Peter Rabl

List of Publications by Year in Descending Order

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	Light-Matter Interactions in Synthetic Magnetic Fields: Landau-Photon Polaritons. *Physical Review Letters*, **2021**, 126, 103603	7.4	5
73	Phase-space methods for simulating the dissipative many-body dynamics of collective spin systems. *SciPost Physics*, **2021**, 10,	6.1	1
72	Supercorrelated Radiance in Nonlinear Photonic Waveguides. *Physical Review Letters*, **2020**, 124, 213601	7.4	11
71	Quantum Simulation of Non-Perturbative Cavity QED with Trapped Ions. *Advanced Quantum Technologies*, **2020**, 3, 1900125	4.3	
70	Quantifying phonon-induced non-Markovianity in color centers in diamond. *Physical Review A*, **2020**, 101,	2.6	3
69	Emergence of PT-symmetry breaking in open quantum systems. *SciPost Physics*, **2020**, 9,	6.1	9
68	The vacua of dipolar cavity quantum electrodynamics. *SciPost Physics*, **2020**, 9,	6.1	13
67	Nonequilibrium magnetic phases in spin lattices with gain and loss. *Physical Review A*, **2020**, 102,	2.6	9
66	Quantum acousto-optic control of light-matter interactions in nanophotonic networks. *Physical Review A*, **2019**, 99,	2.6	12
65	Active energy transport and the role of symmetry breaking in microscopic power grids. *Physical Review A*, **2019**, 100,	2.6	6
64	Ultrastrong-coupling circuit QED in the radio-frequency regime. *Physical Review A*, **2019**, 100,	2.6	3
63	Quantum state transfer via acoustic edge states in a 2D optomechanical array. *New Journal of Physics*, **2019**, 21, 113030	2.9	10
62	Cavity quantum electrodynamics in the nonperturbative regime. *Physical Review A*, **2018**, 97,	2.6	68
61	Dissipative phase transition in the open quantum Rabi model. *Physical Review A*, **2018**, 97,	2.6	41
60	Breakdown of gauge invariance in ultrastrong-coupling cavity QED. *Physical Review A*, **2018**, 98,	2.6	69
59	Phonon Networks with Silicon-Vacancy Centers in Diamond Waveguides. *Physical Review Letters*, **2018**, 120, 213603	7.4	89
58	Controlling photons with phonons: optomechanically induced non-reciprocity. *National Science Review*, **2017**, 4, 3-3	10.8	1

57	Intracity Quantum Communication via Thermal Microwave Networks. *Physical Review X*, **2017**, 7,	9.1	38
56	Harvesting Multiqubit Entanglement from Ultrastrong Interactions in Circuit Quantum Electrodynamics. *Physical Review Letters*, **2017**, 119, 183602	7.4	28
55	Strong coupling between moving atoms and slow-light Cherenkov photons. *Physical Review A*, **2017**, 95,	2.6	15
54	Dynamically encircling an exceptional point for asymmetric mode switching. *Nature*, **2016**, 537, 76-79	50.4	414
53	Atom-field dressed states in slow-light waveguide QED. *Physical Review A*, **2016**, 93,	2.6	88
52	Hybrid Quantum Device with Nitrogen-Vacancy Centers in Diamond Coupled to Carbon Nanotubes. *Physical Review Letters*, **2016**, 117, 015502	7.4	84
51	Electric-field noise above a thin dielectric layer on metal electrodes. *New Journal of Physics*, **2016**, 18, 023020	2.9	17
50	${mathscr{P}}{mathscr{T}}$-symmetry breaking in the steady state of microscopic gain-loss systems. *New Journal of Physics*, **2016**, 18, 095003	2.9	47
49	Cooling phonons with phonons: Acoustic reservoir engineering with silicon-vacancy centers in diamond. *Physical Review B*, **2016**, 94,	3.3	19
48	Ultrastrong-coupling phenomena beyond the Dicke model. *Physical Review A*, **2016**, 94,	2.6	83
47	Quantum technologies with hybrid systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 3866-73	11.5	392
46	General description of quasiadiabatic dynamical phenomena near exceptional points. *Physical Review A*, **2015**, 92,	2.6	111
45	Hybrid Quantum Device Based on NV Centers in Diamond Nanomechanical Resonators Plus Superconducting Waveguide Cavities. *Physical Review Applied*, **2015**, 4,	4.3	53
44	Contextuality in Phase Space. *Physical Review Letters*, **2015**, 114, 250403	7.4	16
43	Ion-trap measurements of electric-field noise near surfaces. *Reviews of Modern Physics*, **2015**, 87, 1419-1482	48.5	185
42	Nonclassicality tests and entanglement witnesses for macroscopic mechanical superposition states. *Physical Review A*, **2015**, 91,	2.6	4
41	Implementation of the Dicke lattice model in hybrid quantum system arrays. *Physical Review Letters*, **2014**, 113, 023603	7.4	68
40	Probing macroscopic realism via Ramsey correlation measurements. *Physical Review Letters*, **2014**, 112, 190402	7.4	51

39	Two-dimensional lattice gauge theories with superconducting quantum circuits. *Annals of Physics*, **2014**, 351, 634-654	2.5	68
38	Hybrid Mechanical Systems **2014**, 327-351		46
37	Generation of hyper-entangled photon pairs in coupled microcavities. *New Journal of Physics*, **2014**, 16, 063030	2.9	16
36	Phonon cooling and lasing with nitrogen-vacancy centers in diamond. *Physical Review B*, **2013**, 88,	3.3	86
35	Single-photon nonlinearities in two-mode optomechanics. *Physical Review A*, **2013**, 87,	2.6	120
34	Phonon-induced spin-spin interactions in diamond nanostructures: application to spin squeezing. *Physical Review Letters*, **2013**, 110, 156402	7.4	176
33	Influence of monolayer contamination on electric-field-noise heating in ion traps. *Physical Review A*, **2013**, 87,	2.6	22
32	Superconducting circuits for quantum simulation of dynamical gauge fields. *Physical Review Letters*, **2013**, 111, 110504	7.4	75
31	Measuring mechanical motion with a single spin. *New Journal of Physics*, **2012**, 14, 125004	2.9	26
30	Reservoir engineering and dynamical phase transitions in optomechanical arrays. *Physical Review A*, **2012**, 86,	2.6	68
29	Coherent sensing of a mechanical resonator with a single-spin qubit. *Science*, **2012**, 335, 1603-6	33.3	276
28	Photon condensation in circuit quantum electrodynamics by engineered dissipation. *New Journal of Physics*, **2012**, 14, 055005	2.9	37
27	Continuous mode cooling and phonon routers for phononic quantum networks. *New Journal of Physics*, **2012**, 14, 115004	2.9	115
26	Optomechanically induced non-reciprocity in microring resonators. *Optics Express*, **2012**, 20, 7672-84	3.3	177
25	Optomechanical quantum information processing with photons and phonons. *Physical Review Letters*, **2012**, 109, 013603	7.4	295
24	Driven-dissipative preparation of entangled states in cascaded quantum-optical networks. *New Journal of Physics*, **2012**, 14, 063014	2.9	105
23	Photon blockade effect in optomechanical systems. *Physical Review Letters*, **2011**, 107, 063601	7.4	456
22	Quantum information processing in self-assembled crystals of cold polar molecules. *Quantum Information Processing*, **2011**, 10, 793-819	1.6	8

21	Long-range and frustrated spin-spin interactions in crystals of cold polar molecules. *Physical Review A*, **2011**, 84,	2.6	16
20	Optomechanical transducers for quantum-information processing. *Physical Review A*, **2011**, 84,	2.6	86
19	Microscopic model of electric-field-noise heating in ion traps. *Physical Review A*, **2011**, 84,	2.6	62
18	A quantum spin transducer based on nanoelectromechanical resonator arrays. *Nature Physics*, **2010**, 6, 602-608	16.2	285
17	Cooling of mechanical motion with a two-level system: The high-temperature regime. *Physical Review B*, **2010**, 82,	3.3	46
16	Optomechanical transducers for long-distance quantum communication. *Physical Review Letters*, **2010**, 105, 220501	7.4	309
15	Strong magnetic coupling between an electronic spin qubit and a mechanical resonator. *Physical Review B*, **2009**, 79,	3.3	273
14	Phase-noise induced limitations on cooling and coherent evolution in optomechanical systems. *Physical Review A*, **2009**, 80,	2.6	70
13	Hybrid quantum devices and quantum engineering. *Physica Scripta*, **2009**, T137, 014001	2.6	194
12	Theory of cavity-assisted microwave cooling of polar molecules. *New Journal of Physics*, **2008**, 10, 063005	3.9	12
11	Suppression of inelastic collisions between polar molecules with a repulsive shield. *Physical Review Letters*, **2008**, 101, 073201	7.4	70
10	Molecular dipolar crystals as high-fidelity quantum memory for hybrid quantum computing. *Physical Review A*, **2007**, 76,	2.6	71
9	Feedback cooling of a single trapped ion. *Physical Review Letters*, **2006**, 96, 043003	7.4	127
8	Hybrid quantum processors: molecular ensembles as quantum memory for solid state circuits. *Physical Review Letters*, **2006**, 97, 033003	7.4	320
7	A coherent all-electrical interface between polar molecules and mesoscopic superconducting resonators. *Nature Physics*, **2006**, 2, 636-642	16.2	343
6	Quantum feedback cooling of a single trapped ion in front of a mirror. *Physical Review A*, **2005**, 72,	2.6	18
5	Quantum-limited velocity readout and quantum feedback cooling of a trapped ion via electromagnetically induced transparency. *Physical Review A*, **2005**, 72,	2.6	12
4	Generation of squeezed states of nanomechanical resonators by reservoir engineering. *Physical Review B*, **2004**, 70,	3.3	120

3	Interfacing quantum-optical and solid-state qubits. *Physical Review Letters*, **2004**, 92, 247902	7.4	105
2	Defect-suppressed atomic crystals in an optical lattice. *Physical Review Letters*, **2003**, 91, 110403	7.4	95
1	Thermodynamics of ultrastrongly coupled light-matter systems. *Quantum - the Open Journal for Quantum Science*,4, 335		6