

# Mark D Lumsden

## List of Publications by Year in descending order

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135  
papers

8,300  
citations

61857

43  
h-index

46693

89  
g-index

138  
all docs

138  
docs citations

138  
times ranked

6811  
citing authors

#	ARTICLE	IF	CITATIONS
1	CHESSE: The future direct geometry spectrometer at the second target station. Review of Scientific Instruments, 2022, 93, .	0.6	9
2	Van Hove singularity in the magnon spectrum of the antiferromagnetic quantum honeycomb lattice. Nature Communications, 2021, 12, 171.	5.8	24
3	Possible observation of Kondo screening cloud in $\text{Yb}_{14}\text{MnSb}_{11}$ . Philosophical Magazine, 2020, 100, 1204-1210.	0.7	1
4	Finite field regime for a quantum spin liquid in $\text{YbAlO}_3$ . Physical Review B, 2019, 100, .	1.1	14
5	Multicomponent fluctuation spectrum at the quantum critical point in $\text{CeCu}_6\text{Ag}_x$ . Npj Quantum Materials, 2019, 4, .	1.8	4
6	Antiferromagnetic ordering and dipolar interactions of $\text{YbAlO}_3$ . Physical Review B, 2019, 99, .	1.1	14
7	Tomonaga-Luttinger liquid behavior and spinon confinement in $\text{YbAlO}_3$ . Nature Communications, 2019, 10, 698.	5.8	56
8	Frustrated Magnetism in Mott Insulating $\text{YbCl}_3$ . Physical Review B, 2019, 100, .	2.8	14
9	Constant field splitting, local anisotropy, and low-energy excitations in the quantum magnet $\text{YbCl}_3$ . Physical Review B, 2019, 100, .	1.1	26
10	Excitations in the field-induced quantum spin liquid state of $\text{Yb-RuCl}_3$ . Npj Quantum Materials, 2018, 3, .	1.8	254
11	Origin of magnetic excitation gap in double perovskite $\text{Sr}_2\text{YbO}_6$ . Physical Review B, 2018, 98, .	1.1	15
12	Behavior of the breathing pyrochlore lattice $\text{Ba}_3\text{Yb}_2\text{Zn}_5\text{O}_{11}$ in applied magnetic field. Journal of Physics Condensed Matter, 2018, 30, 455801.	0.7	11
13	Clamp cell with <i>in situ</i> pressure monitoring for low-temperature neutron scattering measurements. High Pressure Research, 2018, 38, 482-492.	0.4	12
14	Decoupled spin dynamics in the rare-earth orthoferrite $\text{YbFeO}_3$ : Evolution of magnetic excitations through the spin-reorientation transition. Physical Review B, 2018, 98, .	1.1	31
15	Physical properties of the trigonal binary compound $\text{Nd}_2\text{O}_3$ . Physical Review Materials, 2018, 2, .	0.9	9
16	Relevance of Kondo physics for the temperature dependence of the bulk modulus in plutonium. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E268.	3.3	9
17	Neutron scattering in the proximate quantum spin liquid $\text{Yb-RuCl}_3$ . Science, 2017, 356, 1055-1059.	6.0	499
18	Magnetic ground state of the Ising-like antiferromagnet $\text{DyScO}_3$ . Physical Review B, 2017, 96, .	1.1	17

#	ARTICLE	IF	CITATIONS
19	Excitations and magnetization density distribution in the dilute ferromagnetic semiconductor $\chi_{\text{Yb}} \sim 14 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review B, 2017, 95.	1.1	5
20	Interplay of spin-orbit coupling and hybridization in $\text{CaMn}_3\text{O}_{10}$ and $\text{CaMn}_3\text{O}_{11}$ $\chi_{\text{Ca}} \sim 1.1 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review B, 2017, 96.	1.1	12
21	Electronic Ground State in $\text{CaMn}_5\text{O}_{14}$ Oxides. $\chi_{\text{Ca}} \sim 2.9 \chi_{\text{Mn}}$ $\chi_{\text{Ca}} \sim 2.9 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review Letters, 2017, 118, 207202.	2.9	31
22	What can we learn from not so high pressure physics?. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C1430-C1430.	0.0	0
23	The Neutron Scattering Society of America Prizes. Neutron News, 2016, 27, 43-43.	0.1	0
24	The 8th American Conference on Neutron Scattering. Neutron News, 2016, 27, 4-10.	0.1	0
25	Strong anisotropy within a Heisenberg model in the insulating state of $\text{SrMn}_2\text{O}_7$ $\chi_{\text{Sr}} \sim 1.1 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review B, 2016, 94.	1.1	6
26	Extended magnetic exchange interactions in the high-temperature ferromagnet $\text{MnBi}$ . Applied Physics Letters, 2016, 108, .	1.5	32
27	Spin-orbit-driven magnetic structure and excitation in the 5d pyrochlore $\text{Cd}_2\text{Os}_2\text{O}_7$ . Nature Communications, 2016, 7, 11651.	5.8	56
28	Proximate Kitaev quantum spin liquid behaviour in a honeycomb magnet. Nature Materials, 2016, 15, 733-740.	13.3	762
29	Low-temperature crystal and magnetic structure of $\text{SrMn}_2\text{O}_7$ $\chi_{\text{Sr}} \sim 1.1 \chi_{\text{Mn}}$ Physical Review B, 2016, 93, .	1.1	11
30	Spin-orbit coupling controlled ground state in $\text{SrMn}_2\text{O}_7$ $\chi_{\text{Sr}} \sim 1.1 \chi_{\text{Mn}}$ Physical Review B, 2016, 93, .	1.1	11
31	Anisotropic Exchange within Decoupled Tetrahedra in the Quantum Breathing Pyrochlore $\text{BaMn}_3\text{O}_{13}$ $\chi_{\text{Ba}} \sim 2.9 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review Letters, 2016, 116, 257204.	2.9	55
32	On the Chemistry and Physical Properties of Flux and Floating Zone Grown $\text{SmB}_6$ Single Crystals. Scientific Reports, 2016, 6, 20860.	1.6	38
33	MCVINE – An object oriented Monte Carlo neutron ray tracing simulation package. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 810, 86-99.	0.7	51
34	Magnetic order and electronic structure of the $\text{SrMn}_2\text{O}_7$ perovskite $\chi_{\text{Sr}} \sim 1.1 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review B, 2015, 91, .	1.1	58
35	Influence of interstitial Mn on magnetism in the room-temperature ferromagnet $\text{Mn}_2\text{O}_7$ $\chi_{\text{Mn}} \sim 1.1 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review B, 2015, 91, .	1.1	19
36	Magnetic correlations in the quasi-two-dimensional semiconducting ferromagnet $\text{CrSiTe}_3$ $\chi_{\text{CrSiTe}_3} \sim 3.1 \chi_{\text{Mn}}$ <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> Physical Review B, 2015, 92, .	3.1	134

#	ARTICLE	IF	CITATIONS
37	Evolution of competing magnetic order in the state of Structural and magnetic phase transitions in	1.1	33
38			

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#	ARTICLE	IF	CITATIONS
55	ism and electronic structure of La $\text{Zn}_2\text{O}_6$ and La $\text{Zn}_2\text{O}_7$ $\text{Zn}_2\text{O}_6$ and La $\text{Zn}_2\text{O}_7$ $\text{Zn}_2\text{O}_6$ and La $\text{Zn}_2\text{O}_7$ $\text{Zn}_2\text{O}_6$ and La $\text{Zn}_2\text{O}_7$	1.1	80
56	Phonon Lifetime Investigation of Anharmonicity and Thermal Conductivity of $\text{UO}_2$ $\text{UO}_2$	2.9	132
57	Doping dependence of the spin excitations in the Fe-based superconductors Fe $_{1+y}$ Te $_{1-x}$ Sex. Physical Review B, 2013, 87, .	1.1	12
58	New Executive Committee of Neutron Scattering Society of America. Neutron News, 2013, 24, 39-39.	0.1	0
59	Quasi-One-Dimensional Magnons in an Intermetallic Marcasite. Physical Review Letters, 2012, 108, 167202.	2.9	21
60	Effect of molybdenum4dhole substitution in BaFe $_{2-x}$ As $_2$ . Physical Review B, 2012, 85, .	1.1	27
61	Magnetically Driven Metal-Insulator Transition in $\text{NaOsO}_3$ $\text{NaOsO}_3$	2.9	115
62	Temperature dependence of the resonance and low-energy spin excitations in superconducting FeTe $_{0.6}$ Se $_{0.4}$ . Physical Review B, 2012, 85, .	1.1	9
63	antiferromagnet K $\text{SVO}_4$ $\text{SVO}_4$	1.1	11
64	Competition between stripe and checkerboard magnetic instabilities in Mn-doped BaFe $_{1-x}$ As $_2$ $\text{BaFe}_2\text{As}_2$ $\text{BaFe}_2\text{As}_2$	1.1	44
65	Magnetic structural change of Sr $_{2-x}$ IrO $_4$ upon Mn doping. Physical Review B, 2012, 86, .	1.1	43
66	Magnetic order tuned by Cu substitution in Fe $\text{Fe}_{1-x}\text{Cu}_x\text{O}_2$ $\text{Fe}_{1-x}\text{Cu}_x\text{O}_2$	1.1	55
67	Competing zaf/mad and Antiferromagnetic phases in Ce $\text{LuFe}_2\text{O}_4$ $\text{LuFe}_2\text{O}_4$	2.9	55
68	Lattice dynamics reveals a local symmetry breaking in the emergent dipole phase of PbTe. Physical Review B, 2012, 86, .	1.1	55
69	Effect of pressure on the neutron spin resonance in the unconventional superconductor FeTe $_{1-x}$ Se $_x$ $\text{FeTe}_{1-x}\text{Se}_x$ $\text{FeTe}_{1-x}\text{Se}_x$	1.1	6
70	Effects of Transition Metal Substitutions on the Incommensurability and Spin Fluctuations $\text{BaFe}_2\text{As}_2$ $\text{BaFe}_2\text{As}_2$	2.9	37
71	Elastic and Inelastic Neutron Scattering. Physical Review Letters, 2012, 109, 167003.	1.1	15
72	Magnetic properties of the S=12quasisquare lattice antiferromagnet CuF $_2$ (H $_2$ O) $_2$ (pyz) (pyz=pyrazine) investigated by neutron scattering. Physical Review B, 2012, 86, . Magnetic structure determination of Ca $\text{Ca}_3\text{LiOsO}_6$ $\text{Ca}_3\text{LiOsO}_6$	1.1	19

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73	Magnetism and Disorder Effects on Muon Spin Rotation Measurements of the Magnetic Penetration Depth in Iron-Arsenic Superconductors. <i>Physical Review Letters</i> , 2011, 106, 127002.	2.9	28
74	Antiferromagnetic order in MnO spherical nanoparticles. <i>Physical Review B</i> , 2011, 83, .	1.1	17
75	Neutron scattering of iron-based superconductors. <i>Physica C: Superconductivity and Its Applications</i> , 2011, 471, 639-642.	0.6	1
76	Giant anharmonic phonon scattering in PbTe. <i>Nature Materials</i> , 2011, 10, 614-619.	13.3	561
77	Neutron Scattering Studies of spin excitations in hole-doped Ba <sub>0.67</sub> K <sub>0.33</sub> Fe <sub>2</sub> As <sub>2</sub> superconductor. <i>Scientific Reports</i> , 2011, 1, 115.	1.6	72
78	Spin-wave excitation in the antiferromagnetic bilayer ruthenate $\text{Ca}_3\text{Ru}_2\text{O}_7$ . <i>Physical Review B</i> , 2011, 84, .	1.1	8
79	Spin glass and semiconducting behavior in one-dimensional BaFe <sub>2</sub> (As <sub>0.2</sub> ) crystals. <i>Physical Review B</i> , 2011, 84, .	1.1	58
80	Spatial inhomogeneity in RFeAsO <sub>1-x</sub> F <sub>x</sub> (R=Pr, Nd) determined from rare-earth crystal-field excitations. <i>Physical Review B</i> , 2011, 83, .	1.1	11
81	Comparing magnetic ground states in nonsuperconducting $\text{Ba}(\text{small math})\text{Tj}$ FeTe. <a href="https://arxiv.org/abs/1011.0784">arXiv:1011.0784 [cond-mat]</a> , 2010, 1011.0784.	1.1	69
82	Antiferromagnetic order and superlattice structure in nonsuperconducting and superconducting $\text{Rb}_x\text{Fe}_2\text{As}_2$ . <i>Physical Review B</i> , 2011, 83, .	1.1	54
83	Coexistence of spiral and commensurate structures in a triangular antiferromagnet $\text{KFe}(\text{MoO}_4)_2$ . <i>Journal of Physics: Conference Series</i> , 2010, 200, 032068.	0.3	3
84	Evolution of spin excitations into the superconducting state in $\text{FeTe}_{1-x}\text{Se}_x$ . <i>Nature Physics</i> , 2010, 6, 182-186.	6.5	151
85	Doping dependence of spin dynamics in electron-doped $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$ . <i>Physical Review B</i> , 2010, 82, .	1.1	38
86	Dispersion of the superconducting spin resonance in underdoped and antiferromagnetic $\text{BaFe}_2\text{As}_2$ . <i>Physical Review B</i> , 2010, 81, .	1.1	30
87	Paramagnetic spin correlations in $\text{CaFe}_2\text{As}_2$ crystals. <i>Physical Review B</i> , 2010, 81, .	1.1	14
88	Neutron scattering and scaling behavior in $\text{URu}_2\text{Si}_2$ . <i>Physical Review B</i> , 2010, 81, .	1.1	14
89	Unusual Relationship between Magnetism and Superconductivity in $\text{FeTe}_{0.5}\text{Se}_{0.5}$ . <i>Physical Review Letters</i> , 2010, 104, 187002.	2.9	62
90	Magnetism in Fe-based superconductors. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 203203.	0.7	289

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91	Inelastic neutron scattering study of the resonance mode in the optimally doped pnictide superconductor $\text{LaFeAsO}$ . Physical Review B, 2010, 82, .	1.1	47
92	Spin excitations in $\text{BaFe}_2\text{As}_2$ observed by inelastic neutron scattering. Physical Review B, 2009, 80, .	1.1	184
93	critical point in $\text{CaF}_2$ . Physical Review Letters, 2009, 102, 107005.	1.1	6
94	Two-dimensional resonant magnetic excitation in $\text{BaFe}_2\text{As}_2$ . Physical Review Letters, 2009, 102, 107005.	2.9	237
95	Chiral and Collinear Ordering in a Distorted Triangular Antiferromagnet. Physical Review Letters, 2009, 102, 037202.	2.9	26
96	Static and Dynamic Magnetism in Underdoped Superconductor $\text{BaFe}_2\text{As}_2$ . Physical Review Letters, 2009, 103, 087002.	2.9	150
97	Spin-lozenge thermodynamics and magnetic excitations in $\text{Na}_3\text{RuO}_4$ . Journal of Physics Condensed Matter, 2009, 21, 506003.	0.7	9
98	Neutron diffraction in a model itinerant metal near a quantum critical point. Journal of Physics: Conference Series, 2009, 150, 042189.	0.3	0
99	Elastic neutron scattering in Quantum Critical Antiferromagnet. Physica B: Condensed Matter, 2008, 403, 1276-1278.	1.3	3
100	Unconventional superconductivity in $\text{Ba}_{0.6}\text{K}_{0.4}\text{Fe}_2\text{As}_2$ from inelastic neutron scattering. Nature, 2008, 456, 930-932.	13.7	543
101	Phonon Density of States of $\text{LaFeAsO}$ . Physical Review Letters, 2008, 101, 157004.	2.9	65
102	Phase transitions in $\text{LaFeAsO}$ : Structural, magnetic, elastic, and transport properties, heat capacity and Mössbauer spectra. Physical Review B, 2008, 78, .	1.1	284
103	Lattice and magnetic structures of $\text{PrFeAsO}$ . Physical Review Letters, 2008, 101, 157004.	1.1	133
104	Anisotropic Three-Dimensional Magnetism in $\text{CaFe}_2\text{As}_2$ . Physical Review Letters, 2008, 101, 227205.	2.9	90
105	Singlet-Triplet Dispersion Reveals Additional Frustration in the Triangular-Lattice Dimer Compound $\text{Ba}_3\text{Mn}_8\text{O}_{16}$ . Physical Review Letters, 2008, 101, 157004.	1.1	16
106	Three-Dimensional Magnetic Correlations in Multiferroic $\text{LuFe}_2\text{O}_4$ . Physical Review Letters, 2008, 100, 107601.	2.9	130
107	The Triple-Axis Spectrometers at the High Flux Isotope Reactor. Neutron News, 2008, 19, 18-21.	0.1	1
108	Dispersive magnetic excitations in the antiferromagnet $\text{Ba}_3\text{Mn}_2\text{O}_8$ . Physical Review B, 2008, 77, .	1.1	31

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109	Charge Order in $\text{LuFe}_2\text{O}_4$ : Antiferroelectric Ground State of a Quantum Critical System. Neutron Scattering on $\text{LuFe}_2\text{O}_4$ . Physical Review Letters, 2007, 99, 087204.	2.9	120
110	Structural modulation in $\text{K}_2\text{V}_3\text{O}_8$ . Journal of Solid State Chemistry, 2007, 180, 812-817.	1.1	14
111	Quantum Spin Correlations in an Organometallic Alternating-Sign Chain. Physical Review Letters, 2007, 99, 087204.	2.9	42
112	Structural modulation in $\text{K}_2\text{V}_3\text{O}_8$ . Journal of Solid State Chemistry, 2007, 180, 812-817.	1.4	12
113	Temperature-dependent bilayer ferromagnetism in $\text{Sr}_3\text{Ru}_2\text{O}_7$ . Physical Review B, 2006, 73, .	1.1	19
114	SPICE – Spectrometer and Instrument Control Environment. Physica B: Condensed Matter, 2006, 385-386, 1336-1339.	1.3	14
115	Spin dynamics of the low-dimensional magnet $(\text{CH}_3)_2\text{NH}_2\text{CuCl}_3$ . Physica B: Condensed Matter, 2006, 385-386, 438-440.	1.3	5
116	Anisotropic spin waves and exchange interactions in the A-type antiferromagnetic state of $\text{Pr}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ . Physical Review B, 2006, 73, .	1.1	10
117	Magnetic excitation spectrum of the square lattice $S=1$ Heisenberg antiferromagnet $\text{K}_2\text{V}_3\text{O}_8$ . Physical Review B, 2006, 74, .	1.1	17
118	UB matrix implementation for inelastic neutron scattering experiments. Journal of Applied Crystallography, 2005, 38, 405-411.	1.9	15
119	Temperature Dependence of the Magnetic Penetration Depth in the Vortex State of the Pyrochlore Superconductor, $\text{Cd}_2\text{Re}_2\text{O}_7$ . Physical Review Letters, 2002, 89, 147002.	2.9	24
120	Magnetic Field Enhancement of Heat Transport in the 2D Heisenberg Antiferromagnet $\text{K}_2\text{V}_3\text{O}_8$ . Physical Review Letters, 2002, 88, 095901.	2.9	44
121	Structural ordering and symmetry breaking in $\text{Cd}_2\text{Re}_2\text{O}_7$ . Physical Review B, 2002, 66, .	1.1	47
122	Weak Ferromagnetism and Field-Induced Spin Reorientation in $\text{K}_2\text{V}_3\text{O}_8$ . Physical Review Letters, 2001, 86, 159-162.	2.9	78
123	Long-range antiferromagnetic order in the $S=1$ chain compound $\text{LiVGe}_2\text{O}_6$ . Physical Review B, 2000, 62, R9244-R9247.	1.1	34
124	Two Dimensional Ordering and Fluctuations in $\text{NaV}_2\text{O}_5$ . Physical Review Letters, 2000, 84, 3446-3449.	2.9	14
125	Cooperative Paramagnetism in the Geometrically Frustrated Pyrochlore Antiferromagnet $\text{Tb}_2\text{Ti}_2\text{O}_7$ . Physical Review Letters, 1999, 82, 1012-1015.	2.9	487
126	Critical phenomena at the spin-Peierls transition in $\text{MEM}(\text{TCNQ})_2$ . Physical Review B, 1999, 59, 9372-9381.	1.1	15



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127	X-ray-diffraction study of critical phenomena at the spin-Peierls transition in CuGeO <sub>3</sub> . Physical Review B, 1998, 57, 14097-14104.	1.1	18
128	Critical phenomena at the spin-Peierls transition in doped CuGeO <sub>3</sub> . Physical Review B, 1998, 58, 12252-12259.	1.1	8
129	c-axis Josephson tunneling in twinned and untwinned YBCO-Pb Junctions. Physical Review B, 1997, 55, 9088-9093.	1.1	15
130	Antiferromagnetism, structural properties, and electronic transport of BaCo <sub>0.9</sub> Ni <sub>0.1</sub> S <sub>1.8</sub> . Physical Review B, 1997, 55, 12375-12381.	1.1	12
131	Neutron scattering studies of geometrically frustrated pyrochlore antiferromagnets. Physica B: Condensed Matter, 1997, 241-243, 511-516.	1.3	4
132	Critical Phenomena of the Spin-Peierls Transition in CuGeO <sub>3</sub> . Physical Review Letters, 1996, 76, 4919-4922.	2.9	18
133	Critical properties of the spin Peierls transition in CuGeO <sub>3</sub> . Journal of Applied Physics, 1996, 79, 5081.	1.1	2
134	X-ray single-crystal study of the low-temperature structure of. Journal of Physics Condensed Matter, 1996, 8, 10899-10906.	0.7	7
135	Phase transitions involving vacancy ordering in two metal mercuric iodides, Ag <sub>2</sub> HgI <sub>4</sub> and Cu <sub>2</sub> HgI <sub>4</sub> . Journal of Applied Physics, 1995, 77, 6039-6041.	1.1	9