Martin Weitz

List of Publications by Year
in descending order

113 papers	5,396 citations	101496 36 h-index	82499 72 g-index
116 all docs	116 docs citations	116 times ranked	3313 citing authors

#	Article	IF	Citations
1	Measurement of the Hydrogen1S-2STransition Frequency by Phase Coherent Comparison with a Microwave Cesium Fountain Clock. Physical Review Letters, 2000, 84, 5496-5499.	2.9	579
2	Boseâ€“Einstein condensation of photons in an optical microcavity. Nature, 2010, 468, 545-548.	13.7	571
3	Phase-Coherent Measurement of the Hydrogen1Sâ^'2STransition Frequency with an Optical Frequency Interval Divider Chain. Physical Review Letters, 1997, 79, 2646-2649.	2.9	326
4	Atomic Interferometer with Amplitude Gratings of Light and Its Applications to Atom Based Tests of the Equivalence Principle. Physical Review Letters, 2004, 93, 240404.	2.9	234
5	Phase Coherent Vacuum-Ultraviolet to Radio Frequency Comparison with a Mode-Locked Laser. Physical Review Letters, 2000, 84, 3232-3235.	2.9	215
6	Directed Transport of Atoms in a Hamiltonian Quantum Ratchet. Science, 2009, 326, 1241-1243.	6.0	196
7	Hydrogen-Deuterium1Sâ^'2SIsotope Shift and the Structure of the Deuteron. Physical Review Letters, 1998, 80, 468-471.	2.9	186
8	Atomic Interferometer Based on Adiabatic Population Transfer. Physical Review Letters, 1994, 73, 2563-2566.	2.9	182
9	CO2-laser optical lattice with cold rubidium atoms. Physical Review A, 1998, 57, R20-R23.	1.0	182
10	Thermalization of a two-dimensional photonic gas in a â€˜white wallâ€™ photon box. Nature Physics, 2010, 6, 512-515.	6.5	142
11	Atomic Landau-Zener Tunneling in Fourier-Synthesized Optical Lattices. Physical Review Letters, 2007, 99, 190405.	2.9	120
12	Precision measurement of the hydrogen and deuterium 1 S ground state Lamb shift. Physical Review Letters, 1994, 72, 328-331.	2.9	108
13	Theory of the energy levels and precise two-photon spectroscopy of atomic hydrogen and deuterium. Journal of Physics B: Atomic, Molecular and Optical Physics, 1996, 29, 177-195.	0.6	106
14	Observation of Grand-Canonical Number Statistics in a Photon Bose-Einstein Condensate. Physical Review Letters, 2014, 112, 030401.	2.9	93
15	Fourier synthesis of optical potentials for atomic quantum gases. Physical Review A, 2006, 74, .	1.0	91
16	Atomic Bloch-Zener Oscillations and StÃ¼ckelberg Interferometry in Optical Lattices. Physical Review Letters, 2010, 105, 215301.	2.9	87
17	Real-space imaging of a topologically protected edge state with ultracold atoms in an amplitude-chirped optical lattice. Nature Communications, 2016, 7, 13112.	5.8	86
18	Statistical Physics of Bose-Einstein-Condensed Light in a Dye Microcavity. Physical Review Letters, 2012, 108, 160403.	2.9	82

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19	Precision measurement of the 1Sground-state Lamb shift in atomic hydrogen and deuterium by frequency comparison. Physical Review A, 1995, 52, 2664-2681.	1.0	80
20	A Sternâ€“Gerlach experiment for slow light. Nature Physics, 2006, 2, 332-335.	6.5	78
21	All-Optical Realization of an Atom Laser. Physical Review Letters, 2003, 91, 240408.	2.9	73
22	Precise optical Lamb shift measurements in atomic hydrogen. Physical Review Letters, 1992, 68, 1120-1123.	2.9	70
23	Atom manipulation based on delayed laser pulses in three- and four-level systems: Light shifts and transfer efficiencies. Physical Review A, 1994, 50, 2438-2444.	1.0	70
24	Multiple Beam Atomic Interferometer. Physical Review Letters, 1996, 77, 2356-2359.	2.9	69
25	Precision measurement of the isotope shift of the 1S-2Stransition of atomic hydrogen and deuterium. Physical Review Letters, 1993, 70, 2261-2264.	2.9	67
26	High-resolution spectroscopy of the 1S-2Stransition of atomic hydrogen and deuterium. Physical Review A, 1995, 51, 2789-2800.	1.0	67
27	Thermalization kinetics of light: From laser dynamics to equilibrium condensation of photons. Physical Review A, 2015, 92, .	1.0	67
28	High-resolution spectroscopy of the1Sâ^'2Stransition in atomic hydrogen. Physical Review A, 1999, 59, 1844-1851.	1.0	64
29	Klein Tunneling of a Quasirelativistic Bose-Einstein Condensate in an Optical Lattice. Physical Review Letters, 2011, 107, 240401.	2.9	63
30	Resonance Beating of Light Stored Using Atomic Spinor Polaritons. Physical Review Letters, 2008, 101, 170406.	2.9	58
31	Laser cooling by collisional redistribution of radiation. Nature, 2009, 461, 70-73.	13.7	57
32	Boseâ€“Einstein condensation of paraxial light. Applied Physics B: Lasers and Optics, 2011, 105, 17-33.	1.1	56
33	Variable potentials for thermalized light and coupled condensates. Nature Photonics, 2017, 11, 565-569.	15.6	55
34	Theory of the hydrogen-deuterium isotope shift. Physical Review A, 1994, 49, 2255-2259.	1.0	45
35	Experimental control of transport resonances in a coherent quantum rocking ratchet. Nature Communications, 2016, 7, 10440.	5.8	41
36	Observation of a non-Hermitian phase transition in an optical quantum gas. Science, 2021, 372, 88-91.	6.0	39

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37	Controlled Decoherence in Multiple Beam Ramsey Interference. Physical Review Letters, 2001, 86, 559-563.	2.9	35
38	Spontaneous Symmetry Breaking and Phase Coherence of a Photon Bose-Einstein Condensate Coupled to a Reservoir. Physical Review Letters, 2016, 116, 033604.	2.9	30
39	Laser frequency offset locking using a side of filter technique. Applied Physics B: Lasers and Optics, 2004, 79, 363-365.	1.1	26
40	Boseâ€“Einstein condensation in a CO2-laser optical dipole trap. Applied Physics B: Lasers and Optics, 2003, 77, 773-779.	1.1	24
41	Calorimetry of a Boseâ€“Einstein-condensed photon gas. Nature Communications, 2016, 7, 11340.	5.8	23
42	Quantum Rabi model in the Brillouin zone with ultracold atoms. Physical Review A, 2017, 95, .	1.0	23
43	Thermally condensing photons into a coherently split state of light. Science, 2019, 366, 894-897.	6.0	23
44	Optical multiphoton lattices. Physical Review A, 2004, 70, .	1.0	22
45	Kennard-Stepanov Relation Connecting Absorption and Emission Spectra in an Atomic Gas. Physical Review Letters, 2014, 113, 063002.	2.9	22
46	Tuning the Mobility of a Driven Bose-Einstein Condensate via Diabatic Floquet Bands. Physical Review Letters, 2013, 110, 135302.	2.9	21
47	Frequency Matching in Light-Storage Spectroscopy of Atomic Raman Transitions. Physical Review Letters, 2009, 103, 093601.	2.9	20
48	Superresolution of Pulsed Multiphoton Raman Transitions. Physical Review Letters, 2001, 87, 113601.	2.9	19
49	First-order spatial coherence measurements in a thermalized two-dimensional photonic quantum gas. Nature Communications, 2017, 8, 158.	5.8	19
50	Thermo-optical interactions in a dye-microcavity photon Boseâ€“Einstein condensate. New Journal of Physics, 2017, 19, 115009.	1.2	19
51	Interference of a variable number of coherent atomic sources. Physical Review A, 2005, 72, .	1.0	18
52	Spectroscopy of atomic rubidium at500â°barbuffer gas pressure: Approaching the thermal equilibrium of dressed atom-light states. Physical Review A, 2008, 78, .	1.0	18
53	Collisional redistribution laser cooling of a high-pressure atomic gas. Journal of Modern Optics, 2011, 58, 1300-1309.	0.6	18
54	Bloch oscillations of a Bose-Einstein condensate in a subwavelength optical lattice. Physical Review A, 2009, 79, .	1.0	15

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55	Phase-coherent light pulses for atom optics and interferometry. Optics Letters, 1997, 22, 1719.	1.7	14
56	Optical Ramsey spectroscopy of atomic hydrogen. Europhysics Letters, 1998, 44, 186-191.	0.7	14
57	Realizing arbitrary trapping potentials for light via direct laser writing of mirror surface profiles. Europhysics Letters, 2020, 130, 54001.	0.7	14
58	Optomechanical generation of a photonic Bose-Einstein condensate. Physical Review A, 2013, 88, .	1.0	13
59	Veselago lensing with ultracold atoms in an optical lattice. Nature Communications, 2014, 5, 3327.	5.8	13
60	Collapse and revival of the fringe pattern in a multiple-beam atom interferometer. Europhysics Letters, 1997, 37, 517-522.	0.7	12
61	Two-photon optical Ramsey spectroscopy of the1Sâ^'2Stransition in atomic hydrogen. Physical Review A, 1998, 58, R2631-R2634.	1.0	12
62	Frequency-independent laser cooling based on interferometry. Europhysics Letters, 2000, 49, 302-308.	0.7	12
63	Compressibility and the equation of state of an optical quantum gas in a box. Science, 2022, 375, 1403-1406.	6.0	12
64	Hydrogen atom interferometer with short light pulses. Europhysics Letters, 2002, 57, 158-163.	0.7	11
65	Laser cooling of a potassiumâ€“argon gas mixture using collisional redistribution of radiation. Applied Physics B: Lasers and Optics, 2011, 102, 503-507.	1.1	11
66	Bose-Einstein condensation of photons in a microscopic optical resonator: towards photonic lattices and coupled cavities. Proceedings of SPIE, 2013, , .	0.8	11
67	Multiple-beam Ramsey interference and quantum decoherence. Applied Physics B: Lasers and Optics, 2001, 72, 91-99.	1.1	10
68	Bose-Einstein condensation of erbium atoms in a quasielectrostatic optical dipole trap. Physical Review A, 2017, 95, .	1.0	10
69	Dark resonances with variable Doppler sensitivity. Physical Review A, 2005, 71, .	1.0	9
70	An optical lattice with single lattice site optical control for quantum engineering. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 645-650.	1.4	8
71	Slow light in inhomogeneous and transverse fields. New Journal of Physics, 2008, 10, 045015.	1.2	8
72	Light confinement by a cylindrical metallic waveguide in a dense buffer-gas environment. Physical Review A, 2011, 83, .	1.0	8

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73	Cavity enhanced cw stimulated Brillouin scattering in a fused silica plate. Optics Communications, 1997, 140, 281-284.	1.0	7
74	Atom-Based Test of the Equivalence Principle. Space Science Reviews, 2009, 148, 225-232.	3.7	7
75	Doppler-free frequency-modulation spectroscopy of atomic erbium in a hollow-cathode discharge cell. Applied Physics B: Lasers and Optics, 2012, 106, 405-408.	1.1	7
76	High power ultraviolet source with extreme frequency stability. Optics Communications, 1991, 81, 63-66.	1.0	6
77	Thermalization of a two-dimensional photon gas in a polymeric host matrix. New Journal of Physics, 2012, 14, 075019.	1.2	6
78	Phase dependent loading of Bloch bands and quantum simulation of relativistic wave equation predictions with ultracold atoms in variably shaped optical lattice potentials. Journal of Modern Optics, 2016, 63, 1805-1813.	0.6	6
79	Fluctuation dynamics of an open photon Bose-Einstein condensate. Physical Review A, 2019, 100, .	1.0	6
80	Phase-coherent measurement of the hydrogen 1S-2S frequency with an optical frequency interval divider chain. IEEE Transactions on Instrumentation and Measurement, 1997, 46, 166-168.	2.4	5
81	Nondispersive optics using storage of light. Physical Review A, 2010, 81, .	1.0	4
82	Laser cooling of dense rubidium-noble gas mixtures via collisional redistribution of radiation. Proceedings of SPIE, 2012, , .	0.8	4
83	Verifying thermodynamic equilibrium of molecular manifolds: Kennard-Stepanov spectroscopy of a molecular gas. Physical Review A, 2017, 95, .	1.0	4
84	Interference of an array of atom lasers. Physical Review A, 2008, 77, .	1.0	3
85	Absorption spectroscopy of xenon and ethyleneâ€“noble gas mixtures at high pressure: towards Boseâ€“Einstein condensation of vacuum ultraviolet photons. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	3
86	Rubidium spectroscopy at high-pressure buffer gas conditions: detailed balance in the optical interaction of an absorber coupled to a reservoir. Physica Scripta, 2018, 93, 124006.	1.2	3
87	Synthetic magnetic fields for cold erbium atoms. Physical Review A, 2020, 101, .	1.0	3
88	Sapphire optical viewport for high pressure and temperature applications. Review of Scientific Instruments, 2021, 92, 065109.	0.6	3
89	Boseâ€Einsteinâ€Kondensat aus Licht. Physik in Unserer Zeit, 2011, 42, 58-59.	0.0	2
90	Resonance retrieval of stored coherence in an rf-optical double-resonance experiment. Physical Review A, 2015, 92, .	1.0	2

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91	Vacuum-ultraviolet absorption and emission spectroscopy of gaseous, liquid, and supercritical xenon. Physical Review A, 2021, 103, .	1.0	2
92	Measuring the Frequency of Light with Mode-Locked Lasers. , 2001, , 275-294.		2
93	Boseâ€“Einstein condensation of photons. , 2013, , 376-397.		2
94	Bose-Einstein condensation of photons in a 'white-wall' photon box. Journal of Physics: Conference Series, 2011, 264, 012005.	0.3	1
95	Cooled by Light. German Research, 2011, 33, 19-21.	0.1	1
96	Laser cooling of dense atomic gases by collisional redistribution of radiation and spectroscopy of molecular dimers in a dense buffer gas environment. , 2014, , .		1
97	Bose-Einstein Condensation of Photons versus Lasing and Hanbury Brown-Twiss Measurements with a Condensate of Light. , 2016, , .		1
98	Dipole Trapping, Cooling in Traps, and Long Coherence Times. , 1994, , .		0
99	Vielstrahlâ€Atominterferometer. Physik Journal, 1997, 53, 883-885.	0.1	0
100	Ã„quivalenzprinzip gilt auch fÃ¼r Quantenobjekte. Physik in Unserer Zeit, 2005, 36, 60-60.	0.0	0
101	Deflection of slow light in a Stern-Gerlach magnetic field. , 2007, , .		0
102	Vom Licht gekÃ¼hlt. Forschung, 2010, 35, 23-25.	0.0	0
103	Quantenratsche fÃ¼r ultrakalte Atome. Physik in Unserer Zeit, 2010, 41, 110-111.	0.0	0
104	Publisherâ€™s Note: Observation of Grand-Canonical Number Statistics in a Photon Bose-Einstein Condensate [Phys. Rev. Lett. 112, 030401 (2014)]. Physical Review Letters, 2014, 112, .	2.9	0
105	A Kennard-Stepanov relation study on redistributional laser cooling in dense gaseous ensembles. Proceedings of SPIE, 2015, , .	0.8	0
106	Spectroscopy and thermalization of dense atomic gases in redistributional laser cooling. , 2016, , .		0
107	Absorption Spectroscopy of Xenon and Ethyleneâ€“Noble Gas Mixtures at High Pressure: Towards Boseâ€“Einstein Condensation of Vacuum Ultraviolet Photons. , 2018, , 729-739.		0
108	Multiple-Beam Atom Interferometry: An Overview. , 2002, , 141-151.		0

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109	All-optical realization of an atom laser. , 2004, , .		0
110	Atom-Based Test of the Equivalence Principle. Space Sciences Series of ISSI, 2009, , 277-284.	0.0	0
111	Atomic Bose-Einstein Condensates in Optical Lattices with Variable Spatial Symmetry. Springer Series in Optical Sciences, 2010, , 195-203.	0.5	0
112	Chapter 1 Laser Cooling of Dense Gases by Collisional Redistribution of Radiation. , 2016, , 1-36.		0
113	Two-dimensional Bose-Einstein Condensates in a CO2-laser Optical Lattice. , 0, , 145-153.		0