Steven A Kivelson

List of Publications by Year
in descending order

142	17,369	28274 55	12946 131
papers	citations	h-index	g-index

143	143	143	8158
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Importance of phase fluctuations in superconductors with small superfluid density. Nature, 1995, 374, 434-437.	27.8	1,869
2	From quantum matter to high-temperature superconductivity in copper oxides. Nature, 2015, 518, 179-186.	27.8	1,606
3	Electronic liquid-crystal phases of a doped Mott insulator. Nature, 1998, 393, 550-553.	27.8	1,025
4	Superconductivity and the Quantum Hard-Core Dimer Gas. Physical Review Letters, 1988, 61, 2376-2379.	7.8	849
5	Phase separation in thet-Jmodel. Physical Review Letters, 1990, 64, 475-478.	7.8	815
6	Topology of the resonating valence-bond state: Solitons and high-Tcsuperconductivity. Physical Review B, 1987, 35, 8865-8868.	3.2	795
7	Colloquium: Theory of intertwined orders in high temperature superconductors. Reviews of Modern Physics, 2015, 87, 457-482.	45.6	737
8	Theory of electron nematic order in LaFeAsO. Physical Review B, 2008, 77, .	3.2	588
9	Spin-gap proximity effect mechanism of high-temperature superconductivity. Physical Review B, 1997, 56, 6120-6147.	3.2	581
10	Nematic Fermi Fluids in Condensed Matter Physics. Annual Review of Condensed Matter Physics, 2010, 1, 153-178.	14.5	561
11	Quantum spin liquids. Science, 2020, 367, .	12.6	513
12	Three-dimensional charge density wave order in YBa ₂ Cu ₃ O _{6.67} at high magnetic fields. Science, 2015, 350, 949-952.	12.6	280
13	Dynamical Layer Decoupling in a Stripe-Ordered High-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:math>Superconductor. Physical Review Letters, 2007, 99, 127003.	7.8	251
14	Striped superconductors: how spin, charge and superconducting orders intertwine in the cuprates. New Journal of Physics, 2009, 11, 115004.	2.9	244
15	Ubiquitous signatures of nematic quantum criticality in optimally doped Fe-based superconductors. Science, 2016, 352, 958-962.	12.6	239
16	Enhancement of Superconductivity near a Nematic Quantum Critical Point. Physical Review Letters, 2015, 114, 097001.	7.8	233
17	Superconductivity in the repulsive Hubbard model: An asymptotically exact weak-coupling solution. Physical Review B, 2010, 81, .	3.2	228
18	The Physics of Pair-Density Waves: Cuprate Superconductors and Beyond. Annual Review of Condensed Matter Physics, 2020, 11, 231-270.	14.5	209

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19	Phases of a phenomenological model of twisted bilayer graphene. Physical Review B, 2018, 98, .	3.2	197
20	Quenched disorder and vestigial nematicity in the pseudogap regime of the cuprates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7980-7985.	7.1	191
21	Nematicity and quantum paramagnetism in FeSe. Nature Physics, 2015, 11, 959-963.	16.7	190
22	Charge-4e superconductivity from pair-density-wave order in certain high-temperature superconductors. Nature Physics, 2009, 5, 830-833.	16.7	186
23	Quantum Theory of the Smectic Metal State in Stripe Phases. Physical Review Letters, 2000, 85, 2160-2163.	7.8	183
24	Doped antiferromagnets in the weak-hopping limit. Physical Review B, 1990, 42, 6523-6530.	3.2	180
25	Superconductivity and non-Fermi liquid behavior near a nematic quantum critical point. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4905-4910.	7.1	150
26	The Hubbard Model. Annual Review of Condensed Matter Physics, 2022, 13, 239-274.	14.5	136
27	Theory of the striped superconductor. Physical Review B, 2009, 79, .	3.2	123
28	SHORT RANGE RESONATING VALENCE BOND THEORIES AND SUPERCONDUCTIVITY. Modern Physics Letters B, 1990, 04, 225-232.	1.9	120
29	Nematic Phase of the Two-Dimensional Electron Gas in a Magnetic Field. Physical Review Letters, 2000, 84, 1982-1985.	7.8	116
30	Universal Aspects of Coulomb-Frustrated Phase Separation. Physical Review Letters, 2005, 94, 056805.	7.8	112
31	Distinguishing patterns of charge order: Stripes or checkerboards. Physical Review B, 2006, 74, .	3.2	111
32	In search of a theory of supercooled liquids. Nature Materials, 2008, 7, 831-833.	27.5	110
33	Ising Nematic Quantum Critical Point in a Metal: A MonteÂCarlo Study. Physical Review X, 2016, 6, .	8.9	105
34	Classical Phase Fluctuations in High Temperature Superconductors. Physical Review Letters, 1999, 83, 612-615.	7.8	101
35	Ineluctable complexity. Nature Physics, 2012, 8, 864-866.	16.7	100
36	Statistics of holons in the quantum hard-core dimer gas. Physical Review B, 1989, 39, 259-264.	3.2	91

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37	Algebraic Spin Liquid in an Exactly Solvable Spin Model. Physical Review Letters, 2009, 102, 217202.	7.8	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.	7.1	83
39	Microscopic theory of the nematic phase in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Sr</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:msub> Physical Review B, 2009, 79, .	3.2	82
40	Theory of the nodal nematic quantum phase transition in superconductors. Physical Review B, 2008, 77, .	3.2	81
41	Mechanism of high-temperature superconductivity in a striped Hubbard model. Physical Review B, 2004, 69, .	3.2	79
42	Transport in two dimensional electronic micro-emulsions. Annals of Physics, 2006, 321, 2071-2115.	2.8	77
43	Route to high-temperature superconductivity in composite systems. Physical Review B, 2008, 78, .	3.2	72
44	Pair-Density-Wave Correlations in the Kondo-Heisenberg Model. Physical Review Letters, 2010, 105, 146403.	7.8	72
45	Evidence from tunneling spectroscopy for a quasi-one-dimensional origin of superconductivity in Sr<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>RuO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>4</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 88, .	3.2	72
46	Competing order in the mixed state of high-temperature superconductors. Physical Review B, 2002, 66, .	3.2	71
47	Breakdown of the Migdal-Eliashberg theory: A determinant quantum Monte Carlo study. Physical Review B, 2018, 97, .	3.2	68
48	Kerr effect as evidence of gyrotropic order in the cuprates. Physical Review B, 2013, 87, .	3.2	67
49	Textured Edges in Quantum Hall Systems. Physical Review Letters, 1996, 77, 2061-2064.	7.8	64
50	Enhancement of superconductivity by local inhomogeneities. Physical Review B, 2005, 72, .	3.2	64
51	Nematic valley ordering in quantum Hall systems. Physical Review B, 2010, 82, .	3.2	63
52	Field theory of the quantum Hall nematic transition. Physical Review B, 2013, 88, .	3.2	63
53	Pair binding in small Hubbard-model molecules. Physical Review B, 1992, 45, 5062-5065.	3.2	62
54	Observation of two types of charge-density-wave orders in superconducting La2-xSrxCuO4. Nature Communications, 2019, 10, 3269.	12.8	58

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55	Fermi-surface reconstruction in a smectic phase of a high-temperature superconductor. Physical Review B, 2011, 84, .	3.2	57
56	Effects of longer-range interactions on unconventional superconductivity. Physical Review B, 2012, 85, .	3.2	56
57	Phases of the Infinite<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>U</mml:mi></mml:math>Hubbard Model on Square Lattices. Physical Review Letters, 2012, 108, 126406.	7.8	55
58	Superconductivity in the doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="italic">t</mml:mi><mml:mo>â^'</mml:mo><mml:mi mathvariant="italic">J</mml:mi></mml:mrow></mml:math> model: Results for four-leg cylinders. Physical Review B, 2018, 98, .	3.2	55
59	Thermodynamics of phase formation in the quantum critical metal Sr ₃ Ru ₂ O ₇. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16549-16553.	7.1	53
60	Intertwined order in a frustrated four-leg <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>t</mml:mi><mml:mo>â^'</mml:mo><mml:mi>J</mml:mi></mml:mrow></mml:math> cylinder. Physical Review B, 2017, 95, .	3.2	53
61	Valence bond ground states in a frustrated two-dimensional spin-1/2 Heisenberg antiferromagnet. Communications in Mathematical Physics, 1989, 123, 53-83.	2.2	51
62	Optimal inhomogeneity for superconductivity: Finite-size studies. Physical Review B, 2008, 77, .	3.2	51
63	Eliashberg theory of phonon-mediated superconductivity â€" When it is valid and how it breaks down. Annals of Physics, 2020, 417, 168190.	2.8	50
64	Vestigial chiral and charge orders from bidirectional spin-density waves: Application to the iron-based superconductors. Physical Review B, 2016, 93, .	3.2	49
65	Enhanced Thermal Hall Effect in Nearly Ferroelectric Insulators. Physical Review Letters, 2020, 124, 167601.	7.8	47
66	Electronic liquid crystalline phases in a spin-orbit coupled two-dimensional electron gas. Physical Review B, 2012, 85, .	3.2	45
67	Superconductivity from repulsive interactions in the two-dimensional electron gas. Physical Review B, 2011, 83, .	3.2	44
68	Classification and stability of phases of the multicomponent one-dimensional electron gas. Physical Review B, 1999, 59, 15641-15653.	3.2	43
69	Myriad phases of the checkerboard Hubbard model. Physical Review B, 2007, 76, .	3.2	43
70	Coherent transmutation of electrons into fractionalized anyons. Science, 2014, 346, 722-725.	12.6	42
71	Pair density waves in superconducting vortex halos. Physical Review B, 2018, 97, .	3.2	41
72	Band structure effects on the superconductivity in Hubbard models. Physical Review B, 2013, 88, .	3.2	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, .	3.2	37
74	Quasi-one-dimensional dynamics and nematic phases in the two-dimensional Emery model. Physical Review B, 2004, 69, .	3.2	36
75	Vestigial nematicity from spin and/or charge order in the cuprates. Physical Review B, 2017, 96, .	3.2	36
76	High Temperature Superconductivity in a Lightly Doped Quantum Spin Liquid. Physical Review Letters, 2021, 127, 097002.	7.8	35
77	A bound on the superconducting transition temperature. Npj Quantum Materials, 2018, 3, .	5.2	32
78	Charge and spin collective modes in a quasi-one-dimensional model of Sr2RuO4. Physical Review B, 2012, 86, .	3.2	31
79	Long-range interactions and the quantum Hall effect. Physical Review B, 1992, 46, 13319-13325.	3.2	29
80	Strong Coupling Limit of the Holstein-Hubbard Model. Physical Review Letters, 2020, 125, 167001.	7.8	29
81	Superconductor-to-metal transition in overdoped cuprates. Npj Quantum Materials, 2021, 6, .	5.2	29
82	Pseudogap crossover in the electron-phonon system. Physical Review B, 2019, 99, .	3.2	28
83	Hubbard ladders at small <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>U</mml:mi></mml:math> revisited. Physical Review B, 2020, 102, .	3.2	28
84	Non-quasiparticle transport and resistivity saturation: a view from the large-N limit. Npj Quantum Materials, 2017, 2, .	5.2	27
85	Gapless spin liquids: Stability and possible experimental relevance. Physical Review B, 2013, 87, .	3.2	26
86	Holon Wigner Crystal in a Lightly Doped Kagome Quantum Spin Liquid. Physical Review Letters, 2017, 119, 067002.	7.8	26
87	Correlated Hofstadter spectrum and flavour phase diagram in magic-angle twisted bilayer graphene. Nature Physics, 2022, 18, 825-831.	16.7	26
88	Charge- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>4</mml:mn><mml:mi>e</mml:mi></mml:mrow></mml:r superconductors: A Majorana quantum Monte Carlo study. Physical Review B, 2017, 95, .	3.2	26
89	Evidence of a fractional quantum Hall nematic phase in a microscopic model. Physical Review B, 2017, 96, .	3.2	25
90	Properties of a diagonal two-orbital ladder model of the iron pnictide superconductors. Physical Review B, 2010, 81, .	3.2	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.	7.1	24
92	One Hole in the Two-Legtâ˜JLadder and Adiabatic Continuity to the Noninteracting Limit. Physical Review Letters, 2015, 115, 056401.	7.8	23
93	Defining emergence in physics. Npj Quantum Materials, 2016, 1, .	5.2	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, .	7.1	23
95	Fluctuating orders and quenched randomness in the cuprates. Physical Review B, 2015, 92, .	3.2	22
96	Nematic quantum criticality in an Fe-based superconductor revealed by strain-tuning. Science, 2021, 372, 973-977.	12.6	22
97	Surface pinning of fluctuating charge order: An extraordinary surface phase transition. Physical Review B, 2005, 71, .	3.2	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.	7.1	21
99	Disorder-induced suppression of charge density wave order: STM study of Pd-intercalated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>ErTe</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review B, 2019, 100, .	3.2	21
100	Critical divergence of the symmetric (<mml:math) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 392 Td (xmlns:mml="http://www.w3.org/1998/ Review B, 2017, 96, .	3.2	20
101	Hall number across a van Hove singularity. Physical Review B, 2017, 96, .	3.2	20
102	Order by Disorder, without Order, in a Two-Dimensional Spin System with O(2) Symmetry. Annales Henri Poincare, 2004, 5, 1181-1205.	1.7	19
103	Quantum oscillations in a bilayer with broken mirror symmetry: A minimal model forYBa2Cu3O6+Î´. Physical Review B, 2016, 93, .	3.2	18
104	Superconductivity, charge density waves, and bipolarons in the Holstein model. Physical Review B, 2021, 103, .	3.2	17
105	Cold-spots and glassy nematicity in underdoped cuprates. Physical Review B, 2016, 94, .	3.2	16
106	Pair-density-wave in the strong coupling limit of the Holstein-Hubbard model. Npj Quantum Materials, 2022, 7, .	5.2	16
107	Fermi surface reconstruction by a charge density wave with finite correlation length. Physical Review B, 2019, 100, .	3.2	14
108	On the Absence of Ferromagnetism in Typical 2D Ferromagnets. Communications in Mathematical Physics, 2007, 274, 217-231.	2.2	13

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109	Weakly Coupled Pfaffian as a Type I Quantum Hall Liquid. Physical Review Letters, 2011, 106, 236801.	7.8	13
110	Correlations and renormalization of the electron-phonon coupling in the honeycomb Hubbard ladder and superconductivity in polyacene. Physical Review B, 2013, 88, .	3.2	13
111	Strain-induced time reversal breaking and half quantum vortices near a putative superconducting tetracritical point in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sr</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> Physical Review B, 2021, 104, .	3.2	13
112	Generic character of charge and spin density waves in superconducting cuprates. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119429119.	7.1	13
113	Superconductivity in zigzag CuO chains. Physical Review B, 2007, 76, .	3.2	12
114	Macroscopic character of composite high-temperature superconducting wires. Physical Review B, 2015, 92, .	3.2	12
115	Electronic pair binding and Hund's rule violations in doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mtext>C</mml:mtext><mml:mn>60</mml:mn></mml:msub></mml:math> Physical Review B, 2016, 93, .	3.2	12
116	Elastocaloric signature of nematic fluctuations. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2105911118.	7.1	12
117	Robust superconductivity intertwined with charge density wave and disorder in Pd-intercalated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>ErTe</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review Research, 2020, 2, .	3.6	10
118	Typology for quantum Hall liquids. Physical Review B, 2012, 85, .	3.2	8
119	Magnetic model of the tetragonal-orthorhombic transition in the cuprates. Physical Review B, 2006, 74, .	3.2	7
120	Inferring effective interactions from the local density of states: Application to STM data fromBi2Sr2CaCu2O8+Î´. Physical Review B, 2006, 74, .	3.2	7
121	Microscopic Model of Quasiparticle Wave Packets in Superfluids, Superconductors, and Paired Hall States. Physical Review Letters, 2012, 109, 237004.	7.8	7
122	The quantum Hall effect in the absence of disorder. Npj Quantum Materials, 2021, 6, .	5.2	7
123	Fractional charge and emergent mass hierarchy in diagonal two-leg tâ€“J cylinders. Physical Review B, 2017, 95, .	3.2	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. Physical Review Letters, 2016, 116, 093903.	7.8	5
126	Understanding complexity. Nature Physics, 2018, 14, 426-427.	16.7	5

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127	Spatially modulated susceptibility in thin film <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>La</mml:mi><mml:mrow><mml:mn>2</mml:mn> Physical Review B, 2018, 98, .	3.2	5
128	Discovery of an insulating ferromagnetic phase of electrons in two dimensions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	4
129	Paired Insulators and High-Temperature Superconductors. , 2016, , 127-133.		3
130	Physics of Superconducting Transition Temperatures. Journal of Superconductivity and Novel Magnetism, 2020, 33, 5-10.	1.8	3
131	Phases of frustrated quantum antiferromagnets on the square and triangular lattices. Physical Review B, 2020, 101, .	3.2	3
132	Pair density wave and reentrant superconducting tendencies originating from valley polarization. Physical Review B, 2022, 105, .	3.2	3
133	Theory of disordered unconventional superconductors. Journal of Experimental and Theoretical Physics, 2014, 119, 1109-1114.	0.9	2
134	Floating topological phases. Physical Review B, 2020, 102, .	3.2	2
135	Measuring the imaginary-time dynamics of quantum materials. Philosophical Magazine, 2020, 100, 2477-2490.	1.6	2
136	Nematic antiferromagnetism and deconfined criticality from the interplay between electron-phonon and electron-electron interactions. Physical Review B, 2021, 104, .	3.2	2
137	Anomalous thermal transport and strong violation of Wiedemann-Franz law in the critical regime of a charge density wave transition. Physical Review B, 2021, 104, .	3.2	2
138	Time to fix science prizes. Nature Physics, 2017, 13, 822-822.	16.7	1
139	Npj Quantum Materials as a symbol of international scientific cooperation. Npj Quantum Materials, 2021, 6, .	5.2	0
140	STATISTICAL PHASES AND THE FRACTIONAL QUANTUM HALL EFFECT. World Scientific Series in 20th Century Physics, 2002, , 265-269.	0.0	0
141	Mesoscopics and the High T_c Problem. , 2010, , 239-247.		0
142	Mean Field Theories of Quantum Hall Liquids Justified: Variations on the Greiterâ€“Wilczek Theme. , 2022, , 103-123.		0