

Johannes Knolle

List of Publications by Year in descending order

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57
papers

4,346
citations

172457

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57
all docs

57
docs citations

57
times ranked

3076
citing authors

#	ARTICLE	IF	CITATIONS
1	Proximate Kitaev quantum spin liquid behaviour in a honeycomb magnet. Nature Materials, 2016, 15, 733-740.	27.5	762
2	Neutron scattering in the proximate quantum spin liquid $\hat{I}\pm$ -RuCl ₃ . Science, 2017, 356, 1055-1059.	12.6	499
3	A Field Guide to Spin Liquids. Annual Review of Condensed Matter Physics, 2019, 10, 451-472.	14.5	297
4	Physics of the Kitaev Model: Fractionalization, Dynamic Correlations, and Material Connections. Annual Review of Condensed Matter Physics, 2018, 9, 17-33.	14.5	272
5	Dynamics of a Two-Dimensional Quantum Spin Liquid: Signatures of Emergent Majorana Fermions and Fluxes. Physical Review Letters, 2014, 112, .	7.8	263
6	Excitations in the field-induced quantum spin liquid state of $\hat{I}\pm$ -RuCl ₃ . Npj Quantum Materials, 2018, 3, .	5.2	254
7	Fermionic response from fractionalization in an insulating two-dimensional magnet. Nature Physics, 2016, 12, 912-915.	16.7	204
8	Simulating quantum many-body dynamics on a current digital quantum computer. Npj Quantum Information, 2019, 5, .	6.7	173
9	Disorder-Free Localization. Physical Review Letters, 2017, 118, 266601.	7.8	167
10	Raman Scattering Signatures of Kitaev Spin Liquids in IrO_2 . Physical Review Letters, 2014, 113, 187201.	7.8	141
11	Theory of itinerant magnetic excitations in the spin-density-wave phase of iron-based superconductors. Physical Review B, 2010, 81, .	3.2	97
12	Absence of Ergodicity without Quenched Disorder: From Quantum Disentangled Liquids to Many-Body Localization. Physical Review Letters, 2017, 119, 176601.	7.8	86
13	Quantum Many-Body Scars in Optical Lattices. Physical Review Letters, 2020, 124, 160604.	7.8	79
14	Dynamical localization in LiFeAs lattice gauge theories. Physical Review B, 2018, 97, .	3.2	60
15	Superconductivity from repulsion in LiFeAs : Novel s -wave symmetry and potential time-reversal symmetry breaking. Physical Review B, 2014, 89, .	3.2	56
16	Theory of Raman response in three-dimensional Kitaev spin liquids: Application to IrO_2 and LiFeAs . Physical Review B, 2015, 92, .	3.2	54
17	Periodic Discrete Time Crystals and Quasicrystals with Ultracold Bosons. Physical Review Letters, 2019, 123, 150601.	7.8	51
18	Simple mitigation of global depolarizing errors in quantum simulations. Physical Review E, 2021, 104, 035309.	2.1	51

#	ARTICLE	IF	CITATIONS
19	Electronic Properties of \hat{I}_{\pm} in Proximity to Graphene. Physical Review Letters, 2019, 123, 237201.	7.8	43
20	Quasiparticle Interference in the Spin-Density Wave Phase of Iron-Based Superconductors. Physical Review Letters, 2010, 104, 257001.	7.8	43
21	Local probes for charge-neutral edge states in two-dimensional quantum magnets. Physical Review B, 2020, 102, .	3.2	39
22	The range of non-Kitaev terms and fractional particles in \hat{I}_{\pm} -RuCl ₃ . Npj Quantum Materials, 2020, 5, .	5.2	38
23	Confinement and entanglement dynamics on a digital quantum computer. Scientific Reports, 2021, 11, 11577.	3.3	38
24	Higher-order and fractional discrete time crystals in clean long-range interacting systems. Nature Communications, 2021, 12, 2341.	12.8	37
25	Classical Prethermal Phases of Matter. Physical Review Letters, 2021, 127, 140602.	7.8	37
26	Quasiparticle interference in iron-based superconductors. Physical Review B, 2010, 82, .	3.2	36
27	Dynamics of a quantum spin liquid beyond integrability: The Kitaev-Heisenberg- \hat{I} model in an augmented parton mean-field theory. Physical Review B, 2018, 97, .	3.2	36
28	Multiorbital spin susceptibility in a magnetically ordered state: Orbital versus excitonic spin density wave scenario. Physical Review B, 2011, 83, .	3.2	32
29	Random Multipolar Driving: Tunably Slow Heating through Spectral Engineering. Physical Review Letters, 2021, 126, 040601.	7.8	30
30	Incommensurate magnetic fluctuations and Fermi surface topology in LiFeAs. Physical Review B, 2012, 86, .	3.2	27
31	Resonant Raman scattering theory for Kitaev models and their Majorana fermion boundary modes. Physical Review B, 2016, 94, .	3.2	25
32	Orthogonal Quantum Many-Body Scars. Physical Review Letters, 2021, 127, 150601.	7.8	24
33	Neutron scattering signatures of the 3D hyperhoneycomb Kitaev quantum spin liquid. Physical Review B, 2015, 92, .	3.2	22
34	Classical approaches to prethermal discrete time crystals in one, two, and three dimensions. Physical Review B, 2021, 104, .	3.2	20
35	Magnetic resonance from the interplay of frustration and superconductivity. Physical Review B, 2011, 84, .	3.2	18
36	Majorana Landau-level Raman spectroscopy. Physical Review B, 2017, 95, .	3.2	18

#	ARTICLE	IF	CITATIONS
37	Anomalous Quantum Oscillations in a Heterostructure of Graphene on a Proximate Quantum Spin Liquid. <i>Physical Review Letters</i> , 2021, 126, 097201.	7.8	18
38	Enhancing Disorder-Free Localization through Dynamically Emergent Local Symmetries. <i>PRX Quantum</i> , 2022, 3, .	9.2	18
39	Disorder-free localization in a simple $U(1)$ lattice gauge theory. <i>Physical Review B</i> , 2020, 102, .	3.2	17
40	Rigorous Bounds on the Heating Rate in Thue-Morse Quasiperiodically and Randomly Driven Quantum Many-Body Systems. <i>Physical Review Letters</i> , 2021, 127, 050602.	7.8	16
41	Variational quantum algorithm with information sharing. <i>Npj Quantum Information</i> , 2021, 7, .	6.7	15
42	Unveiling the $S=3/2$ Kitaev honeycomb spin liquids. <i>Nature Communications</i> , 2022, 13, .	12.8	15
43	Measurement-induced phase transition in a chaotic classical many-body system. <i>Physical Review B</i> , 2022, 106, .	3.2	14
44	Pair breaking by nonmagnetic impurities in the noncentrosymmetric superconductor $CePt_3Si$. <i>Physical Review B</i> , 2010, 81, .	3.2	13
45	Raman scattering in correlated thin films as a probe of chargeless surface states. <i>Physical Review B</i> , 2016, 94, .	3.2	13
46	Bistability and time crystals in long-ranged directed percolation. <i>Nature Communications</i> , 2021, 12, 1061.	12.8	13
47	Antiferromagnetism in Iron-Based Superconductors: Selection of Magnetic Order and Quasiparticle Interference. <i>Journal of the Physical Society of Japan</i> , 2014, 83, 061015.	1.6	11
48	Optical phonons coupled to a Kitaev spin liquid. <i>Physical Review B</i> , 2022, 105, .	3.2	9
49	Orbital magnetic field effects in Mott insulators with strong spin-orbit coupling. <i>Physical Review B</i> , 2019, 100, .	3.2	8
50	Flat and correlated plasmon bands in $U(1)$ graphene heterostructures. <i>Physical Review B</i> , 2021, 104, .	3.2	8
51	One-dimensional long-range Falikov-Kimball model: Thermal phase transition and disorder-free localization. <i>Physical Review B</i> , 2021, 104, .	3.2	5
52	Seasonal epidemic spreading on small-world networks: Biennial outbreaks and classical discrete time crystals. <i>Physical Review Research</i> , 2021, 3, .	3.6	4
53	Confinement-induced impurity states in spin chains. <i>Physical Review B</i> , 2022, 105, .	3.2	4
54	Localization persisting under aperiodic driving. <i>Physical Review B</i> , 2022, 105, .	3.2	4

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55	Gapless state of interacting Majorana fermions in a strain-induced Landau level. <i>Physical Review B</i> , 2021, 103, .	3.2	3
56	Berry curvature-induced local spin polarisation in gated graphene/WTe2 heterostructures. <i>Nature Communications</i> , 2022, 13, .	12.8	3
57	Anomalous random multipolar driven insulators. <i>Physical Review B</i> , 2022, 105, .	3.2	3