

Wu-Ming Liu

List of Publications by Year in descending order

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110
papers

2,091
citations

257357

24
h-index

289141

40
g-index

111
all docs

111
docs citations

111
times ranked

1699
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonlinear Effects in Interference of Bose-Einstein Condensates. Physical Review Letters, 2000, 84, 2294-2297.	2.9	180
2	Quantum spin Hall insulators with interactions and lattice anisotropy. Physical Review B, 2012, 85, .	1.1	127
3	Adiabatic Dynamics of Local Spin Moments in Itinerant Magnets. Physical Review Letters, 1999, 83, 207-210.	2.9	112
4	Kondo Metal and Ferrimagnetic Insulator on the Triangular Kagome Lattice. Physical Review Letters, 2012, 108, 246402.	2.9	90
5	Interacting Dirac fermions on honeycomb lattice. Physical Review B, 2010, 82, .	1.1	75
6	Spatiotemporal engineering of matter-wave solitons in Bose-Einstein condensates. Physics Reports, 2021, 899, 1-62.	10.3	73
7	Stacked bilayer phosphorene: strain-induced quantum spin Hall state and optical measurement. Scientific Reports, 2015, 5, 13927.	1.6	64
8	Supersolid with nontrivial topological spin textures in spin-orbit-coupled Bose gases. Physical Review A, 2015, 91, .	1.0	54
9	Circular-hyperbolic skyrmion in rotating pseudo-spin-1/2 Bose-Einstein condensates with spin-orbit coupling. Physical Review A, 2012, 86, .	1.0	50
10	Vortex chain in anisotropic spin-orbit-coupled spin-1 Bose-Einstein condensates. Physical Review A, 2013, 87, .	1.0	42
11	Controlled Electromagnetically Induced Transparency and Fano Resonances in Hybrid BEC-Optomechanics. Scientific Reports, 2016, 6, 22651.	1.6	42
12	The d-p band-inversion topological insulator in bismuth-based skutterudites. Scientific Reports, 2014, 4, 5131.	1.6	34
13	Double-quantum spin vortices in SU(3) spin-orbit-coupled Bose gases. Physical Review A, 2016, 94, .	1.0	33
14	Non-autonomous solitons in inhomogeneous nonlinear media with distributed dispersion. Nonlinear Dynamics, 2019, 97, 449-469.	2.7	33
15	Theory of ferromagnetic resonance in magnetic trilayers with a tilted spin polarizer. Physical Review B, 2008, 78, .	1.1	29
16	Frequency-selected enhancement of high-order-harmonic generation by interference of degenerate Rydberg states in a few-cycle laser pulse. Physical Review A, 2012, 86, .	1.0	28
17	Fragmentation of spin-orbit-coupled spinor Bose-Einstein condensates. Physical Review A, 2014, 89, .	1.0	28
18	Tunable Bistability in Hybrid Bose-Einstein Condensate Optomechanics. Scientific Reports, 2015, 5, 10612.	1.6	28

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19	Quantum phase transition in an array of coupled dissipative cavities. <i>Physical Review A</i> , 2011, 83, .	1.0	27
20	Finite-Component Multicriticality at the Superradiant Quantum Phase Transition. <i>Physical Review Letters</i> , 2020, 125, 050402.	2.9	27
21	<i>Zitterbewegung</i> effect in spin-orbit-coupled spin-1 ultracold atoms. <i>Physical Review A</i> , 2013, 87, .	1.0	26
22	Ground-state properties of spin-orbit-coupled Bose gases for arbitrary interactions. <i>Physical Review A</i> , 2013, 87, .	1.0	26
23	Electron-Phonon Coupling and its implication for the superconducting topological insulators. <i>Scientific Reports</i> , 2015, 5, 8964.	1.6	25
24	Quantum magnetic phase transition in square-octagon lattice. <i>Scientific Reports</i> , 2015, 4, 6918.	1.6	24
25	Tuning near-gap electronic structure, interface charge transfer and visible light response of hybrid doped graphene and Ag ₃ PO ₄ composite: Dopant effects. <i>Scientific Reports</i> , 2016, 6, 22267.	1.6	24
26	Collapses and revivals of exciton emission in a semiconductor microcavity: Detuning and phase-space filling effects. <i>Physical Review A</i> , 2004, 70, .	1.0	23
27	Dirac monopoles with a polar-core vortex induced by spin-orbit coupling in spinor Bose-Einstein condensates. <i>Physical Review A</i> , 2017, 95, .	1.0	23
28	Universal Bose gases near resonance: A rigorous solution. <i>Physical Review A</i> , 2014, 89, .	1.0	22
29	Auxiliary-cavity-assisted ground-state cooling of an optically levitated nanosphere in the unresolved-sideband regime. <i>Physical Review A</i> , 2017, 96, .	1.0	22
30	Spin-orbit-coupling-induced backaction cooling in cavity optomechanics with a Bose-Einstein condensate. <i>Physical Review A</i> , 2017, 95, .	1.0	20
31	Quantum dynamical speedup in correlated noisy channels. <i>Physical Review A</i> , 2019, 100, .	1.0	20
32	Layer Anti-Ferromagnetism on Bilayer Honeycomb Lattice. <i>Scientific Reports</i> , 2014, 4, 5367.	1.6	19
33	Defective Majorana zero modes in a non-Hermitian Kitaev chain. <i>Physical Review B</i> , 2021, 104, .	1.1	19
34	Ground states, solitons and spin textures in spin-1 Bose-Einstein condensates. <i>Frontiers of Physics</i> , 2013, 8, 302-318.	2.4	18
35	Collective modes of spin-orbit-coupled Fermi gases in the repulsive regime. <i>Physical Review A</i> , 2013, 87, .	1.0	18
36	Current-driven ferromagnetic resonance in magnetic trilayers with a tilted spin polarizer. <i>Journal of Applied Physics</i> , 2009, 105, 043908.	1.1	17

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37	Crystallized and amorphous vortices in rotating atomic-molecular Bose-Einstein condensates. <i>Scientific Reports</i> , 2015, 4, 4224.	1.6	17
38	Stability of a two-dimensional homogeneous spin-orbit-coupled boson system. <i>Physical Review A</i> , 2013, 87, .	1.0	16
39	Drag force on a moving impurity in a spin-orbit-coupled Bose-Einstein condensate. <i>Physical Review A</i> , 2014, 89, .	1.0	16
40	The confinement induced resonance in spin-orbit coupled cold atoms with Raman coupling. <i>Scientific Reports</i> , 2015, 4, 4992.	1.6	16
41	Exact solutions for generalized variable-coefficients Ginzburg-Landau equation: Application to Bose-Einstein condensates with multi-body interatomic interactions. <i>Journal of Mathematical Physics</i> , 2012, 53, .	0.5	15
42	Feynman relation of Bose-Einstein condensates with spin-orbit coupling. <i>Physical Review A</i> , 2012, 86, .	1.0	15
43	Tunable topological quantum states in three- and two-dimensional materials. <i>Frontiers of Physics</i> , 2015, 10, 161-176.	2.4	15
44	Three-dimensional ring vortex solitons and their stabilities in Bose-Einstein condensates under magnetic confinement. <i>Physical Review A</i> , 2012, 86, .	1.0	14
45	Quantum magnetism of spinor bosons in optical lattices with synthetic non-Abelian gauge fields. <i>Physical Review A</i> , 2015, 92, .	1.0	14
46	Phase transitions of the ionic Hubbard model on the honeycomb lattice. <i>Scientific Reports</i> , 2015, 5, 9810.	1.6	14
47	The polarization and the fundamental sensitivity of 39K (133Cs)-85Rb-4He hybrid optical pumping spin exchange relaxation free atomic magnetometers. <i>Scientific Reports</i> , 2017, 7, 6776.	1.6	14
48	Topological transition from superfluid vortex rings to isolated knots and links. <i>Physical Review A</i> , 2020, 102, .	1.0	13
49	Anomalous non-Abelian statistics for non-Hermitian generalization of Majorana zero modes. <i>Physical Review B</i> , 2021, 104, .	1.1	13
50	Quantum phase transitions for two coupled cavities with dipole-interaction atoms. <i>Physical Review A</i> , 2011, 84, .	1.0	12
51	Topological defects and inhomogeneous spin patterns induced by the quadratic Zeeman effect in spin-1 Bose-Einstein condensates. <i>Physical Review A</i> , 2015, 91, .	1.0	12
52	Antiferromagnetic Metal and Mott Transition on Shastry-Sutherland Lattice. <i>Scientific Reports</i> , 2015, 4, 4829.	1.6	12
53	Dynamics of vortex quadrupoles in nonrotating trapped Bose-Einstein condensates. <i>Scientific Reports</i> , 2016, 6, 29066.	1.6	12
54	Management of modulated wave solitons in a two-dimensional nonlinear transmission network. <i>European Physical Journal B</i> , 2019, 92, 1.	0.6	12

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55	Near-infrared dual-wavelength plasmonic switching and digital metasurface unveiled by plasmonic Fano resonance. <i>Nanophotonics</i> , 2020, 10, 947-957.	2.9	12
56	Coherence lengths in attractively interacting Fermi gases with spin-orbit coupling. <i>Physical Review A</i> , 2014, 90, .	1.0	11
57	Robust large-gap quantum spin Hall insulators in methyl-functionalized III-Bi buckled honeycombs. <i>Physical Review Materials</i> , 2018, 2, .	0.9	11
58	Non-Hermitian spectrum and multistability in exciton-polariton condensates. <i>Physical Review B</i> , 2021, 104, .	1.1	11
59	Enhancing the performance of an open quantum battery via environment engineering. <i>Physical Review E</i> , 2021, 104, 064143.	0.8	11
60	Bragg diffraction of interacting Bose-Einstein condensates. <i>Physical Review A</i> , 2010, 82, .	1.0	10
61	Collapse of the superradiant phase and multiple quantum phase transitions for Bose-Einstein condensates in an optomechanical cavity. <i>Physical Review A</i> , 2016, 93, .	1.0	10
62	Magnetic diversity in stable and metastable structures of CrAs. <i>Physical Review B</i> , 2017, 96, .	1.1	9
63	Classification of the quantum chaos in colored Sachdev-Ye-Kitaev models. <i>Physical Review D</i> , 2020, 101, .	1.6	9
64	Interface-induced ferroelectric domains and charged domain walls in $\text{Bi}_3\text{Fe}_3\text{O}_{10}$ superlattices. <i>Physical Review B</i> , 2021, 103, .	1.1	8
65	Quantum dynamics of a vortex in a Josephson junction. <i>Physical Review B</i> , 2005, 72, .	1.1	8
66	Tuning a magnetic Feshbach resonance with spatially modulated laser light. <i>Physical Review A</i> , 2014, 90, .	1.0	8
67	Finite-field calculation of static polarizabilities and hyperpolarizabilities of In^+ and Sr. <i>Physical Review A</i> , 2015, 92, .	1.0	8
68	Negative differential conductance and super-Poissonian shot noise in single-molecule magnet junctions. <i>Scientific Reports</i> , 2015, 5, 8730.	1.6	8
69	Non-Markovian full counting statistics in quantum dot molecules. <i>Scientific Reports</i> , 2015, 5, 8978.	1.6	8
70	Itinerant magnetic phases and quantum Lifshitz transitions in a three-dimensional repulsively interacting Fermi gas with spin-orbit coupling. <i>Physical Review B</i> , 2016, 94, .	1.1	8
71	Unified and Exact Framework for Variance-Based Uncertainty Relations. <i>Scientific Reports</i> , 2020, 10, 150.	1.6	8
72	Superfluid density and collective modes of fermion superfluid in dice lattice. <i>Scientific Reports</i> , 2021, 11, 13572.	1.6	8

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73	Dynamics of Bose-Einstein condensates near Feshbach resonance in external potential. <i>Frontiers of Physics</i> , 2011, 6, 46-60.	2.4	7
74	Quantum phase transition of cold atoms trapped in optical lattices. <i>Frontiers of Physics</i> , 2012, 7, 223-234.	2.4	7
75	Exact wave solutions for Bose-Einstein condensates with time-dependent scattering length and spatiotemporal complicated potential. <i>Journal of Mathematical Physics</i> , 2013, 54, 051501.	0.5	7
76	Universal Dissipationless Dynamics in Gaussian Continuous-Variable Open Systems. <i>Physical Review Letters</i> , 2018, 121, 220403.	2.9	7
77	Three-Dimensional Skyrmions with Arbitrary Topological Number in a Ferromagnetic Spin-1 Bose-Einstein Condensate. <i>Scientific Reports</i> , 2019, 9, 18804.	1.6	7
78	Formation of vortex rings and hopfions in trapped Bose-Einstein condensates. <i>Physics of Fluids</i> , 2021, 33, 027105.	1.6	7
79	Negative magnetoresistance and spin filtering of spin-coupled di-iron-oxo clusters. <i>Physical Review B</i> , 2014, 89, .	1.1	6
80	Classification of magnons in rotated ferromagnetic Heisenberg model and their competing responses in transverse fields. <i>Physical Review B</i> , 2016, 94, .	1.1	6
81	Localized spatially nonlinear matter waves in atomic-molecular Bose-Einstein condensates with space-modulated nonlinearity. <i>Scientific Reports</i> , 2016, 6, 29566.	1.6	6
82	Multiply quantized and fractional skyrmions in a binary dipolar Bose-Einstein condensate under rotation. <i>Physical Review A</i> , 2017, 96, .	1.0	6
83	The effect of oscillator and dipole-dipole interaction on multiple optomechanically induced transparency in cavity optomechanical system. <i>Scientific Reports</i> , 2018, 8, 14367.	1.6	6
84	Topological transition and Majorana zero modes in 2D non-Hermitian chiral superconductor with anisotropy. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 195401.	0.7	6
85	Itinerant chiral ferromagnetism in a trapped Rashba spin-orbit-coupled Fermi gas. <i>Physical Review A</i> , 2016, 93, .	1.0	5
86	Social distancing mediated generalized model to predict epidemic spread of COVID-19. <i>Nonlinear Dynamics</i> , 2021, 106, 1187-1195.	2.7	5
87	Tunable quantum switcher and router of single atoms using localized artificial magnetic fields. <i>Physical Review Research</i> , 2020, 2, .	1.3	5
88	Spin-orbit coupling controlling the topological vortical phase transition in spin-2 rotating Bose-Einstein condensates. <i>Physical Review A</i> , 2021, 104, .	1.0	5
89	Quantum tunneling of ultracold atoms in optical traps. <i>Frontiers of Physics</i> , 2014, 9, 137-152.	2.4	4
90	Quantum phase transitions of light in a dissipative Dicke-Bose-Hubbard model. <i>Physical Review A</i> , 2017, 96, .	1.0	4

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91	Vortex-Meissner phase transition induced by a two-tone-drive-engineered artificial gauge potential in the fermionic ladder constructed by superconducting qubit circuits. <i>Physical Review A</i> , 2020, 102, .	1.0	4
92	Quantum speedup in noninertial frames. <i>European Physical Journal C</i> , 2020, 80, 1.	1.4	4
93	Nonlinear dynamics of a Bose-Einstein condensate excited by a vortex ring phase imprinting. <i>Results in Physics</i> , 2021, 22, 103828.	2.0	4
94	Non-Floquet engineering in periodically driven dissipative open quantum systems. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 365402.	0.7	4
95	Fermionic non-Abelian fractional Chern insulators from dipolar interactions. <i>Physical Review B</i> , 2015, 91, .	1.1	3
96	Robust Majorana edge modes with low frequency multiple time periodic driving. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 355404.	0.7	3
97	Topological supersolidity of dipolar Fermi gases in a spin-dependent optical lattice. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 235701.	0.7	3
98	Supersolid phase of cold atoms. <i>European Physical Journal D</i> , 2020, 74, 1.	0.6	3
99	On the propagation of nonlinear signals in nonlinear transmission lines. <i>European Physical Journal Plus</i> , 2013, 128, 1.	1.2	2
100	Modulational instability of Bose-Einstein condensate in a complex polynomial in elliptic Jacobian functions potential. <i>European Physical Journal B</i> , 2013, 86, 1.	0.6	2
101	Adjustable electromagnetically induced transparency and absorption, optical controlled-phase gate in semiconductor quantum wells. <i>European Physical Journal D</i> , 2014, 68, 1.	0.6	2
102	Tunable spinful matter wave valve. <i>Scientific Reports</i> , 2019, 9, 8653.	1.6	2
103	Ergodic time scale and transitive dynamics in single-particle tracking. <i>Physical Review E</i> , 2021, 103, 032136.	0.8	2
104	Multipartite Entanglement Structure Resolution Analyzer Based on Quantum Control-Assisted Multipartite Uncertainty Relation. <i>Annalen Der Physik</i> , 2021, 533, 2100014.	0.9	2
105	Excitation spectra and hard-core thermodynamics of bosonic atoms in optical superlattices. <i>Physical Review A</i> , 2015, 91, .	1.0	1
106	Enhanced Fulde-Ferrell-Larkin-Ovchinnikov and Sarma superfluid states near an orbital Feshbach resonance. <i>Physical Review A</i> , 2019, 100, .	1.0	1
107	Superfluid-Mott-insulator quantum phase transition in a cavity optomagnonic system. <i>Physical Review A</i> , 2022, 105, .	1.0	1
108	Enhancing the precision of a phase measurement through phase-sensitive non-Gaussianity. <i>Physical Review A</i> , 2022, 105, .	1.0	1

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109	First-order metal-ferromagnetic insulator phase transition induced by Rashba spin-orbit coupling on the puckered honeycomb lattice. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 335603.	0.7	0
110	Dynamics of Bose-Einstein Condensates. , 2006, , .		0