

Fabian Grusdt

List of Publications by Year in descending order

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68
papers

3,525
citations

136740

32
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133063

59
g-index

68
all docs

68
docs citations

68
times ranked

2297
citing authors

#	ARTICLE	IF	CITATIONS
1	Snapshot-based characterization of particle currents and the Hall response in synthetic flux lattices. Physical Review A, 2022, 105, .	1.0	10
2	Strong pairing in mixed-dimensional bilayer antiferromagnetic Mott insulators. Nature Physics, 2022, 18, 651-656.	6.5	20
3	Enhancing Disorder-Free Localization through Dynamically Emergent Local Symmetries. PRX Quantum, 2022, 3, .	3.5	18
4	Characterizing topological excitations of a long-range Heisenberg model with trapped ions. Physical Review B, 2022, 105, .	1.1	10
5	Thouless Pumps and Bulk-Boundary Correspondence in Higher-Order Symmetry-Protected Topological Phases. Physical Review Letters, 2022, 128, .	2.9	11
6	Dynamical signatures of thermal spin-charge deconfinement in the doped Ising model. Physical Review B, 2022, 105, .	1.1	4
7	Bosonic Pfaffian state in the Hofstadter-Bose-Hubbard model. Physical Review B, 2021, 103, .	1.1	8
8	Radiofrequency spectroscopy of one-dimensional trapped Bose polarons: crossover from the adiabatic to the diabatic regime. New Journal of Physics, 2021, 23, 043051.	1.2	11
9	Coupling a Mobile Hole to an Antiferromagnetic Spin Background: Transient Dynamics of a Magnetic Polaron. Physical Review X, 2021, 11, .	2.8	33
10	Z^2 lattice gauge theories and Kitaev's toric code: A scheme for analog quantum simulation. Physical Review B, 2021, 104, .	1.1	23
11	Higher-order spin-hole correlations around a localized charge impurity. Physical Review Research, 2021, 3, .	1.3	5
12	Microscopic evolution of doped Mott insulators from polaronic metal to Fermi liquid. Science, 2021, 374, 82-86.	6.0	48
13	Dominant Fifth-Order Correlations in Doped Quantum Antiferromagnets. Physical Review Letters, 2021, 126, 026401.	2.9	11
14	Confinement and Mott Transitions of Dynamical Charges in One-Dimensional Lattice Gauge Theories. Physical Review Letters, 2021, 127, 167203.	2.9	19
15	Exploration of doped quantum magnets with ultracold atoms. Annals of Physics, 2021, 435, 168651.	1.0	35
16	Dynamical Quantum Cherenkov Transition of Fast Impurities in Quantum Liquids. Physical Review Letters, 2021, 127, 185302.	2.9	16
17	Rotational Resonances and Regge-like Trajectories in Lightly Doped Antiferromagnets. Physical Review Letters, 2021, 127, 197004.	2.9	9
18	Visualizing spinon Fermi surfaces with time-dependent spectroscopy. Physical Review B, 2021, 104, .	1.1	0

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19	Time-resolved observation of spin-charge deconfinement in fermionic Hubbard chains. <i>Science</i> , 2020, 367, 186-189.	6.0	81
20	Parton theory of angle-resolved photoemission spectroscopy spectra in antiferromagnetic Mott insulators. <i>Physical Review B</i> , 2020, 102, .	1.1	31
21	Fractional corner charges in a two-dimensional superlattice Bose-Hubbard model. <i>Physical Review B</i> , 2020, 102, .	1.1	11
22	Z2 Parton Phases in the Mixed-Dimensional $t\hat{=}J$ Model. <i>Physical Review Letters</i> , 2020, 125, 256401.	2.9	15
23	Confined Phases of One-Dimensional Spinless Fermions Coupled to Z_2 Gauge Theory. <i>Physical Review Letters</i> , 2020, 124, 120503.	2.9	56
24	Multiparticle Interactions for Ultracold Atoms in Optical Tweezers: Cyclic Ring-Exchange Terms. <i>Physical Review Letters</i> , 2020, 124, 073601.	2.9	6
25	Skyrmion ground states of rapidly rotating few-fermion systems. <i>New Journal of Physics</i> , 2020, 22, 083037.	1.2	8
26	Dynamical formation of a magnetic polaron in a two-dimensional quantum antiferromagnet. <i>New Journal of Physics</i> , 2020, 22, 123023.	1.2	22
27	Z2 characterization for three-dimensional multiband Hubbard models. <i>Physical Review Research</i> , 2020, 2, .	1.3	5
28	Ramsey interferometry of non-Hermitian quantum impurities. <i>Physical Review Research</i> , 2020, 2, .	1.3	12
29	Evaluation of time-dependent correlators after a local quench in iPEPS: hole motion in the t-J model. <i>SciPost Physics</i> , 2020, 8, .	1.5	28
30	Topological polarons, quasiparticle invariants, and their detection in one-dimensional symmetry-protected phases. <i>Physical Review B</i> , 2019, 100, .	1.1	9
31	Imaging magnetic polarons in the doped Fermi-Hubbard model. <i>Nature</i> , 2019, 572, 358-362.	13.7	106
32	String patterns in the doped Hubbard model. <i>Science</i> , 2019, 365, 251-256.	6.0	102
33	Classifying snapshots of the doped Hubbard model with machine learning. <i>Nature Physics</i> , 2019, 15, 921-924.	6.5	94
34	Dissipative correlated dynamics of a moving impurity immersed in a Bose-Einstein condensate. <i>New Journal of Physics</i> , 2019, 21, 103026.	1.2	28
35	Microscopic spinon-charge theory of magnetic polarons in the $t\hat{=}J$ model. <i>Physical Review B</i> , 2019, 99, .	1.1	10
36	Signatures of correlated magnetic phases in the two-spin density matrix. <i>Physical Review A</i> , 2019, 99, .	1.0	2

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37	Floquet approach to \hat{a}_2 lattice gauge theories with ultracold atoms in optical lattices. Nature Physics, 2019, 15, 1168-1173.	6.5	214
38	Coupling ultracold matter to dynamical gauge fields in optical lattices: From flux attachment to \hat{a}_2 lattice gauge theories. Science Advances, 2019, 5, eaav7444.	4.7	75
39	Strong-coupling Bose polarons out of equilibrium: Dynamical renormalization-group approach. Physical Review A, 2018, 97, .	1.0	32
40	Angle-resolved photoemission spectroscopy with quantum gas microscopes. Physical Review B, 2018, 97, .	1.1	43
41	Parton Theory of Magnetic Polarons: Mesonic Resonances and Signatures in Dynamics. Physical Review X, 2018, 8, .	2.8	65
42	Meson formation in mixed-dimensional t-J models. , 2018, 5, .		33
43	Topological order of mixed states in correlated quantum many-body systems. Physical Review B, 2017, 95, .	1.1	24
44	Microscopy of the interacting Harper-Hofstadter model in the two-body limit. Nature, 2017, 546, 519-523.	13.7	198
45	A cold-atom Fermi-Hubbard antiferromagnet. Nature, 2017, 545, 462-466.	13.7	514
46	Revealing hidden antiferromagnetic correlations in doped Hubbard chains via string correlators. Science, 2017, 357, 484-487.	6.0	144
47	Quantum correlations at infinite temperature: The dynamical Nagaoka effect. Physical Review B, 2017, 96, .	1.1	22
48	Realizing and adiabatically preparing bosonic integer and fractional quantum Hall states in optical lattices. Physical Review B, 2017, 96, .	1.1	57
49	Strong-coupling Bose polarons in a Bose-Einstein condensate. Physical Review A, 2017, 96, .	1.0	70
50	Tunable spin-orbit coupling for ultracold atoms in two-dimensional optical lattices. Physical Review A, 2017, 95, .	1.0	32
51	Bose polarons in ultracold atoms in one dimension: beyond the Fröhlich paradigm. New Journal of Physics, 2017, 19, 103035.	1.2	101
52	Bloch state tomography using Wilson lines. Science, 2016, 352, 1094-1097.	6.0	136
53	Quantum Dynamics of Ultracold Bose Polarons. Physical Review Letters, 2016, 117, 113002.	2.9	134
54	Polaronic mass renormalization of impurities in Bose-Einstein condensates: Correlated Gaussian-wave-function approach. Physical Review A, 2016, 93, .	1.0	45

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55	All-coupling theory for the Fröhlich polaron. Physical Review B, 2016, 93, .	1.1	27
56	Tunable Polarons of Slow-Light Polaritons in a Two-Dimensional Bose-Einstein Condensate. Physical Review Letters, 2016, 116, 053602.	2.9	39
57	Reservoir-induced Thouless pumping and symmetry-protected topological order in open quantum chains. Physical Review B, 2016, 94, .	1.1	34
58	Interferometric measurements of many-body topological invariants using mobile impurities. Nature Communications, 2016, 7, 11994.	5.8	58
59	Growing quantum states with topological order. Physical Review B, 2015, 91, .	1.1	3
60	Renormalization group approach to the Fröhlich polaron model: application to impurity-BEC problem. Scientific Reports, 2015, 5, 12124.	1.6	82
61	Realization of fractional Chern insulators in the thin-torus limit with ultracold bosons. Physical Review A, 2014, 90, .	1.0	52
62	Bloch oscillations of bosonic lattice polarons. Physical Review A, 2014, 90, .	1.0	24
63	Radio-frequency spectroscopy of polarons in ultracold Bose gases. Physical Review A, 2014, 89, .	1.0	85
64	Topological Growing of Laughlin States in Synthetic Gauge Fields. Physical Review Letters, 2014, 113, 155301.	2.9	36
65	Quantum particle in a parabolic lattice in the presence of a gauge field. Physical Review A, 2014, 89, .	1.0	12
66	Measuring χ^2 topological invariants in optical lattices using interferometry. Physical Review A, 2014, 89, .	1.0	48
67	Topological Edge States in the One-Dimensional Superlattice Bose-Hubbard Model. Physical Review Letters, 2013, 110, 260405.	2.9	118
68	Fractional quantum Hall physics with ultracold Rydberg gases in artificial gauge fields. Physical Review A, 2013, 87, .	1.0	23