in the dynamics of strong laser field ? matter interactions. Zeitschrift FÅ¼r Physik D-Atoms Molecules and Clusters, 1988, 8, 349-357.	1.0	49
32	Maxwell's Demon at work: Two types of Bose condensate fluctuations in power-law traps. Optics Express, 1997, 1, 262.	3.4	49
33	Thermal radiation and near-field energy density of thin metallic films. European Physical Journal B, 2007, 55, 237-251.	1.5	48
34	Process-chain approach to the Bose-Hubbard model: Ground-state properties and phase diagram. Physical Review B, 2009, 79, .	3.2	48
35	Bose -Einstein Condensation and Condensate Tunneling. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1995, 50, 323-326.	1.5	47
36	Avoided-Level-Crossing Spectroscopy with Dressed Matter Waves. Physical Review Letters, 2008, 101, 245302.	7.8	47

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37	Energy flow in periodic thermodynamics. <i>Physical Review E</i> , 2014, 89, 012101.	2.1	47
38	Pseudopotential approximation in a harmonic trap. <i>Physical Review A</i> , 2002, 65, .	2.5	46
39	Kilohertz-Driven Bose-Einstein Condensates in Optical Lattices. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2012, 61, 515-547.	2.3	45
40	Bose-Einstein condensation in a cavity. <i>European Physical Journal B</i> , 1995, 97, 319-326.	1.5	44
41	ac Stark effects and harmonic generation in periodic potentials. <i>Physical Review B</i> , 1994, 49, 16605-16608.	3.2	42
42	Locally disordered lattices in strong ac electric fields. <i>Physical Review B</i> , 1993, 48, 15123-15131.	3.2	41
43	The Saddle-Point Method for Condensed Bose Gases. <i>Annals of Physics</i> , 1999, 276, 321-360.	2.8	39
44	Selective excitation of molecular vibrations by interference of Floquet states. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1991, 24, 1343-1357.	1.5	38
45	Many-particle tunnelling in a driven Bosonic Josephson junction. <i>Chemical Physics</i> , 2006, 322, 118-126.	1.9	36
46	On the classical-quantum correspondence for periodically time dependent systems. <i>Chaos, Solitons and Fractals</i> , 1995, 5, 1143-1167.	5.1	35
47	The background flow method. Part 1. Constructive approach to bounds on energy dissipation. <i>Journal of Fluid Mechanics</i> , 1998, 363, 281-300.	3.4	34
48	Shape-dependence of near-field heat transfer between a spheroidal nanoparticle and a flat surface. <i>EPJ Applied Physics</i> , 2010, 50, 10603.	0.7	34
49	Strong laser fields interacting with matter I. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1988, 10, 13-26.	1.0	33
50	Classical resonances in quantum mechanics. <i>Physical Review A</i> , 1992, 45, 1978-1986.	2.5	33
51	Random Lattices in Combined a.c. and d.c. Electric Fields: Anderson vs. Wannier-Stark Localization. <i>Europhysics Letters</i> , 1995, 32, 241-246.	2.0	33
52	Ultracold atoms in modulated standing light waves. <i>Chemical Physics</i> , 1997, 217, 201-219.	1.9	33
53	Perturbative and nonperturbative processes in adiabatic population transfer. <i>European Physical Journal D</i> , 1998, 3, 73-86.	1.3	30
54	Classical and Quantum Dynamics of a Periodically Driven Particle in a Triangular Well. <i>Annals of Physics</i> , 1996, 245, 113-146.	2.8	27

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55	Quantum approach to electromagnetic energy transfer between two dielectric bodies. <i>Physical Review A</i> , 2003, 68, .	2.5	27
56	Generalized acceleration theorem for spatiotemporal Bloch waves. <i>Physical Review B</i> , 2011, 84, .	3.2	25
57	Low-frequency ionisation of excited hydrogen atoms: the Floquet picture. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989, 22, 3187-3196.	1.5	24
58	Transport of quantum states of periodically driven systems. <i>Journal De Physique</i> , 1990, 51, 709-722.	1.8	24
59	Highly excited hydrogen atoms in strong microwave fields. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1991, 18, 239-248.	1.0	23
60	Adiabatic control of molecular excitation and tunneling by short laser pulses. <i>The Journal of Physical Chemistry</i> , 1993, 97, 12634-12643.	2.9	22
61	Master equation vs. partition function: canonical statistics of ideal Bose-Einstein condensates. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 300, 433-467.	2.6	22
62	Variational bound on energy dissipation in plane Couette flow. <i>Physical Review E</i> , 1997, 56, 6774-6786.	2.1	19
63	Driven optical lattices as strong-field simulators. <i>Physical Review A</i> , 2010, 81, .	2.5	19
64	Reference data for phase diagrams of triangular and hexagonal bosonic lattices. <i>Europhysics Letters</i> , 2010, 91, 10004.	2.0	19
65	Transitions induced by separatrix crossing. <i>Physical Review A</i> , 1992, 45, 4960-4968.	2.5	18
66	On the classical dynamics of strongly driven anharmonic oscillators. <i>Physica D: Nonlinear Phenomena</i> , 1990, 46, 317-341.	2.8	17
67	Selective excitation of the HF molecule: Continuum and pulse-shape effects. <i>Physical Review A</i> , 1992, 45, 550-552.	2.5	17
68	Rigorous bound on the plane-shear-flow dissipation rate. <i>Physical Review E</i> , 1995, 51, 360-365.	2.1	17
69	The background flow method. Part 2. Asymptotic theory of dissipation bounds. <i>Journal of Fluid Mechanics</i> , 1998, 363, 301-323.	3.4	16
70	Asymptotics of the number partitioning distribution. <i>Europhysics Letters</i> , 2002, 59, 486-492.	2.0	16
71	Adiabatic preparation of Floquet condensates. <i>Journal of Modern Optics</i> , 2016, 63, 1768-1776.	1.3	16
72	Ground-state energy and depletions for a dilute binary Bose gas. <i>Physical Review A</i> , 2004, 70, .	2.5	15

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73	Anderson localization in an ac-driven two-band model. <i>Journal of Physics Condensed Matter</i> , 1996, 8, 1193-1206.	1.8	14
74	Bogoliubov speed of sound for a dilute Bose-Einstein condensate in a 3d optical lattice. <i>Europhysics Letters</i> , 2004, 67, 887-892.	2.0	14
75	Factorising numbers with a Bose-Einstein condensate. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 341, 586-606.	2.6	14
76	Controlled wave-packet manipulation with driven optical lattices. <i>Physical Review A</i> , 2011, 84, .	2.5	14
77	Subharmonic generation in quantum systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 187, 151-156.	2.1	13
78	Hypergeometric continuation of divergent perturbation series: II. Comparison with Shanks transformation and Pad� approximation. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 465302.	2.1	12
79	Variational Bound on Energy Dissipation in Turbulent Shear Flow. <i>Physical Review Letters</i> , 1997, 79, 4170-4173.	7.8	11
80	Towards lowering dissipation bounds for turbulent flows. <i>European Physical Journal B</i> , 1999, 10, 385-396.	1.5	11
81	Influence of boundary conditions on statistical properties of ideal Bose-Einstein condensates. <i>Physical Review E</i> , 2002, 65, 036129.	2.1	11
82	Perturbation theory for plasmonic eigenvalues. <i>Physical Review B</i> , 2009, 80, .	3.2	11
83	Spheroidal nanoparticles as thermal near-field sensors. <i>Journal of Applied Physics</i> , 2010, 108, 014312.	2.5	11
84	Hypergeometric continuation of divergent perturbation series: I. Critical exponents of the Bose-Hubbard model. <i>New Journal of Physics</i> , 2017, 19, 103036.	2.9	11
85	Cumulants of partitions. <i>Journal of Physics A</i> , 2003, 36, 1827-1844.	1.6	10
86	Periodic thermodynamics of the Rabi model with circular polarization for arbitrary spin quantum numbers. <i>Physical Review E</i> , 2019, 100, 042141.	2.1	10
87	Adiabatic motion and the structure of quasi-energy surfaces of periodically driven quantum systems. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , 1990, 105, 53-63.	0.2	9
88	Trojan quasiparticles. <i>New Journal of Physics</i> , 2014, 16, 093009.	2.9	9
89	Berry's phase in quantum optics. <i>Physical Review A</i> , 1993, 47, 725-728.	2.5	8
90	Perturbative calculation of critical exponents for the Bose-Hubbard model. <i>Applied Physics B: Lasers and Optics</i> , 2013, 113, 57-67.	2.2	8

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91	Periodic thermodynamics of the parametrically driven harmonic oscillator. Physical Review E, 2019, 100, 012102.	2.1	8
92	Floquet-state cooling. Scientific Reports, 2019, 9, 17614.	3.3	8
93	Phase diagram for a modified Harper model. Physical Review B, 1997, 55, R14693-R14696.	3.2	7
94	Second-order calculation of the local density of states above a nanostructured surface. Physical Review B, 2010, 82, .	3.2	7
95	Hypergeometric analytic continuation of the strong-coupling perturbation series for the 2d Bose-Hubbard model. Europhysics Letters, 2015, 111, 20002.	2.0	7
96	Floquet theory of the analytical solution of a periodically driven two-level system. Applicable Analysis, 2021, 100, 992-1009.	1.3	7
97	A remark on the Kramers-Henneberger transformation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 165, 341-346.	2.1	6
98	Fluctuations of the order parameter of a mesoscopic Floquet condensate. Physical Review A, 2014, 90, .	2.5	6
99	Strongly Driven Semiconductor Quantum Wells. Progress of Theoretical Physics Supplement, 1994, 116, 417-423.	0.1	6
100	Ground-State Energy of a Weakly Interacting Bose Gas: Calculation Without Regularization. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2004, 59, 1-13.	1.5	5
101	Quantum critical properties of Bose-Hubbard models. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 255001.	2.1	5
102	On the quantum field theory of photoionisation and electron scattering reactions on atoms. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1987, 7, 9-21.	1.0	4
103	Universal renormalization of saddle-point integrals for condensed Bose gases. Physical Review E, 1999, 60, 6534-6537.	2.1	4
104	s-wave pseudopotential for anisotropic traps. Physical Review A, 2003, 68, .	2.5	4
105	$\langle \mathbf{r} \rangle$ Stark shift and multiphotonlike resonances in low-frequency-driven optical lattices. Physical Review A, 2012, 85, .	2.8	4
106	Quasiparticle tunneling in a periodically driven bosonic Josephson junction. Physical Review A, 2014, 90, .	2.5	3
107	Emergence and destruction of macroscopic wave functions. Europhysics Letters, 2015, 111, 30006.	2.5	3
108	Emergence and destruction of macroscopic wave functions. Europhysics Letters, 2015, 111, 30006.	2.0	3

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109	Entropy Production Within a Pulsed Bose-Einstein Condensate. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2016, 71, 875-881.	1.5	3
110	Environment-controlled Floquet-state paramagnetism. Physical Review Research, 2020, 2, .	3.6	3
111	Adiabatic evolution, quantum phases, and Landau-Zener transitions in strong. Radiation Effects and Defects in Solids, 1994, null, 91-106.	1.2	1
112	Canonical Statistics of Occupation Numbers for Ideal and Weakly Interacting Bose-Einstein Condensates. Lecture Notes in Physics, 2002, , 332-368.	0.7	0
113	Sub- and superluminal kink-like waves in the kinetic limit of Maxwell-Bloch equations. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 025301.	2.1	0
114	Coherent Control of Quantum Localization. , 1999, , 171-182.		0
115	Following Floquet states in high-dimensional Hilbert spaces. Physical Review Research, 2021, 3, .	3.6	0