

Georg Bruun

List of Publications by Year in descending order

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113
papers

4,697
citations

76326

40
h-index

106344

65
g-index

114
all docs

114
docs citations

114
times ranked

1709
citing authors

#	ARTICLE	IF	CITATIONS
1	Metastability and coherence of repulsive polarons in a strongly interacting Fermi mixture. <i>Nature</i> , 2012, 485, 615-618.	27.8	372
2	Polarons, dressed molecules and itinerant ferromagnetism in ultracold Fermi gases. <i>Reports on Progress in Physics</i> , 2014, 77, 034401.	20.1	325
3	Observation of Attractive and Repulsive Polarons in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2016, 117, 055302.	7.8	325
4	Impurity in a Bose-Einstein Condensate and the Efimov Effect. <i>Physical Review Letters</i> , 2015, 115, 125302.	7.8	144
5	Quasiparticle Properties of a Mobile Impurity in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2015, 115, 160401.	7.8	132
6	Quantum Phases of a Two-Dimensional Dipolar Fermi Gas. <i>Physical Review Letters</i> , 2008, 101, 245301.	7.8	123
7	Repulsive polarons and itinerant ferromagnetism in strongly polarized Fermi gases. <i>European Physical Journal D</i> , 2011, 65, 83-89.	1.3	110
8	Bipolarons in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2018, 121, 013401.	7.8	100
9	Decoherence of Impurities in a Fermi Sea of Ultracold Atoms. <i>Physical Review Letters</i> , 2015, 115, 135302.	7.8	93
10	Viscous relaxation and collective oscillations in a trapped Fermi gas near the unitarity limit. <i>Physical Review A</i> , 2005, 71, .	2.5	89
11	Shear viscosity and damping for a Fermi gas in the unitarity limit. <i>Physical Review A</i> , 2007, 75, .	2.5	81
12	Strong-coupling ansatz for the one-dimensional Fermi gas in a harmonic potential. <i>Science Advances</i> , 2015, 1, e1500197.	10.3	81
13	Goldstone mode and pair-breaking excitations in atomic Fermi superfluids. <i>Nature Physics</i> , 2017, 13, 943-946.	16.7	77
14	Collective oscillations of a Fermi gas in the unitarity limit: Temperature effects and the role of pair correlations. <i>Physical Review A</i> , 2008, 78, .	2.5	74
15	Hydrodynamic Excitations of Trapped Fermi Gases. <i>Physical Review Letters</i> , 1999, 83, 5415-5418.	7.8	71
16	Viscosity and thermal relaxation for a resonantly interacting Fermi gas. <i>Physical Review A</i> , 2005, 72, .	2.5	71
17	Interacting Fermi gas in a harmonic trap. <i>Physical Review A</i> , 1998, 58, 2427-2434.	2.5	69
18	Analyzing a Bose polaron across resonant interactions. <i>Physical Review A</i> , 2019, 99, .	2.5	68

#	ARTICLE	IF	CITATIONS
19	Low Energy Collective Modes of a Superfluid Trapped Atomic Fermi Gas. Physical Review Letters, 2001, 87, 270403.	7.8	66
20	Non-equilibrium quantum dynamics and formation of the Bose polaron. Nature Physics, 2021, 17, 731-735.	16.7	63
21	Effective Theory of Feshbach Resonances and Many-Body Properties of Fermi Gases. Physical Review Letters, 2004, 92, 140404.	7.8	62
22	Bose Polarons at Finite Temperature and Strong Coupling. Physical Review Letters, 2018, 120, 050405.	7.8	62
23	Polarons and molecules in a two-dimensional Fermi gas. Physical Review A, 2011, 83, .	2.5	59
24	$\langle X \rangle \langle Y \rangle \langle Z \rangle$ Quantum Heisenberg Models with p -Orbital Bosons. Physical Review Letters, 2013, 111, 205302.	7.8	55
25	Landau Effective Interaction between Quasiparticles in a Bose-Einstein Condensate. Physical Review X, 2018, 8, .	8.9	54
26	Collisional Properties of a Polarized Fermi Gas with Resonant Interactions. Physical Review Letters, 2008, 100, 240406.	7.8	52
27	Decay of Polarons and Molecules in a Strongly Polarized Fermi Gas. Physical Review Letters, 2010, 105, 020403.	7.8	52
28	Microscopic Structure of a Vortex Line in a Dilute Superfluid Fermi Gas. Physical Review Letters, 2003, 90, 210402.	7.8	49
29	Twin peaks in rf spectra of Fermi gases at unitarity. Physical Review A, 2008, 77, .	2.5	47
30	Short-range correlations and entropy in ultracold-atom Fermi gases. Physical Review A, 2009, 80, .	2.5	47
31	Cooper pairing and single-particle properties of trapped Fermi gases. Physical Review A, 2002, 65, .	2.5	46
32	Dilute Fluid Governed by Quantum Fluctuations. Physical Review Letters, 2018, 121, 173403.	7.8	46
33	Multichannel scattering and Feshbach resonances: Effective theory, phenomenology, and many-body effects. Physical Review A, 2005, 71, .	2.5	45
34	Bosonic and Fermionic Dipoles on a Ring. Physical Review Letters, 2011, 107, 035301.	7.8	44
35	Itinerant Ferromagnetism in a Polarized Two-Component Fermi Gas. Physical Review Letters, 2013, 110, 230401.	7.8	43
36	Topological Superfluid in a Fermi-Bose Mixture with a High Critical Temperature. Physical Review Letters, 2016, 117, 245302.	7.8	43

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37	Universality of a two-component Fermi gas with a resonant interaction. Physical Review A, 2004, 70, .	2.5	42
38	Frequency and damping of the scissors mode of a Fermi gas. Physical Review A, 2007, 76, .	2.5	41
39	Tunable Wigner States with Dipolar Atoms and Molecules. Physical Review Letters, 2010, 105, 255301.	7.8	40
40	Critical slowdown of non-equilibrium polaron dynamics. New Journal of Physics, 2019, 21, 043014.	2.9	40
41	Spin diffusion in Fermi gases. New Journal of Physics, 2011, 13, 035005.	2.9	39
42	Finite-temperature behavior of the Bose polaron. Physical Review A, 2017, 96, .	2.5	38
43	Observing the emergence of a quantum phase transition shell by shell. Nature, 2020, 587, 583-587.	27.8	38
44	Laser probing of Cooper-paired trapped atoms. Physical Review A, 2001, 64, .	2.5	35
45	Induced $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline">p \rangle$ -Wave Pairing in Bose-Fermi Mixtures. Physical Review Letters, 2018, 121, 253402.	7.8	35
46	Shear viscosity and spin-diffusion coefficient of a two-dimensional Fermi gas. Physical Review A, 2012, 85, .	2.5	33
47	Density waves in layered systems with fermionic polar molecules. European Physical Journal D, 2011, 65, 133-139.	1.3	32
48	Induced interactions in a superfluid Bose-Fermi mixture. Physical Review A, 2015, 91, .	2.5	32
49	Bragg spectroscopy of cold atomic Fermi gases. Physical Review A, 2006, 74, .	2.5	30
50	Quantum Geometry and Flat Band Bose-Einstein Condensation. Physical Review Letters, 2021, 127, 170404.	7.8	30
51	Spin polarons and molecules in strongly interacting atomic Fermi gases. Physical Review A, 2008, 78, .	2.5	29
52	Anisotropic Relaxation Dynamics in a Dipolar Fermi Gas Driven Out of Equilibrium. Physical Review Letters, 2014, 113, 263201.	7.8	29
53	Probing Spatial Spin Correlations of Ultracold Gases by Quantum Noise Spectroscopy. Physical Review Letters, 2009, 102, 030401.	7.8	28
54	Mobile impurity in a Bose-Einstein condensate and the orthogonality catastrophe. Physical Review A, 2021, 103, .	2.5	28

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55	Density wave instabilities of tilted fermionic dipoles in a multilayer geometry. <i>New Journal of Physics</i> , 2012, 14, 105006.	2.9	26
56	Excitation Spectrum and Superfluid Gap of an Ultracold Fermi Gas. <i>Physical Review Letters</i> , 2022, 128, 100401.	7.8	26
57	Magnetic and superfluid phases of confined fermions in two-dimensional optical lattices. <i>Physical Review A</i> , 2007, 76, .	2.5	25
58	Stability and breakdown of Fermi polarons in a strongly interacting Fermi-Bose mixture. <i>Physical Review A</i> , 2021, 103, .	2.5	25
59	Harmonically trapped dipolar fermions in a two-dimensional square lattice. <i>Physical Review A</i> , 2012, 85, .	2.5	23
60	Vortex state in superfluid trapped Fermi gases at zero temperature. <i>Physical Review A</i> , 2001, 64, .	2.5	22
61	Collective modes of trapped Fermi gases in the normal phase. <i>Physical Review A</i> , 2001, 63, .	2.5	22
62	Collective modes of a two-dimensional spin- $\frac{1}{2}$ Fermi gas in a harmonic trap. <i>Physical Review A</i> , 2013, 87, .	2.5	22
63	Few-Body Precursor of the Higgs Mode in a Fermi Gas. <i>Physical Review Letters</i> , 2016, 116, 155302.	7.8	21
64	Dropping an impurity into a Chern insulator: A polaron view on topological matter. <i>Physical Review B</i> , 2019, 99, .	3.2	20
65	Detection of the BCS transition in a trapped Fermi gas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000, 33, 3953-3959.	1.5	19
66	Improving comparability between microarray probe signals by thermodynamic intensity correction. <i>Nucleic Acids Research</i> , 2007, 35, e48.	14.5	19
67	Long-lived Higgs mode in a two-dimensional confined Fermi system. <i>Physical Review A</i> , 2014, 90, .	2.5	19
68	Vortex line in a neutral finite-temperature superfluid Fermi gas. <i>Physical Review A</i> , 2004, 69, .	2.5	18
69	Spin Diffusion in Trapped Clouds of Cold Atoms with Resonant Interactions. <i>Physical Review Letters</i> , 2011, 107, 255302.	7.8	18
70	Topological superfluidity of lattice fermions inside a Bose-Einstein condensate. <i>Physical Review A</i> , 2016, 94, .	2.5	18
71	Low-Energy Monopole Modes of a Trapped Atomic Fermi Gas. <i>Physical Review Letters</i> , 2002, 89, 263002.	7.8	17
72	Antiferromagnetic noise correlations in optical lattices. <i>Physical Review A</i> , 2009, 80, .	2.5	17

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73	Quantum hexatic order in two-dimensional dipolar and charged fluids. <i>Physical Review B</i> , 2014, 89, .	3.2	17
74	Long-range mediated interactions in a mixed-dimensional system. <i>Physical Review A</i> , 2017, 95, .	2.5	17
75	Detection of BCS Pairing in Neutral Fermi Fluids via Stokes Scattering: The Hebel-Slichter Effect. <i>Physical Review Letters</i> , 2004, 93, 150403.	7.8	16
76	Dipolar fermions in a two-dimensional lattice at nonzero temperature. <i>Physical Review A</i> , 2012, 86, .	2.5	16
77	Liquid crystal phases of two-dimensional dipolar gases and Berezinskii-Kosterlitz-Thouless melting. <i>Scientific Reports</i> , 2016, 6, 19038.	3.3	16
78	Excitations of a Bose-Einstein condensate and the quantum geometry of a flat band. <i>Physical Review B</i> , 2021, 104, .	3.2	16
79	Ginzburg-Landau-Gor'kov theory of magnetic oscillations in a type-II two-dimensional superconductor. <i>Physical Review B</i> , 1997, 56, 809-825.	3.2	15
80	Properties of the density-wave phase of a two-dimensional dipolar Fermi gas. <i>Physical Review B</i> , 2014, 90, .	3.2	15
81	Time-reversal-invariant topological superfluids in Bose-Fermi mixtures. <i>Physical Review A</i> , 2017, 96, .	2.5	15
82	Attractive and Repulsive Exciton-Polariton Interactions Mediated by an Electron Gas. <i>Physical Review Letters</i> , 2021, 126, 127405.	7.8	15
83	Strong interactions and biexcitons in a polariton mixture. <i>Physical Review B</i> , 2019, 100, .	3.2	14
84	High-Frequency Sound in a Unitary Fermi Gas. <i>Physical Review Letters</i> , 2020, 124, 150401.	7.8	14
85	Charged Polarons and Molecules in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2021, 126, 243001.	7.8	14
86	Coexistence of density wave and superfluid order in a dipolar Fermi gas. <i>Physical Review B</i> , 2015, 91, .	3.2	13
87	Effects of the trapping potential on a superfluid atomic Fermi gas. <i>Physical Review A</i> , 2002, 66, .	2.5	12
88	Spatial structure of magnetic polarons in strongly interacting antiferromagnets. <i>Physical Review B</i> , 2021, 104, .	3.2	12
89	Pairing Fluctuations in Trapped Fermi Gases. <i>Physical Review Letters</i> , 2004, 93, 110406.	7.8	11
90	Mediated Interactions and Photon Bound States in an Exciton-Polariton Mixture. <i>Physical Review Letters</i> , 2021, 126, 017401.	7.8	11

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91	Quasiparticle Lifetime in Ultracold Fermionic Mixtures with Density and Mass Imbalance. <i>Physical Review Letters</i> , 2013, 111, 145301.	7.8	8
92	Self-bound many-body states of quasi-one-dimensional dipolar Fermi gases: Exploiting Bose-Fermi mappings for generalized contact interactions. <i>Physical Review A</i> , 2013, 88, .	2.5	8
93	Quasiparticle scattering rate in a strongly polarized Fermi mixture. <i>Physical Review A</i> , 2015, 91, .	2.5	7
94	Mixed-dimensional Bose polaron. <i>Physical Review A</i> , 2017, 96, .	2.5	6
95	Polariton dynamics in strongly interacting quantum many-body systems. <i>Physical Review Research</i> , 2020, 2, .	3.6	6
96	Nonlinear optical response of resonantly driven polaron-polaritons. <i>Physical Review B</i> , 2021, 104, .	3.2	6
97	Measuring spin correlations in optical lattices using superlattice potentials. <i>Physical Review A</i> , 2011, 84, .	2.5	5
98	Topological transport of mobile impurities. <i>Physical Review B</i> , 2021, 103, .	3.2	5
99	Detecting chiral pairing and topological superfluidity using circular dichroism. <i>Physical Review Research</i> , 2020, 2, .	3.6	5
100	Polaritons in an Electron Gas—Quasiparticles and Landau Effective Interactions. <i>Atoms</i> , 2021, 9, 81.	1.6	5
101	Feshbach Resonances and Medium Effects in Ultracold Atomic Gases. <i>Few-Body Systems</i> , 2009, 45, 227-232.	1.5	4
102	Metastability in spin-polarized Fermi gases and quasiparticle decays. <i>New Journal of Physics</i> , 2011, 13, 055011.	2.9	4
103	Superfluid Flow of Polaron Polaritons above Landau's Critical Velocity. <i>Physical Review Letters</i> , 2020, 125, 035301.	7.8	4
104	Mobile ion in a Fermi sea. <i>Physical Review A</i> , 2022, 105, .	2.5	4
105	Clock shifts in a Fermi gas interacting with a minority component: A soluble model. <i>Physical Review A</i> , 2010, 81, .	2.5	3
106	Higher first Chern numbers in one-dimensional Bose-Fermi mixtures. <i>New Journal of Physics</i> , 2018, 20, 025005.	2.9	3
107	Stabilizing Fulde-Ferrell-Larkin-Ovchinnikov superfluidity with long-range interactions in a mixed-dimensional Bose-Fermi system. <i>Physical Review A</i> , 2018, 98, .	2.5	3
108	New interactions seen in an ultracold gas. <i>Nature</i> , 2019, 568, 37-38.	27.8	3

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109	Validity of the Gor'kov expansion near the upper critical field in type II superconductors. Journal of Physics Condensed Matter, 1997, 9, 2773-2779.	1.8	2
110	Mixed parity pairing in a dipolar gas. Journal of Modern Optics, 2016, 63, 1777-1782.	1.3	2
111	Mobile impurity probing a two-dimensional superfluid phase transition. Physical Review A, 2022, 105, .	2.5	2
112	Inducing spin-dependent tunneling to probe magnetic correlations in optical lattices. Physical Review A, 2012, 85, .	2.5	1
113	Using superlattice potentials to probe long-range magnetic correlations in optical lattices. Physical Review A, 2015, 92, .	2.5	1