

Franco Dalfovo

List of Publications by Year in descending order

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103
papers

9,234
citations

94381

37
h-index

37183

96
g-index

105
all docs

105
docs citations

105
times ranked

3833
citing authors

#	ARTICLE	IF	CITATIONS
1	Theory of Bose-Einstein condensation in trapped gases. <i>Reviews of Modern Physics</i> , 1999, 71, 463-512.	16.4	4,734
2	Bosons in anisotropic traps: Ground state and vortices. <i>Physical Review A</i> , 1996, 53, 2477-2485.	1.0	461
3	Structural and dynamical properties of superfluid helium: A density-functional approach. <i>Physical Review B</i> , 1995, 52, 1193-1209.	1.1	284
4	Dynamical Response of a Bose-Einstein Condensate to a Discontinuous Change in Internal State. <i>Physical Review Letters</i> , 1998, 81, 243-247.	2.9	241
5	Spontaneous creation of Kibble-Zurek solitons in a Bose-Einstein condensate. <i>Nature Physics</i> , 2013, 9, 656-660.	6.5	197
6	Order parameter at the boundary of a trapped Bose gas. <i>Physical Review A</i> , 1996, 54, 4213-4217.	1.0	165
7	Density of superfluid helium droplets. <i>Physical Review B</i> , 1998, 58, 3341-3350.	1.1	162
8	Atomic and molecular impurities in ^4He clusters. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1994, 29, 61-66.	1.0	131
9	Observation of Subdiffusion in a Disordered Interacting System. <i>Physical Review Letters</i> , 2011, 106, 230403.	2.9	131
10	Observation of Solitonic Vortices in Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2014, 113, 065302.	2.9	123
11	Superfluid Hydrodynamic Model for the Enhanced Moments of Inertia of Molecules in Liquid ^4He . <i>Physical Review Letters</i> , 1999, 83, 5058-5061.	2.9	115
12	Collective and single-particle excitations of a trapped Bose gas. <i>Physical Review A</i> , 1997, 56, 3840-3845.	1.0	98
13	Momentum transferred to a trapped Bose-Einstein condensate by stimulated light scattering. <i>Physical Review A</i> , 2001, 64, .	1.0	79
14	Dynamics of Dark Solitons in a Trapped Superfluid Fermi Gas. <i>Physical Review Letters</i> , 2011, 106, 185301.	2.9	79
15	Dark solitons in a superfluid Fermi gas. <i>Physical Review A</i> , 2007, 76, .	1.0	75
16	Effects of interaction on the diffusion of atomic matter waves in one-dimensional quasiperiodic potentials. <i>Physical Review A</i> , 2009, 80, .	1.0	75
17	Bragg Spectroscopy of the Multibranch Bogoliubov Spectrum of Elongated Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2003, 90, 060404.	2.9	68
18	Frequency shift and mode coupling in the nonlinear dynamics of a Bose-condensed gas. <i>Physical Review A</i> , 1997, 56, 4855-4863.	1.0	67

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19	Role of transverse excitations in the instability of Bose-Einstein condensates moving in optical lattices. <i>Physical Review A</i> , 2004, 70, .	1.0	61
20	Shape deformations and angular-momentum transfer in trapped Bose-Einstein condensates. <i>Physical Review A</i> , 2000, 63, .	1.0	60
21	Surface tension of liquid ^3He at low temperature. <i>Journal of Low Temperature Physics</i> , 1989, 77, 307-317.	0.6	59
22	Structure of vortices in helium at zero temperature. <i>Physical Review B</i> , 1992, 46, 5482-5488.	1.1	59
23	Dynamics and Interaction of Vortex Lines in an Elongated Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2015, 115, 170402.	2.9	59
24	Nonlinear dynamics of a Bose condensed gas. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 227, 259-264.	0.9	57
25	Helium nanodroplets and trapped Bose-Einstein condensates as prototypes of finite quantum fluids. <i>Journal of Chemical Physics</i> , 2001, 115, 10078.	1.2	57
26	Free expansion of Bose-Einstein condensates with quantized vortices. <i>Physical Review A</i> , 2000, 61, .	1.0	56
27	Parametric excitation of a Bose-Einstein condensate in a one-dimensional optical lattice. <i>Physical Review A</i> , 2005, 71, .	1.0	56
28	Stability diagram and growth rate of parametric resonances in Bose-Einstein condensates in one-dimensional optical lattices. <i>Physical Review A</i> , 2005, 72, .	1.0	54
29	Detecting phonons and persistent currents in toroidal Bose-Einstein condensates by means of pattern formation. <i>Physical Review A</i> , 2006, 74, .	1.0	54
30	Effects of temperature and magnetization on the maximum solubility of ^3He in ^4He . <i>Journal of Low Temperature Physics</i> , 1988, 71, 311-317.	0.6	53
31	Vortex Reconnections and Rebounds in Trapped Atomic Bose-Einstein Condensates. <i>Physical Review X</i> , 2017, 7, .	2.8	53
32	Pinning of Quantized Vortices in Helium Drops by Dopant Atoms and Molecules. <i>Physical Review Letters</i> , 2000, 85, 1028-1031.	2.9	47
33	Critical velocity of superfluid flow through single-barrier and periodic potentials. <i>Physical Review A</i> , 2009, 80, .	1.0	47
34	Density functional calculations for ^4He droplets. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1995, 35, 67-75.	1.0	45
35	Snake instability of dark solitons in fermionic superfluids. <i>Physical Review A</i> , 2013, 88, .	1.0	44
36	Dynamical equilibration across a quenched phase transition in a trapped quantum gas. <i>Communications Physics</i> , 2018, 1, .	2.0	42

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37	Rotons and Quantum Evaporation from Superfluid ⁴ He. <i>Physical Review Letters</i> , 1995, 75, 2510-2513.	2.9	41
38	Dynamics of two colliding Bose-Einstein condensates in an elongated magnetostatic trap. <i>Physical Review A</i> , 2000, 62, .	1.0	36
39	Collisionless Sound in a Uniform Two-Dimensional Bose Gas. <i>Physical Review Letters</i> , 2018, 121, 145302.	2.9	35
40	How to Measure the Bogoliubov Quasiparticle Amplitudes in a Trapped Condensate. <i>Physical Review Letters</i> , 2000, 85, 4422-4425.	2.9	34
41	Solitons in two-dimensional Bose-Einstein condensates. <i>Physical Review A</i> , 2008, 77, .	1.0	34
42	Rapid ramps across the BEC-BCS crossover: A route to measuring the superfluid gap. <i>Physical Review A</i> , 2012, 86, .	1.0	33
43	³ He impurities on ⁴ He clusters. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1989, 14, 263-270.	1.0	32
44	Subdiffusion of nonlinear waves in quasiperiodic potentials. <i>New Journal of Physics</i> , 2012, 14, 103036.	1.2	32
45	Creation and counting of defects in a temperature-quenched Bose-Einstein condensate. <i>Physical Review A</i> , 2016, 94, .	1.0	32
46	Bogoliubov spectrum and Bragg spectroscopy of elongated Bose-Einstein condensates. <i>New Journal of Physics</i> , 2003, 5, 54-54.	1.2	30
47	Bounds for the phonon-roton dispersion in superfluid ⁴ He. <i>Physical Review B</i> , 1995, 52, 1236-1241.	1.1	29
48	Darkâ€“bright solitons in a superfluid Boseâ€“Fermi mixture. <i>New Journal of Physics</i> , 2016, 18, 053014.	1.2	29
49	Dispersion of ripplons in superfluid ⁴ He. <i>Journal of Low Temperature Physics</i> , 1995, 98, 227-250.	0.6	27
50	Quantum evaporation from the free surface of superfluid ⁴ He. <i>Journal of Low Temperature Physics</i> , 1996, 104, 367-397.	0.6	24
51	The condensate wave function of a trapped atomic gas. <i>Journal of Research of the National Institute of Standards and Technology</i> , 1996, 101, 537.	0.4	24
52	Equation of state and effective mass of the unitary Fermi gas in a one-dimensional periodic potential. <i>Physical Review A</i> , 2008, 78, .	1.0	23
53	Variational calculations for ³ He impurities on ⁴ He droplets. <i>Physical Review B</i> , 1994, 49, 15253-15257.	1.1	22
54	Quantized Vortices in Mixed ³ Heâ€“ ⁴ He Drops. <i>Physical Review Letters</i> , 2001, 87, 145301.	2.9	22

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55	Density pattern in supercritical flow of liquid He4. <i>Physical Review B</i> , 2005, 71, .	1.1	22
56	Swallowtail Band Structure of the Superfluid Fermi Gas in an Optical Lattice. <i>Physical Review Letters</i> , 2011, 107, 270404.	2.9	21
57	Localization in momentum space of ultracold atoms in incommensurate lattices. <i>Physical Review A</i> , 2011, 83, .	1.0	21
58	The decay and collisions of dark solitons in superfluid Fermi gases. <i>New Journal of Physics</i> , 2012, 14, 023044.	1.2	20
59	Josephson Oscillations and Self-Trapping of Superfluid Fermions in a Double-Well Potential. <i>Journal of Low Temperature Physics</i> , 2014, 177, 240-256.	0.6	20
60	Phonon evaporation in freely expanding Bose-Einstein condensates. <i>Physical Review A</i> , 2004, 69, .	1.0	18
61	High Sensitivity Phonon Spectroscopy of Bose-Einstein Condensates using Matter-Wave Interference. <i>Physical Review Letters</i> , 2004, 93, 220403.	2.9	18
62	Kibble-Zurek dynamics in a trapped ultracold Bose gas. <i>Physical Review Research</i> , 2020, 2, .	1.3	18
63	Hartree-Fock calculations for ^3He - ^4He mixtures at zero temperature. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1985, 112, 171-174.	0.9	17
64	Solitonic vortices in Bose-Einstein condensates. <i>European Physical Journal: Special Topics</i> , 2015, 224, 577-583.	1.2	17
65	Surface state of ^3He on liquid ^4He . <i>Physica Scripta</i> , 1988, 38, 204-206.	1.2	15
66	Sum rules and spin multipair excitations in liquid He3. <i>Physical Review Letters</i> , 1989, 63, 532-535.	2.9	15
67	Freezing of Liquid Helium at Zero Temperature: A Density Functional Approach. <i>Europhysics Letters</i> , 1991, 16, 205-210.	0.7	15
68	Dynamic structure function in ^3He mixtures. <i>Physical Review B</i> , 1993, 48, 7409-7418.	1.1	15
69	Quench dynamics of an ultracold two-dimensional Bose gas. <i>Physical Review A</i> , 2019, 100, .	1.0	15
70	Static response function for longitudinal and transverse excitations in superfluid helium. <i>Physical Review B</i> , 1992, 46, 13991-13996.	1.1	14
71	Scattering of Elementary Excitations at the Surface of Superfluid ^4He . <i>Journal of Low Temperature Physics</i> , 1998, 110, 449-454.	0.6	11
72	Effects of periodic potentials on the critical velocity of superfluid Fermi gases in the BCS-BEC crossover. <i>Physical Review A</i> , 2011, 83, .	1.0	10

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73	Vortices with more than one quantum of circulation in ^4He at negative pressure. <i>Journal of Low Temperature Physics</i> , 1992, 89, 425-428.	0.6	9
74	Observation of a spinning top in a Bose-Einstein condensate. <i>Physical Review A</i> , 2017, 96, .	1.0	9
75	Oscillations in the Expansion of Solid ^4He into Vacuum. <i>Physical Review Letters</i> , 2005, 95, 095301.	2.9	8
76	Variational study of a ^3He impurity and of a vacancy in solid ^4He . <i>Physical Review B</i> , 1997, 55, 3122-3127.	1.1	7
77	Dynamic structure factor of a strongly correlated Fermi superfluid within a density functional theory approach. <i>New Journal of Physics</i> , 2016, 18, 113044.	1.2	7
78	Finite-temperature spin dynamics of a two-dimensional Bose-Bose atomic mixture. <i>Physical Review Research</i> , 2021, 3, .	1.3	7
79	Quantum evaporation from superfluid helium at normal incidence. <i>Journal of Physics Condensed Matter</i> , 1997, 9, L369-L374.	0.7	6
80	Deep penetration of vacancies into a solid. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2003, 129, 201-206.	0.8	6
81	Density functional calculations for the structure of vortices in superfluid ^4He . <i>Journal of Low Temperature Physics</i> , 1992, 89, 453-456.	0.6	5
82	Theory of quantum evaporation from superfluid helium. <i>European Physical Journal D</i> , 1996, 46, 2973-2980.	0.4	5
83	Unitarity, time reversal and quantum evaporation from liquid helium. <i>European Physical Journal D</i> , 1996, 46, 391-392.	0.4	5
84	Stability and Excitations of Solitons in 2D Bose-Einstein Condensates. <i>Journal of Low Temperature Physics</i> , 2007, 148, 393-398.	0.6	5
85	Macroscopic models for sound propagation in normal liquid ^3He . <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1985, 6, 445-467.	0.4	4
86	Magnetic susceptibility and collisionless spin waves in liquid ^3He and ^3He - ^4He mixtures. <i>Journal of Low Temperature Physics</i> , 1990, 78, 1-12.	0.6	4
87	Vortices in Doped ^4He Clusters. <i>Journal of Low Temperature Physics</i> , 2000, 121, 423-428.	0.6	4
88	Pinning of Quantized Vortices in Mixed ^3He - ^4He Droplets. <i>Journal of Low Temperature Physics</i> , 2002, 126, 281-286.	0.6	4
89	Multiple period states of the superfluid Fermi gas in an optical lattice. <i>New Journal of Physics</i> , 2016, 18, 023011.	1.2	4
90	Optical Visibility and Core Structure of Vortex Filaments in a Bosonic Superfluid. <i>Journal of Experimental and Theoretical Physics</i> , 2018, 127, 804-811.	0.2	4

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91	Bosons in a magnetic trap: the condensate wave function. Physica Scripta, 1996, T66, 234-237.	1.2	3
92	Measurement of the order parameter and its spatial fluctuations across Bose-Einstein condensation. Physical Review A, 2022, 105, .	1.0	2
93	Static response function in superfluid ⁴ He. Journal of Low Temperature Physics, 1992, 89, 325-333.	0.6	1
94	Thermodynamic and superfluid behavior of a trapped Bose gas. European Physical Journal D, 1996, 46, 545-546.	0.4	1
95	Bose-Einstein Condensates. , 2006, , 312-318.		1
96	Dynamic structure function in ³ He- ⁴ He mixtures. Physica B: Condensed Matter, 1994, 194-196, 859-860.	1.3	0
97	Dynamics of two interacting Bose condensates in a magnetostatic trap. AIP Conference Proceedings, 2001, , .	0.3	0
98	Bragg spectroscopy of the multi-branch Bogoliubov spectrum of elongated Bose-Einstein condensates. , 0, , .		0
99	Multiple Period States of the Superfluid Fermi Gas in an Optical Lattice. Journal of Physics: Conference Series, 2016, 752, 012002.	0.3	0
100	Experiments with two Colliding Bose-Einstein Condensates in an Elongated Magneto-Static Trap. , 2002, , 67-90.		0
101	High sensitivity phonon spectroscopy of Bose-Einstein condensates using matter-wave interference. , 2004, , .		0
102	Dynamical Response of a Bose-Einstein Condensate to a Discontinuous Change in Internal State. , 2008, , 523-527.		0
103	Dynamic Structure Function of ³ He- ⁴ He Mixtures in the Deep Inelastic Regime. , 1995, , 101-107.		0