

Wei-Min Zhang

List of Publications by Year in descending order

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116
papers

4,429
citations

159585

30
h-index

106344

65
g-index

117
all docs

117
docs citations

117
times ranked

1863
citing authors

#	ARTICLE	IF	CITATIONS
1	Coherent states: Theory and some applications. <i>Reviews of Modern Physics</i> , 1990, 62, 867-927.	45.6	1,277
2	General Non-Markovian Dynamics of Open Quantum Systems. <i>Physical Review Letters</i> , 2012, 109, 170402.	7.8	272
3	Nonperturbative QCD: A weak-coupling treatment on the light front. <i>Physical Review D</i> , 1994, 49, 6720-6766.	4.7	240
4	Non-Markovian decoherence theory for a double-dot charge qubit. <i>Physical Review B</i> , 2008, 78, .	3.2	203
5	Quantum-criticality-induced strong Kerr nonlinearities in optomechanical systems. <i>Scientific Reports</i> , 2013, 3, 2943.	3.3	150
6	Non-Markovian entanglement dynamics of noisy continuous-variable quantum channels. <i>Physical Review A</i> , 2007, 76, .	2.5	134
7	Non-equilibrium quantum theory for nanodevices based on the Feynmanâ€“Vernon influence functional. <i>New Journal of Physics</i> , 2010, 12, 083013.	2.9	95
8	Non-Markovian dynamics of an open quantum system with initial system-reservoir correlations: A nanocavity coupled to a coupled-resonator optical waveguide. <i>Physical Review A</i> , 2011, 83, .	2.5	90
9	Light-front QCD. II. Two-component theory. <i>Physical Review D</i> , 1993, 48, 4881-4902.	4.7	81
10	Decoherence suppression via non-Markovian coherent feedback control. <i>Physical Review A</i> , 2012, 86, .	2.5	75
11	Quantum nonintegrability in finite systems. <i>Physics Reports</i> , 1995, 252, 1-100.	25.6	65
12	A quantum photonic dissipative transport theory. <i>Annals of Physics</i> , 2012, 327, 1408-1433.	2.8	63
13	Exact non-Markovian cavity dynamics strongly coupled to a reservoir. <i>Physical Review A</i> , 2010, 82, .	2.5	62
14	Non-Markovian Complexity in the Quantum-to-Classical Transition. <i>Scientific Reports</i> , 2015, 5, 13353.	3.3	57
15	Integrability and nonintegrability of quantum systems: Quantum integrability and dynamical symmetry. <i>Physical Review A</i> , 1989, 40, 438-447.	2.5	53
16	Light-front QCD. I. Role of longitudinal boundary integrals. <i>Physical Review D</i> , 1993, 48, 4868-4880.	4.7	47
17	Radiative leptonic decays in the light front model. <i>Physical Review D</i> , 1998, 57, 5697-5702.	4.7	43
18	Transport theory of relativistic heavy-ion collisions with chiral symmetry. <i>Physical Review C</i> , 1992, 45, 1900-1917.	2.9	42

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19	Non-Markovian dynamics of a microcavity coupled to a waveguide in photonic crystals. Optics Express, 2010, 18, 18407.	3.4	42
20	Study of $B_s \rightarrow l^+ l^- \bar{\nu}_s$ decays. Physical Review D, 2000, 62, .	4.7	41
21	Non-Markovianity measure using two-time correlation functions. Physical Review A, 2015, 92, .	2.5	41
22	Light-front QCD. III. Coupling constant renormalization. Physical Review D, 1993, 48, 4903-4915.	4.7	39
23	Decoherence suppression of open quantum systems through a strong coupling to non-Markovian reservoirs. Physical Review A, 2011, 84, .	2.5	39
24	Dynamical Symmetry Breaking and Quantum Nonintegrability. Physical Review Letters, 1988, 61, 2167-2170.	7.8	38
25	Breakdown of Bose-Einstein Distribution in Photonic Crystals. Scientific Reports, 2015, 5, 9423.	3.3	37
26	Geometrical interpretation of SO(7): A critical dynamical symmetry. Physical Review Letters, 1987, 59, 2032-2035.	7.8	35
27	Influence of surface plasmon resonance on the emission intermittency of photoluminescence from gold nano-sea-urchins. Nanoscale, 2010, 2, 2639.	5.6	35
28	Deep inelastic structure functions in light-front QCD: Radiative corrections. Physical Review D, 1999, 59, .	4.7	33
29	Exact master equation and non-Markovian decoherence dynamics of Majorana zero modes under gate-induced charge fluctuations. Physical Review B, 2018, 97, .	3.2	32
30	Entangling two superconducting L and C coherent modes via a superconducting flux qubit. Physical Review B, 2009, 80, .	3.2	31
31	Geometrical structure and critical phenomena in the fermion dynamical symmetry model: Sp(6). Physical Review C, 1988, 38, 1475-1487.	2.9	30
32	π form factors calculated on the light-front. Zeitschrift für Physik C-Particles and Fields, 1997, 75, 657-664.	1.5	30
33	Entangling two distant nanocavities via a waveguide. Physical Review A, 2011, 83, .	2.5	30
34	Integrability and nonintegrability of quantum systems. II. Dynamics in quantum phase space. Physical Review A, 1990, 42, 7125-7150.	2.5	29
35	Master equation approach to transient quantum transport in nanostructures incorporating initial correlations. Physical Review B, 2015, 92, .	3.2	29
36	Geometrical structure and critical phenomena in the fermion dynamical symmetry model: SO(8). Physical Review C, 1988, 37, 1281-1294.	2.9	28

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37	Solar weak currents, neutrino oscillations, and time variations. <i>Physical Review D</i> , 1991, 43, 2484-2494.	4.7	27
38	STUDY OF RADIATIVE LEPTONIC D MESON DECAYS. <i>Modern Physics Letters A</i> , 2000, 15, 2087-2103.	1.2	26
39	Weak-coupling treatment of nonperturbative QCD dynamics to heavy hadrons. <i>Physical Review D</i> , 1997, 56, 1528-1548.	4.7	24
40	Covariant light-front model of heavy mesons within heavy quark effective theory. <i>Physical Review D</i> , 1998, 57, 5598-5610.	4.7	24
41	Mesonic tensor form factors with the light front quark model. <i>Physical Review D</i> , 2001, 64, .	4.7	23
42	Transient current-current correlations and noise spectra. <i>Physical Review B</i> , 2014, 89, .	3.2	23
43	Study of $B_c \rightarrow \pi^+ l^+ \nu_l$ decays in the light front model. <i>Physical Review D</i> , 1999, 59, .	4.7	22
44	Exact master equation and non-markovian decoherence for quantum dot quantum computing. <i>Quantum Information Processing</i> , 2009, 8, 631-646.	2.2	22
45	Transient quantum transport in double-dot Aharonov-Bohm interferometers. <i>Physical Review B</i> , 2012, 86, .	3.2	22
46	Light-front heavy-quark effective theory and heavy-meson bound states. <i>Physical Review D</i> , 1995, 52, 2915-2925.	4.7	21
47	Master equation and dispersive probing of a non-Markovian process. <i>Physical Review A</i> , 2013, 87, .	2.5	20
48	Master equation approach to transient quantum transport in nanostructures. <i>Frontiers of Physics</i> , 2017, 12, 1.	5.0	20
49	Quantum thermodynamics of single particle systems. <i>Scientific Reports</i> , 2020, 10, 13500.	3.3	20
50	Exact master equation and general non-Markovian dynamics in open quantum systems. <i>European Physical Journal: Special Topics</i> , 2019, 227, 1849-1867.	2.6	19
51	Possibility that Schrödinger's conjecture for the hydrogen-atom coherent states is not attainable. <i>Physical Review A</i> , 1994, 50, R1973-R1975.	2.5	18
52	Nonperturbative description of deep inelastic structure functions in light-front QCD. <i>Physical Review D</i> , 1999, 59, .	4.7	18
53	Magnetic field switching in parallel quantum dots. <i>Europhysics Letters</i> , 2009, 88, 37001.	2.0	18
54	Deterministic chaos can act as a decoherence suppressor. <i>Physical Review B</i> , 2011, 84, .	3.2	18

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55	Examination of Wandzura-Wilczek relation for $g_2(x, Q^2)$ in pQCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 408, 347-356.	4.1	17
56	Quantum Frenkel-Kontorova model: A squeezed state approach. Physical Review E, 1998, 58, R4068-R4071.	2.1	17
57	Residual gauge fixing in light-front QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 314, 223-228.	4.1	16
58	Intrinsic coherence dynamics and phase localization in nanoscale Aharonov-Bohm interferometers. Physical Review B, 2011, 83, .	3.2	16
59	Dynamically stabilized decoherence-free states in non-Markovian open fermionic systems. Physical Review A, 2012, 86, .	2.5	16
60	Decoherence dynamics of coherent electronic excited states in the photosynthetic purple bacterium <i>Rhodospirillum rubrum</i> . Physical Review E, 2010, 81, 011906.	2.1	14
61	Transient probing of the symmetry and the asymmetry of electron interference. Physical Review B, 2016, 93, .	3.2	13
62	Non-equilibrium quantum phase transition via entanglement decoherence dynamics. Scientific Reports, 2016, 6, 34804.	3.3	13
63	Nonequilibrium transient dynamics of photon statistics. Physical Review A, 2017, 95, .	2.5	13
64	Quantum theory of dissipative topological systems. Physical Review B, 2020, 102, .	3.2	13
65	Entanglement oscillation and survival induced by non-Markovian decoherence dynamics of the entangled squeezed state. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 015302.	2.1	12
66	Buildup of Fano resonances in the time domain in a double quantum dot Aharonov-Bohm interferometer. Physical Review B, 2018, 97, .	3.2	12
67	Non-Markovian suppression of charge qubit decoherence in the quantum point contact measurement. Journal of Chemical Physics, 2008, 129, 224106.	3.0	11
68	Dynamical Pauli effect on geometry. Journal of Physics G: Nuclear and Particle Physics, 1989, 15, L115-L121.	3.6	10
69	Dynamical symmetry breaking and mean-field chaotic motions in nuclear many-body systems. Physical Review C, 1991, 43, 1127-1139.	2.9	9
70	Charge-to-spin conversion of electron entanglement states and spin-interaction-free solid-state quantum computation. Physical Review B, 2007, 76, .	3.2	9
71	Real-time dynamics of spin-dependent transport through a double-quantum-dot Aharonov-Bohm interferometer with spin-orbit interaction. Physical Review B, 2014, 90, .	3.2	9
72	Nonperturbative renormalization of quantum thermodynamics from weak to strong couplings. Physical Review Research, 2022, 4, .	3.6	9

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73	Symmetry constrained Hartree-Fock-Bogoliubov theory with applications to the fermion dynamical symmetry model. Nuclear Physics A, 1989, 505, 7-25.	1.5	8
74	Quantum fluctuations in classical chaos. Physical Review A, 1990, 42, 3646-3649.	2.5	8
75	Wave-packet localization in nonlinear external potentials with dissipation. Physical Review A, 1995, 52, 1746-1749.	2.5	8
76	HEAVY QUARK EFFECTIVE THEORY ON THE LIGHT FRONT. International Journal of Modern Physics A, 1996, 11, 3297-3305.	1.5	8
77	Non-Markovian decoherence dynamics of strong-coupling hybrid quantum systems: A master equation approach. Physical Review A, 2021, 103, .	2.5	8
78	The matrix element of the transverse component of the bilocal vector current and its parton interpretation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 390, 359-362.	4.1	7
79	Decoherence induced by electron accumulation in a quantum measurement of charge qubits. Physical Review B, 2006, 74, .	3.2	7
80	Exact decoherence dynamics of $1/f$ noise. New Journal of Physics, 2014, 16, 103010.	2.9	7
81	Decoherence dynamics of Majorana qubits under braiding operations. Physical Review B, 2020, 101, .	3.2	7
82	Chiral symmetry in light-front QCD. Journal of High Energy Physics, 2004, 2004, 045-045.	4.7	6
83	Single-electron turnstile pumping with high frequencies. Applied Physics Letters, 2011, 99, .	3.3	6
84	Coherent control of double-dot molecules using Aharonov-Bohm magnetic flux. Physical Review B, 2012, 86, .	3.2	6
85	Quantum coherence of the molecular states and their corresponding currents in nanoscale Aharonov-Bohm interferometers. Physical Review B, 2016, 94, .	3.2	5
86	Manipulating quantum coherence of charge states in interacting double-dot Aharonov-Bohm interferometers. New Journal of Physics, 2018, 20, 043043.	2.9	5
87	Probing topological states through the exact non-Markovian decoherence dynamics of a spin coupled to a spin bath in the real-time domain. Physical Review B, 2020, 102, .	3.2	5
88	GEOMETRY IN QUANTUM NON-INTEGRABILITY. Modern Physics Letters A, 1993, 08, 1417-1425.	1.2	4
89	FIELD-THEORETIC REALIZATION OF HEAVY MESONS AS COMPOSITE PARTICLES. Modern Physics Letters A, 1998, 13, 2163-2171.	1.2	4
90	Implementing controlled-NOT gate based on free spin qubits with semiconductor quantum-dot array. Europhysics Letters, 2005, 71, 524-529.	2.0	4

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91	Precision control of charge coherence in parallel double dot systems through spin-orbit interaction. Journal of Chemical Physics, 2013, 139, 064706.	3.0	4
92	Exact dynamics and thermalization of open quantum systems coupled to reservoirs through particle exchanges. Physical Review A, 2020, 102, .	2.5	4
93	A simple example of light-front current renormalization. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 333, 158-165.	4.1	3
94	Effective field theory of heavy mesons. Physical Review D, 1998, 58, .	4.7	3
95	Nonperturbative determination of heavy meson bound states. Physical Review D, 1999, 60, .	4.7	3
96	Quantum Nonlinear Model for Arbitrary Spin Heisenberg Antiferromagnets. Physical Review Letters, 2005, 95, 167205.	7.8	3
97	Modeling Neuronal Systems as an Open Quantum System. Symmetry, 2021, 13, 1603.	2.2	3
98	Manipulating Majorana qubit states without braiding. Physical Review B, 2021, 104, .	3.2	3
99	Underlying pairing states in cuprate superconductors. Physical Review B, 2000, 61, R898-R901.	3.2	2
100	Nontrivial gauge symmetry in high Tc superconductivity. Physica C: Superconductivity and Its Applications, 2001, 364-365, 147-150.	1.2	1
101	SUM(2) \times UC(1) gauge symmetry in high-Tc superconductivity. Physical Review B, 2002, 65, .	3.2	1
102	EFFECTS OF INTERFACIAL PSEUDO-SPIN COUPLING FLUCTUATIONS ON THE DIELECTRIC PROPERTIES OF FERROELECTRIC SUPERLATTICES. International Journal of Modern Physics B, 2005, 19, 3193-3203.	2.0	1
103	Generation of entangled photon pairs by semiconductor quantum dots in a structure of quantum cellular automata. Journal of Physics Condensed Matter, 2007, 19, 326215.	1.8	1
104	Zhanget Al.Reply.. Physical Review Letters, 2015, 115, 168902.	7.8	1
105	The differential conductance tunnel spectroscopy in an analytical solvable two-terminal Majorana device. New Journal of Physics, 2022, 24, 073015.	2.9	1
106	Quantum-Classical Correspondence and Quantum Chaos. , 1992, , 66-107.		0
107	Influence of dynamical Pauli effect and dynamical symmetry breaking on quantum chaos. Physical Review C, 1998, 57, 637-647.	2.9	0
108	Coherent pairing state and high Tc superconductivity. Physica C: Superconductivity and Its Applications, 2000, 341-348, 313-314.	1.2	0

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109	Nonperturbative determination of heavy meson bound states. Nuclear Physics A, 2000, 663-664, 667c-670c.	1.5	0
110	QUANTUM COMPUTATION BASED ON ELECTRON SPIN QUBITS WITHOUT SPIN-SPIN INTERACTION. International Journal of Quantum Information, 2005, 03, 155-162.	1.1	0
111	Exact wave packet decoherence dynamics in a discrete spectrum environment. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 245501.	1.5	0
112	NONPERTURBATIVE DESCRIPTION OF B-MESONS. , 2000, , .		0
113	QUANTUM COMPUTATION BASED ON ELECTRON SPIN QUBITS WITHOUT SPIN-SPIN INTERACTION. , 2005, , .		0
114	Nobel Metal Nanoparticles in Bio-LED. , 0, , .		0
115	Classicalization and Coherent States. , 1994, , .		0
116	Controlling the dynamics of dissipationless localized bound states in open quantum systems with periodic driving fields. Physical Review A, 2021, 104, .	2.5	0