

Jean Dalibard

List of Publications by Year in descending order

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158
papers

29,978
citations

16437

64
h-index

9579

142
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160
all docs

160
docs citations

160
times ranked

10794
citing authors

#	ARTICLE	IF	CITATIONS
1	Many-body physics with ultracold gases. <i>Reviews of Modern Physics</i> , 2008, 80, 885-964.	16.4	6,386
2	Experimental Test of Bell's Inequalities Using Time-Varying Analyzers. <i>Physical Review Letters</i> , 1982, 49, 1804-1807.	2.9	2,659
3	<i>Colloquium</i> : Artificial gauge potentials for neutral atoms. <i>Reviews of Modern Physics</i> , 2011, 83, 1523-1543.	16.4	1,630
4	Quantum simulations with ultracold quantum gases. <i>Nature Physics</i> , 2012, 8, 267-276.	6.5	1,612
5	Vortex Formation in a Stirred Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2000, 84, 806-809.	2.9	1,590
6	Wave-function approach to dissipative processes in quantum optics. <i>Physical Review Letters</i> , 1992, 68, 580-583.	2.9	1,508
7	Laser cooling below the Doppler limit by polarization gradients: simple theoretical models. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989, 6, 2033-2035.	0.9	957
8	Monte Carlo wave-function method in quantum optics. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1993, 10, 524.	0.9	950
9	Berezinskii-Kosterlitz-Thouless crossover in a trapped atomic gas. <i>Nature</i> , 2006, 441, 1118-1121.	13.7	747
10	Periodically Driven Quantum Systems: Effective Hamiltonians and Engineered Gauge Fields. <i>Physical Review X</i> , 2014, 4, .	2.8	572
11	Topological bands for ultracold atoms. <i>Reviews of Modern Physics</i> , 2019, 91, .	16.4	541
12	Dressed-atom approach to atomic motion in laser light: the dipole force revisited. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1985, 2, 1707.	0.9	462
13	Relative phase of two Bose-Einstein condensates. <i>Physical Review A</i> , 1997, 55, 4330-4337.	1.0	385
14	Stationary States of a Rotating Bose-Einstein Condensate: Routes to Vortex Nucleation. <i>Physical Review Letters</i> , 2001, 86, 4443-4446.	2.9	331
15	Fast Rotation of a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2004, 92, 050403.	2.9	315
16	Vacuum fluctuations and radiation reaction : identification of their respective contributions. <i>Journal De Physique</i> , 1982, 43, 1617-1638.	1.8	280
17	Measurement of the Angular Momentum of a Rotating Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2000, 85, 2223-2227.	2.9	267
18	Single-Atom Laser Spectroscopy. Looking for Dark Periods in Fluorescence Light. <i>Europhysics Letters</i> , 1986, 1, 441-448.	0.7	246

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19	Gauge fields for ultracold atoms in optical superlattices. <i>New Journal of Physics</i> , 2010, 12, 033007.	1.2	246
20	Cesium atoms bouncing in a stable gravitational cavity. <i>Physical Review Letters</i> , 1993, 71, 3083-3086.	2.9	216
21	Phase-space density in the magneto-optical trap. <i>Physical Review A</i> , 1995, 52, 1423-1440.	1.0	216
22	Atomic Wave Diffraction and Interference Using Temporal Slits. <i>Physical Review Letters</i> , 1996, 77, 4-7.	2.9	214
23	Laser Cooling of Cesium Atoms Below $3 \frac{1}{4}$ K. <i>Europhysics Letters</i> , 1990, 12, 683-688.	0.7	207
24	Emergence of coherence via transverse condensation in a uniform quasi-two-dimensional Bose gas. <i>Nature Communications</i> , 2015, 6, 6162.	5.8	206
25	Refractive index of a dilute Bose gas. <i>Physical Review A</i> , 1995, 51, 3896-3901.	1.0	200
26	Quantization of Atomic Motion in Optical Molasses. <i>Europhysics Letters</i> , 1991, 14, 761-766.	0.7	184
27	Quench-Induced Supercurrents in an Annular Bose Gas. <i>Physical Review Letters</i> , 2014, 113, 135302.	2.9	172
28	Interference of an Array of Independent Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2004, 93, 180403.	2.9	170
29	Cooling Atoms with Stimulated Emission. <i>Physical Review Letters</i> , 1986, 57, 1688-1691.	2.9	167
30	Stopping Atoms with Laser Light. <i>Physical Review Letters</i> , 1985, 54, 992-995.	2.9	164
31	Time Correlations between the Two Sidebands of the Resonance Fluorescence Triplet. <i>Physical Review Letters</i> , 1980, 45, 617-620.	2.9	163
32	Superfluid behaviour of a two-dimensional Bose gas. <i>Nature Physics</i> , 2012, 8, 645-648.	6.5	161
33	Channeling atoms in a laser standing wave. <i>Physical Review Letters</i> , 1987, 59, 1659-1662.	2.9	155
34	Direct imaging of topological edge states in cold-atom systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 6736-6741.	3.3	153
35	Dynamics of a small system coupled to a reservoir : reservoir fluctuations and self-reaction. <i>Journal De Physique</i> , 1984, 45, 637-656.	1.8	152
36	Generalized Rashba-Dresselhaus spin-orbit coupling for cold atoms. <i>Physical Review A</i> , 2010, 81, .	1.0	152

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37	Phase Modulation of Atomic de Broglie Waves. <i>Physical Review Letters</i> , 1995, 74, 4972-4975.	2.9	151
38	Three-body decay of a rubidium Bose-Einstein condensate. <i>Applied Physics B: Lasers and Optics</i> , 1999, 69, 257-261.	1.1	147
39	Reaching Fractional Quantum Hall States with Optical Flux Lattices. <i>Physical Review Letters</i> , 2013, 110, 185301.	2.9	142
40	Transverse Breathing Mode of an Elongated Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2002, 88, 250402.	2.9	140
41	Dynamics of a Single Vortex Line in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2002, 89, 200403.	2.9	136
42	Trapping atoms in a gravitational cavity. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1992, 54, 407-419.	1.5	131
43	Atomic motion in laser light: connection between semiclassical and quantum descriptions. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1985, 18, 1661-1683.	1.6	123
44	Critical Point of an Interacting Two-Dimensional Atomic Bose Gas. <i>Physical Review Letters</i> , 2007, 99, 040402.	2.9	123
45	Observation of Phase Defects in Quasi-Two-Dimensional Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2005, 95, 190403.	2.9	121
46	Quadrupole Oscillation of a Single-Vortex Bose-Einstein Condensate: Evidence for Kelvin Modes. <i>Physical Review Letters</i> , 2003, 90, 100403.	2.9	120
47	Periodically driven quantum matter: The case of resonant modulations. <i>Physical Review A</i> , 2015, 91, .	1.0	119
48	Exploring the Thermodynamics of a Two-Dimensional Bose Gas. <i>Physical Review Letters</i> , 2011, 107, 130401.	2.9	118
49	Observation of a Zero-Energy Resonance in Cs-Cs Collisions. <i>Physical Review Letters</i> , 1997, 79, 625-628.	2.9	109
50	Limit of Doppler cooling. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989, 6, 2046.	0.9	107
51	Vortex patterns in a fast rotating Bose-Einstein condensate. <i>Physical Review A</i> , 2005, 71, .	1.0	106
52	Vortices in a stirred Bose-Einstein condensate. <i>Journal of Modern Optics</i> , 2000, 47, 2715-2723.	0.6	101
53	Measuring the One-Particle Excitations of Ultracold Fermionic Atoms by Stimulated Raman Spectroscopy. <i>Physical Review Letters</i> , 2007, 98, 240402.	2.9	98
54	Giant Spin Relaxation of an Ultracold Cesium Gas. <i>Physical Review Letters</i> , 1998, 80, 1869-1872.	2.9	94

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55	Collective oscillations of a classical gas confined in harmonic traps. <i>Physical Review A</i> , 1999, 60, 4851-4856.	1.0	89
56	The trapped two-dimensional Bose gas: from Bose-Einstein condensation to Berezinskii-Kosterlitz-Thouless physics. <i>New Journal of Physics</i> , 2008, 10, 045006.	1.2	86
57	Microwave-induced Fano-Feshbach resonances. <i>Physical Review A</i> , 2010, 81, .	1.0	77
58	Absorption imaging of a quasi-two-dimensional gas: a multiple scattering analysis. <i>New Journal of Physics</i> , 2012, 14, 055001.	1.2	76
59	Sum-frequency generation of 589 nm light with near-unit efficiency. <i>Optics Express</i> , 2008, 16, 18684.	1.7	73
60	N-boson time-dependent problem: a reformulation with stochastic wave functions. <i>Physical Review A</i> , 2001, 63, .	1.0	72
61	Laser cooling of an optically thick gas: The simplest radiation pressure trap?. <i>Optics Communications</i> , 1988, 68, 203-208.	1.0	66
62	Critical Rotation of a Harmonically Trapped Bose Gas. <i>Physical Review Letters</i> , 2002, 88, 250403.	2.9	66
63	Vortex nucleation as a case study of symmetry breaking in quantum systems. <i>Nature Physics</i> , 2009, 5, 431-437.	6.5	65
64	Sound Propagation in a Uniform Superfluid Two-Dimensional Bose Gas. <i>Physical Review Letters</i> , 2018, 121, 145301.	2.9	65
65	Sisyphus cooling of a bound atom. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1992, 9, 32.	0.9	62
66	Phase diagram of spin-1 antiferromagnetic Bose-Einstein condensates. <i>Physical Review A</i> , 2012, 86, .	1.0	62
67	Potentialities of a new $\vec{f} + \vec{f}$ -laser configuration for radiative cooling and trapping. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1984, 17, 4577-4594.	1.6	60
68	Probing chiral edge dynamics and bulk topology of a synthetic Hall system. <i>Nature Physics</i> , 2020, 16, 1017-1021.	6.5	59
69	Dynamics of Two Interacting Bose-Einstein Condensates. <i>Physical Review Letters</i> , 1999, 82, 251-254.	2.9	57
70	Interferometric detection of a single vortex in a dilute Bose-Einstein condensate. <i>Physical Review A</i> , 2001, 64, .	1.0	57
71	Equilibrium state of a trapped two-dimensional Bose gas. <i>Physical Review A</i> , 2010, 82, .	1.0	57
72	Dynamic Optical Lattices of Subwavelength Spacing for Ultracold Atoms. <i>Physical Review Letters</i> , 2015, 115, 140401.	2.9	57

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73	Three-dimensional spatial diffusion in optical molasses. Applied Physics B: Lasers and Optics, 1995, 60, 135-143.	1.1	56
74	Bose-Einstein condensates in fast rotation. Laser Physics Letters, 2005, 2, 275-284.	0.6	56
75	From rotating atomic rings to quantum Hall states. Scientific Reports, 2011, 1, 43.	1.6	55
76	Shape oscillation of a rotating Bose-Einstein condensate. Europhysics Letters, 2004, 65, 594-600.	0.7	54
77	Practical scheme for a light-induced gauge field in an atomic Bose gas. Physical Review A, 2009, 79, .	1.0	54
78	Realization of a Magnetically Guided Atomic Beam in the Collisional Regime. Physical Review Letters, 2004, 93, 093003.	2.9	52
79	Transmission of near-resonant light through a dense slab of cold atoms. Physical Review A, 2017, 96, .	1.0	51
80	Evaporative cooling of an atomic beam. European Physical Journal D, 2000, 10, 9-18.	0.6	50
81	Optical flux lattices for two-photon dressed states. Europhysics Letters, 2011, 95, 66004.	0.7	50
82	Optical molasses in a longitudinal magnetic field. Journal of the Optical Society of America B: Optical Physics, 1992, 9, 1997.	0.9	47
83	Two-dimensional Sisyphus cooling. Physical Review A, 1994, 50, 5092-5115.	1.0	47
84	An atom faucet. European Physical Journal D, 2001, 15, 237-244.	0.6	45
85	Atom optics in the time domain. Physical Review A, 1996, 53, 3369-3378.	1.0	44
86	Elementary Sisyphus process close to a dielectric surface. Physical Review A, 1996, 54, 4292-4298.	1.0	43
87	Loading of a cold atomic beam into a magnetic guide. European Physical Journal D, 2002, 20, 107-116.	0.6	43
88	Correlation signals in resonance fluorescence : interpretation via photon scattering amplitudes. Journal De Physique, 1983, 44, 1337-1343.	1.8	42
89	Strong evaporative cooling of a trapped cesium gas. Optics Express, 1998, 2, 323.	1.7	42
90	Is Bose-Einstein condensation of atomic cesium possible?. Europhysics Letters, 1998, 44, 25-30.	0.7	42

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91	Relaxation Dynamics in the Merging of N Independent Condensates. Physical Review Letters, 2017, 119, 190403.	2.9	41
92	Photon statistics and quantum jumps: the picture of the dressed atom radiative cascade. IEEE Journal of Quantum Electronics, 1988, 24, 1395-1402.	1.0	40
93	Production of sodium Bose-Einstein condensates in an optical dimple trap. New Journal of Physics, 2011, 13, 065022.	1.2	40
94	Can a Bose Gas Be Saturated?. Physical Review Letters, 2011, 106, 230401.	2.9	39
95	Loading and compression of a single two-dimensional Bose gas in an optical accordion. Physical Review A, 2017, 95, .	1.0	39
96	Dynamical Symmetry and Breathers in a Two-Dimensional Bose Gas. Physical Review X, 2019, 9, .	2.8	37
97	Spin-nematic order in antiferromagnetic spinor condensates. Physical Review A, 2016, 93, .	1.0	36
98	Proposals of stable optical traps for neutral atoms. Optics Communications, 1983, 47, 395-399.	1.0	35
99	Geometric potentials in quantum optics: A semi-classical interpretation. Europhysics Letters, 2008, 83, 60001.	0.7	33
100	Probing Spin Correlations in a Bose-Einstein Condensate Near the Single-Atom Level. Physical Review Letters, 2020, 125, 033401.	2.9	33
101	Determination of Scale-Invariant Equations of State without Fitting Parameters: Application to the Two-Dimensional Bose Gas Across the Berezinskii-Kosterlitz-Thouless Transition. Physical Review Letters, 2014, 113, 020404.	2.9	31
102	Quantum beats in continuously excited atomic cascades. Optics Communications, 1984, 49, 429-434.	1.0	30
103	Cooling and Tunnelling of Atoms in a 2D Laser Field. Europhysics Letters, 1993, 22, 663-668.	0.7	30
104	Optical cooling and trapping of highly magnetic atoms: the benefits of a spontaneous spin polarization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 065005.	0.6	27
105	Loading atoms in a bi-dimensional light trap. Optics Communications, 1996, 132, 540-548.	1.0	26
106	Evaporative cooling of a guided rubidium atomic beam. Physical Review A, 2005, 72, .	1.0	26
107	Strongly correlated states of a small cold-atom cloud from geometric gauge fields. Physical Review A, 2011, 84, .	1.0	26
108	Realization of a Townes Soliton in a Two-Component Planar Bose Gas. Physical Review Letters, 2021, 127, 023603.	2.9	26

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109	Observation of fragmentation of a spinor Bose-Einstein condensate. <i>Science</i> , 2021, 373, 1340-1343.	6.0	25
110	Fast production of ultracold sodium gases using light-induced desorption and optical trapping. <i>Physical Review A</i> , 2010, 81, .	1.0	23
111	Stepwise Bose-Einstein Condensation in a Spinor Gas. <i>Physical Review Letters</i> , 2017, 119, 050404.	2.9	21
112	Spontaneous formation and relaxation of spin domains in antiferromagnetic spin-1 condensates. <i>Nature Communications</i> , 2019, 10, 1422.	5.8	21
113	Superfluidity and relaxation dynamics of a laser-stirred two-dimensional Bose gas. <i>Physical Review A</i> , 2017, 95, .	1.0	20
114	Spin fragmentation of Bose-Einstein condensates with antiferromagnetic interactions. <i>New Journal of Physics</i> , 2013, 15, 113039.	1.2	18
115	Dynamic Kosterlitz-Thouless transition in two-dimensional Bose mixtures of ultracold atoms. <i>Physical Review A</i> , 2017, 95, .	1.0	17
116	Quantized Vortices in the Ideal Bose Gas: A Physical Realization of Random Polynomials. <i>Physical Review Letters</i> , 2006, 96, 040405.	2.9	16
117	From Many-Body Oscillations to Thermalization in an Isolated Spinor Gas. <i>Physical Review Letters</i> , 2021, 126, 063401.	2.9	16
118	Continuous loading of a non-dissipative atom trap. <i>Europhysics Letters</i> , 2003, 61, 187-193.	0.7	15
119	An Atom Trap Relying on Optical Pumping. <i>Europhysics Letters</i> , 1994, 27, 569-574.	0.7	14
120	Scissors mode of a rotating Bose-Einstein condensate. <i>Physical Review A</i> , 2003, 67, .	1.0	14
121	Relaxation and hysteresis near Shapiro resonances in a driven spinor condensate. <i>Physical Review A</i> , 2019, 100, .	1.0	14
122	Resonant-light diffusion in a disordered atomic layer. <i>Physical Review A</i> , 2018, 97, .	1.0	12
123	Tan δ 's two-body contact across the superfluid transition of a planar Bose gas. <i>Nature Communications</i> , 2021, 12, 760.	5.8	12
124	A modulated mirror for atomic interferometry. <i>Journal De Physique II</i> , 1994, 4, 1877-1896.	0.9	12
125	Compensation of Doppler broadening by light shifts in two photon absorption. <i>Optics Communications</i> , 1982, 42, 39-44.	1.0	11
126	Anisotropic light shift and magic polarization of the intercombination line of dysprosium atoms in a far-detuned dipole trap. <i>Physical Review A</i> , 2018, 98, .	1.0	11

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127	Coherent seeding of the dynamics of a spinor Bose-Einstein condensate: From quantum to classical behavior. <i>Physical Review A</i> , 2021, 103, .	1.0	10
128	Multiple-path interferometer with a single quantum obstacle. <i>Europhysics Letters</i> , 2002, 57, 651-657.	0.7	9
129	Solid-state laser system for laser cooling of sodium. <i>Applied Physics B: Lasers and Optics</i> , 2010, 99, 31-40.	1.1	9
130	Optical control of the density and spin spatial profiles of a planar Bose gas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2021, 54, 08LT01.	0.6	9
131	Spin-1 condensates at thermal equilibrium: A SU(3) coherent state approach. <i>Europhysics Letters</i> , 2015, 110, 26001.	0.7	7
132	Magnetic Dipolar Interaction between Hyperfine Clock States in a Planar Alkali Bose Gas. <i>Physical Review Letters</i> , 2020, 125, 233604.	2.9	6
133	Atomic Motion in a Laser Standing Wave. <i>Springer Series in Optical Sciences</i> , 1987, , 81-86.	0.5	6
134	Dynamics of a single vortex line in a Bose-Einstein condensate. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2003, 5, S23-S28.	1.4	5
135	A Source of Cold Atoms for a Continuously Loaded Magnetic Guide. <i>Physica Scripta</i> , 2003, T105, 19.	1.2	4
136	Interferometry and Dissipative Optics with Atoms. <i>Acta Physica Polonica A</i> , 1998, 93, 197-209.	0.2	4
137	Optical molasses: cold atoms for precision measurements. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1991, 40, 78-80.	2.4	3
138	Atomic Brownian Motion in a Light Wave. <i>Physica Scripta</i> , 1986, T12, 28-33.	1.2	2
139	Optical Molasses: The Coldest Atoms Ever. <i>Physica Scripta</i> , 1991, T34, 20-22.	1.2	2
140	How to reach the collisional regime on a magnetically guided atomic beam. <i>European Physical Journal Special Topics</i> , 2004, 116, 259-264.	0.2	2
141	Foreword: Laser Cooling and Trapping of Neutral Atoms. , 2001, , 43-62.		2
142	Dissipative atom optics. <i>Journal of Modern Optics</i> , 1997, 44, 1827-1836.	0.6	1
143	New Physical Mechanisms in Laser Cooling. , 1989, , 2-7.		1
144	Formation of Quantized Vortices in a Gaseous Bose-Einstein Condensate. , 2002, , 109-124.		1

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145	Experiments with Cold Atoms. , 2004, , 53-83.		1
146	Preparing and Probing Chern Bands with Cold Atoms. , 0, , 274-298.		0
147	Atomic motion in a resonant laser standing wave. Lecture Notes in Physics, 1987, , 196-210.	0.3	0
148	Multidimensional laser cooling: Quantum approaches. , 1993, , 105-118.		0
149	Nucleation of quantized vortices in a gaseous Bose-Einstein condensate. Comptes Rendus Physique, 2001, 2, 663-669.	0.1	0
150	Hidden Variables and Bell's Inequalities. Advanced Texts in Physics, 2000, , 109-118.	0.5	0
151	La condensation de Bose-Einstein d'un gaz atomique. European Physical Journal Special Topics, 2000, 10, Pr8-3.	0.2	0
152	Coherence and Superfluidity of Gaseous Bose-Einstein Condensates. Lecture Notes in Physics, 2002, , 293-311.	0.3	0
153	Measurement of the Atom-Wall Interaction: from London to Casimir-Polder. , 2003, , 93-108.		0
154	Vacuum Fluctuations Versus Radiation Reaction. , 1984, , 537-537.		0
155	Cooling, Stopping, and Trapping Atoms. Springer Series in Optical Sciences, 1985, , 10-13.	0.5	0
156	LASER-ATOM INTERACTIONS : RECENT THEORETICAL DEVELOPMENTS. , 1987, , 365-375.		0
157	Quantum Effects with Ultracold Atoms. NATO ASI Series Series B: Physics, 1995, , 47-63.	0.2	0
158	Cavités atomiques. Annales De Physique, 1995, 20, 681-686.	0.2	0