

# Martin Kiffner

## List of Publications by Year in descending order

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55  
papers

1,236  
citations

393982

19  
h-index

377514

34  
g-index

57  
all docs

57  
docs citations

57  
times ranked

1135  
citing authors

#	ARTICLE	IF	CITATIONS
1	A quantum-inspired approach to exploit turbulence structures. <i>Nature Computational Science</i> , 2022, 2, 30-37.	3.8	25
2	Quantum self-supervised learning. <i>Quantum Science and Technology</i> , 2022, 7, 035005.	2.6	8
3	Coarse-grained intermolecular interactions on quantum processors. <i>Physical Review A</i> , 2022, 105, .	1.0	3
4	Directional THz generation in hot Rb vapor excited to a Rydberg state. <i>Optics Letters</i> , 2021, 46, 1017.	1.7	12
5	Variational quantum algorithms for nonlinear problems. <i>Physical Review A</i> , 2020, 101, .	1.0	130
6	Ultrafast Creation of Overlapping Rydberg Electrons in an Atomic BEC and Mott-Insulator Lattice. <i>Physical Review Letters</i> , 2020, 124, 253201.	2.9	14
7	Characterizing the phase diagram of finite-size dipolar Bose-Hubbard systems. <i>Physical Review A</i> , 2020, 101, .	1.0	7
8	Minimum hardware requirements for hybrid quantum-classical DMFT. <i>Quantum Science and Technology</i> , 2020, 5, 034015.	2.6	20
9	Mott polaritons in cavity-coupled quantum materials. <i>New Journal of Physics</i> , 2019, 21, 073066.	1.2	19
10	Bosonic fractional quantum Hall states on a finite cylinder. <i>Physical Review A</i> , 2019, 99, .	1.0	16
11	Manipulating quantum materials with quantum light. <i>Physical Review B</i> , 2019, 99, .	1.1	46
12	Efficient microwave-to-optical conversion using Rydberg atoms. <i>Physical Review A</i> , 2019, 99, .	1.0	43
13	Collimated UV light generation by two-photon excitation to a Rydberg state in Rb vapor. <i>Optics Letters</i> , 2019, 44, 2931.	1.7	19
14	Coherent Microwave-to-Optical Conversion via Six-Wave Mixing in Rydberg Atoms. <i>Physical Review Letters</i> , 2018, 120, 093201.	2.9	87
15	Topological Spin Models in Rydberg Lattices. , 2018, , 351-369.		0
16	Probing microscopic models for system-bath interactions via parametric driving. <i>Physical Review A</i> , 2018, 98, .	1.0	1
17	A polynomial Ansatz for norm-conserving pseudopotentials. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 275501.	0.7	0
18	Terahertz field control of interlayer transport modes in cuprate superconductors. <i>Physical Review B</i> , 2017, 96, .	1.1	13

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19	Topological spin models in Rydberg lattices. Applied Physics B: Lasers and Optics, 2017, 123, 1.	1.1	4
20	Quantum mechanical calculation of Rydberg autoionization rates. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 204004.	0.6	12
21	Two-way interconversion of millimeter-wave and optical fields in Rydberg gases. New Journal of Physics, 2016, 18, 093030.	1.2	37
22	Coherent bidirectional microwave-optical conversion using Rydberg atoms. , 2016, , .		1
23	Pulse splitting in light propagation through $N$ -type atomic media due to an interplay of Kerr nonlinearity and group-velocity dispersion. Physical Review A, 2015, 92, .	1.0	8
24	Lensing effect of electromagnetically induced transparency involving a Rydberg state. Physical Review A, 2015, 92, .	1.0	16
25	Single spontaneous photon as a coherent beamsplitter for an atomic matter-wave. , 2014, , .		0
26	Few-body bound states of dipole-dipole-interacting Rydberg atoms. Physical Review A, 2014, 89, .	1.0	9
27	Magnetic Monopoles and Synthetic Spin-Orbit Coupling in Rydberg Macrodimers. Physical Review Letters, 2013, 110, 170402.	2.9	28
28	Abelian and non-Abelian gauge fields in dipole-dipole interacting Rydberg atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 134008.	0.6	13
29	Three-Body Bound States in Dipole-Dipole Interacting Rydberg Atoms. Physical Review Letters, 2013, 111, 233003.	2.9	25
30	Dipole-dipole-coupled double-Rydberg molecules. Physical Review A, 2012, 86, .	1.0	32
31	Dissipative quantum-light-field engineering. Physical Review A, 2012, 85, .	1.0	7
32	Steady-state negative Wigner functions of nonlinear nanomechanical oscillators. New Journal of Physics, 2012, 14, 023042.	1.2	77
33	Single spontaneous photon as a coherent beamsplitter for an atomic matter-wave. Nature Physics, 2011, 7, 379-382.	6.5	13
34	Dissipation-induced correlations in one-dimensional bosonic systems. New Journal of Physics, 2011, 13, 053027.	1.2	10
35	Subwavelength optical lattices induced by position-dependent dark states. Physical Review A, 2011, 83, .	1.0	4
36	Cavity optomechanics with nonlinear mechanical resonators in the quantum regime. , 2011, , .		0

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37	Master equation approach for interacting slow- and stationary-light polaritons. Physical Review A, 2010, 82, .	1.0	11
38	Vacuum-Induced Processes in Multilevel Atoms. Progress in Optics, 2010, 55, 85-197.	0.4	80
39	Dissipation-induced Tonks-Girardeau gas of polaritons. Physical Review A, 2010, 81, .	1.0	41
40	Resonant interferometric lithography beyond the diffraction limit. , 2009, , .		0
41	Dynamical control of pulse propagation in electromagnetically induced transparency. Physical Review A, 2009, 79, .	1.0	9
42	Probing quantum superposition states with few-cycle laser pulses. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1912.	0.9	8
43	Resonant Interferometric Lithography beyond the Diffraction Limit. Physical Review Letters, 2008, 100, 073602.	2.9	72
44	Resonant Interferometric Lithography beyond the Diffraction Limit. , 2008, , .		0
45	Breakdown of the few-level approximation in collective systems. Physical Review A, 2007, 76, .	1.0	15
46	Coherent control in a decoherence-free subspace of a collective multilevel system. Physical Review A, 2007, 75, .	1.0	26
47	Breakdown of the few-level approximation in dipole-dipole interacting systems. Proceedings of SPIE, 2007, , .	0.8	0
48	Two-mode single-atom laser as a source of entangled light. Physical Review A, 2007, 75, .	1.0	92
49	Quantum Control of Interacting Multiatom Systems. AIP Conference Proceedings, 2007, , .	0.3	0
50	Breakdown of the Few-Level Approximation in Collective Systems. , 2007, , .		0
51	Quantum Interference Enforced by Time-Energy Complementarity. Physical Review Letters, 2006, 96, 100403.	2.9	54
52	Geometry-dependent dynamics of two $\hat{\delta}$ -type atoms via vacuum-induced coherences. Physical Review A, 2006, 73, .	1.0	38
53	Interference in the resonance fluorescence of two incoherently coupled transitions. Physical Review A, 2006, 73, .	1.0	19
54	Detection of atomic entanglement and electromagnetically induced transparency in velocity-selective coherent population trapping. Physical Review A, 2005, 71, .	1.0	6

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55	Detection of atomic entanglement and electromagnetically induced transparency in velocity-selective coherent population trapping. , 0, , .		0