

Giovanna Morigi

List of Publications by Year in descending order

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142
papers

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citations

117625

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144
docs citations

144
times ranked

2619
citing authors

#	ARTICLE	IF	CITATIONS
1	Ground State Laser Cooling Using Electromagnetically Induced Transparency. <i>Physical Review Letters</i> , 2000, 85, 4458-4461.	7.8	214
2	Crystallization of strongly interacting photons in a nonlinear optical fibre. <i>Nature Physics</i> , 2008, 4, 884-889.	16.7	170
3	Laser cooling of trapped ions. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 1003.	2.1	161
4	Mott-Insulator States of Ultracold Atoms in Optical Resonators. <i>Physical Review Letters</i> , 2008, 100, 050401.	7.8	136
5	Generation of Einstein-Podolsky-Rosen-Entangled Radiation through an Atomic Reservoir. <i>Physical Review Letters</i> , 2007, 98, 240401.	7.8	130
6	Structural phase transitions in low-dimensional ion crystals. <i>Physical Review B</i> , 2008, 77, .	3.2	130
7	Structural Defects in Ion Chains by Quenching the External Potential: The Inhomogeneous Kibble-Zurek Mechanism. <i>Physical Review Letters</i> , 2010, 105, 075701.	7.8	120
8	Interfacing Superconducting Qubits and Telecom Photons via a Rare-Earth-Doped Crystal. <i>Physical Review Letters</i> , 2014, 113, 063603.	7.8	118
9	Quantum Zigzag Transition in Ion Chains. <i>Physical Review Letters</i> , 2011, 106, 010401.	7.8	87
10	Bose-Glass Phases of Ultracold Atoms due to Cavity Backaction. <i>Physical Review Letters</i> , 2013, 110, 075304.	7.8	81
11	Phase-dependent interaction in a four-level atomic configuration. <i>Physical Review A</i> , 2002, 66, .	2.5	80
12	Cooling Carbon Nanotubes to the Phononic Ground State with a Constant Electron Current. <i>Physical Review Letters</i> , 2009, 102, 096804.	7.8	77
13	Spontaneous nucleation of structural defects in inhomogeneous ion chains. <i>New Journal of Physics</i> , 2010, 12, 115003.	2.9	72
14	Two-photon lasing by a single quantum dot in a high- Q microcavity. <i>Physical Review B</i> , 2010, 81, .	3.2	71
15	Quantum ground state of self-organized atomic crystals in optical resonators. <i>Physical Review A</i> , 2010, 81, .	2.5	71
16	Cavity Cooling of Internal Molecular Motion. <i>Physical Review Letters</i> , 2007, 99, 073001.	7.8	67
17	Engineering atomic quantum reservoirs for photons. <i>Physical Review A</i> , 2010, 81, .	2.5	66
18	Cooling atomic motion with quantum interference. <i>Physical Review A</i> , 2003, 67, .	2.5	62

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19	Cooling Trapped Atoms in Optical Resonators. <i>Physical Review Letters</i> , 2005, 95, 143001.	7.8	61
20	Quantum stability of Mott-insulator states of ultracold atoms in optical resonators. <i>New Journal of Physics</i> , 2008, 10, 045002.	2.9	57
21	Eigenmodes and Thermodynamics of a Coulomb Chain in a Harmonic Potential. <i>Physical Review Letters</i> , 2004, 93, 170602.	7.8	54
22	Entangled Light Pulses from Single Cold Atoms. <i>Physical Review Letters</i> , 2006, 96, 023601.	7.8	49
23	Dynamical Critical Scaling of Long-Range Interacting Quantum Magnets. <i>Physical Review Letters</i> , 2018, 121, 240403.	7.8	48
24	Dynamics of an ion chain in a harmonic potential. <i>Physical Review E</i> , 2004, 70, 066141.	2.1	46
25	Measuring irreversible dynamics of a quantum harmonic oscillator. <i>Physical Review A</i> , 2002, 65, .	2.5	45
26	Prethermalization of Atoms Due to Photon-Mediated Long-Range Interactions. <i>Physical Review Letters</i> , 2014, 113, 203002.	7.8	44
27	Interfacing microwave qubits and optical photons via spin ensembles. <i>Physical Review A</i> , 2015, 91, .	2.5	44
28	Ultracold bosons with cavity-mediated long-range interactions: A local mean-field analysis of the phase diagram. <i>Physical Review A</i> , 2016, 94, .	2.5	44
29	Dissipative Quantum Control of a Spin Chain. <i>Physical Review Letters</i> , 2015, 115, 200502.	7.8	43
30	Supercooling of Atoms in an Optical Resonator. <i>Physical Review Letters</i> , 2016, 116, 153002.	7.8	39
31	Mechanical effects of optical resonators on driven trapped atoms: Ground-state cooling in a high-finesse cavity. <i>Physical Review A</i> , 2005, 72, .	2.5	37
32	Cold Fermi atomic gases in a pumped optical resonator. <i>Physical Review A</i> , 2008, 78, .	2.5	35
33	Ground state of low-dimensional dipolar gases: Linear and zigzag chains. <i>Physical Review A</i> , 2008, 78, .	2.5	34
34	Photon-mediated interaction between two distant atoms. <i>Physical Review A</i> , 2008, 78, .	2.5	33
35	Quantum structural phase transition in chains of interacting atoms. <i>Physical Review A</i> , 2011, 83, .	2.5	33
36	Cavity cooling of a trapped atom using electromagnetically induced transparency. <i>New Journal of Physics</i> , 2012, 14, 023002.	2.9	33

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37	Electromagnetically-induced-transparency control of single-atom motion in an optical cavity. Physical Review A, 2014, 89, .	2.5	32
38	Many-body localization in presence of cavity mediated long-range interactions. SciPost Physics, 2019, 7, .	4.9	32
39	Single cold atom as efficient stationary source of EPR-entangled light. Physical Review A, 2006, 74, .	2.5	31
40	Optimal storage of a single photon by a single intra-cavity atom. New Journal of Physics, 2018, 20, 105009.	2.9	31
41	Crossover from Classical to Quantum Kibble-Zurek Scaling. Physical Review Letters, 2016, 116, 225701.	7.8	30
42	Coherent generation of EPR-entangled light pulses mediated by a single trapped atom. Physical Review A, 2006, 73, .	2.5	29
43	Dipolar interaction in ultra-cold atomic gases. AIP Conference Proceedings, 2008, , .	0.4	29
44	Quantum coherence and population trapping in three-photon processes. Physical Review A, 2006, 74, .	2.5	28
45	Phase-dependent light propagation in atomic vapors. Physical Review A, 2007, 75, .	2.5	28
46	Quantum superpositions of crystalline structures. Physical Review A, 2011, 84, .	2.5	27
47	Trapping ions with lasers. New Journal of Physics, 2011, 13, 043019.	2.9	27
48	Ramsey interferometry with a spin embedded in a Coulomb chain. Physical Review A, 2008, 78, .	2.5	26
49	Light scattering by ultracold atoms in an optical lattice. Physical Review A, 2010, 81, .	2.5	26
50	Structural Transitions of Ion Strings in Quantum Potentials. Physical Review Letters, 2012, 109, 053003.	7.8	26
51	Quantum quenches of ion Coulomb crystals across structural instabilities. Physical Review A, 2012, 86, .	2.5	25
52	Cooling of atomic ensembles in optical cavities: Semiclassical limit. Physical Review A, 2013, 88, .	2.5	25
53	Extracting atoms on demand with lasers. Physical Review A, 2005, 71, .	2.5	24
54	Suppression of Bragg Scattering by Collective Interference of Spatially Ordered Atoms with a High-Q-Cavity Mode. Physical Review Letters, 2004, 93, 123002.	7.8	23

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55	Nonlinear optics with two trapped atoms. <i>Physical Review A</i> , 2007, 76, .	2.5	23
56	Ground-state-cooling vibrations of suspended carbon nanotubes with constant electron current. <i>Physical Review B</i> , 2010, 81, .	3.2	23
57	Arbitrary-quantum-state preparation of a harmonic oscillator via optimal control. <i>Physical Review A</i> , 2014, 90, .	2.5	23
58	Quenches across the self-organization transition in multimode cavities. <i>New Journal of Physics</i> , 2018, 20, 025004.	2.9	23
59	Nanofriction in Cavity Quantum Electrodynamics. <i>Physical Review Letters</i> , 2015, 115, 233602.	7.8	22
60	Generation of two-mode entangled states by quantum reservoir engineering. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 224001.	1.5	21
61	Dissipation-Assisted Prethermalization in Long-Range Interacting Atomic Ensembles. <i>Physical Review Letters</i> , 2016, 117, 083001.	7.8	21
62	Doppler cooling of a Coulomb crystal. <i>Physical Review A</i> , 2001, 64, .	2.5	20
63	Quantum phases of incommensurate optical lattices due to cavity backaction. <i>Physical Review A</i> , 2013, 88, .	2.5	19
64	Full characterization of the quantum linear zigzag transition in atomic chains. <i>Annalen Der Physik</i> , 2013, 525, 827-832.	2.4	19
65	Staggered superfluid phases of dipolar bosons in two-dimensional square lattices. <i>Physical Review B</i> , 2020, 102, .	3.2	19
66	Dynamical Phase Transitions to Optomechanical Superradiance. <i>Physical Review Letters</i> , 2019, 123, 053601.	7.8	18
67	Two-photon and electromagnetically-induced-transparency-assisted Doppler cooling in a three-level cascade system. <i>Physical Review A</i> , 2007, 75, .	2.5	17
68	Thermal and quantum fluctuations in chains of ultracold polar molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 154026.	1.5	17
69	Thermodynamics and dynamics of atomic self-organization in an optical cavity. <i>Physical Review A</i> , 2015, 92, .	2.5	17
70	Universal dynamical scaling of long-range topological superconductors. <i>Physical Review B</i> , 2019, 100, .	3.2	17
71	Edge states of the long-range Kitaev chain: An analytical study. <i>Physical Review B</i> , 2020, 102, .	3.2	17
72	Entanglement of distant atoms by projective measurement: the role of detection efficiency. <i>New Journal of Physics</i> , 2008, 10, 103003.	2.9	16

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73	From classical to quantum criticality. <i>Physical Review B</i> , 2014, 89, .	3.2	16
74	Localization transition in the presence of cavity backaction. <i>Physical Review A</i> , 2016, 94, .	2.5	16
75	Resonance fluorescence of a trapped three-level atom. <i>Physical Review A</i> , 2004, 69, .	2.5	15
76	Time-separated entangled light pulses from a single-atom emitter. <i>New Journal of Physics</i> , 2008, 10, 033025.	2.9	15
77	Quantum light by atomic arrays in optical resonators. <i>Physical Review A</i> , 2011, 84, .	2.5	15
78	Semiclassical theory of synchronization-assisted cooling. <i>Physical Review A</i> , 2017, 95, .	2.5	15
79	Neural network operations and Susukiâ€™Trotter evolution of neural network states. <i>International Journal of Quantum Information</i> , 2018, 16, 1840008.	1.1	15
80	Self-organized topological insulator due to cavity-mediated correlated tunneling. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 5, 501.	0.0	15
81	Resonance fluorescence of a cold atom in a high-finesse resonator. <i>Physical Review A</i> , 2007, 76, .	2.5	14
82	Cooling the motion of a trapped atom with a cavity field. <i>Physical Review A</i> , 2012, 86, .	2.5	14
83	Entangling two defects via a surrounding crystal. <i>Physical Review A</i> , 2013, 87, .	2.5	14
84	Superfluid phases induced by dipolar interactions. <i>Physical Review B</i> , 2020, 101, .	3.2	14
85	Simultaneous cooling of axial vibrational modes in a linear ion trap. <i>Physical Review A</i> , 2005, 72, .	2.5	13
86	Seeding patterns for self-organization of photons and atoms. <i>Physical Review A</i> , 2013, 88, .	2.5	13
87	<i>Ab initio</i> characterization of the quantum linear-zigzag transition using density matrix renormalization group calculations. <i>Physical Review B</i> , 2014, 89, .	3.2	13
88	Statistical mechanics of entanglement mediated by a thermal reservoir. <i>Physical Review A</i> , 2012, 85, .	2.5	12
89	Stability and dynamics of ion rings in linear multipole traps. <i>Physical Review A</i> , 2013, 87, .	2.5	12
90	Quantum reservoirs with ion chains. <i>Physical Review A</i> , 2014, 90, .	2.5	12

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91	Single-particle localization in dynamical potentials. <i>Physical Review A</i> , 2018, 98, .	2.5	12
92	Photonic spectrum of bichromatic optical lattices. <i>Physical Review A</i> , 2009, 79, .	2.5	11
93	Optomechanical many-body cooling to the ground state using frustration. <i>Physical Review A</i> , 2016, 94, .	2.5	11
94	Cavity sideband cooling of trapped molecules. <i>Physical Review A</i> , 2011, 84, .	2.5	10
95	Mean-field theory of atomic self-organization in optical cavities. <i>Physical Review A</i> , 2016, 94, .	2.5	10
96	Phases of cold atoms interacting via photon-mediated long-range forces. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2017, 2017, 064002.	2.3	10
97	Spectral properties of single photons from quantum emitters. <i>Physical Review A</i> , 2017, 96, .	2.5	10
98	Mean-field phase diagram of the extended Bose-Hubbard model of many-body cavity quantum electrodynamics. <i>Physical Review A</i> , 2019, 99, .	2.5	10
99	Ion chains in high-finesse cavities. <i>Physical Review A</i> , 2013, 87, .	2.5	9
100	Master equation for high-precision spectroscopy. <i>Physical Review A</i> , 2016, 94, .	2.5	9
101	Enhanced Second-Order Nonlinearity for THz Generation by Resonant Interaction of Exciton-Polariton Rabi Oscillations with Optical Phonons. <i>Physical Review Letters</i> , 2017, 119, 127401.	7.8	9
102	Superradiant optomechanical phases of cold atomic gases in optical resonators. <i>Physical Review A</i> , 2020, 101, .	2.5	9
103	Is an ion string laser-cooled like a single ion?. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2003, 36, 1041-1048.	1.5	8
104	Ergodicity breaking with long-range cavity-induced quasiperiodic interactions. <i>Physical Review B</i> , 2021, 103, .	3.2	8
105	Ground state cooling in a bad cavity. <i>Journal of Modern Optics</i> , 2007, 54, 1595-1606.	1.3	7
106	Buckling Transitions and Clock Order of Two-Dimensional Coulomb Crystals. <i>Physical Review X</i> , 2016, 6, .	8.9	7
107	Entanglement in the quantum Game of Life. <i>Physical Review A</i> , 2022, 105, .	2.5	7
108	Single-photon frequency conversion in nonlinear crystals. <i>Physical Review A</i> , 2013, 88, .	2.5	6

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109	Finite-temperature spectrum at the symmetry-breaking linear to zigzag transition. <i>Physical Review B</i> , 2021, 103, .	3.2	6
110	Physarum-inspired multi-commodity flow dynamics. <i>Theoretical Computer Science</i> , 2022, , .	0.9	6
111	One-dimensional Coulomb crystals at low temperatures. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, S221-S230.	1.5	5
112	Inelastic scattering of light by a cold trapped atom: Effects of the quantum center-of-mass motion. <i>Physical Review A</i> , 2006, 73, .	2.5	5
113	Continuous-variable entanglement purification with atomic systems. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, A198.	2.1	5
114	Entanglement detection by Bragg scattering. <i>Physical Review A</i> , 2013, 87, .	2.5	5
115	Structural transitions of nearly second order in classical dipolar gases. <i>Physical Review A</i> , 2014, 90, .	2.5	5
116	Multimode Bose-Hubbard model for quantum dipolar gases in confined geometries. <i>Physical Review A</i> , 2017, 95, .	2.5	5
117	Sound of an axon's growth. <i>Physical Review E</i> , 2019, 99, 050401.	2.1	5
118	Reversing the Jaynes-Cummings dynamics to measure decoherence. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2002, 4, S310-S312.	1.4	4
119	Quantum-noise quenching in atomic tweezers. <i>Physical Review A</i> , 2011, 83, .	2.5	4
120	Homodyne detection of matter-wave fields. <i>Physical Review A</i> , 2012, 85, .	2.5	4
121	Quantum quenches of ion Coulomb crystals across structural instabilities. II. Thermal effects. <i>Physical Review A</i> , 2013, 87, .	2.5	4
122	Stationary entanglement of photons and atoms in a high-finesse resonator. <i>Physical Review A</i> , 2014, 89, .	2.5	4
123	Laser and cavity cooling of a mechanical resonator with a nitrogen-vacancy center in diamond. <i>Physical Review A</i> , 2016, 94, .	2.5	4
124	Weak coherent pulses for single-photon quantum memories. <i>Physica Scripta</i> , 2019, 94, 014012.	2.5	3
125	Static Kinks in Chains of Interacting Atoms. <i>Condensed Matter</i> , 2020, 5, 35.	1.8	3
126	Interplay of periodic dynamics and noise: Insights from a simple adaptive system. <i>Physical Review E</i> , 2021, 104, 054215.	2.1	3

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127	Reservoir-engineering shortcuts to adiabaticity. <i>Physical Review Research</i> , 2022, 4, .	3.6	3
128	Laser Cooling of Matter. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 883.	2.1	2
129	Long-range interactions in cold atomic systems: A foreword. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	2
130	Master equation for multilevel interference in a superradiant medium. <i>Physical Review A</i> , 2020, 102, .	2.5	2
131	Dynamics of entanglement creation between two spins coupled to a chain. <i>European Physical Journal Plus</i> , 2020, 135, 1.	2.6	2
132	Strongly Correlated Ion Coulomb Systems. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	1
133	Retrieval of single photons from solid-state quantum transducers. <i>Physical Review A</i> , 2021, 104, .	2.5	1
134	Dynamics of cavity cooling of trapped atoms. , 2007, , .		0
135	Cavity cooling of internal and external degrees of freedom of molecules. , 2007, , .		0
136	Ab initio based calculations of cavity cooling including the ro-vibrational modes of the OH radical. , 2007, , .		0
137	Cavity-enhanced sideband cooling of molecules to the ground state of a harmonic trap. , 2009, , .		0
138	Quantum Optical Information Technologies. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, A233.	2.1	0
139	Quantum Optical Information Technologies. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, QOIT1.	2.1	0
140	Low-Noise Frequency Down-Conversion at the Single Photon Level. , 2012, , .		0
141	Laser Cooling of Trapped Ions. , 2002, , 243-260.		0
142	Frequency Down-Conversion of Single Photons into the Telecom Band. , 2010, , .		0