

Reinhold Walser

List of Publications by Year in descending order

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71
papers

3,041
citations

236612

25
h-index

155451

55
g-index

74
all docs

74
docs citations

74
times ranked

1941
citing authors

#	ARTICLE	IF	CITATIONS
1	Resonance Superfluidity in a Quantum Degenerate Fermi Gas. <i>Physical Review Letters</i> , 2001, 87, 120406.	2.9	455
2	Interferometry with Bose-Einstein Condensates in Microgravity. <i>Physical Review Letters</i> , 2013, 110, 093602.	2.9	296
3	Bose-Einstein Condensation in Microgravity. <i>Science</i> , 2010, 328, 1540-1543.	6.0	246
4	Space-borne Bose-Einstein condensation for precision interferometry. <i>Nature</i> , 2018, 562, 391-395.	13.7	224
5	Nonlinear Josephson-type oscillations of a driven, two-component Bose-Einstein condensate. <i>Physical Review A</i> , 1999, 59, R31-R34.	1.0	181
6	STE-QUEST test of the universality of free fall using cold atom interferometry. <i>Classical and Quantum Gravity</i> , 2014, 31, 115010.	1.5	159
7	Resonance superfluidity: Renormalization of resonance scattering theory. <i>Physical Review A</i> , 2002, 65, .	1.0	157
8	Formation of Pairing Fields in Resonantly Coupled Atomic and Molecular Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2001, 86, 1915-1918.	2.9	116
9	Motion tomography of a single trapped ion. <i>Physical Review A</i> , 1996, 53, R1966-R1969.	1.0	101
10	Excitation of a dipole topological state in a strongly coupled two-component Bose-Einstein condensate. <i>Physical Review A</i> , 2000, 61, .	1.0	86
11	Quantum kinetic theory for a condensed bosonic gas. <i>Physical Review A</i> , 1999, 59, 3878-3889.	1.0	83
12	Evolution of a spinor condensate: Coherent dynamics, dephasing, and revivals. <i>Physical Review A</i> , 2005, 72, .	1.0	79
13	Diode-laser noise spectroscopy of rubidium. <i>Optics Letters</i> , 1993, 18, 1816.	1.7	57
14	Laser-noise-induced polarization fluctuations as a spectroscopic tool. <i>Physical Review A</i> , 1994, 49, 5067-5077.	1.0	56
15	A Compact Atom Interferometer for Future Space Missions. <i>Microgravity Science and Technology</i> , 2010, 22, 551-561.	0.7	48
16	Vortex creation in a trapped Bose-Einstein condensate by stimulated Raman adiabatic passage. <i>Physical Review A</i> , 2004, 69, .	1.0	47
17	Magnetic Tomography of a Cavity State. <i>Physical Review Letters</i> , 1996, 77, 2658-2661.	2.9	46
18	Quantum tunneling of semifluxons in a long Josephson junction. <i>Physical Review B</i> , 2005, 72, .	1.1	40

#	ARTICLE	IF	CITATIONS
19	Bose-Einstein condensates in microgravity. <i>Applied Physics B: Lasers and Optics</i> , 2006, 84, 663-671.	1.1	40
20	Reversible and irreversible evolution of a condensed bosonic gas. <i>Physical Review A</i> , 2000, 63, .	1.0	33
21	Sagnac Effect of Gödel's Universe. <i>General Relativity and Gravitation</i> , 2004, 36, 2289-2316.	0.7	33
22	Matter wave explorer of gravity (MWXG). <i>Experimental Astronomy</i> , 2009, 23, 611-649.	1.6	30
23	Laser-noise-induced population fluctuations in two-level systems: Complex and real Gaussian driving fields. <i>Physical Review A</i> , 1992, 45, 468-476.	1.0	28
24	Localization of atoms in light fields: Optical molasses, adiabatic compression and squeezing. <i>Applied Physics B: Lasers and Optics</i> , 1995, 60, 145-153.	1.1	26
25	Achieving steady-state Bose-Einstein condensation. <i>Physical Review A</i> , 1998, 57, 2030-2036.	1.0	26
26	Equivalence of kinetic theories of Bose-Einstein condensation. <i>Physical Review A</i> , 2001, 64, .	1.0	26
27	Degenerate Quantum Gases in Microgravity. <i>Microgravity Science and Technology</i> , 2011, 23, 287-292.	0.7	22
28	A freely falling magneto-optical trap drop tower experiment. <i>Applied Physics B: Lasers and Optics</i> , 2007, 89, 431-438.	1.1	21
29	The Space Atom Interferometer project: status and prospects. <i>Journal of Physics: Conference Series</i> , 2011, 327, 012050.	0.3	20
30	Quantum simulators by design: Many-body physics in reconfigurable arrays of tunnel-coupled traps. <i>Physical Review A</i> , 2017, 95, .	1.0	18
31	Quantum dynamics of atomic coherence in a spin-1 condensate: Mean-field versus many-body simulation. <i>Optics Communications</i> , 2006, 264, 311-320.	1.0	17
32	Resonant Feshbach scattering of fermions in one-dimensional optical lattices. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2007, 40, 2703-2718.	0.6	17
33	Measuring the State of a Bosonic Two-Mode Quantum Field. <i>Physical Review Letters</i> , 1997, 79, 4724-4727.	2.9	16
34	Riemann ζ function from wave-packet dynamics. <i>Physical Review A</i> , 2010, 82, .	1.0	16
35	Saturated absorption spectroscopy using diode-laser phase noise. <i>Physical Review A</i> , 1994, 50, 4303-4309.	1.0	14
36	Tailored quantum statistics from broadband states of light. <i>New Journal of Physics</i> , 2015, 17, 043039.	1.2	12

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37	Spectroscopy with diode-laser noise. <i>Optics Communications</i> , 1998, 146, 158-162.	1.0	11
38	Dropping cold quantum gases on Earth over long times and large distances. <i>Physical Review A</i> , 2007, 76, .	1.0	11
39	Memory effects and conservation laws in the quantum kinetic evolution of a dilute Bose gas. <i>Physical Review A</i> , 2002, 66, .	1.0	9
40	Feasibility of UV lasing without inversion in mercury vapor. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2014, 31, 1964.	0.9	9
41	Efficient Description of Bose-Einstein Condensates in Time-Dependent Rotating Traps. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2017, 66, 375-438.	2.3	9
42	Ground state correlations in a trapped quasi one-dimensional Bose gas. <i>Optics Communications</i> , 2004, 243, 107-129.	1.0	8
43	Harmonic oscillator thermal density matrix: First-order differential equations for the position representation. <i>American Journal of Physics</i> , 2018, 86, 22-24.	0.3	8
44	Semifluxons in superconductivity and cold atomic gases. <i>New Journal of Physics</i> , 2008, 10, 045020.	1.2	7
45	Exploring the growth of correlations in a quasi one-dimensional trapped Bose gas. <i>New Journal of Physics</i> , 2008, 10, 045024.	1.2	7
46	Resonance Superfluidity in a Quantum Degenerate Fermi Gas. <i>Acta Physica Polonica A</i> , 2002, 101, 387-397.	0.2	7
47	Immersing carbon nanotubes in cold atomic gases. <i>Physical Review A</i> , 2013, 88, .	1.0	6
48	Optimal pulse propagation in an inhomogeneously gas-filled hollow-core fiber. <i>Physical Review A</i> , 2019, 100, .	1.0	6
49	ATOMIC QUANTUM SENSORS IN SPACE. <i>International Journal of Modern Physics D</i> , 2007, 16, 2421-2429.	0.9	4
50	Emergence of atomic semifluxons in optical Josephson junctions. <i>Physical Review A</i> , 2013, 87, .	1.0	4
51	Two-body loss rates for reactive collisions of cold atoms. <i>Physical Review A</i> , 2018, 97, .	1.0	4
52	Collective Feshbach scattering of a superfluid droplet from a mesoscopic two-component Bose-Einstein condensate. <i>Physical Review A</i> , 2006, 73, .	1.0	3
53	Number filter for matter waves. <i>Physical Review A</i> , 2008, 78, .	1.0	3
54	The granularity of weakly occupied bosonic fields beyond the local density approximation. <i>New Journal of Physics</i> , 2009, 11, 023010.	1.2	3

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55	Emission spectrum of broadband quantum dot superluminescent diodes. Optics Communications, 2020, 458, 124449.	1.0	3
56	Raman velocity filter as a tool for collinear laser spectroscopy. Physical Review A, 2020, 101, .	1.0	3
57	Aberrations in (3+1)-dimensional Bragg diffraction using pulsed Laguerre-Gaussian laser beams. Physical Review A, 2021, 103, .	1.0	3
58	Realization of a magneto-optical trap in microgravity. Journal of Modern Optics, 2007, 54, 2513-2522.	0.6	2
59	Mean-field Wigner function of Bose-Einstein condensates in the Thomas-Fermi limit. Physica Scripta, 2018, 93, 124004.	1.2	2
60	Toward lasing without inversion in the ultraviolet regime: Doppler-free three-photon coherence effects in mercury vapor. Physical Review A, 2022, 105, .	1.0	2
61	Quantum Engineering with Trapped Ions. , 1997, , 317-323.		1
62	RUBIDIUM BOSE-EINSTEIN CONDENSATE UNDER MICROGRAVITY. International Journal of Modern Physics D, 2007, 16, 2447-2454.	0.9	1
63	Developments toward atomic quantum sensors. , 2007, , .		1
64	Towards Lasing Without Inversion in Neutral Mercury. Journal of Physics: Conference Series, 2015, 594, 012007.	0.3	1
65	Sagnac Effect in Gödel's Universe. , 2006, , .		1
66	QUANTUM KINETIC THEORY FOR A BOSE-EINSTEIN CONDENSED ALKALI GAS. International Journal of Modern Physics B, 2001, 15, 1641-1650.	1.0	0
67	Extended Mean-Field Theory: Reversible and Irreversible Quantum Evolution of Trapped Gases. Cold Atoms, 2013, , 107-119.	0.3	0
68	Hybrid coherent light: Modeling broadband quantum dot superluminescent diodes. , 2017, , .		0
69	Three-dimensional simulation of atomic Bragg beam splitters. , 2017, , .		0
70	Rapid generation of Mott insulators from arrays of noncondensed atoms. Physical Review A, 2018, 97, .	1.0	0
71	Silent White Light: Intensity Noise Suppression in Superluminescent Diodes. , 2021, , .		0