Diego Porras

List of Publications by Year in descending order

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78 papers	4,325 citations	147801 31 h-index	114465 63 g-index
78 all docs	78 docs citations	78 times ranked	2878 citing authors

#	Article	IF	Citations
1	Out-of-time-order correlator in the quantum Rabi model. Physical Review A, 2022, 105, .	2.5	5
2	Decimation technique for open quantum systems: A case study with driven-dissipative bosonic chains. Physical Review A, 2022, 105, .	2.5	1
3	Topological input-output theory for directional amplification. Physical Review A, 2021, 103, .	2.5	16
4	Dissipative Josephson effect in coupled nanolasers. New Journal of Physics, 2021, 23, 033010.	2.9	1
5	Hybrid quantumâ€“classical optimization with cardinality constraints and applications to finance. Quantum Science and Technology, 2021, 6, 034010.	5.8	8
6	Qubit-photon bound states in topological waveguides with long-range hoppings. Physical Review A, 2021, 104, .	2.5	35
7	Quantum variational optimization: The role of entanglement and problem hardness. Physical Review A, 2021, 104, .	2.5	15
8	Taking snapshots of a quantum thermalization process: Emergent classicality in quantum jump trajectories. Physical Review E, 2020, 102, 042115.	2.1	5
9	Limits of photon-mediated interactions in one-dimensional photonic baths. Physical Review A, 2020, 102, .	2.5	10
10	Symmetries and conservation laws in quantum trajectories: Dissipative freezing. Physical Review A, 2019, 100, .	2.5	35
11	Quantum chaotic fluctuation-dissipation theorem: Effective Brownian motion in closed quantum systems. Physical Review E, 2019, 99, 052139.	2.1	21
12	Topological Amplification in Photonic Lattices. Physical Review Letters, 2019, 122, 143901.	7.8	44
13	Floquet-Engineered Vibrational Dynamics in a Two-Dimensional Array of Trapped Ions. Physical Review Letters, 2019, 123, 213605.	7.8	22
14	Heisenberg scaling with classical long-range correlations. Physical Review A, 2018, 97, .	2.5	6
15	Off-diagonal observable elements from random matrix theory: distributions, fluctuations, and eigenstate thermalization. New Journal of Physics, 2018, 20, 103003.	2.9	23
16	Quantum sensing close to a dissipative phase transition: Symmetry breaking and criticality as metrological resources. Physical Review A, 2017, 96, .	2.5	42
17	Topological Edge States in Periodically Driven Trapped-Ion Chains. Physical Review Letters, 2017, 119, 210401.	7.8	24
18	Hidden frustrated interactions and quantum annealing in trapped-ion spin-phonon chains. Physical Review A, 2016, 93, .	2.5	24

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19	Time-Resolved Observation of Thermalization in an Isolated Quantum System. Physical Review Letters, 2016, 117, 170401.	7.8	81
20	Topological phases of shaken quantum Ising lattices. New Journal of Physics, 2016, 18, 023030.	2.9	2
21	Rabi lattice models with discrete gauge symmetry: Phase diagram and implementation in trapped-ion quantum simulators. Physical Review A, 2015, 92, .	2.5	6
22	Quantum Sensors Assisted by Spontaneous Symmetry Breaking for Detecting Very Small Forces. Physical Review Applied, 2015, 4, .	3.8	15
23	Interaction-dependent photon-assisted tunneling in optical lattices: a quantum simulator of strongly-correlated electrons and dynamical Gauge fields. New Journal of Physics, 2015, 17, 103021.	2.9	38
24	The Boseâ€“Hubbard model with squeezed dissipation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 055302.	1.5	5
25	Photon-mediated qubit interactions in one-dimensional discrete and continuous models. Physical Review A, 2015, 91, .	2.5	20
26	Inducing Nonclassical Lasing via Periodic Drivings in Circuit Quantum Electrodynamics. Physical Review Letters, 2014, 113, 193601.	7.8	30
27	Circuit QED Bright Source for Chiral Entangled Light Based on Dissipation. Physical Review Letters, 2013, 111, 073602.	7.8	31
28	Mesoscopic mean-field theory for spin-boson chains in quantum optical systems. European Physical Journal: Special Topics, 2013, 217, 29-41.	2.6	9
29	Mesoscopic Entanglement Induced by Spontaneous Emission in Solid-State Quantum Optics. Physical Review Letters, 2013, 110, 080502.	7.8	112
30	Adiabatic quantum metrology with strongly correlated quantum optical systems. Physical Review A, 2013, 88, .	2.5	23
31	Nonequilibrium and Nonperturbative Dynamics of Ultrastrong Coupling in Open Lines. Physical Review Letters, 2013, 111, 243602.	7.8	96
32	Nonclassical lasing in circuit quantum electrodynamics. , 2013, , .		0
33	Simulation of the Jahnâ€“Tellerâ€“Dicke magnetic structural phase transition with trapped ions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 104003.	1.5	10
34	Photon-assisted-tunneling toolbox for quantum simulations in ion traps. New Journal of Physics, 2012, 14, 053049.	2.9	36
35	Simulating accelerated atoms coupled to a quantum field. Physical Review A, 2012, 85, .	2.5	22
36	Experimental quantum simulations of many-body physics with trapped ions. Reports on Progress in Physics, 2012, 75, 024401.	20.1	270

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37	Quantum Simulation of the Cooperative Jahn-Teller Transition in 1D Ion Crystals. Physical Review Letters, 2012, 108, 235701.	7.8	31
38	Shaping an Itinerant Quantum Field into a Multimode Squeezed Vacuum by Dissipation. Physical Review Letters, 2012, 108, 043602.	7.8	41
39	Synthetic Gauge Fields for Vibrational Excitations of Trapped Ions. Physical Review Letters, 2011, 107, 150501.	7.8	109
40	Simulating quantum-optical phenomena with optical lattices. , 2011, , .		0
41	Simulating quantum-optical phenomena with cold atoms in optical lattices. New Journal of Physics, 2011, 13, 023024.	2.9	49
42	Towards electron-electron entanglement in Penning traps. Physical Review A, 2010, 81, .	2.5	17
43	The localization of phonons in ion traps with controlled quantum disorder. New Journal of Physics, 2010, 12, 123016.	2.9	24
44	The â€œarchâ€•of simulating quantum spin systems with trapped ions. Applied Physics B: Lasers and Optics, 2009, 95, 195-203.	2.2	21
45	Competing many-body interactions in systems of trapped ions. Physical Review A, 2009, 79, .	2.5	42
46	Simulating a quantum magnet with trappedÂions. Nature Physics, 2008, 4, 757-761.	16.7	502
47	Quantum phases of interacting phonons in ion traps. Physical Review A, 2008, 77, .	2.5	45
48	Quantum phases of trapped ions in an optical lattice. New Journal of Physics, 2008, 10, 045017.	2.9	51
49	Detection of spin correlations in optical lattices by light scattering. Physical Review A, 2008, 77, .	2.5	27
50	Matter-Wave Emission in Optical Lattices: Single Particle and Collective Effects. Physical Review Letters, 2008, 101, 260404.	7.8	69
51	Mesoscopic spin-boson models of trapped ions. Physical Review A, 2008, 78, .	2.5	99
52	Collective generation of quantum states of light by entangled atoms. Physical Review A, 2008, 78, .	2.5	104
53	Quantum Processing Photonic States in Optical Lattices. Physical Review Letters, 2008, 100, 063601.	7.8	8
54	Quantum processing photonic states in optical lattices. , 2007, , .		0

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55	Quantum engineering of photon states with atomic ensembles. , 2007, , .		0
56	Quantum computation and quantum simulation with Coulomb crystals. , 2007, , .		0
57	Quantum Manipulation of Trapped Ions in Two Dimensional Coulomb Crystals. Physical Review Letters, 2006, 96, 250501.	7.8	95
58	Phonon Superfluids in Sets of Trapped Ions. Foundations of Physics, 2006, 36, 465-476.	1.3	3
59	Renormalization algorithm for the calculation of spectra of interacting quantum systems. Physical Review B, 2006, 73, .	3.2	47
60	Simulation of quantum magnetism with trapped ions. , 2005, , .		1
61	Superfluid-Mott insulator transition and Bose-Einstein Condensation of phonons in ion traps. AIP Conference Proceedings, 2005, , .	0.4	0
62	Single and two photon emission from a semiconductor quantum dot in an optical microcavity. AIP Conference Proceedings, 2005, , .	0.4	0
63	Effective spin quantum phases in systems of trapped ions. Physical Review A, 2005, 72, .	2.5	150
64	Bose-Einstein Condensation and Strong-Correlation Behavior of Phonons in Ion Traps. Physical Review Letters, 2004, 93, 263602.	7.8	113
65	Effective Quantum Spin Systems with Trapped Ions. Physical Review Letters, 2004, 92, 207901.	7.8	700
66	Density Matrix Renormalization Group and Periodic Boundary Conditions: A Quantum Information Perspective. Physical Review Letters, 2004, 93, 227205.	7.8	455
67	Dynamics of the excitations of a quantum dot in a microcavity. Physical Review B, 2004, 70, .	3.2	52
68	Linewidth of a polariton laser:â€ƒTheoretical analysis of self-interaction effects. Physical Review B, 2003, 67, .	3.2	77
69	Ring emission and exciton-pair scattering in semiconductor microcavities. Physical Review B, 2002, 65, .	3.2	45
70	Polariton dynamics and Bose-Einstein condensation in semiconductor microcavities. Physical Review B, 2002, 66, .	3.2	162
71	Coherent control and four wave-mixing of Fermi edge singularities in doped quantum wells. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 558-561.	2.7	0
72	Fermi-edge singularities in linear and nonlinear ultrafast spectroscopy. Physical Review B, 2001, 63, .	3.2	3

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73	Microscopic theory for quantum mirages in quantum corrals. Physical Review B, 2001, 63, .	3.2	37
74	Coherent Response to Optical Pulses in Quantum Wells. , 2000, , 143-157.		0
75	Strong correlation in systems of trapped ions. , 0, , .		0
76	Ergodicity probes: using time-fluctuations to measure the Hilbert space dimension. Quantum - the Open Journal for Quantum Science, 0, 3, 207.	0.0	3
77	Exciton and Polariton Condensation. , 0, , 153-189.		0
78	Quantum Processing Photonic States in Optical Lattices. , 0, , 533-553.		0