

Mark S Rudner

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

8,078
citations

81743

39
h-index

71532

76
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all docs

80
docs citations

80
times ranked

6146
citing authors

#	ARTICLE	IF	CITATIONS
1	Prethermalization and entanglement dynamics in interacting topological pumps. <i>Physical Review B</i> , 2022, 105, .	1.1	5
2	Multistable excitonic Stark effect. <i>Physical Review Research</i> , 2022, 4, .	1.3	0
3	Anomalous random multipolar driven insulators. <i>Physical Review B</i> , 2022, 105, .	1.1	3
4	Spin-polarized superconductivity: Order parameter topology, current dissipation, and multiple-period Josephson effect. <i>Physical Review Research</i> , 2021, 3, .	1.3	11
5	Electronic Floquet gyro-liquid crystal. <i>Nature Communications</i> , 2021, 12, 5299.	5.8	5
6	Quasiperiodic Floquet-Thouless Energy Pump. <i>Physical Review Letters</i> , 2021, 127, 166804.	2.9	19
7	Topology and Broken Symmetry in Floquet Systems. <i>Annual Review of Condensed Matter Physics</i> , 2020, 11, 345-368.	5.2	120
8	Contrasting lattice geometry dependent versus independent quantities: Ramifications for Berry curvature, energy gaps, and dynamics. <i>Physical Review B</i> , 2020, 102, .	1.1	18
9	Universal Lindblad equation for open quantum systems. <i>Physical Review B</i> , 2020, 102, .	1.1	63
10	Floquet metal-to-insulator phase transitions in semiconductor nanowires. <i>Science Advances</i> , 2020, 6, eaay4922.	4.7	11
11	Band structure engineering and non-equilibrium dynamics in Floquet topological insulators. <i>Nature Reviews Physics</i> , 2020, 2, 229-244.	11.9	311
12	Quantized large-bias current in the anomalous Floquet-Anderson insulator. <i>Physical Review B</i> , 2020, 101, .	1.1	16
13	Driving toward hot new phases. <i>Nature Physics</i> , 2020, 16, 1008-1009.	6.5	1
14	Quantum frequency locking and downconversion in a driven qubit-cavity system. <i>Physical Review Research</i> , 2020, 2, .	1.3	11
15	Self-induced Berry flux and spontaneous non-equilibrium magnetism. <i>Nature Physics</i> , 2019, 15, 1017-1021.	6.5	22
16	<i>Ab initio</i> exact diagonalization simulation of the Nagaoka transition in quantum dots. <i>Physical Review B</i> , 2019, 100, .	1.1	12
17	Steady states of interacting Floquet insulators. <i>Physical Review B</i> , 2019, 99, .	1.1	27
18	Parton construction of particle-hole-conjugate Read-Rezayi parafermion fractional quantum Hall states and beyond. <i>Physical Review B</i> , 2019, 99, .	1.1	23

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19	Anomalous Floquet insulators. <i>Physical Review B</i> , 2019, 99, .	1.1	47
20	Topological transport in the steady state of a quantum particle with dissipation. <i>Physical Review B</i> , 2019, 99, .	1.1	11
21	Charge and spin textures of Ising quantum Hall ferromagnet domain walls. <i>Physical Review B</i> , 2019, 100, .	1.1	2
22	Current-Induced Gap Opening in Interacting Topological Insulator Surfaces. <i>Physical Review Letters</i> , 2019, 123, 246803.	2.9	12
23	Fractional Quantum Hall Effect at $\nu = 1/2$: The Parton Paradigm for the Second Landau Level. <i>Physical Review Letters</i> , 2018, 121, 186601.	2.9	25
24	Parton construction of a wave function in the anti-Pfaffian phase. <i>Physical Review B</i> , 2018, 98, .	1.1	60
25	Many-Body Dynamics and Gap Opening in Interacting Periodically Driven Systems. <i>Physical Review Letters</i> , 2018, 121, 036801.	2.9	13
26	Topological phase transition measured in a dissipative metamaterial. <i>Physical Review B</i> , 2018, 97, .	1.1	25
27	Quantized transport and steady states of Floquet topological insulators. <i>Physical Review B</i> , 2018, 97, .	1.1	41
28	Universal Chiral Quasisteady States in Periodically Driven Many-Body Systems. <i>Physical Review X</i> , 2017, 7, .	2.8	37
29	Direct Probe of Topological Invariants Using Bloch Oscillating Quantum Walks. <i>Physical Review Letters</i> , 2017, 118, 130501.	2.9	78
30	Fermi arc plasmons in Weyl semimetals. <i>Physical Review B</i> , 2017, 96, .	1.1	46
31	Quantized Magnetization Density in Periodically Driven Systems. <i>Physical Review Letters</i> , 2017, 119, 186801.	2.9	48
32	Notch filtering the nuclear environment of a spin qubit. <i>Nature Nanotechnology</i> , 2017, 12, 16-20.	15.6	80
33	Spectrum of the Nuclear Environment for GaAs Spin Qubits. <i>Physical Review Letters</i> , 2017, 118, 177702.	2.9	67
34	Chiral plasmons without magnetic field. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 4658-4663.	3.3	98
35	Filter function formalism beyond pure dephasing and non-Markovian noise in singlet-triplet qubits. <i>Physical Review B</i> , 2016, 93, .	1.1	25
36	Nonlocal Polarization Feedback in a Fractional Quantum Hall Ferromagnet. <i>Physical Review Letters</i> , 2016, 116, 136804.	2.9	6

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37	Composite Topological Excitations in Ferromagnet-Superconductor Heterostructures. Physical Review Letters, 2016, 117, 017001.	2.9	54
38	Anomalous Floquet-Anderson Insulator as a Nonadiabatic Quantized Charge Pump. Physical Review X, 2016, 6, .	2.8	204
39	Nonlocal damping of helimagnets in one-dimensional interacting electron systems. Physical Review B, 2015, 92, .	1.1	6
40	Controlled Population of Floquet-Bloch States via Coupling to Bose and Fermi Baths. Physical Review X, 2015, 5, .	2.8	115
41	Topological singularities and the general classification of Floquet-Bloch systems. New Journal of Physics, 2015, 17, 125014.	1.2	223
42	Spin-Lattice Order in One-Dimensional Conductors: Beyond the RKKY Effect. Physical Review Letters, 2015, 114, 247205.	2.9	20
43	Observation of a Topological Transition in the Bulk of a Non-Hermitian System. Physical Review Letters, 2015, 115, 040402.	2.9	551
44	Multilevel Interference Resonances in Strongly Driven Three-Level Systems. Physical Review Letters, 2014, 113, 247002.	2.9	26
45	Theory of coherent dynamic nuclear polarization in quantum dots. Physical Review B, 2014, 89, .	1.1	15
46	Ultranarrow ionization resonances in a quantum dot under broadband excitation. Physical Review B, 2014, 89, .	1.1	0
47	Vibration multistability and quantum switching for dispersive coupling. Physical Review B, 2014, 89, .	1.1	6
48	Anomalous Edge States and the Bulk-Edge Correspondence for Periodically Driven Two-Dimensional Systems. Physical Review X, 2013, 3, .	2.8	690
49	Self-Sustaining Dynamical Nuclear Polarization Oscillations in Quantum Dots. Physical Review Letters, 2013, 110, 086601.	2.9	8
50	Electronic liquid crystalline phases in a spin-orbit coupled two-dimensional electron gas. Physical Review B, 2012, 85, .	1.1	45
51	Singlet-triplet splitting in double quantum dots due to spin-orbit and hyperfine interactions. Physical Review B, 2012, 85, .	1.1	80
52	Observation of topologically protected bound states in photonic quantum walks. Nature Communications, 2012, 3, 882.	5.8	488
53	Spin-Orbit-Induced Strong Coupling of a Single Spin to a Nanomechanical Resonator. Physical Review Letters, 2012, 108, 206811.	2.9	85
54	Generating Entanglement and Squeezed States of Nuclear Spins in Quantum Dots. Physical Review Letters, 2011, 107, 206806.	2.9	53

#	ARTICLE	IF	CITATIONS
55	Chirality-Assisted Electronic Cloaking of Confined States in Bilayer Graphene. <i>Physical Review Letters</i> , 2011, 107, 156603.	2.9	57
56	Detection of spin injection into a double quantum dot: Violation of magnetic-field-inversion symmetry of nuclear polarization instabilities. <i>Physical Review B</i> , 2011, 83, .	1.1	4
57	Hot Carrier Transport and Photocurrent Response in Graphene. <i>Nano Letters</i> , 2011, 11, 4688-4692.	4.5	380
58	Gate-Activated Photoresponse in a Graphene p-n Junction. <i>Nano Letters</i> , 2011, 11, 4134-4137.	4.5	379
59	Collapse of Landau Levels in Gated Graphene Structures. <i>Physical Review Letters</i> , 2011, 106, 066601.	2.9	48
60	Dephasing time of GaAs electron-spin qubits coupled to a nuclear bath exceeding 200 μ s. <i>Nature Physics</i> , 2011, 7, 109-113.	6.5	501
61	Nuclear spin dynamics in double quantum dots: Fixed points, transients, and intermittency. <i>Physical Review B</i> , 2011, 84, .	1.1	30
62	Semiclassical model for the dephasing of a two-electron spin qubit coupled to a coherently evolving nuclear spin bath. <i>Physical Review B</i> , 2011, 84, .	1.1	41
63	Observation of topologically protected bound states in photonic quantum walks. , 2011, , .		1
64	Exploring topological phases with quantum walks. <i>Physical Review A</i> , 2010, 82, .	1.0	397
65	Phase-sensitive probes of nuclear polarization in spin-blockaded transport. <i>Physical Review B</i> , 2010, 82, .	1.1	13
66	Dynamical cooling of nuclear spins in double quantum dots. <i>Nanotechnology</i> , 2010, 21, 274016.	1.3	14
67	Topological characterization of periodically driven quantum systems. <i>Physical Review B</i> , 2010, 82, .	1.1	932
68	Spin relaxation due to deflection coupling in nanotube quantum dots. <i>Physical Review B</i> , 2010, 81, .	1.1	53
69	Phase transitions in dissipative quantum transport and mesoscopic nuclear spin pumping. <i>Physical Review B</i> , 2010, 82, .	1.1	39
70	Topological Transition in a Non-Hermitian Quantum Walk. <i>Physical Review Letters</i> , 2009, 102, 065703.	2.9	361
71	Pulse imaging and nonadiabatic control of solid-state artificial atoms. <i>Physical Review B</i> , 2009, 80, .	1.1	26
72	Atomic collapse, Lorentz boosts, Klein scattering, and other quantum-relativistic phenomena in graphene. <i>Solid State Communications</i> , 2009, 149, 1087-1093.	0.9	98

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73	Amplitude spectroscopy of a solid-state artificial atom. <i>Nature</i> , 2008, 455, 51-57.	13.7	134
74	Klein Backscattering and Fabry-Pérot Interference in Graphene Heterojunctions. <i>Physical Review Letters</i> , 2008, 101, 156804.	2.9	253
75	Quantum Phase Tomography of a Strongly Driven Qubit. <i>Physical Review Letters</i> , 2008, 101, 190502.	2.9	63
76	Electrically Driven Reverse Overhauser Pumping of Nuclear Spins in Quantum Dots. <i>Physical Review Letters</i> , 2007, 99, 246602.	2.9	43
77	Self-Polarization and Dynamical Cooling of Nuclear Spins in Double Quantum Dots. <i>Physical Review Letters</i> , 2007, 99, 036602.	2.9	64
78	Intramolecular Hydrogen Bonding in Disubstituted Ethanes: A General Considerations and Methodology in Quantum Mechanical Calculations of the Conformational Equilibria of Succinamate Monoanion. <i>Journal of Physical Chemistry A</i> , 2005, 109, 9083-9088.	1.1	9
79	Intramolecular Hydrogen Bonding in Disubstituted Ethanes. A Comparison of NH ₂ -O- and OH ₂ -O-Hydrogen Bonding through Conformational Analysis of 4-Amino-4-oxobutanoate (succinamate) and Monohydrogen 1,4-Butanoate (monohydrogen succinate) Anions. <i>Journal of Physical Chemistry A</i> , 2005, 109, 9076-9082.	1.1	33
80	Angular profiles of molecular beams from effusive tube sources: I. Experiment. <i>Measurement Science and Technology</i> , 2000, 11, 1750-1765.	1.4	37