Steve Johnston

List of Publications by Year
in descending order

106 papers	3,352 citations	172457 29 h-index	161849 54 g-index
106 all docs	106 docs citations	106 times ranked	3522 citing authors

#	Article	IF	Citations
1	Interfacial mode coupling as the origin of the enhancement of Tc in FeSe films on SrTiO3. Nature, 2014, 515, 245-248.	27.8	567
2	Charge Disproportionation without Charge Transfer in the Rare-Earth-Element Nickelates as a Possible Mechanism for the Metal-Insulator Transition. Physical Review Letters, 2014, 112, 106404.	7.8	206
3	Numerical evidence of fluctuating stripes in the normal state of high- T _c cuprate superconductors. Science, 2017, 358, 1161-1164.	12.6	132
4	Persistent spin excitations in doped antiferromagnets revealed by resonant inelastic light scattering. Nature Communications, 2014, 5, 3314.	12.8	120
5	Systematic study of electron-phonon coupling to oxygen modes across the cuprates. Physical Review B, 2010, 82, .	3.2	119
6	Enhanced superconductivity due to forward scattering in FeSe thin films on SrTiO₃substrates. New Journal of Physics, 2016, 18, 022001.	2.9	103
7	Specific heat and upper critical fields in KFe<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>As<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>single crystals. Physical Review B, 2012, 85, .	3.2	80
8	Role of Lattice Coupling in Establishing Electronic and Magnetic Properties in Quasi-One-Dimensional Cuprates. Physical Review Letters, 2013, 110, 265502.	7.8	70
9	Polaronic behavior in a weak-coupling superconductor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1475-1480.	7.1	67
10	Competition Between Antiferromagnetic and Charge-Density-Wave Order in the Half-Filled Hubbard-Holstein Model. Physical Review Letters, 2012, 109, 246404.	7.8	64
11	Determinant quantum Monte Carlo study of the two-dimensional single-band Hubbard-Holstein model. Physical Review B, 2013, 87, .	3.2	57
12	High<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>T</mml:mi></mml:mrow><mml:mrow><mml:mi>c</mml:mi></mml:m Spin Fluctuations from Incipient Bands: Application to Monolayers and Intercalates of FeSe. Physical Review Letters, 2016, 117, 077003.	7.8	49
13	Effect of strong correlations on the high energy anomaly in hole- and electron-doped high-T_csuperconductors. New Journal of Physics, 2009, 11, 093020.	2.9	48
14	Evidence for the Importance of Extended Coulomb Interactions and Forward Scattering in Cuprate Superconductors. Physical Review Letters, 2012, 108, 166404.	7.8	48
15	Momentum-Resolved Electronic Structure of the High-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>T</mml:mi></mml:mrow><mml:mrow><mml:mi>c</mml:mi></mml:mrow> Parent Compound<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>BaBiO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn> Physical Review Letters, 2016, 117, 037002.	7.8	48
16	Electron-lattice interactions strongly renormalize the charge-transfer energy in the spin-chain cuprate Li2CuO2. Nature Communications, 2016, 7, 10563.	12.8	43
17	Characterizing the three-orbital Hubbard model with determinant quantum Monte Carlo. Physical Review B, 2016, 93, .	3.2	42
18	Determining the Short-Range Spin Correlations in the Spin-Chain<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Li</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>CuO</mml:mi><mml:m xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CuGeO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Compounds Using Resonant Inelastic X-Ray Scattering. Physical Review Letters, 2013, 110, 087403.	7.8	41

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19	Sign inversion in the superconducting order parameter of LiFeAs inferred from Bogoliubov quasiparticle interference. Physical Review B, 2014, 89, .	3.2	40
20	Experimental evidence for bipolaron condensation as a mechanism for the metal-insulator transition in rare-earth nickelates. Nature Communications, 2018, 9, 86.	12.8	40
21	Unraveling the Nature of Charge Excitations in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>La</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>CuO</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math> Momentum-Resolved Cu<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>K</mml:mi></mml:math>-Edge Resonant Inelastic X-Ray Scattering. Physical Review Letters, 2010, 105, 177401.	7.8	39
22	Probing multi-spinon excitations outside of the two-spinon continuum in the antiferromagnetic spin chain cuprate Sr2CuO3. Nature Communications, 2018, 9, 5394.	12.8	39
23	Ab initiostudy of cross-interface electron-phonon couplings in FeSe thin films on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:m xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>BaTiO</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:m	3.2	38
24	Evidence of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-wave superconductivity in K<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>1</mml:mn><mml:mo>â”</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Na<mml: xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Fe<mml:math xmlns:mml="http://www.w3.or. Physical	3.2	37
25	Fingerprints of an orbital-selective Mott phase in the block magnetic state of BaFe2Se3 ladders. Communications Physics, 2019, 2, .	5.3	34
26	Aspects of electronâ€“phonon interactions with strong forward scattering in FeSe Thin Films on SrTiO3substrates. Superconductor Science and Technology, 2016, 29, 054009.	3.5	33
27	Realization of a Hole-Doped Mott Insulator on a Triangular Silicon Lattice. Physical Review Letters, 2017, 119, 266802.	7.8	33
28	Superconductivity-induced self-energy evolution of the nodal electron of optimally dopedBi2Sr2Ca0.92Y0.08Cu2O8+Î´. Physical Review B, 2008, 77, .	3.2	31
29	Doping evolution of spin and charge excitations in the Hubbard model. Physical Review B, 2015, 92, .	3.2	30
30	Multiorbital charge-density wave excitations and concomitant phonon anomalies in Bi ₂ Sr ₂ LaCuO _{6+Î´}. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16219-16225.	7.1	29
31	Evolution of spin excitations from bulk to monolayer FeSe. Nature Communications, 2021, 12, 3122.	12.8	29
32	Testing the Monte Carloâ€“mean field approximation in the one-band Hubbard model. Physical Review B, 2014, 90, .	3.2	27
33	Quantum-classical simulation of two-site dynamical mean-field theory on noisy quantum hardware. Quantum Science and Technology, 2020, 5, 035001.	5.8	27
34	Ca2Y2Cu5O10: The First Frustrated Quasi-1D Ferromagnet Close to Criticality. Physical Review Letters, 2012, 109, 117207.	7.8	26
35	Lattice dynamics of ultrathin FeSe films on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:m Physical Review B, 2018, 97, .	3.2	26
36	Superconductivity in a Hole-Doped Mott-Insulating Triangular Adatom Layer on a Silicon Surface. Physical Review Letters, 2020, 125, 117001.	7.8	26

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37	Quantum Monte Carlo study of lattice polarons in the two-dimensional three-orbital Suâ€“Schriefferâ€“Heeger model. Npj Quantum Materials, 2020, 5, .	5.2	26
38	Intertwined spin, charge, and pair correlations in the two-dimensional Hubbard model in the thermodynamic limit. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	26
39	Specific heat of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>Ca</mml:mi><mml:mn>0.32</mml:mn></mml:msub><m crystals: Unconventional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>s</mml:mi><mml:mo>Â±</mml:mo></mml:msub></m	3.2	24
40	Correlation of Fe-Based Superconductivity and Electron-Phonon Coupling in an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>FeAs</mml:mi><mml:mo>/</mml:mo><mml:mtext>Oxide</mml:mtext></mml:mrow></mml:ma Heterostructure. Physical Review Letters, 2017, 119, 107003.	7.8	24
41	Accelerating lattice quantum Monte Carlo simulations using artificial neural networks: Application to the Holstein model. Physical Review B, 2019, 100, .	3.2	23
42	Decoupling Carrier Concentration and Electron-Phonon Coupling in Oxide Heterostructures Observed with Resonant Inelastic X-Ray Scattering. Physical Review Letters, 2018, 121, 236802.	7.8	22
43	Quantifying Many-Body Effects by High-Resolution Fourier Transform Scanning Tunneling Spectroscopy. Physical Review Letters, 2013, 111, 246804.	7.8	21
44	Aspects of electron-phonon self-energy revealed from angle-resolved photoemission spectroscopy. Physical Review B, 2007, 75, .	3.2	20
45	Impact of an oxygen dopant in Bi ₂ Sr ₂ CaCu ₂ O _{8+Î´}. Europhysics Letters, 2009, 86, 37007.	2.0	20
46	Direct observation of a Fermi liquid-like normal state in an iron-pnictide superconductor. Scientific Reports, 2015, 5, 12421.	3.3	20
47	Relative importance of nonlinear electron-phonon coupling and vertex corrections in the Holstein model. Communications Physics, 2020, 3, .	5.3	20
48	Switching Magnetism and Superconductivity with Spin-Polarized Current in Iron-Based Superconductor. Physical Review Letters, 2017, 119, 227001.	7.8	20
49	Determining the electron-phonon coupling in superconducting cuprates by resonant inelastic x-ray scattering: Methods and results on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Nd</mml:mi><mml:mrow><mml:mn>1</m mathva. Physical Review Research, 2020, 2, .	3.6	20
50	Renormalization of spectra by phase competition in the half-filled Hubbard-Holstein model. Physical Review B, 2015, 91, .	3.2	19
51	Nonlocal correlations in the orbital selective Mott phase of a one-dimensional multiorbital Hubbard model. Physical Review B, 2016, 94, .	3.2	19
52	Computing Resonant Inelastic X-Ray Scattering Spectra Using The Density Matrix Renormalization Group Method. Scientific Reports, 2018, 8, 11080.	3.3	19
53	Determinant quantum Monte Carlo study of exciton condensation in the bilayer Hubbard model. Physical Review B, 2013, 88, .	3.2	18
54	Temperature-filling phase diagram of the two-dimensional Holstein model in the thermodynamic limit by self-consistent Migdal approximation. Physical Review B, 2019, 99, .	3.2	18

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55	Superconductivity, charge density waves, and bipolarons in the Holstein model. Physical Review B, 2021, 103, .	3.2	17
56	Material and Doping Dependence of the Nodal and Antinodal Dispersion Renormalizations in Single- and Multilayer Cuprates. Advances in Condensed Matter Physics, 2010, 2010, 1-13.	1.1	16
57	Quasiparticle properties of the nonlinear Holstein model at finite doping and temperature. Physical Review B, 2015, 92, .	3.2	16
58	Unusual Layer-Dependent Charge Distribution, Collective Mode Coupling, and Superconductivity in Multilayer CuprateBa2Ca3Cu4O8F2. Physical Review Letters, 2009, 103, 036403.	7.8	15
59	Numerical exploration of spontaneous broken symmetries in multiorbital Hubbard models. Physical Review B, 2014, 90, .	3.2	15
60	Orbital structure of the effective pairing interaction in the high-temperature superconducting cuprates. Npj Quantum Materials, 2021, 6, .	5.2	15
61	High-resolution angle-resolved photoemission studies of quasiparticle dynamics in graphite. Physical Review B, 2009, 79, .	3.2	14
62	Density of states modulations from oxygen phonons in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-wave superconductors: Reconciling angle-resolved photoemission spectroscopy and scanning tunneling microscopy. Physical Review B, 2010, 81, .	3.2	14
63	The effects of non-linear electron-phonon interactions on superconductivity and charge-density-wave correlations. Europhysics Letters, 2015, 109, 27007.	2.0	14
64	Numerically exploring the 1D-2D dimensional crossover on spin dynamics in the doped Hubbard model. Physical Review B, 2017, 96, .	3.2	14
65	Multi-spinon and antiholon excitations probed by resonant inelastic x-ray scattering on doped one-dimensional antiferromagnets. New Journal of Physics, 2018, 20, 073019.	2.9	14
66	Doping evolution of charge and spin excitations in two-leg Hubbard ladders: Comparing DMRG and FLEX results. Physical Review B, 2018, 97, .	3.2	14
67	Particle-hole asymmetry in the dynamical spin and charge responses of corner-shared 1D cuprates. Communications Physics, 2021, 4, .	5.3	14
68	Investigation of particle-hole asymmetry in the cuprates via electronic Raman scattering. Physical Review B, 2011, 84, .	3.2	13
69	Probing inter- and intrachain Zhang-Rice excitons in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Li</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> determining their binding energy. Physical Review B, 2016, 94, .	3.2	13
70	Orbital-selective Mott phases of a one-dimensional three-orbital Hubbard model studied using computational techniques. Physical Review E, 2016, 93, 063313.	2.1	13
71	Phonon linewidth due to electron-phonon interactions with strong forward scattering in FeSe thin films on oxide substrates. Physical Review B, 2017, 96, .	3.2	13
72	Doping dependence of ordered phases and emergent quasiparticles in the doped Hubbard-Holstein model. Physical Review B, 2017, 96, .	3.2	12

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73	Theoretical study of the spin and charge dynamics of two-leg ladders as probed by resonant inelastic x-ray scattering. Physical Review B, 2019, 99, .	3.2	12
74	Zero-bias anomaly in nanoscale hole-doped Mott insulators on a triangular silicon surface. Physical Review B, 2018, 97, .	3.2	11
75	Pairing correlations in the cuprates: A numerical study of the three-band Hubbard model. Physical Review B, 2021, 103, .	3.2	11
76	Role of Oxygen States in the Low Valence Nickelate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>La</mml:mi></mml:mrow><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:msub><mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>8</mml:mn></mml:mrow></mml:msub></mml:mrow></mml: Physical Review X, 2022, 12, .	8.9	11
77	Insights on the cuprate high energy anomaly observed in ARPES. Journal of Electron Spectroscopy and Related Phenomena, 2010, 181, 31-34.	1.7	10
78	Dispersing artifacts in FT-STS: a comparison of set point effects across acquisition modes. Nanotechnology, 2016, 27, 414004.	2.6	10
79	Enhanced superconductivity in FeSe/SrTiO3 from the combination of forward scattering phonons and spin fluctuations. Physical Review B, 2021, 103, .	3.2	10
80	Quadrupolar magnetic excitations in an isotropic spin-1 antiferromagnet. Nature Communications, 2022, 13, 2327.	12.8	10
81	Competing phases and orbital-selective behaviors in the two-orbital Hubbard-Holstein model. Physical Review B, 2017, 95, .	3.2	9
82	Quantum Fluctuations of Charge Order Induce Phonon Softening in a Superconducting Cuprate. Physical Review X, 2021, 11, .	8.9	9
83	High-energy anomaly in Nd2â^'xCexCuO4investigated by angle-resolved photoemission spectroscopy and quantum Monte Carlo simulations. Physical Review B, 2011, 83, .	3.2	8
84	Constraints on the total coupling strengthto bosons in the iron based superconductors. Physica Status Solidi (B): Basic Research, 2017, 254, 1700006.	1.5	8
85	Comment on â€˜Oxygen vacancy-induced magnetic moment in edge-sharing CuO₂ chains of Li₂CuO₂â€™. New Journal of Physics, 2018, 20, 058001.	2.9	8
86	Phase competition in a one-dimensional three-orbital Hubbard-Holstein model. Physical Review B, 2018, 97, .	3.2	8
87	Superconductivity in the bilayer Hubbard model: Two Fermi surfaces are better than one. Physical Review B, 2021, 104, .	3.2	8
88	Coupled Cu and Mn charge and orbital orders in YBa2Cu3O7/Nd0.65(Ca1-ySry)0.35MnO3 multilayers. Communications Physics, 2018, 1, .	5.3	7
89	Doping dependence of the electron-phonon coupling in two families of bilayer superconducting cuprates. Physical Review B, 2022, 105, .	3.2	7
90	Mass Enhancements and Band Shifts in Strongly Hole-Overdoped Fe-Based Pnictide Superconductors: KFe2As2 and CsFe2As2. Journal of Superconductivity and Novel Magnetism, 2018, 31, 777-783.	1.8	6

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91	Spectroscopic signatures of next-nearest-neighbor hopping in the charge and spin dynamics of doped one-dimensional antiferromagnets. Physical Review B, 2020, 102, .	3.2	6
92	Probing the interplay between lattice dynamics and short-range magnetic correlations in CuGeO3 with femtosecond RIXS. Npj Quantum Materials, 2021, 6, .	5.2	6
93	Dynamical tuning of the chemical potential to achieve a target particle number in grand canonical Monte Carlo simulations. Physical Review E, 2022, 105, 045311.	2.1	6
94	Enhancing <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi mathvariant="normal">c</mml:mi></mml:msub></mml:math> in a composite superconductor/metal bilayer system: A dynamical cluster approximation study. Physical Review B, 2022, 105, .	3.2	6
95	Polaron and bipolaron tendencies in a semiclassical model for hole-doped bismuthates. Physical Review B, 2021, 103, .	3.2	5
96	Beyond the single-site approximation modeling of electron-phonon coupling effects on resonant inelastic X-ray scattering spectra. SciPost Physics, 2021, 11, .	4.9	5
97	Hybridization of Bogoliubov Quasiparticles between Adjacent <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CuO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Layers in the Triple-Layer Cuprate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Bi</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>	7.8	5
98	Surface Adatom Conductance Filtering in Scanning Tunneling Spectroscopy of Co-doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>BaFe</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>As</mml:mi>	7.8	4
99	Pnictide Superconductors. Physical Review Letters, 2012, 109, 127001. From bad metal to Kondo insulator: temperature evolution of the optical properties of SmB6. New Journal of Physics, 2016, 18, 123003.	2.9	4
100	Nonrigid band shift and nonmonotonic electronic structure changes upon doping in the normal state of the pnictide high-temperature superconductor<mml:math		