J J Arlt

List of Publications by Year
in descending order

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83 papers	4,157 citations	126907 33 h-index	110387 64 g-index
84 all docs	84 docs citations	84 times ranked	2713 citing authors

#	Article	IF	Citations
1	Twin Matter Waves for Interferometry Beyond the Classical Limit. Science, 2011, 334, 773-776.	12.6	352
2	Observation of Attractive and Repulsive Polarons in a Bose-Einstein Condensate. Physical Review Letters, 2016, 117, 055302.	7.8	325
3	Dynamics ofF=2Spinor Bose-Einstein Condensates. Physical Review Letters, 2004, 92, 040402.	7.8	306
4	Observation of Phase Fluctuations in Elongated Bose-Einstein Condensates. Physical Review Letters, 2001, 87, 160406.	7.8	246
5	Observation of the Scissors Mode and Evidence for Superfluidity of a Trapped Bose-Einstein Condensed Gas. Physical Review Letters, 2000, 84, 2056-2059.	7.8	234
6	An experiment to observe the intensity and phase structure of Laguerreâ€“Gaussian laser modes. American Journal of Physics, 1996, 64, 77-82.	0.7	219
7	Routes Towards Anderson-Like Localization of Bose-Einstein Condensates in Disordered Optical Lattices. Physical Review Letters, 2005, 95, 170411.	7.8	214
8	Detecting Multiparticle Entanglement of Dicke States. Physical Review Letters, 2014, 112, 155304.	7.8	172
9	Waveguide for Bose-Einstein condensates. Physical Review A, 2001, 63, .	2.5	164
10	Measurement of the Spatial Correlation Function of Phase Fluctuating Bose-Einstein Condensates. Physical Review Letters, 2003, 91, 010406.	7.8	120
11	Improvement of an Atomic Clock using Squeezed Vacuum. Physical Review Letters, 2016, 117, 143004.	7.8	94
12	Satisfying the Einsteinâ€“Podolskyâ€“Rosen criterion with massive particles. Nature Communications, 2015, 6, 8984.	12.8	85
13	Phase separation and dynamics of two-component Bose-Einstein condensates. Physical Review A, 2016, 94, .	2.5	78
14	Ultraviolet light-induced atom desorption for large rubidium and potassium magneto-optical traps. Physical Review A, 2006, 73, .	2.5	76
15	Tunable dual-species Bose-Einstein condensates of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">K</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>39</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Rb</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>87</mml:m	2.5	76
16	Parametric Amplification of Vacuum Fluctuations in a Spinor Condensate. Physical Review Letters, 2010, 104, 195303.	7.8	73
17	Analyzing a Bose polaron across resonant interactions. Physical Review A, 2019, 99, .	2.5	68
18	Non-equilibrium quantum dynamics and formation of the Bose polaron. Nature Physics, 2021, 17, 731-735.	16.7	63

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19	Multiresonant Spinor Dynamics in a Bose-Einstein Condensate. Physical Review Letters, 2009, 103, 195302.	7.8	58
20	Non-destructive Faraday imaging of dynamically controlled ultracold atoms. Review of Scientific Instruments, 2013, 84, 083105.	1.3	56
21	Spontaneous Breaking of Spatial and Spin Symmetry in Spinor Condensates. Physical Review Letters, 2010, 105, 135302.	7.8	48
22	A pyramidal magneto-optical trap as a source of slow atoms. Optics Communications, 1998, 157, 303-309.	2.1	47
23	Dilute Fluid Governed by Quantum Fluctuations. Physical Review Letters, 2018, 121, 173403.	7.8	46
24	Observation of Harmonic Generation and Nonlinear Coupling in the Collective Dynamics of a Bose-Einstein Condensate. Physical Review Letters, 2000, 85, 692-695.	7.8	45
25	Universal Three-Body Physics in Ultracold KRb Mixtures. Physical Review Letters, 2016, 117, 163201.	7.8	41
26	Extended Coherence Time on the Clock Transition of Optically Trapped Rubidium. Physical Review Letters, 2011, 106, 240801.	7.8	40
27	Phase fluctuations in Boseâ€“Einstein condensates. Applied Physics B: Lasers and Optics, 2001, 73, 781-789.	2.2	39
28	Interaction-free measurements by quantum Zeno stabilization of ultracold atoms. Nature Communications, 2015, 6, 6811.	12.8	38
29	Finite-temperature behavior of the Bose polaron. Physical Review A, 2017, 96, .	2.5	38
30	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mi mathvariant="normal">K</mml:mi><mml:none /><mml:none /><mml:mprescripts /><mml:none /><mml:mn>40</mml:mn></mml:mmultiscripts><mml:mtext>âˆ’</mml:mtext><mml:mmultiscripts><mml:mi>Rb</mml:mi><mml:none /><mml:none /><mml:mprescripts /><mml:none /><mml:mn>87</mml:mn></mml:mmultiscripts></mml:mrow></mml:math>Feshbach resonances: Modeli	2.5	37
31	Radio-frequency association of heteronuclear Feshbach molecules. Physical Review A, 2008, 78, .	2.5	36
32	Observation of a Lee-Huang-Yang Fluid. Physical Review Letters, 2021, 126, 230404.	7.8	36
33	Measurement of elastic cross section for cold cesium collisions. Physical Review A, 2000, 61, .	2.5	34
34	Preparation of Ultracold Atom Clouds at the Shot Noise Level. Physical Review Letters, 2016, 117, 073604.	7.8	33
35	Dynamics of Bloch oscillations in disordered lattice potentials. Physical Review A, 2008, 77, .	2.5	30
36	Observation of Atom Number Fluctuations in a Bose-Einstein Condensate. Physical Review Letters, 2019, 122, 163601.	7.8	29

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37	Second-order correlation function of a phase fluctuating Bose-Einstein condensate. Physical Review A, 2003, 68, .	2.5	28
38	A slow gravity compensated atom laser. Applied Physics B: Lasers and Optics, 2010, 100, 117-123.	2.2	27
39	Analysis of localization phenomena in weakly interacting disordered lattice gases. New Journal of Physics, 2006, 8, 230-230.	2.9	22
40	Time-of-flight expansion of binary Boseâ€“Einstein condensates at finite temperature. New Journal of Physics, 2018, 20, 053004.	2.9	22
41	Damped Bloch oscillations of Boseâ€“Einstein condensates in disordered potential gradients. New Journal of Physics, 2008, 10, 045027.	2.9	19
42	Suppression of collisional loss from a magnetic trap. Journal of Physics B: Atomic, Molecular and Optical Physics, 1998, 31, L321-L327.	1.5	18
43	Spectroscopy of dark soliton states in BoseÂEinstein condensates. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, S124-S130.	1.4	18
44	Bose-Einstein condensation in a rotating anisotropic TOP trap. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 5861-5869.	1.5	17
45	Hexapole-compensated magneto-optical trap on a mesoscopic atom chip. Physical Review A, 2011, 83, .	2.5	16
46	Transport of a quantum degenerate heteronuclear Bose-Fermi mixture in a harmonic trap. European Physical Journal D, 2008, 48, 121-126.	1.3	15
47	Sub-atom shot noise Faraday imaging of ultracold atom clouds. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 034004.	1.5	15
48	Collective excitation of Bose-Einstein condensates in the transition region between three and one dimensions. Physical Review A, 2005, 72, .	2.5	14
49	Characterization and control of phase fluctuations in elongated Bose-Einstein condensates. Applied Physics B: Lasers and Optics, 2003, 76, 165-172.	2.2	13
50	The pumpâ€“probe coupling of matter wave packets to remote lattice states. New Journal of Physics, 2012, 14, 083013.	2.9	13
51	Production and manipulation of wave packets from ultracold atoms in an optical lattice. Physical Review A, 2013, 88, .	2.5	13
52	Simulation of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>X</mml:mi><mml:mi>X</mml:mi><mml:mi>Z</mml:mi></mml:math> Spin Models Using Sideband Transitions in Trapped Bosonic Gases. Physical Review Letters, 2020, 125, 240504.	7.8	13
53	Parametric amplification of matter waves in dipolar spinor Bose-Einstein condensates. Physical Review A, 2010, 82, .	2.5	12
54	Dynamical control of matter-wave splitting using time-dependent optical lattices. Physical Review A, 2012, 85, .	2.5	12

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55	Evolutionary optimization of an experimental apparatus. Applied Physics Letters, 2013, 102, .	3.3	12
56	A simple laser locking system based on a field-programmable gate array. Review of Scientific Instruments, 2016, 87, 073106.	1.3	12
57	Atom optics, guided atoms, and atom interferometry. Advances in Atomic, Molecular and Optical Physics, 2005, , 55-89.	2.3	10
58	Spontaneous symmetry breaking in spinor Bose-Einstein condensates. Physical Review A, 2013, 88, .	2.5	10
59	Time-limited optimal dynamics beyond the quantum speed limit. Physical Review A, 2015, 92, .	2.5	10
60	Spatially-selective <i>in situ</i> magnetometry of ultracold atomic clouds. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 075003.	1.5	10
61	Measurement-enhanced determination of BEC phase transitions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 175301.	1.5	9
62	Observation of Microcanonical Atom Number Fluctuations in a Bose-Einstein Condensate. Physical Review Letters, 2021, 126, 153601.	7.8	9
63	Semi-classical dynamics of superradiant Rayleigh scattering in a Boseâ€“Einstein condensate. Journal of Modern Optics, 2016, 63, 1886-1897.	1.3	8
64	Bose-Einstein condensation in a stiff TOP trap with adjustable geometry. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 4087-4094.	1.5	7
65	Dipole force trapping of caesium atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 4149-4155.	1.5	7
66	Spin dynamics in a two-dimensional quantum gas. Physical Review A, 2014, 89, .	2.5	7
67	Coherent manipulation and guiding of Boseâ€“Einstein condensates by optical dipole potentials. Comptes Rendus Physique, 2001, 2, 671-680.	0.1	6
68	Spatial tomography of individual atoms in a quantum gas microscope. Physical Review A, 2020, 102, .	2.5	6
69	Note: A portable rotating waveplate polarimeter. Review of Scientific Instruments, 2017, 88, 036101.	1.3	5
70	Number-resolved preparation of mesoscopic atomic ensembles. New Journal of Physics, 2021, 23, 113046.	2.9	5
71	Resonant amplification of quantum fluctuations in a spinor gas. Laser Physics, 2010, 20, 1156-1162.	1.2	4
72	Initial Dynamics of Quantum Impurities in a Boseâ€“Einstein Condensate. Atoms, 2021, 9, 22.	1.6	4

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73	A continuously pumped reservoir of ultracold atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 165301.	1.5	3
74	Temperature dependence of an Efimov resonance in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">K</mml:mi><mml:mprescripts /><mml:none /><mml:mn>39</mml:mn></mml:mmultiscripts></mml:math>. Physical Review A, 2018, 98, .	2.5	3
75	Remote multi-user control of the production of Boseâ€"Einstein condensates. Applied Physics B: Lasers and Optics, 2021, 127, 1.	2.2	3
76	Bose-Einstein condensation in dilute atomic gases. Die Naturwissenschaften, 2002, 89, 47-56.	1.6	1
77	Magnetism in ultracold quantum gases. Journal of Modern Optics, 2004, 51, 1829-1841.	1.3	1
78	Satisfying the Einstein-Podolsky-Rosen criterion with massive particles. Proceedings of SPIE, 2016, , .	0.8	1
79	Magnetism in ultracold quantum gases. Journal of Modern Optics, 2004, 51, 1829-1841.	1.3	1
80	Analysis of localization phenomena in weakly interacting disordered lattice gases. , 2007, , .		0
81	Resonant amplification of quantum fluctuations with a spinor gas. , 2009, , .		0
82	OBSERVATION OF VACUUM FLUCTUATIONS IN A SPINOR BOSE-EINSTEIN CONDENSATE. , 2010, , .		0
83	0.75 atoms improve the clock signal of 10,000 atoms. , 2017, , .		0