

Barry Garraway

List of Publications by Citations

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89
papers

3,604
citations

29
h-index

59
g-index

95
ext. papers

4,022
ext. citations

3
avg, IF

5.61
L-index

#	Paper	IF	Citations
89	Nonperturbative decay of an atomic system in a cavity. <i>Physical Review A</i> , 1997 , 55, 2290-2303	2.6	291
88	Wave-packet dynamics: new physics and chemistry in femto-time. <i>Reports on Progress in Physics</i> , 1995 , 58, 365-419	14.4	263
87	The Dicke model in quantum optics: Dicke model revisited. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 1137-55	3	219
86	Landau-Zener model: Effects of finite coupling duration. <i>Physical Review A</i> , 1996 , 53, 4288-4304	2.6	180
85	Sudden death and sudden birth of entanglement in common structured reservoirs. <i>Physical Review A</i> , 2009 , 79,	2.6	173
84	Adiabatic Passage by Light-Induced Potentials in Molecules. <i>Physical Review Letters</i> , 1998 , 80, 932-935	7.4	165
83	Generation and detection of nonclassical field states by conditional measurements following two-photon resonant interactions. <i>Physical Review A</i> , 1994 , 49, 535-547	2.6	144
82	Two-dimensional atom trapping in field-induced adiabatic potentials. <i>Physical Review Letters</i> , 2001 , 86, 1195-8	7.4	125
81	Time-dependent tunneling of Bose-Einstein condensates. <i>Physical Review A</i> , 2000 , 61,	2.6	122
80	Decay of an atom coupled strongly to a reservoir. <i>Physical Review A</i> , 1997 , 55, 4636-4639	2.6	119
79	Theory of pseudomodes in quantum optical processes. <i>Physical Review A</i> , 2001 , 64,	2.6	119
78	Pseudomodes as an effective description of memory: Non-Markovian dynamics of two-state systems in structured reservoirs. <i>Physical Review A</i> , 2009 , 80,	2.6	93
77	Ring trap for ultracold atoms. <i>Physical Review A</i> , 2006 , 74,	2.6	93
76	Cavity modified quantum beats. <i>Physical Review A</i> , 1996 , 54, 3592-3602	2.6	82
75	Generation of nonclassical light by dissipative two-photon processes. <i>Physical Review A</i> , 1994 , 49, 2785-2789	2.6	77
74	Comparison of quantum-state diffusion and quantum-jump simulations of two-photon processes in a dissipative environment. <i>Physical Review A</i> , 1994 , 49, 1266-1274	2.6	76
73	Population transfer in a level-crossing model with two time scales. <i>Physical Review A</i> , 1992 , 45, 374-386	2.6	66

72	Atom trapping and two-dimensional Bose-Einstein condensates in field-induced adiabatic potentials. <i>Physical Review A</i> , 2004 , 69,	2.6	64
71	High harmonic generation and periodic level crossings. <i>Physical Review A</i> , 1997 , 56, 3093-3096	2.6	60
70	Evolution of quantum superpositions in open environments: Quantum trajectories, jumps, and localization in phase space. <i>Physical Review A</i> , 1994 , 50, 2548-2563	2.6	60
69	Population dynamics and phase effects in periodic level crossings. <i>Physical Review A</i> , 1997 , 55, 4418-4432.	2.6	58
68	Wave-packet model for excitation by ultrashort pulses. <i>Physical Review A</i> , 1992 , 45, 3060-3070	2.6	55
67	Quantum phase distributions and quasidistributions. <i>Physical Review A</i> , 1992 , 46, R5346-R5349	2.6	52
66	Tailoring of vibrational state populations with light-induced potentials in molecules. <i>Physical Review A</i> , 2000 , 62,	2.6	48
65	Recent developments in trapping and manipulation of atoms with adiabatic potentials. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016 , 49, 172001	1.3	41
64	Dissipation effects on wave packets in level crossings: A comparison between two numerical approaches. <i>Physical Review A</i> , 1993 , 47, 4779-4785	2.6	40
63	High-order unraveling of master equations for dissipative evolution. <i>Physical Review A</i> , 1995 , 51, 3302-3308	2.6	39
62	Non-Markovian decay of a three-level cascade atom in a structured reservoir. <i>Physical Review A</i> , 2003 , 68,	2.6	36
61	Quantum superpositions, phase distributions and quasi-probabilities. <i>Physica Scripta</i> , 1993 , T48, 66-76	2.6	35
60	Observing the spin of a free electron. <i>Physical Review A</i> , 1999 , 60, 63-79	2.6	29
59	Journeys from quantum optics to quantum technology. <i>Progress in Quantum Electronics</i> , 2017 , 54, 19-45.	9.1	26
58	Evaporative cooling in a radio-frequency trap. <i>Physical Review A</i> , 2006 , 74,	2.6	26
57	Dissipation control in cavity QED with oscillating mode structures. <i>Physical Review A</i> , 2008 , 77,	2.6	25
56	Interferometer within a molecule. <i>Physical Review A</i> , 1992 , 46, 1413-1420	2.6	25
55	Application of quantum Darwinism to a structured environment. <i>Physical Review A</i> , 2017 , 96,	2.6	24

54	Population transfer at periodically repeated level crossings. <i>Physical Review A</i> , 1992 , 45, 364-373	2.6	22
53	Entanglement trapping in a nonstationary structured reservoir. <i>Physical Review A</i> , 2012 , 86,	2.6	21
52	Two-photon parametric pumping versus two-photon absorption: A quantum jump approach. <i>Physical Review A</i> , 1997 , 55, 3842-3857	2.6	21
51	Theory of non-Markovian decay of a cascade atom in high-Q cavities and photonic band gap materials. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006 , 39, S767-S786	1.3	21
50	Adventures in Wave packet land. <i>Physics World</i> , 1993 , 6, 46-53	0.5	20
49	Control of atomic decay rates via manipulation of reservoir mode frequencies. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006 , 39, 3383-3401	1.3	19
48	Quantum entanglement for systems of identical bosons: I. General features. <i>Physica Scripta</i> , 2017 , 92, 023004	2.6	18
47	Does a flying electron spin?. <i>Contemporary Physics</i> , 2002 , 43, 147-160	3.3	18
46	New spin squeezing and other entanglement tests for two mode systems of identical bosons. <i>New Journal of Physics</i> , 2014 , 16, 013026	2.9	17
45	Wave packet dynamics in molecules. <i>Contemporary Physics</i> , 2002 , 43, 97-114	3.3	17
44	Analysis of adiabatic passage by light-induced potentials with chirped laser pulses in three- and four-level diatomic systems. <i>Journal of Chemical Physics</i> , 2006 , 124, 024320	3.9	16
43	Trapping Atoms With Radio Frequency Adiabatic Potentials. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2017 , 181-262	1.7	15
42	Wave-packet dynamics: Level-crossing-induced changes in momentum distributions. <i>Physical Review A</i> , 1993 , 48, 3811-3819	2.6	15
41	Adiabatic entanglement in two-atom cavity QED. <i>Physical Review A</i> , 2008 , 77,	2.6	13
40	Roadmap on Atomtronics: State of the art and perspective. <i>AVS Quantum Science</i> , 2021 , 3, 039201	10.3	13
39	RF spectroscopy in a resonant RF-dressed trap. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010 , 43, 065302	1.3	12
38	Generalized theory of pseudomodes for exact descriptions of non-Markovian quantum processes. <i>Physical Review Research</i> , 2020 , 2,	3.9	12
37	Quantum entanglement for systems of identical bosons: II. Spin squeezing and other entanglement tests. <i>Physica Scripta</i> , 2017 , 92, 023005	2.6	11

36	Generation and Preservation of Coherence in Dissipative Quantum Optical Environments. <i>Physica Scripta</i> , 1998 , T76, 152	2.6	11
35	Inductively guided circuits for ultracold dressed atoms. <i>Nature Communications</i> , 2014 , 5, 5289	17.4	9
34	Nonadiabatic losses from radio-frequency-dressed cold-atom traps: Beyond the Landau-Zener model. <i>Physical Review A</i> , 2017 , 96,	2.6	8
33	Generation of entanglement density within a reservoir. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011 , 44, 065505	1.3	8
32	Dynamics of a Raman coupled model: Entanglement and quantum computation. <i>Journal of Modern Optics</i> , 2004 , 51, 1691-1704	1.1	8
31	Extended Gaussian wavepacket dynamics. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000 , 33, 4447-4467	1.3	8
30	Giant Quantum Oscillators from Rydberg Atoms: Atomic Coherent States and Their Squeezing from Rydberg Atoms. <i>NATO ASI Series Series B: Physics</i> , 1989 , 81-106		8
29	Radio-frequency dressed lattices for ultracold alkali atoms. <i>New Journal of Physics</i> , 2015 , 17, 053037	2.9	7
28	Inductive dressed ring traps for ultracold atoms. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2014 , 47, 071001	1.3	7
27	Multiphoton resonances for all-optical quantum logic with multiple cavities. <i>Physical Review A</i> , 2014 , 90,	2.6	7
26	Molecular heat pump for rotational states. <i>Physical Review A</i> , 2010 , 81,	2.6	7
25	Reservoir cross-over in entanglement dynamics. <i>Quantum Information Processing</i> , 2009 , 8, 577-585	1.6	7
24	Radio-frequency dressed atoms beyond the linear Zeeman effect. <i>New Journal of Physics</i> , 2012 , 14, 123008	2.9	6
23	Theory of an optical dipole trap for cold atoms. <i>Physical Review A</i> , 2000 , 62,	2.6	6
22	The quantum theory of the Penning trap. <i>Journal of Modern Optics</i> , 2018 , 65, 427-440	1.1	5
21	Publisher's Note: Dissipation control in cavity QED with oscillating mode structures [Phys. Rev. A 77 , 033831 (2008)]. <i>Physical Review A</i> , 2008 , 77,	2.6	5
20	Addressed qubit manipulation in radio-frequency dressed lattices. <i>New Journal of Physics</i> , 2016 , 18, 035009	2.9	5
19	Pumping Dynamics of Cold-Atom Experiments in a Single Vacuum Chamber. <i>Physical Review Applied</i> , 2019 , 12,	4.3	3

18	An effective scalar magnetic interaction for resonantly trapped atoms. <i>Physica Scripta</i> , 2010 , T140, 014006		3
17	Quantum measurement, detection and locality. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007 , 370, 213-218	2.3	3
16	Quasimode theory of quantum optical processes in photonic band gap materials. <i>Journal of Modern Optics</i> , 2002 , 49, 947-958	1.1	3
15	Wave-packet dynamics and quantum beats. <i>Physical Review A</i> , 1998 , 58, 440-449	2.6	3
14	Microwave spectroscopy of radio-frequency-dressed Rb87. <i>Physical Review A</i> , 2019 , 100,	2.6	3
13	Tests for Einstein-Podolsky-Rosen steering in two-mode systems of identical massive bosons. <i>Physical Review A</i> , 2020 , 101,	2.6	2
12	Cascade atom in high-Q cavity: the spectrum for non-Markovian decay. <i>Journal of Modern Optics</i> , 2007 , 54, 2049-2099	1.1	2
11	Transient effects on electron spin observation. <i>Physical Review A</i> , 2004 , 69,	2.6	2
10	Dynamics of a Raman coupled model: Entanglement and quantum computation		2
9	Emergent randomness in the Jaynes-Cummings model. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008 , 41, 075304	2	1
8	Adiabatic cavity QED with pairs of atoms. <i>European Physical Journal: Special Topics</i> , 2008 , 160, 235-246	2.3	1
7	Dynamics of Five-Level Atoms in Two Standing Electromagnetic Waves. <i>Journal of the Physical Society of Japan</i> , 1990 , 59, 3155-3166	1.5	1
6	Multimode quantum optical logic 2007 ,		1
5	Dissipative Environments: Quantum Jumps or Phase-Space Localization?. <i>Springer Proceedings in Physics</i> , 1994 , 173-183	0.2	1
4	Quantisation of the elliptical Penning trap. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2021 , 54, 115501	1.3	0
3	Entanglement in the adiabatic limit of a two-atom Tavis-Cummings model. <i>Physica Scripta</i> , 2009 , T135, 014016	2.6	
2	Quasimodes and pseudomodes in structured reservoirs 2003 , 495-496		
1	Stochastic Simulations of Dissipation in Quantum Optics: Quantum Superpositions 1995 , 463-477		

