AndrÃ© Eckardt

List of Publications by Year
in descending order

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69 papers	5,410 citations	172457 29 h-index	95266 68 g-index
69 all docs	69 docs citations	69 times ranked	2878 citing authors

#	Article	IF	Citations
1	Colloquium: Atomic quantum gases in periodically driven optical lattices. Reviews of Modern Physics, 2017, 89, .	45.6	737
2	Quantum Simulation of Frustrated Classical Magnetism in Triangular Optical Lattices. Science, 2011, 333, 996-999.	12.6	543
3	Tunable Gauge Potential for Neutral and Spinless Particles in Driven Optical Lattices. Physical Review Letters, 2012, 108, 225304.	7.8	523
4	Superfluid-Insulator Transition in a Periodically Driven Optical Lattice. Physical Review Letters, 2005, 95, 260404.	7.8	446
5	High-frequency approximation for periodically driven quantum systems from a Floquet-space perspective. New Journal of Physics, 2015, 17, 093039.	2.9	422
6	Non-Abelian Gauge Fields and Topological Insulators in Shaken Optical Lattices. Physical Review Letters, 2012, 109, 145301.	7.8	287
7	Engineering Ising-XY spin-models in a triangular lattice using tunable artificial gauge fields. Nature Physics, 2013, 9, 738-743.	16.7	286
8	Exploring dynamic localization with a Bose-Einstein condensate. Physical Review A, 2009, 79, .	2.5	180
9	Realization of an anomalous Floquet topological system with ultracold atoms. Nature Physics, 2020, 16, 1058-1063.	16.7	163
10	Frustrated quantum antiferromagnetism with ultracold bosons in a triangular lattice. Europhysics Letters, 2010, 89, 10010.	2.0	131
11	Measuring topology from dynamics by obtaining the Chern number from a linking number. Nature Communications, 2019, 10, 1728.	12.8	130
12	Analog of Photon-Assisted Tunneling in a Bose-Einstein Condensate. Physical Review Letters, 2005, 95, 200401.	7.8	111
13	Tomography of Band Insulators from Quench Dynamics. Physical Review Letters, 2014, 113, 045303.	7.8	102
14	Generalized Bose-Einstein Condensation into Multiple States in Driven-Dissipative Systems. Physical Review Letters, 2013, 111, 240405.	7.8	80
15	Interaction Dependent Heating and Atom Loss in a Periodically Driven Optical Lattice. Physical Review Letters, 2017, 119, 200402.	7.8	73
16	Floquet Realization and Signatures of One-Dimensional Anyons in an Optical Lattice. Physical Review Letters, 2016, 117, 205303.	7.8	66
17	Multiphoton interband excitations of quantum gases in driven optical lattices. Physical Review A, 2015, 92, .	2.5	65
18	AC-induced superfluidity. Europhysics Letters, 2007, 80, 50004.	2.0	58

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19	Bose-Hubbard phase diagram with arbitrary integer filling. Physical Review B, 2009, 79, .	3.2	54
20	Semisynthetic zigzag optical lattice for ultracold bosons. Physical Review A, 2016, 94, .	2.5	51
21	Boseâ€“Hubbard model with occupation-dependent parameters. New Journal of Physics, 2011, 13, 023019.	2.9	50
22	Process-chain approach to the Bose-Hubbard model: Ground-state properties and phase diagram. Physical Review B, 2009, 79, .	3.2	48
23	Avoided-Level-Crossing Spectroscopy with Dressed Matter Waves. Physical Review Letters, 2008, 101, 245302.	7.8	47
24	Giant Spin Oscillations in an Ultracold Fermi Sea. Science, 2014, 343, 157-160.	12.6	46
25	Kilohertz-Driven Boseâ€“Einstein Condensates in Optical Lattices. Advances in Atomic, Molecular and Optical Physics, 2012, 61, 515-547.	2.3	45
26	Role of real-space micromotion for bosonic and fermionic Floquet fractional Chern insulators. Physical Review B, 2015, 91, .	3.2	43
27	Hopf characterization of two-dimensional Floquet topological insulators. Physical Review Research, 2019, 1, .	3.6	43
28	Quantifying and Controlling Prethermal Nonergodicity in Interacting Floquet Matter. Physical Review X, 2019, 9, .	8.9	36
29	Creating, probing, and manipulating fractionally charged excitations of fractional Chern insulators in optical lattices. Physical Review A, 2018, 98, .	2.5	35
30	Nonequilibrium steady states of ideal bosonic and fermionic quantum gases. Physical Review E, 2015, 92, 062119.	2.1	29
31	Floquet Engineering of Optical Solenoids and Quantized Charge Pumping along Tailored Paths in Two-Dimensional Chern Insulators. Physical Review Letters, 2018, 120, 243602.	7.8	27
32	Process-chain approach to high-order perturbation calculus for quantum lattice models. Physical Review B, 2009, 79, .	3.2	25
33	Is there a Floquet Lindbladian?. Physical Review B, 2020, 101, .	3.2	25
34	How to Directly Measure Floquet Topological Invariants in Optical Lattices. Physical Review Letters, 2019, 122, 253601.	7.8	24
35	Bath-Induced Decay of Stark Many-Body Localization. Physical Review Letters, 2019, 123, 030602.	7.8	23
36	Engineering Spin Waves in a High-Spin Ultracold Fermi Gas. Physical Review Letters, 2013, 110, 250402.	7.8	20

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37	Interband Heating Processes in a Periodically Driven Optical Lattice. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2016, 71, 909-920.	1.5	20
38	Measuring the Single-Particle Density Matrix for Fermions and Hard-Core Bosons in an Optical Lattice. Physical Review Letters, 2018, 121, 260401.	7.8	20
39	Pump-Power-Driven Mode Switching in a Microcavity Device and Its Relation to Bose-Einstein Condensation. Physical Review X, 2017, 7, .	8.9	18
40	Dressed matter waves. Journal of Physics: Conference Series, 2008, 99, 012007.	0.4	17
41	Modified interactions in a Floquet topological system on a square lattice and their impact on a bosonic fractional Chern insulator state. Physical Review A, 2016, 93, .	2.5	17
42	Phasonic Spectroscopy of a Quantum Gas in a Quasicrystalline Lattice. Physical Review Letters, 2019, 123, 223201.	7.8	16
43	Ground-state energy and depletions for a dilute binary Bose gas. Physical Review A, 2004, 70, .	2.5	15
44	Controlled hole doping of a Mott insulator of ultracold fermionic atoms. Physical Review A, 2010, 82, .	2.5	15
45	Charge density wave and charge pump of interacting fermions in circularly shaken hexagonal optical lattices. Physical Review A, 2018, 98, .	2.5	15
46	Describing many-body localized systems in thermal environments. New Journal of Physics, 2019, 21, 063026.	2.9	15
47	Spontaneous Time-Reversal Symmetry Breaking for Spinless Fermions on a Triangular Lattice. Physical Review Letters, 2013, 110, 096405.	7.8	14
48	Orbital-driven melting of a bosonic Mott insulator in a shaken optical lattice. Physical Review A, 2015, 91, .	2.5	14
49	Lindbladian approximation beyond ultraweak coupling. Physical Review E, 2021, 104, 014110.	2.1	14
50	High-frequency expansions for time-periodic Lindblad generators. Physical Review B, 2021, 104, .	3.2	14
51	Optimal frequency window for Floquet engineering in optical lattices. Physical Review Research, 2020, 2, .	3.6	13
52	High-Temperature Nonequilibrium Bose Condensation Induced by a Hot Needle. Physical Review Letters, 2017, 119, 140602.	7.8	12
53	Spin segregation via dynamically induced long-range interactions in a system of ultracold fermions. Physical Review A, 2011, 84, .	2.5	11
54	On the number of Bose-selected modes in driven-dissipative ideal Bose gases. Physical Review E, 2018, 97, 032136.	2.1	11

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55	Relaxation Dynamics of an Isolated Large-Spin Fermi Gas Far from Equilibrium. Physical Review X, 2014, 4, .	8.9	10
56	Measurable signatures of bosonic fractional Chern insulator states and their fractional excitations in a quantum-gas microscope. SciPost Physics, 2022, 12, .	4.9	8
57	Cooling and state preparation in an optical lattice via Markovian feedback control. Physical Review Research, 2022, 4, .	3.6	7
58	Quantum crystal growing: adiabatic preparation of a bosonic antiferromagnet in the presence of a parabolic inhomogeneity. New Journal of Physics, 2013, 15, 033028.	2.9	6
59	Ground-State Energy of a Weakly Interacting Bose Gas: Calculation Without Regularization. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2004, 59, 1-13.	1.5	5
60	Prethermal memory loss in interacting quantum systems coupled to thermal baths. Physical Review B, 2020, 101, .	3.2	5
61	Robust and ultrafast state preparation by ramping artificial gauge potentials. New Journal of Physics, 2021, 23, 063017.	2.9	5
62	Floquet chiral hinge modes and their interplay with Weyl physics in a three-dimensional lattice. Physical Review B, 2021, 104, .	3.2	5
63	Controlled two-mode emission from the interplay of driving and thermalization in a dye-filled photonic cavity. Physical Review Research, 2019, 1, .	3.6	5
64	Unified theory for excited-state, fragmented, and equilibriumlike Bose condensation in pumped photonic many-body systems. Physical Review A, 2018, 97, .	2.5	4
65	Ground-state energy of a homogeneous Bose-Einstein condensate beyond Bogoliubov. Europhysics Letters, 2004, 68, 8-14.	2.0	2
66	Tunable gauge potential for spinless particles in driven lattices. EPJ Web of Conferences, 2013, 57, 01004.	0.3	1
67	Design and characterization of a quantum heat pump in a driven quantum gas. Physical Review E, 2020, 101, 042109.	2.1	1
68	Nonequilibrium mode competition in a pumped dye-filled cavity. Physical Review A, 2021, 104, .	2.5	1
69	Mode switching in bimodal microcavities and its connection to Bose condensation. , 2017, , .		0