Peter Rabl

List of Publications by Year
in descending order

81 papers	9,104 citations	53794 45 h-index	66911 78 g-index
83 all docs	83 docs citations	83 times ranked	5918 citing authors

#	Article	IF	Citations
1	Realistic simulations of spin squeezing and cooperative coupling effects in large ensembles of interacting two-level systems. Physical Review A, 2022, 105, .	2.5	12
2	Universal Deterministic Quantum Operations in Microwave Quantum Links. Physical Review Applied, 2022, 17, .	3.8	4
3	Long-distance distribution of qubit-qubit entanglement using Gaussian-correlated photonic beams. Physical Review A, 2022, 105, .	2.5	7
4	Phase-space methods for simulating the dissipative many-body dynamics of collective spin systems. SciPost Physics, 2021, 10, .	4.9	16
5	Light-Matter Interactions in Synthetic Magnetic Fields: Landau-Photon Polaritons. Physical Review Letters, 2021, 126, 103603.	7.8	31
6	Quantum Computing with Superconducting Circuits in the Picosecond Regime. Physical Review Applied, 2021, 16, .	3.8	8
7	Nonequilibrium magnetic phases in spin lattices with gain and loss. Physical Review A, 2020, 102, .	2.5	20
8	Supercorrelated Radiance in Nonlinear Photonic Waveguides. Physical Review Letters, 2020, 124, 213601.	7.8	29
9	Quantum Simulation of Nonâ€Perturbative Cavity QED with Trapped Ions. Advanced Quantum Technologies, 2020, 3, 1900125.	3.9	3
10	Quantifying phonon-induced non-Markovianity in color centers in diamond. Physical Review A, 2020, 101, .	2.5	7
11	Emergence of PT-symmetry breaking in open quantum systems. SciPost Physics, 2020, 9, .	4.9	35
12	The vacua of dipolar cavity quantum electrodynamics. SciPost Physics, 2020, 9, .	4.9	24
13	Active energy transport and the role of symmetry breaking in microscopic power grids. Physical Review A, 2019, 100, .	2.5	9
14	Ultrastrong-coupling circuit QED in the radio-frequency regime. Physical Review A, 2019, 100, .	2.5	5
15	Quantum state transfer via acoustic edge states in a 2D optomechanical array. New Journal of Physics, 2019, 21, 113030.	2.9	29
16	Quantum acousto-optic control of light-matter interactions in nanophotonic networks. Physical Review A, 2019, 99, .	2.5	20
17	Interaction of Topological States of Sounds and Light with Solid-State Emitters as a Quantum Hybrid Platform. , 2019, , .		0
18	Cavity quantum electrodynamics in the nonperturbative regime. Physical Review A, 2018, 97, .	2.5	105

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19	Dissipative phase transition in the open quantum Rabi model. Physical Review A, 2018, 97, .	2.5	79
20	Breakdown of gauge invariance in ultrastrong-coupling cavity QED. Physical Review A, 2018, 98, .	2.5	122
21	Phonon Networks with Silicon-Vacancy Centers in Diamond Waveguides. Physical Review Letters, 2018, 120, 213603.	7.8	125
22	Controlling photons with phonons: optomechanically induced non-reciprocity. National Science Review, 2017, 4, 3-3.	9.5	1
23	Intracity Quantum Communication via Thermal Microwave Networks. Physical Review X, 2017, 7, .	8.9	58
24	Harvesting Multiqubit Entanglement from Ultrastrong Interactions in Circuit Quantum Electrodynamics. Physical Review Letters, 2017, 119, 183602.	7.8	31
25	Strong coupling between moving atoms and slow-light Cherenkov photons. Physical Review A, 2017, 95, .	2.5	24
26	Electric-field noise above a thin dielectric layer on metal electrodes. New Journal of Physics, 2016, 18, 023020.	2.9	30
27	${mathscr{P}}{mathscr{T}}$-symmetry breaking in the steady state of microscopic gainâ€“loss systems. New Journal of Physics, 2016, 18, 095003.	2.9	63
28	Cooling phonons with phonons: Acoustic reservoir engineering with silicon-vacancy centers in diamond. Physical Review B, 2016, 94, .	3.2	24
29	Ultrastrong-coupling phenomena beyond the Dicke model. Physical Review A, 2016, 94, .	2.5	110
30	Dynamically encircling an exceptional point for asymmetric mode switching. Nature, 2016, 537, 76-79.	27.8	684
31	Atom-field dressed states in slow-light waveguide QED. Physical Review A, 2016, 93, .	2.5	137
32	Hybrid Quantum Device with Nitrogen-Vacancy Centers in Diamond Coupled to Carbon Nanotubes. Physical Review Letters, 2016, 117, 015502.	7.8	127
33	General description of quasiadiabatic dynamical phenomena near exceptional points. Physical Review A, 2015, 92, .	2.5	156
34	Hybrid Quantum Device Based on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>N</mml:mi><mml:mi>V</mml:mi></mml:math>Centers in Diamond Nanomechanical Resonators Plus Superconducting Waveguide Cavities. Physical Review Applied, 2015, 4, .	3.8	71
35	Contextuality in Phase Space. Physical Review Letters, 2015, 114, 250403.	7.8	22
36	Ion-trap measurements of electric-field noise near surfaces. Reviews of Modern Physics, 2015, 87, 1419-1482.	45.6	265

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37	â€œQuantumâ€•Mechanical Systems: bridging foundations and applications. Annalen Der Physik, 2015, 527, A13-A14.	2.4	1
38	Nonclassicality tests and entanglement witnesses for macroscopic mechanical superposition states. Physical Review A, 2015, 91, .	2.5	4
39	Quantum technologies with hybrid systems. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3866-3873.	7.1	568
40	Two-dimensional lattice gauge theories with superconducting quantum circuits. Annals of Physics, 2014, 351, 634-654.	2.8	93
41	Hybrid Mechanical Systems. , 2014, , 327-351.		53
42	Generation of hyper-entangled photon pairs in coupled microcavities. New Journal of Physics, 2014, 16, 063030.	2.9	16
43	Implementation of the Dicke Lattice Model in Hybrid Quantum System Arrays. Physical Review Letters, 2014, 113, 023603.	7.8	89
44	Probing Macroscopic Realism via Ramsey Correlation Measurements. Physical Review Letters, 2014, 112, 190402.	7.8	70
45	Phonon cooling and lasing with nitrogen-vacancy centers in diamond. Physical Review B, 2013, 88, .	3.2	115
46	Single-photon nonlinearities in two-mode optomechanics. Physical Review A, 2013, 87, .	2.5	146
47	Phonon-Induced Spin-Spin Interactions in Diamond Nanostructures: Application to Spin Squeezing. Physical Review Letters, 2013, 110, 156402.	7.8	226
48	Influence of monolayer contamination on electric-field-noise heating in ion traps. Physical Review A, 2013, 87, .	2.5	27
49	Superconducting Circuits for Quantum Simulation of Dynamical Gauge Fields. Physical Review Letters, 2013, 111, 110504.	7.8	93
50	Photon condensation in circuit quantum electrodynamics by engineered dissipation. New Journal of Physics, 2012, 14, 055005.	2.9	45
51	Continuous mode cooling and phonon routers for phononic quantum networks. New Journal of Physics, 2012, 14, 115004.	2.9	143
52	Optomechanically induced non-reciprocity in microring resonators. Optics Express, 2012, 20, 7672.	3.4	226
53	Optomechanical Quantum Information Processing with Photons and Phonons. Physical Review Letters, 2012, 109, 013603.	7.8	374
54	Driven-dissipative preparation of entangled states in cascaded quantum-optical networks. New Journal of Physics, 2012, 14, 063014.	2.9	147

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55	Measuring mechanical motion with a single spin. New Journal of Physics, 2012, 14, 125004.	2.9	31
56	Reservoir engineering and dynamical phase transitions in optomechanical arrays. Physical Review A, 2012, 86, .	2.5	81
57	Coherent Sensing of a Mechanical Resonator with a Single-Spin Qubit. Science, 2012, 335, 1603-1606.	12.6	326
58	Photon Blockade Effect in Optomechanical Systems. Physical Review Letters, 2011, 107, 063601.	7.8	590
59	Quantum information processing in self-assembled crystals of cold polar molecules. Quantum Information Processing, 2011, 10, 793-819.	2.2	10
60	Long-range and frustrated spin-spin interactions in crystals of cold polar molecules. Physical Review A, 2011, 84, .	2.5	19
61	Optomechanical transducers for quantum-information processing. Physical Review A, 2011, 84, .	2.5	119
62	Microscopic model of electric-field-noise heating in ion traps. Physical Review A, 2011, 84, .	2.5	71
63	Optomechanical Transducers for Long-Distance Quantum Communication. Physical Review Letters, 2010, 105, 220501.	7.8	391
64	A quantum spin transducer based on nanoelectromechanical resonator arrays. Nature Physics, 2010, 6, 602-608.	16.7	346
65	Cooling of mechanical motion with a two-level system: The high-temperature regime. Physical Review B, 2010, 82, .	3.2	51
66	Strong magnetic coupling between an electronic spin qubit and a mechanical resonator. Physical Review B, 2009, 79, .	3.2	329
67	Phase-noise induced limitations on cooling and coherent evolution in optomechanical systems. Physical Review A, 2009, 80, .	2.5	84
68	Hybrid quantum devices and quantum engineering. Physica Scripta, 2009, T137, 014001.	2.5	243
69	Theory of cavity-assisted microwave cooling of polar molecules. New Journal of Physics, 2008, 10, 063005.	2.9	12
70	Suppression of Inelastic Collisions Between Polar Molecules With a Repulsive Shield. Physical Review Letters, 2008, 101, 073201.	7.8	84
71	Molecular dipolar crystals as high-fidelity quantum memory for hybrid quantum computing. Physical Review A, 2007, 76, .	2.5	81
72	Hybrid Quantum Processors: Molecular Ensembles as Quantum Memory for Solid State Circuits. Physical Review Letters, 2006, 97, 033003.	7.8	348

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73	A coherent all-electrical interface between polar molecules and mesoscopic superconducting resonators. Nature Physics, 2006, 2, 636-642.	16.7	372
74	Feedback Cooling of a Single Trapped Ion. Physical Review Letters, 2006, 96, 043003.	7.8	158
75	Quantum feedback cooling of a single trapped ion in front of a mirror. Physical Review A, 2005, 72, .	2.5	26
76	Quantum-limited velocity readout and quantum feedback cooling of a trapped ion via electromagnetically induced transparency. Physical Review A, 2005, 72, .	2.5	13
77	Generation of squeezed states of nanomechanical resonators by reservoir engineering. Physical Review B, 2004, 70, .	3.2	127
78	Interfacing Quantum-Optical and Solid-State Qubits. Physical Review Letters, 2004, 92, 247902.	7.8	123
79	SPECTROSCOPY OF STRONGLY CORRELATED COLD ATOMS. , 2004, , .		0
80	Defect-Suppressed Atomic Crystals in an Optical Lattice. Physical Review Letters, 2003, 91, 110403.	7.8	102
81	Thermodynamics of ultrastrongly coupled light-matter systems. Quantum - the Open Journal for Quantum Science, 0, 4, 335.	0.0	31