

Steven A Kivelson

List of Publications by Year in descending order

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142
papers

17,369
citations

28190

55
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12910

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g-index

143
all docs

143
docs citations

143
times ranked

8158
citing authors

#	ARTICLE	IF	CITATIONS
1	Importance of phase fluctuations in superconductors with small superfluid density. Nature, 1995, 374, 434-437.	13.7	1,869
2	From quantum matter to high-temperature superconductivity in copper oxides. Nature, 2015, 518, 179-186.	13.7	1,606
3	Electronic liquid-crystal phases of a doped Mott insulator. Nature, 1998, 393, 550-553.	13.7	1,025
4	Superconductivity and the Quantum Hard-Core Dimer Gas. Physical Review Letters, 1988, 61, 2376-2379.	2.9	849
5	Phase separation in the J-model. Physical Review Letters, 1990, 64, 475-478.	2.9	815
6	Topology of the resonating valence-bond state: Solitons and high-Tc superconductivity. Physical Review B, 1987, 35, 8865-8868.	1.1	795
7	<i>Colloquium</i>: Theory of intertwined orders in high temperature superconductors. Reviews of Modern Physics, 2015, 87, 457-482.	16.4	737
8	Theory of electron nematic order in LaFeAsO. Physical Review B, 2008, 77, .	1.1	588
9	Spin-gap proximity effect mechanism of high-temperature superconductivity. Physical Review B, 1997, 56, 6120-6147.	1.1	581
10	Nematic Fermi Fluids in Condensed Matter Physics. Annual Review of Condensed Matter Physics, 2010, 1, 153-178.	5.2	561
11	Quantum spin liquids. Science, 2020, 367, .	6.0	513
12	Three-dimensional charge density wave order in $\text{YBa}_2\text{Cu}_3\text{O}_{6.67}$ at high magnetic fields. Science, 2015, 350, 949-952.	6.0	280
13	Dynamical Layer Decoupling in a Stripe-Ordered High- T_c Superconductor. Physical Review Letters, 2007, 99, 127003.	2.9	251
14	Striped superconductors: how spin, charge and superconducting orders intertwine in the cuprates. New Journal of Physics, 2009, 11, 115004.	1.2	244
15	Ubiquitous signatures of nematic quantum criticality in optimally doped Fe-based superconductors. Science, 2016, 352, 958-962.	6.0	239
16	Enhancement of Superconductivity near a Nematic Quantum Critical Point. Physical Review Letters, 2015, 114, 097001.	2.9	233
17	Superconductivity in the repulsive Hubbard model: An asymptotically exact weak-coupling solution. Physical Review B, 2010, 81, .	1.1	228
18	The Physics of Pair-Density Waves: Cuprate Superconductors and Beyond. Annual Review of Condensed Matter Physics, 2020, 11, 231-270.	5.2	209

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19	Phases of a phenomenological model of twisted bilayer graphene. <i>Physical Review B</i> , 2018, 98, .	1.1	197
20	Quenched disorder and vestigial nematicity in the pseudogap regime of the cuprates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 7980-7985.	3.3	191
21	Nematicity and quantum paramagnetism in FeSe. <i>Nature Physics</i> , 2015, 11, 959-963.	6.5	190
22	Charge-4e superconductivity from pair-density-wave order in certain high-temperature superconductors. <i>Nature Physics</i> , 2009, 5, 830-833.	6.5	186
23	Quantum Theory of the Smectic Metal State in Stripe Phases. <i>Physical Review Letters</i> , 2000, 85, 2160-2163.	2.9	183
24	Doped antiferromagnets in the weak-hopping limit. <i>Physical Review B</i> , 1990, 42, 6523-6530.	1.1	180
25	Superconductivity and non-Fermi liquid behavior near a nematic quantum critical point. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4905-4910.	3.3	150
26	The Hubbard Model. <i>Annual Review of Condensed Matter Physics</i> , 2022, 13, 239-274.	5.2	136
27	Theory of the striped superconductor. <i>Physical Review B</i> , 2009, 79, .	1.1	123
28	SHORT RANGE RESONATING VALENCE BOND THEORIES AND SUPERCONDUCTIVITY. <i>Modern Physics Letters B</i> , 1990, 04, 225-232.	1.0	120
29	Nematic Phase of the Two-Dimensional Electron Gas in a Magnetic Field. <i>Physical Review Letters</i> , 2000, 84, 1982-1985.	2.9	116
30	Universal Aspects of Coulomb-Frustrated Phase Separation. <i>Physical Review Letters</i> , 2005, 94, 056805.	2.9	112
31	Distinguishing patterns of charge order: Stripes or checkerboards. <i>Physical Review B</i> , 2006, 74, .	1.1	111
32	In search of a theory of supercooled liquids. <i>Nature Materials</i> , 2008, 7, 831-833.	13.3	110
33	Ising Nematic Quantum Critical Point in a Metal: A MonteÂCarlo Study. <i>Physical Review X</i> , 2016, 6, .	2.8	105
34	Classical Phase Fluctuations in High Temperature Superconductors. <i>Physical Review Letters</i> , 1999, 83, 612-615.	2.9	101
35	Ineluctable complexity. <i>Nature Physics</i> , 2012, 8, 864-866.	6.5	100
36	Statistics of holons in the quantum hard-core dimer gas. <i>Physical Review B</i> , 1989, 39, 259-264.	1.1	91

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37	Algebraic Spin Liquid in an Exactly Solvable Spin Model. Physical Review Letters, 2009, 102, 217202.	2.9	89
38	Ideal charge-density-wave order in the high-field state of superconducting YBCO. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14645-14650.	3.3	83
39	Microscopic theory of the nematic phase in $\text{SrCa}_2\text{Cu}_3\text{O}_{10}$. Physical Review B, 2009, 79, .	1.1	82
40	Theory of the nodal nematic quantum phase transition in superconductors. Physical Review B, 2008, 77, .	1.1	81
41	Mechanism of high-temperature superconductivity in a striped Hubbard model. Physical Review B, 2004, 69, .	1.1	79
42	Transport in two dimensional electronic micro-emulsions. Annals of Physics, 2006, 321, 2071-2115.	1.0	77
43	Route to high-temperature superconductivity in composite systems. Physical Review B, 2008, 78, .	1.1	72
44	Pair-Density-Wave Correlations in the Kondo-Heisenberg Model. Physical Review Letters, 2010, 105, 146403.	2.9	72
45	Evidence from tunneling spectroscopy for a quasi-one-dimensional origin of superconductivity in $\text{SrCa}_2\text{Cu}_3\text{O}_{10}$. Physical Review B, 2013, 88, .	1.1	72
46	Competing order in the mixed state of high-temperature superconductors. Physical Review B, 2002, 66, .	1.1	71
47	Breakdown of the Migdal-Eliashberg theory: A determinant quantum Monte Carlo study. Physical Review B, 2018, 97, .	1.1	68
48	Kerr effect as evidence of gyrotropic order in the cuprates. Physical Review B, 2013, 87, .	1.1	67
49	Textured Edges in Quantum Hall Systems. Physical Review Letters, 1996, 77, 2061-2064.	2.9	64
50	Enhancement of superconductivity by local inhomogeneities. Physical Review B, 2005, 72, .	1.1	64
51	Nematic valley ordering in quantum Hall systems. Physical Review B, 2010, 82, .	1.1	63
52	Field theory of the quantum Hall nematic transition. Physical Review B, 2013, 88, .	1.1	63
53	Pair binding in small Hubbard-model molecules. Physical Review B, 1992, 45, 5062-5065.	1.1	62
54	Observation of two types of charge-density-wave orders in superconducting $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$. Nature Communications, 2019, 10, 3269.	5.8	58

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55	Fermi-surface reconstruction in a smectic phase of a high-temperature superconductor. Physical Review B, 2011, 84, .	1.1	57
56	Effects of longer-range interactions on unconventional superconductivity. Physical Review B, 2012, 85, .	1.1	56
57	Phases of the Infinite U Hubbard Model on Square Lattices. Physical Review Letters, 2012, 108, 126406.	2.9	55
58	Superconductivity in the doped t - \hat{a} model: Results for four-leg cylinders. Physical Review B, 2018, 98, .	1.1	55
59	Thermodynamics of phase formation in the quantum critical metal SrRu_2O_7 . Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16549-16553.	3.3	53
60	Intertwined order in a frustrated four-leg t - \hat{a} cylinder. Physical Review B, 2017, 95, .	1.1	53
61	Valence bond ground states in a frustrated two-dimensional spin-1/2 Heisenberg antiferromagnet. Communications in Mathematical Physics, 1989, 123, 53-83.	1.0	51
62	Optimal inhomogeneity for superconductivity: Finite-size studies. Physical Review B, 2008, 77, .	1.1	51
63	Eliashberg theory of phonon-mediated superconductivity "When it is valid and how it breaks down. Annals of Physics, 2020, 417, 168190.	1.0	50
64	Vestigial chiral and charge orders from bidirectional spin-density waves: Application to the iron-based superconductors. Physical Review B, 2016, 93, .	1.1	49
65	Enhanced Thermal Hall Effect in Nearly Ferroelectric Insulators. Physical Review Letters, 2020, 124, 167601.	2.9	47
66	Electronic liquid crystalline phases in a spin-orbit coupled two-dimensional electron gas. Physical Review B, 2012, 85, .	1.1	45
67	Superconductivity from repulsive interactions in the two-dimensional electron gas. Physical Review B, 2011, 83, .	1.1	44
68	Classification and stability of phases of the multicomponent one-dimensional electron gas. Physical Review B, 1999, 59, 15641-15653.	1.1	43
69	Myriad phases of the checkerboard Hubbard model. Physical Review B, 2007, 76, .	1.1	43
70	Coherent transmutation of electrons into fractionalized anyons. Science, 2014, 346, 722-725.	6.0	42
71	Pair density waves in superconducting vortex halos. Physical Review B, 2018, 97, .	1.1	41
72	Band structure effects on the superconductivity in Hubbard models. Physical Review B, 2013, 88, .	1.1	40

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73	Theory of the quantum Hall Smectic Phase. I. Low-energy properties of the quantum Hall smectic fixed point. Physical Review B, 2002, 65, .	1.1	37
74	Quasi-one-dimensional dynamics and nematic phases in the two-dimensional Emery model. Physical Review B, 2004, 69, .	1.1	36
75	Vestigial nematicity from spin and/or charge order in the cuprates. Physical Review B, 2017, 96, .	1.1	36
76	High Temperature Superconductivity in a Lightly Doped Quantum Spin Liquid. Physical Review Letters, 2021, 127, 097002.	2.9	35
77	A bound on the superconducting transition temperature. Npj Quantum Materials, 2018, 3, .	1.8	32
78	Charge and spin collective modes in a quasi-one-dimensional model of Sr ₂ RuO ₄ . Physical Review B, 2012, 86, .	1.1	31
79	Long-range interactions and the quantum Hall effect. Physical Review B, 1992, 46, 13319-13325.	1.1	29
80	Strong Coupling Limit of the Holstein-Hubbard Model. Physical Review Letters, 2020, 125, 167001.	2.9	29
81	Superconductor-to-metal transition in overdoped cuprates. Npj Quantum Materials, 2021, 6, .	1.8	29
82	Pseudogap crossover in the electron-phonon system. Physical Review B, 2019, 99, .	1.1	28
83	Hubbard ladders at small U revisited. Physical Review B, 2020, 102, .	1.1	28
84	Non-quasiparticle transport and resistivity saturation: a view from the large- N limit. Npj Quantum Materials, 2017, 2, .	1.8	27
85	Gapless spin liquids: Stability and possible experimental relevance. Physical Review B, 2013, 87, .	1.1	26
86	Holon Wigner Crystal in a Lightly Doped Kagome Quantum Spin Liquid. Physical Review Letters, 2017, 119, 067002.	2.9	26
87	Correlated Hofstadter spectrum and flavour phase diagram in magic-angle twisted bilayer graphene. Nature Physics, 2022, 18, 825-831.	6.5	26
88	Charge- $4e$ superconductors: A Majorana quantum Monte Carlo study. Physical Review B, 2017, 95, .	1.1	26
89	Evidence of a fractional quantum Hall nematic phase in a microscopic model. Physical Review B, 2017, 96, .	1.1	25
90	Properties of a diagonal two-orbital ladder model of the iron pnictide superconductors. Physical Review B, 2010, 81, .	1.1	24

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91	Transverse fields to tune an Ising-nematic quantum phase transition. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13430-13434.	3.3	24
92	One Hole in the Two-Legged Ladder and Adiabatic Continuity to the Noninteracting Limit. Physical Review Letters, 2015, 115, 056401.	2.9	23
93	Defining emergence in physics. Npj Quantum Materials, 2016, 1, .	1.8	23
94	Stripe order enhanced superconductivity in the Hubbard model. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	23
95	Fluctuating orders and quenched randomness in the cuprates. Physical Review B, 2015, 92, .	1.1	22
96	Nematic quantum criticality in an Fe-based superconductor revealed by strain-tuning. Science, 2021, 372, 973-977.	6.0	22
97	Surface pinning of fluctuating charge order: An extraordinary surface phase transition. Physical Review B, 2005, 71, .	1.1	21
98	Linking the pseudogap in the cuprates with local symmetry breaking: A commentary. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14395-14397.	3.3	21
99	Disorder-induced suppression of charge density wave order: STM study of Pd-intercalated ErTe . Physical Review B, 2019, 100, .		
100	Critical divergence of the symmetric χ'' at the ErTe quantum critical point. Physical Review B, 2017, 96, .	1.1	20
101	Hall number across a van Hove singularity. Physical Review B, 2017, 96, .	1.1	20
102	Order by Disorder, without Order, in a Two-Dimensional Spin System with $O(2)$ Symmetry. Annales Henri Poincare, 2004, 5, 1181-1205.	0.8	19
103	Quantum oscillations in a bilayer with broken mirror symmetry: A minimal model for $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$. Physical Review B, 2016, 93, .	1.1	18
104	Superconductivity, charge density waves, and bipolarons in the Holstein model. Physical Review B, 2021, 103, .	1.1	17
105	Cold-spots and glassy nematicity in underdoped cuprates. Physical Review B, 2016, 94, .	1.1	16
106	Pair-density-wave in the strong coupling limit of the Holstein-Hubbard model. Npj Quantum Materials, 2022, 7, .	1.8	16
107	Fermi surface reconstruction by a charge density wave with finite correlation length. Physical Review B, 2019, 100, .	1.1	14
108	On the Absence of Ferromagnetism in Typical 2D Ferromagnets. Communications in Mathematical Physics, 2007, 274, 217-231.	1.0	13

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109	Weakly Coupled Pfaffian as a Type I Quantum Hall Liquid. <i>Physical Review Letters</i> , 2011, 106, 236801.	2.9	13
110	Correlations and renormalization of the electron-phonon coupling in the honeycomb Hubbard ladder and superconductivity in polyacene. <i>Physical Review B</i> , 2013, 88, .	1.1	13
111	Strain-induced time reversal breaking and half quantum vortices near a putative superconducting tetracritical point in Sr_2CuO_7 . <i>Physical Review B</i> , 2021, 104, .	1.1	13
112	Generic character of charge and spin density waves in superconducting cuprates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2119429119.	3.3	13
113	Superconductivity in zigzag CuO chains. <i>Physical Review B</i> , 2007, 76, .	1.1	12
114	Macroscopic character of composite high-temperature superconducting wires. <i>Physical Review B</i> , 2015, 92, .	1.1	12
115	Electronic pair binding and Hund's rule violations in doped C_6O . <i>Physical Review B</i> , 2016, 93, .	1.1	12
116	Elastocaloric signature of nematic fluctuations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, e2105911118.	3.3	12
117	Robust superconductivity intertwined with charge density wave and disorder in Pd-intercalated ErTe_3 . <i>Physical Review Research</i> , 2020, 2, .	1.3	10
118	Typology for quantum Hall liquids. <i>Physical Review B</i> , 2012, 85, .	1.1	8
119	Magnetic model of the tetragonal-orthorhombic transition in the cuprates. <i>Physical Review B</i> , 2006, 74, .	1.1	7
120	Inferring effective interactions from the local density of states: Application to STM data from $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8+x$. <i>Physical Review B</i> , 2006, 74, .	1.1	7
121	Microscopic Model of Quasiparticle Wave Packets in Superfluids, Superconductors, and Paired Hall States. <i>Physical Review Letters</i> , 2012, 109, 237004.	2.9	7
122	The quantum Hall effect in the absence of disorder. <i>Npj Quantum Materials</i> , 2021, 6, .	1.8	7
123	Fractional charge and emergent mass hierarchy in diagonal two-leg $\text{tâ€“}J$ cylinders. <i>Physical Review B</i> , 2017, 95, .	1.1	6
124	How Optimal Inhomogeneity Produces High Temperature Superconductivity. , 2007, , 570-596.		6
125	Necessity of Time-Reversal Symmetry Breaking for the Polar Kerr Effect in Linear Response. <i>Physical Review Letters</i> , 2016, 116, 093903.	2.9	5
126	Understanding complexity. <i>Nature Physics</i> , 2018, 14, 426-427.	6.5	5

