

# David C Johnston

## List of Publications by Year in descending order

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118  
papers

6,290  
citations

117453

34  
h-index

66788

78  
g-index

119  
all docs

119  
docs citations

119  
times ranked

5046  
citing authors

#	ARTICLE	IF	CITATIONS
1	Spin dynamics in the hyperhoneycomb lattice. <a href="#">arXiv:2105.08811v1 [cond-mat.str-el]</a> $\langle \mathbf{S}_i \cdot \mathbf{S}_{i+\mathbf{a}_j} \rangle$ vs $T$ . Physical Review Letters, 2021, 126, 177201, .	1.1	1
2	Itinerant G-type antiferromagnet $\text{SrCr}_2\text{As}_2$ studied by magnetization, heat capacity, electrical resistivity, and NMR measurements. Physical Review B, 2022, 105, .	1.1	2
3	Topological electronic structure of $\text{YbMg}_2\text{Bi}_2$ and $\text{CaMg}_2\text{Bi}_2$ . Npj Quantum Materials, 2022, 7, .	1.8	7
4	A new portal for the physics of high-purity metals. Physical Review Materials, 2022, 6, .	0.2	0
5	Zero-field magnetic ground state of $\text{EuMg}_2\text{As}_2$ . Physical Review B, 2021, 103, .	1.1	1
6	Suppression of antiferromagnetic order and strong ferromagnetic spin fluctuations in $\text{Ca}(\text{Co}_{1-x}\text{Ni}_x)_2\text{As}_2$ single crystals. Physical Review B, 2021, 104, .	1.1	0
7	Molecular-field-theory fits to magnetic susceptibilities of antiferromagnetic $\text{GdCu}_2\text{Si}_2$ , $\text{CuO}$ , $\text{LiCrO}_2$ , and $-\text{CaCr}_2\text{O}_4$ single crystals below their Néel temperatures. Journal of Magnetism and Magnetic Materials, 2021, 535, 168062, .	1.0	4
8	Short-range ferromagnetic order due to Ir substitutions in single-crystalline $\text{Ba}(\text{Co}_{1-x}\text{Ir}_x)_2\text{As}_2$ ( $0 \leq x \leq 1/2$ ). Physical Review B, 2021, 104, .	0.7	0
9	First-order antiferromagnetic transitions of $\text{SrMn}_2\text{P}_2$ and $\text{CaMn}_2\text{P}_2$ single crystals containing corrugated-honeycomb Mn sublattices. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	8
10	Electron-phonon coupling enhancement and displacive magnetostructural transition in $\text{SrCr}_2\text{As}_2$ under magneto-Raman spectroscopy. Journal of Physics Condensed Matter, 2021, 33, 105401, .	0.7	2
11	A-type antiferromagnetic order and magnetic phase diagram of the trigonal Eu spin-7/2 triangular-lattice compound $\text{EuSn}_2\text{As}_2$ . Physical Review B, 2021, 104, .	1.1	11
12	Carrier tuning of Stoner ferromagnetism in $\text{ThCr}_2\text{As}_2$ -structure cobalt arsenides. Physical Review B, 2021, 104, .	1.1	1
13	Incommensurate and commensurate antiferromagnetic states in $\text{CaMn}_2\text{P}_2$ and $\text{SrMn}_2\text{P}_2$ . Physical Review B, 2021, 104, .	1.1	0
14	Noninteracting electrons in a prototypical one-dimensional sinusoidal potential. American Journal of Physics, 2020, 88, 1109-1122.	0.3	2
15	Magnetic ordering and quadrupolar magnetic interaction in $\text{EuMg}_2\text{As}_2$ revealed by NMR. Physical Review B, 2020, 102, .	1.1	4
16	Magnetic, thermal, and electronic-transport properties of $\text{EuMg}_2\text{As}_2$ single crystals. Physical Review B, 2020, 101, .	1.1	1
17	Reply to "Comment on 'Magnetic structure and magnetization of z-axis helical Heisenberg antiferromagnets with XY anisotropy in high magnetic fields transverse to the helix axis at zero temperature'". Physical Review B, 2020, 101, .	1.1	1
18	Ferromagnetic cluster-glass phase in $\text{Ca}(\text{Co}_{1-x}\text{Ir}_x)_2\text{As}_2$ crystals. Physical Review B, 2020, 102, .	1.1	12

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19	Magnetic phase transitions in $\text{Eu}(\text{As}_{1-x}\text{Sb}_x)_2$ . <i>Physical Review Materials</i> , 2020, 4, .	0.9	10
20	Instability and evolution of the magnetic ground state in metallic perovskites $\text{GdRh}_3\text{C}_{1-x}\text{B}_x$ . <i>Physical Review Materials</i> , 2020, 4, .	0.9	1
21	Antiferromagnetic stacking of ferromagnetic layers and doping-controlled phase competition in $\text{Ca}_{1-x}\text{Mn}_x\text{As}_2$ . <i>Physical Review B</i> , 2019, 100, .	1.1	11
22	Competing magnetic phases and itinerant magnetic frustration in $\text{SrCo}_2\text{As}_2$ . <i>Physical Review B</i> , 2019, 100, .	1.1	12
23	Magnetic structure and magnetization of $\text{ZrO}_2$ -axis helical Heisenberg antiferromagnets with XY anisotropy in high magnetic fields transverse to the helix axis at zero temperature. <i>Physical Review B</i> , 2019, 99, .	1.1	8
24	Helical magnetic ordering in $\text{Sr}_2\text{MnO}_5$ . <i>Physical Review B</i> , 2019, 100, .	1.1	10
25	Cycloidal paths in physics as superpositions of translational and rotational motions. <i>American Journal of Physics</i> , 2019, 87, 802-814.	0.3	1
26	Helical antiferromagnetic ordering in $\text{EuNi}_2\text{As}_2$ single crystals. <i>Physical Review B</i> , 2019, 100, .	1.1	16
27	Non-Fermi-liquid types of behavior associated with a magnetic quantum critical point in $\text{Sr}_2\text{MnO}_5$ . <i>Physical Review B</i> , 2019, 100, .	1.1	10
28	$\text{CsMn}_4\text{As}_3$ : A Layered Tetragonal Transition-Metal Pnictide Compound with an Antiferromagnetic Ground State. <i>Inorganic Chemistry</i> , 2018, 57, 3206-3214.	1.9	7
29	Enhanced moments of Eu in single crystals of the metallic helical antiferromagnet $\text{EuCo}_2\text{As}_2$ . <i>Physical Review B</i> , 2018, 97, .	1.1	21
30	Antiferromagnetism in semiconducting $\text{SrMn}_2\text{BaMn}_2$ crystals. <i>Physical Review B</i> , 2018, 97, .	1.1	24
31	Collinear antiferromagnetism in trigonal $\text{SrMn}_2\text{As}_2$ revealed by single-crystal neutron diffraction. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 035802.	0.7	17
32	Multiple crossovers between positive and negative magnetoresistance versus field due to fragile spin structure in metallic $\text{GdPd}_3$ . <i>Scientific Reports</i> , 2017, 7, 42789.	1.6	7
33	Influence of uniaxial single-ion anisotropy on the magnetic and thermal properties of Heisenberg antiferromagnets within unified molecular field theory. <i>Physical Review B</i> , 2017, 95, .	1.1	26
34	Magnetic structure and magnetization of helical antiferromagnets in high magnetic fields perpendicular to the helix axis at zero temperature. <i>Physical Review B</i> , 2017, 96, .	1.1	24
35	Effective One-Dimensional Coupling in the Highly Frustrated Square-Lattice Itinerant Magnet $\text{CaCo}_2\text{As}_2$ . <i>Physical Review Letters</i> , 2017, 119, 147201.	2.9	25
36	Suppression of magnetic order in $\text{CaCo}_{1.86}\text{As}_2$ with Fe substitution: Magnetization, neutron diffraction, and x-ray diffraction studies of $\text{Ca}(\text{Co}_{1-x}\text{Fe}_x)\text{As}_2$ . <i>Physical Review B</i> , 2017, 95, .	1.1	11

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37	Itinerant G-type antiferromagnetic order in $\text{SrCr}_2\text{As}_2$ . Physical Review B, 2017, 96, .		
38	NMR determination of an incommensurate helical antiferromagnetic structure in $\text{EuCo}_2\text{As}_2$ . Physical Review B, 2017, 95, .		
39	NMR studies of the incommensurate helical antiferromagnet $\text{EuCo}_2\text{P}_2$ : Determination of antiferromagnetic propagation vector. Physical Review B, 2017, 96, .	1.1	9
40	Robust antiferromagnetic spin waves across the metal-insulator transition in hole-doped $\text{BaMn}_2\text{As}_2$ . Physical Review B, 2017, 95, .		
41	Influence of classical anisotropy fields on the properties of Heisenberg antiferromagnets within unified molecular field theory. Physical Review B, 2017, 96, .	1.1	5
42	Anomalous Composition-Induced Crossover in the Magnetic Properties of the Itinerant-Electron Antiferromagnet $\text{Ca}_{1-x}\text{Sr}_x\text{Co}_2\text{As}_2$ . Physical Review Letters, 2017, 119, 257203.	2.9	13
43	Metallic behavior induced by potassium doping of the trigonal antiferromagnetic insulator $\text{EuMn}_2\text{As}_2$ . Physical Review B, 2016, 94, .	1.1	13
44	Strong magnetic correlations to 900 K in single crystals of the trigonal antiferromagnetic insulators $\text{SrMn}_2\text{As}_2$ and $\text{CaMn}_2\text{As}_2$ . Physical Review B, 2016, 94, .		
45	Superconducting liquid behavior in the $\text{CaPd}_2\text{As}_2$ superconductor. Physical Review B, 2016, 93, .	1.1	14
46	Pressure-induced collapsed-tetragonal phase in $\text{EuCo}_2\text{As}_2$ : A model molecular-field helical Heisenberg antiferromagnet. Physical Review B, 2016, 94, .	1.1	35
47	Magnetic dipole interactions in crystals. Physical Review B, 2016, 93, .	1.1	60
48	Coexistence of antiferromagnetic and ferromagnetic spin correlations in $\text{SrCo}_2\text{As}_2$ and $\text{SrCo}_2\text{P}_2$ . Physical Review B, 2015, 91, .	1.1	29
49	$\text{Ba}_0.4\text{Rb}_0.6\text{Mn}_2\text{As}_2$ : A prototype half-metallic ferromagnet. Physical Review B, 2015, 92, .	1.1	9
50	Pressure-induced collapsed-tetragonal phase in $\text{SrCo}_2\text{As}_2$ . Physical Review B, 2015, 92, .	1.1	16
51	Thermodynamics of the noninteracting Bose gas in a two-dimensional box. Physical Review E, 2015, 92, 062109.	0.8	4
52	Competing Magnetic Fluctuations in Iron Pnictide Superconductors: Role of Ferromagnetic Spin Correlations Revealed by NMR. Physical Review Letters, 2015, 115, 137001.	2.9	34
53	Antiferromagnetism in $\text{EuCu}_2\text{As}_2$ single crystals. Physical Review B, 2015, 91, .	1.1	35
54	Itinerant Ferromagnetism in the As <sub>4p</sub> Conduction Band of $\text{Ba}_0.6\text{K}_0.4\text{Mn}_2\text{As}_2$ Identified by X-Ray Magnetic Circular Dichroism. Physical Review Letters, 2015, 114, 217001.	2.9	26

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55	Unified molecular field theory for collinear and noncollinear Heisenberg antiferromagnets. Physical Review B, 2015, 91, .	1.1	57
56	The magnetic structure of $\text{EuCu}_2\text{Sb}_2$ . Journal of Physics Condensed Matter, 2015, 27, 206002.	0.7	8
57	Crystallography and physical properties of $\text{BaCo}_2\text{As}_2$ , $\text{Ba}_{0.94}\text{K}_{0.06}\text{Co}_2\text{As}_2$ , and $\text{Ba}_{0.78}\text{K}_{0.22}\text{Co}_2\text{As}_2$ . Physical Review B, 2014, 90, .	1.1	25
58	Physical properties of metallic antiferromagnetic $\text{CaCo}_2$ single crystals. Physical Review B, 2014, 89, .	1.1	44
59	Taking Advantage of Gold's Electronegativity in $\text{R}_4\text{Mn}_3\text{Au}_{10+x}$ ( $\text{R} = \text{Gd or Y}; 0.2 \text{ \AA} \leq x \leq 0.4$ ). Physical Review B, 2014, 89, .	0.7	11
60	Helical antiferromagnetic ordering in $\text{Lu}_2\text{Sc}_x\text{MnSi}$ . Physical Review B, 2014, 90, .	1.1	10
61	Physical properties of $\text{EuPd}_2\text{As}_2$ single crystals. Journal of Physics Condensed Matter, 2014, 26, 286002.	0.7	12
62	Superconductivity and physical properties of $\text{CaPd}_2\text{Ge}_2$ single crystals. Journal of Physics Condensed Matter, 2014, 26, 405702.	0.7	11
63	Magnetic susceptibility of frustrated spin-1/2 quantum Heisenberg magnets: High-temperature expansion and exact diagonalization data. Journal of Physics: Conference Series, 2014, 529, 012023.	0.3	5
64	Antiferromagnetism in $\text{EuNiGe}_3$ . Physical Review B, 2013, 87, .	1.1	28
65	Electronic structure of copper pnictides: Influence of different cations and pnictogens. Physical Review B, 2013, 88, .	1.1	4
66	Experimental evidence of a collinear antiferromagnetic ordering in the frustrated $\text{CoAl}_2\text{O}_4$ spinel. Physical Review B, 2013, 88, .	1.1	41
67	$\text{Y}_3\text{MnAu}_5$ : Three Distinctive d-Metal Functions in an Intergrown Cluster Phase. Journal of the American Chemical Society, 2013, 135, 910-917.	6.6	12
68	Crystallographic, electronic, thermal, and magnetic properties of single-crystal $\text{SrCo}_2\text{As}_2$ . Physical Review B, 2013, 87, .	1.1	47
69	Crystallographic, electronic, thermal, and magnetic properties of single-crystal $\text{SrCo}_2\text{As}_2$ . Physical Review B, 2013, 88, .	1.1	67
70	Elaboration of the $\hat{I}\pm$ -model derived from the BCS theory of superconductivity. Superconductor Science and Technology, 2013, 26, 115011.	1.8	101
71	Metal-insulator transition in antiferromagnetic $\text{Ba}_{1-x}\text{K}_x\text{Mn}_2\text{As}_2$ ( $0 \leq x \leq 0.4$ ) single crystals studied by $^{55}\text{Mn}$ and $^{75}\text{As}$ NMR. Physical Review B, 2013, 88, .	1.1	15
72	Stripe Antiferromagnetic Spin Fluctuations in $\text{SrCo}_2\text{As}_2$ . Physical Review Letters, 2013, 111, 157001.	2.9	47

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73	Coexistence of Half-Metallic Itinerant Ferromagnetism with Local-Moment Antiferromagnetism in $\text{Ba}_{0.60}\text{Mn}_2\text{As}_2$ . Superconducting and normal-state properties of $\text{Mn}_2\text{As}$ .	1.9	32
74	$\text{PdA}$ .	1.1	59
75	Persistence of local-moment antiferromagnetic order in $\text{Ba}_{1-x}\text{K}_x\text{Mn}_2\text{As}_2$ . Physical Review B, 2013, 87, .	1.1	36
76	Angle-resolved photoemission spectroscopy study of $\text{BaCoMn}_2\text{As}_2$ .	1.1	22
77	$\text{Ba}_{1-x}\text{K}_x\text{Mn}_2\text{As}_2$ : An Antiferromagnetic Local-Moment Metal. Physical Review Letters, 2012, 108, 087005. Structural, thermal, magnetic, and electronic transport properties of the $\text{LaNiMn}_2\text{As}_2$ .	2.9	71
78			



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91	Unusual magnetic, thermal, and transport behavior of single-crystalline $\text{CaV}_2\text{P}_2\text{O}_{14}$ . Physical Review B, 2009, 79, .	1.1	14
92	Vortex dynamics and frustration in two-dimensional triangular chromium lattices. Physical Review B, 2009, 80, .	1.1	37
93	Magnetic structure and interactions in the quasi-one-dimensional antiferromagnet $\text{CaV}_2\text{P}_2\text{O}_{14}$ . Physical Review B, 2009, 79, .	1.1	23
94	$^{51}\text{V}$ NMR studies of the frustrated square-lattice compound $\text{LiV}_2\text{O}_4$ . Physical Review B, 2009, 79, .	1.1	63
95	Magnetic ordering in $\text{LiV}_2\text{O}_4$ by x-ray resonant magnetic scattering. Physical Review B, 2009, 79, .	1.1	19
96	Magnetic order in $\text{BaMn}_2\text{P}_2\text{O}_{14}$ neutron diffraction measurements. Physical Review B, 2009, 80, .	1.1	18
97	Magnetic, transport, and thermal properties of single crystals of the layered arsenide $\text{BaMn}_2\text{P}_2\text{O}_{14}$ . Physical Review B, 2009, 79, .	1.1	104
98	Magnetic, thermal, and transport properties of layered arsenides $\text{BaRu}_2\text{P}_2\text{O}_{14}$ and $\text{SrRu}_2\text{P}_2\text{O}_{14}$ . Physical Review B, 2009, 79, .	1.1	35
99	Single crystal growth and physical properties of the layered arsenide $\text{BaRh}_2\text{P}_2\text{O}_{14}$ . Physical Review B, 2009, 79, .	1.1	27
100	Magnetic and thermal properties of the $\text{Li}_2\text{V}_2\text{O}_7$ zig-zag spin-chain compound. Physical Review B, 2006, 74, .	1.1	16
101	heavy-fermion $\text{Li}_2\text{V}_2\text{O}_7$ crystals grown using a self-flux technique. Physical Review B, 2007, 76, .	1.1	16
102	Stretched exponential relaxation arising from a continuous sum of exponential decays. Physical Review B, 2006, 74, .	1.1	350
103	Dynamics of Magnetic Defects in Heavy Fermion $\text{Li}_2\text{V}_2\text{O}_7$ from Stretched Exponential $^{51}\text{V}$ NMR Relaxation. Physical Review Letters, 2005, 95, 176408.	2.9	35
104	Thermodynamics of the Spin-1/2 Antiferromagnetic Uniform Heisenberg Chain. Physical Review Letters, 2000, 84, 4701-4704.	2.9	110
105	$^{51}\text{V}$ NMR study of the heavy-fermion compound $\text{LiV}_2\text{O}_4$ . Physical Review B, 1998, 57, 8890-8899.	1.1	66
106	Chapter 1 Normal-state magnetic properties of single-layer cuprate high-temperature superconductors and related materials. Handbook of Magnetic Materials, 1997, 10, 1-237.	0.6	26
107	$\text{LiV}_2\text{O}_4$ : A Heavy Fermion Transition Metal Oxide. Physical Review Letters, 1997, 78, 3729-3732.	2.9	453
108	Intercalation and staging behavior in super-oxygenated $\text{La}_2\text{CuO}_4 + \hat{\gamma}$ . Zeitschrift für Physik B-Condensed Matter, 1996, 100, 535-545.	1.1	88

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109	Phase separation kinetics in $\text{La}_2\text{CuO}_4$ and inhomogeneous hole doping in the antiferromagnetic regime ( $0 < x < 0.02$ ) of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ . <i>Journal of Superconductivity and Novel Magnetism</i> , 1996, 9, 337-342.	0.5	1
110	The far-infrared conductivity of oxide superconductors. <i>Ferroelectrics</i> , 1996, 177, 83-94.	0.3	4
111	Spin Correlations and Magnetic Field Effects in the Weakly Anisotropic Square-Lattice Antiferromagnet $\text{Sr}_2\text{CuO}_2\text{Cl}_2$ . <i>Physical Review Letters</i> , 1995, 75, 2212-2215.	2.9	42
112	Spin Correlations and Magnetic Field Effects in the Weakly Anisotropic Square-Lattice Antiferromagnet $\text{Sr}_2\text{CuO}_2\text{Cl}_2$ . <i>Physical Review Letters</i> , 1995, 75, 4335-4335.	2.9	0
113	Magnetic penetration depth in $\text{V}_3\text{Si}$ and $\text{LiTi}_2\text{O}_4$ measured by $^{17}\text{O}$ NMR. <i>Hyperfine Interactions</i> , 1994, 86, 615-621.	0.2	9
114	Structural and magnetic studies of $\text{Sr}_2\text{IrO}_4$ . <i>Physical Review B</i> , 1994, 49, 9198-9201.	1.1	381
115	Magnetic Structures in $\text{RNi}_2\text{B}_2\text{C}$ (R = Ho, Er) Superconductors. <i>Materials Research Society Symposia Proceedings</i> , 1994, 376, 559.	0.1	0
116	Heat capacity of single-crystal $\text{La}_2\text{CuO}_4$ and polycrystalline $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ ( $0 \leq x \leq 0.20$ ) from 110 to 600 K. <i>Physical Review B</i> , 1991, 43, 239-246.	1.1	62
117	Superconductivity of transition metal sulfides, selenides, and phosphides with the NaCl structure. <i>Journal of Low Temperature Physics</i> , 1978, 33, 175-203.	0.6	44
118	Destruction of Superconductivity at the Onset of Long-Range Magnetic Order in the Compound $\text{ErRh}_4\text{B}_4$ . <i>Physical Review Letters</i> , 1977, 38, 987-990.	2.9	545