

Peter Rabl

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

74
papers

6,879
citations

43
h-index

82
g-index

82
ext. papers

8,198
ext. citations

6.1
avg. IF

6.25
L-index

#	Paper	IF	Citations
74	Photon blockade effect in optomechanical systems. <i>Physical Review Letters</i> , 2011 , 107, 063601	7.4	456
73	Dynamically encircling an exceptional point for asymmetric mode switching. <i>Nature</i> , 2016 , 537, 76-79	50.4	414
72	Quantum technologies with hybrid systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 3866-73	11.5	392
71	A coherent all-electrical interface between polar molecules and mesoscopic superconducting resonators. <i>Nature Physics</i> , 2006 , 2, 636-642	16.2	343
70	Hybrid quantum processors: molecular ensembles as quantum memory for solid state circuits. <i>Physical Review Letters</i> , 2006 , 97, 033003	7.4	320
69	Optomechanical transducers for long-distance quantum communication. <i>Physical Review Letters</i> , 2010 , 105, 220501	7.4	309
68	Optomechanical quantum information processing with photons and phonons. <i>Physical Review Letters</i> , 2012 , 109, 013603	7.4	295
67	A quantum spin transducer based on nanoelectromechanical resonator arrays. <i>Nature Physics</i> , 2010 , 6, 602-608	16.2	285
66	Coherent sensing of a mechanical resonator with a single-spin qubit. <i>Science</i> , 2012 , 335, 1603-6	33.3	276
65	Strong magnetic coupling between an electronic spin qubit and a mechanical resonator. <i>Physical Review B</i> , 2009 , 79,	3.3	273
64	Hybrid quantum devices and quantum engineering. <i>Physica Scripta</i> , 2009 , T137, 014001	2.6	194
63	Ion-trap measurements of electric-field noise near surfaces. <i>Reviews of Modern Physics</i> , 2015 , 87, 1419-1482	18.5	185
62	Optomechanically induced non-reciprocity in microring resonators. <i>Optics Express</i> , 2012 , 20, 7672-84	3.3	177
61	Phonon-induced spin-spin interactions in diamond nanostructures: application to spin squeezing. <i>Physical Review Letters</i> , 2013 , 110, 156402	7.4	176
60	Feedback cooling of a single trapped ion. <i>Physical Review Letters</i> , 2006 , 96, 043003	7.4	127
59	Single-photon nonlinearities in two-mode optomechanics. <i>Physical Review A</i> , 2013 , 87,	2.6	120
58	Generation of squeezed states of nanomechanical resonators by reservoir engineering. <i>Physical Review B</i> , 2004 , 70,	3.3	120

57	Continuous mode cooling and phonon routers for phononic quantum networks. <i>New Journal of Physics</i> , 2012 , 14, 115004	2.9	115
56	General description of quasiadiabatic dynamical phenomena near exceptional points. <i>Physical Review A</i> , 2015 , 92,	2.6	111
55	Driven-dissipative preparation of entangled states in cascaded quantum-optical networks. <i>New Journal of Physics</i> , 2012 , 14, 063014	2.9	105
54	Interfacing quantum-optical and solid-state qubits. <i>Physical Review Letters</i> , 2004 , 92, 247902	7.4	105
53	Defect-suppressed atomic crystals in an optical lattice. <i>Physical Review Letters</i> , 2003 , 91, 110403	7.4	95
52	Phonon Networks with Silicon-Vacancy Centers in Diamond Waveguides. <i>Physical Review Letters</i> , 2018 , 120, 213603	7.4	89
51	Atom-field dressed states in slow-light waveguide QED. <i>Physical Review A</i> , 2016 , 93,	2.6	88
50	Phonon cooling and lasing with nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , 2013 , 88,	3.3	86
49	Optomechanical transducers for quantum-information processing. <i>Physical Review A</i> , 2011 , 84,	2.6	86
48	Hybrid Quantum Device with Nitrogen-Vacancy Centers in Diamond Coupled to Carbon Nanotubes. <i>Physical Review Letters</i> , 2016 , 117, 015502	7.4	84
47	Ultrastrong-coupling phenomena beyond the Dicke model. <i>Physical Review A</i> , 2016 , 94,	2.6	83
46	Superconducting circuits for quantum simulation of dynamical gauge fields. <i>Physical Review Letters</i> , 2013 , 111, 110504	7.4	75
45	Molecular dipolar crystals as high-fidelity quantum memory for hybrid quantum computing. <i>Physical Review A</i> , 2007 , 76,	2.6	71
44	Phase-noise induced limitations on cooling and coherent evolution in optomechanical systems. <i>Physical Review A</i> , 2009 , 80,	2.6	70
43	Suppression of inelastic collisions between polar molecules with a repulsive shield. <i>Physical Review Letters</i> , 2008 , 101, 073201	7.4	70
42	Breakdown of gauge invariance in ultrastrong-coupling cavity QED. <i>Physical Review A</i> , 2018 , 98,	2.6	69
41	Cavity quantum electrodynamics in the nonperturbative regime. <i>Physical Review A</i> , 2018 , 97,	2.6	68
40	Implementation of the Dicke lattice model in hybrid quantum system arrays. <i>Physical Review Letters</i> , 2014 , 113, 023603	7.4	68

39	Two-dimensional lattice gauge theories with superconducting quantum circuits. <i>Annals of Physics</i> , 2014 , 351, 634-654	2.5	68
38	Reservoir engineering and dynamical phase transitions in optomechanical arrays. <i>Physical Review A</i> , 2012 , 86,	2.6	68
37	Microscopic model of electric-field-noise heating in ion traps. <i>Physical Review A</i> , 2011 , 84,	2.6	62
36	Hybrid Quantum Device Based on NV Centers in Diamond Nanomechanical Resonators Plus Superconducting Waveguide Cavities. <i>Physical Review Applied</i> , 2015 , 4,	4.3	53
35	Probing macroscopic realism via Ramsey correlation measurements. <i>Physical Review Letters</i> , 2014 , 112, 190402	7.4	51
34	$\mathcal{P}\mathcal{T}$ -symmetry breaking in the steady state of microscopic gain-loss systems. <i>New Journal of Physics</i> , 2016 , 18, 095003	2.9	47
33	Hybrid Mechanical Systems 2014 , 327-351		46
32	Cooling of mechanical motion with a two-level system: The high-temperature regime. <i>Physical Review B</i> , 2010 , 82,	3.3	46
31	Dissipative phase transition in the open quantum Rabi model. <i>Physical Review A</i> , 2018 , 97,	2.6	41
30	Intracavity Quantum Communication via Thermal Microwave Networks. <i>Physical Review X</i> , 2017 , 7,	9.1	38
29	Photon condensation in circuit quantum electrodynamics by engineered dissipation. <i>New Journal of Physics</i> , 2012 , 14, 055005	2.9	37
28	Harvesting Multiqubit Entanglement from Ultrastrong Interactions in Circuit Quantum Electrodynamics. <i>Physical Review Letters</i> , 2017 , 119, 183602	7.4	28
27	Measuring mechanical motion with a single spin. <i>New Journal of Physics</i> , 2012 , 14, 125004	2.9	26
26	Influence of monolayer contamination on electric-field-noise heating in ion traps. <i>Physical Review A</i> , 2013 , 87,	2.6	22
25	Cooling phonons with phonons: Acoustic reservoir engineering with silicon-vacancy centers in diamond. <i>Physical Review B</i> , 2016 , 94,	3.3	19
24	Quantum feedback cooling of a single trapped ion in front of a mirror. <i>Physical Review A</i> , 2005 , 72,	2.6	18
23	Electric-field noise above a thin dielectric layer on metal electrodes. <i>New Journal of Physics</i> , 2016 , 18, 023020	2.9	17
22	Contextuality in Phase Space. <i>Physical Review Letters</i> , 2015 , 114, 250403	7.4	16

21	Generation of hyper-entangled photon pairs in coupled microcavities. <i>New Journal of Physics</i> , 2014 , 16, 063030	2.9	16
20	Long-range and frustrated spin-spin interactions in crystals of cold polar molecules. <i>Physical Review A</i> , 2011 , 84,	2.6	16
19	Strong coupling between moving atoms and slow-light Cherenkov photons. <i>Physical Review A</i> , 2017 , 95,	2.6	15
18	The vacua of dipolar cavity quantum electrodynamics. <i>SciPost Physics</i> , 2020 , 9,	6.1	13
17	Quantum acousto-optic control of light-matter interactions in nanophotonic networks. <i>Physical Review A</i> , 2019 , 99,	2.6	12
16	Theory of cavity-assisted microwave cooling of polar molecules. <i>New Journal of Physics</i> , 2008 , 10, 063005.9	5.9	12
15	Quantum-limited velocity readout and quantum feedback cooling of a trapped ion via electromagnetically induced transparency. <i>Physical Review A</i> , 2005 , 72,	2.6	12
14	Supercorrelated Radiance in Nonlinear Photonic Waveguides. <i>Physical Review Letters</i> , 2020 , 124, 2136017.4	7.4	11
13	Quantum state transfer via acoustic edge states in a 2D optomechanical array. <i>New Journal of Physics</i> , 2019 , 21, 113030	2.9	10
12	Emergence of PT-symmetry breaking in open quantum systems. <i>SciPost Physics</i> , 2020 , 9,	6.1	9
11	Nonequilibrium magnetic phases in spin lattices with gain and loss. <i>Physical Review A</i> , 2020 , 102,	2.6	9
10	Quantum information processing in self-assembled crystals of cold polar molecules. <i>Quantum Information Processing</i> , 2011 , 10, 793-819	1.6	8
9	Active energy transport and the role of symmetry breaking in microscopic power grids. <i>Physical Review A</i> , 2019 , 100,	2.6	6
8	Thermodynamics of ultrastrongly coupled light-matter systems. <i>Quantum - the Open Journal for Quantum Science</i> , 4, 335		6
7	Light-Matter Interactions in Synthetic Magnetic Fields: Landau-Photon Polaritons. <i>Physical Review Letters</i> , 2021 , 126, 103603	7.4	5
6	Nonclassicality tests and entanglement witnesses for macroscopic mechanical superposition states. <i>Physical Review A</i> , 2015 , 91,	2.6	4
5	Quantifying phonon-induced non-Markovianity in color centers in diamond. <i>Physical Review A</i> , 2020 , 101,	2.6	3
4	Ultrastrong-coupling circuit QED in the radio-frequency regime. <i>Physical Review A</i> , 2019 , 100,	2.6	3

3	Controlling photons with phonons: optomechanically induced non-reciprocity. <i>National Science Review</i> , 2017 , 4, 3-3	10.8	1
2	Phase-space methods for simulating the dissipative many-body dynamics of collective spin systems. <i>SciPost Physics</i> , 2021 , 10,	6.1	1
1	Quantum Simulation of Non-Perturbative Cavity QED with Trapped Ions. <i>Advanced Quantum Technologies</i> , 2020 , 3, 1900125	4.3	