Peter J Baker

List of Publications by Citations

128 papers	4,070 citations	30 h-index	60 g-index
138 ext. papers	4,667 ext. citations	6.5 avg, IF	4.9 L-index

#	Paper	IF	Citations
128	Spin waves and revised crystal structure of honeycomb iridate Na2IrO3. *Physical Review Letters*, **2012**, 108, 127204	7.4	408
127	Enhancement of the superconducting transition temperature of FeSe by intercalation of a molecular spacer layer. *Nature Materials*, **2013**, 12, 15-9	27	324
126	Coexistence of static magnetism and superconductivity in SmFeAsO(1-x)F(x) as revealed by muon spin rotation. *Nature Materials*, **2009**, 8, 310-4	27	245
125	Structure, antiferromagnetism and superconductivity of the layered iron arsenide NaFeAs. *Chemical Communications*, **2009**, 2189-91	5.8	178
124	Polymorphism control of superconductivity and magnetism in Cs(3)C(60) close to the Mott transition. *Nature*, **2010**, 466, 221-5	50.4	177
123	Magnetic and non-magnetic phases of a quantum spin liquid. *Nature*, **2011**, 471, 612-6	50.4	132
122	Coexistence of superconductivity and magnetism by chemical design. *Nature Chemistry*, **2010**, 2, 1031-6	17.6	129
121	Evidence for superconductivity with broken time-reversal symmetry in locally noncentrosymmetric SrPtAs. *Physical Review B*, **2013**, 87,	3.3	118
120	Coexistence of magnetic fluctuations and superconductivity in the pnictide high temperature superconductor SmFeAsO1-xFx measured by muon spin rotation. *Physical Review Letters*, **2008**, 101, 097010	7.4	111
119	Control of the competition between a magnetic phase and a superconducting phase in cobalt-doped and nickel-doped NaFeAs using electron count. *Physical Review Letters*, **2010**, 104, 057007	7.4	104
118	Partial cation substitution reduces iodide ion transport in lead iodide perovskite solar cells. *Energy and Environmental Science*, **2019**, 12, 2264-2272	35.4	99
117	Muon Spin Relaxation Evidence for the U(1) Quantum Spin-Liquid Ground State in the Triangular Antiferromagnet YbMgGaO_{4}. *Physical Review Letters*, **2016**, 117, 097201	7.4	97
116	Magnetic order in the quasi-one-dimensional spin-1⁄2 molecular chain compound copper pyrazine dinitrate. *Physical Review B*, **2006**, 73,	3.3	80
115	Strong H...F hydrogen bonds as synthons in polymeric quantum magnets: structural, magnetic, and theoretical characterization of [Cu(HF2)(pyrazine)2]SbF6, [Cu2F(HF)(HF2)(pyrazine)4](SbF6)2, and [CuAg(H3F4)(pyrazine)5](SbF6)2. *Journal of the American Chemical Society*, **2009**, 131, 6733-47	16.4	72
114	Properties of new magnetic surfactants. *Langmuir*, **2013**, 29, 3246-51	4	64
113	Compositional control of the superconducting properties of LiFeAs. *Journal of the American Chemical Society*, **2010**, 132, 10467-76	16.4	58
112	Magnetic order in the S=1⁄2 two-dimensional molecular antiferromagnet copper pyrazine perchlorate Cu(Pz)2(ClO4)2. *Physical Review B*, **2007**, 75,	3.3	54

111	Response of superconductivity and crystal structure of LiFeAs to hydrostatic pressure. *Journal of the American Chemical Society*, **2009**, 131, 2986-92	16.4	49
110	Fast microwave-assisted synthesis of Li-stuffed garnets and insights into Li diffusion from muon spin spectroscopy. *Journal of Materials Chemistry A*, **2016**, 4, 1729-1736	13	45
109	Muon studies of Li+ diffusion in LiFePO4 nanoparticles of different polymorphs. *Journal of Materials Chemistry A*, **2014**, 2, 6238-6245	13	43
108	Enhanced superfluid stiffness, lowered superconducting transition temperature, and field-induced magnetic state of the pnictide superconductor LiFeAs. *Physical Review B*, **2009**, 79,	3.3	41
107	Muon spin relaxation investigation of magnetic ordering in the hybrid organic-inorganic perovskites [(CH3)2NH2]M(HCOO)3 (M=Ni,Co,Mn,Cu). *Physical Review B*, **2010**, 82,	3.3	40
106	Two-dimensional XY behavior observed in quasi-two-dimensional quantum Heisenberg antiferromagnets. *Physical Review B*, **2009**, 79,	3.3	40
105	Measurement of the internal magnetic field in the correlated iridates Ca4IrO6, Ca5Ir3O12, Sr3Ir2O7 and Sr2IrO4. *Physical Review B*, **2011**, 83,	3.3	39
104	Gradual destruction of magnetism in the superconducting family NaFe1−xCoxAs. *Physical Review B*, **2012**, 85,	3.3	38
103	Muon-fluorine entangled states in molecular magnets. *Physical Review Letters*, **2007**, 99, 267601	7.4	36
102	Local magnetism and spin correlations in the geometrically frustrated cluster magnet LiZn2Mo3O8. *Physical Review B*, **2014**, 89,	3.3	33
101	Heat capacity measurements on FeAs-based compounds: a thermodynamic probe of electronic and magnetic states. *New Journal of Physics*, **2009**, 11, 025010	2.9	33
100	Exotic magnetism on the quasi-fcc lattices of the d3 double Perovskites La2NaB′O6 (B′=Ru, Os). *Physical Review Letters*, **2014**, 112, 117603	7.4	31
99	Magnetic order in quasi-two-dimensional molecular magnets investigated with muon-spin relaxation. *Physical Review B*, **2011**, 84,	3.3	30
98	Probing magnetic order in LiMPO4 (M= Ni, Co, Fe) and lithium diffusion in LixFePO4. *Physical Review B*, **2011**, 84,	3.3	28
97	Quantum spin liquid ground state in the disorder free triangular lattice NaYbS2. *Physical Review B*, **2019**, 100,	3.3	27
96	Spin freezing and dynamics in Ca3Co2−xMnxO6 (x≥0.95) investigated with implanted muons: Disorder in the anisotropic next-nearest-neighbor Ising model. *Physical Review B*, **2009**, 80,	3.3	26
95	Frustration of magnetic and ferroelectric long-range order in Bi(2)Mn(4/3)Ni(2/3)O(6). *Journal of the American Chemical Society*, **2009**, 131, 14000-17	16.4	26
94	Probing Mg Migration in Spinel Oxides. *Chemistry of Materials*, **2020**, 32, 663-670	9.6	26

93	Magnetism in geometrically frustrated YMnO3 under hydrostatic pressure studied with muon spin relaxation. *Physical Review Letters*, **2007**, 98, 197203	7.4	25
92	Thermodynamic and magnetic properties of the layered triangular magnet NaNiO2. *Physical Review B*, **2005**, 72,	3.3	25
91	Low-moment magnetism in the double perovskites Ba2MOsO6 (M=Li,Na). *Physical Review B*, **2011**, 84,	3.3	23
90	Magnetic properties and magnetic structures of synthetic natrochalcites, NaM(II)2(D3O2)(MoO4)2, M = Co or Ni. *Journal of the American Chemical Society*, **2008**, 130, 13490-9	16.4	23
89	Influence of bromide content on iodide migration in inverted MAPb(I1⊠Brx)3 perovskite solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 22604-22614	13	23
88	Characterization of the antiferromagnetism in Ag(pyz)2(S2O8) (pyz = pyrazine) with a two-dimensional square lattice of Ag2+ ions. *Journal of the American Chemical Society*, **2009**, 131, 4590-1	16.4	22
87	Design and commissioning of a high magnetic field muon spin relaxation spectrometer at the ISIS pulsed neutron and muon source. *Review of Scientific Instruments*, **2011**, 82, 073904	1.7	22
86	Kagome staircase compounds Ni3V2O8 and Co3V2O8 studied with implanted muons. *Physical Review B*, **2007**, 75,	3.3	22
85	Two-gap superconductivity with line nodes in CsCa2Fe4As4F2. *Physical Review B*, **2018**, 97,	3.3	21
84	Isotope effect in quasi-two-dimensional metal-organic antiferromagnets. *Physical Review B*, **2008**, 78,	3.3	21
83	Muon-spin relaxation measurements on the dimerized spin-1⁄2 chains NaTiSi2O6 and TiOCl. *Physical Review B*, **2007**, 75,	3.3	21
82	Studies of a Large Odd-Numbered Odd-Electron Metal Ring: Inelastic Neutron Scattering and Muon Spin Relaxation Spectroscopy of Cr8 Mn. *Chemistry - A European Journal*, **2016**, 22, 1779-88	4.8	20
81	Weak magnetic transitions in pyrochlore Bi2Ir2O7. *Physical Review B*, **2013**, 87,	3.3	19
80	Muon-spin relaxation and heat capacity measurements on the magnetoelectric and multiferroic pyroxenes LiFeSi2O6 and NaFeSi2O6. *Physical Review B*, **2010**, 81,	3.3	19
79	Quantum Griffiths Phase Inside the Ferromagnetic Phase of Ni_{1-x}V_{x}. *Physical Review Letters*, **2017**, 118, 267202	7.4	18
78	Giant Magnetic Hardness in the Synthetic Mineral Ferrimagnet K2CoII3(OH)2(SO4)3(H2O)2. *Chemistry of Materials*, **2010**, 22, 4090-4095	9.6	18
77	as a probe of anisotropy in low-dimensional molecular magnets. *Journal of Physics and Chemistry of Solids*, **2007**, 68, 2039-2043	3.9	18
76	Intrinsic magnetic order in Cs2AgF4 detected by muon-spin relaxation. *Physical Review B*, **2007**, 75,	3.3	18

75	Controlling Magnetic Order and Quantum Disorder in Molecule-Based Magnets. *Physical Review Letters*, **2014**, 112,	7.4	17
74	Two-dimensional magnetism in the pnictide superconductor parent material SrFeAsF probed by muon-spin relaxation. *Physical Review B*, **2009**, 79,	3.3	17
73	Chiral-like critical behavior in the antiferromagnet cobalt glycerolate. *Physical Review Letters*, **2007**, 99, 017202	7.4	17
72	Structure–property insights into nanostructured electrodes for Li-ion batteries from local structural and diffusional probes. *Journal of Materials Chemistry A*, **2018**, 6, 127-137	13	17
71	Candidate quantum spin liquid due to dimensional reduction of a two-dimensional honeycomb lattice. *Scientific Reports*, **2014**, 4, 6451	4.9	16
70	Mechanistic insights of Li diffusion within doped LiFePO from Muon Spectroscopy. *Scientific Reports*, **2018**, 8, 4114	4.9	15
69	Structural and magnetic properties of the 5d2 double perovskites Sr2BReO6 (B=Y, In). *Physical Review B*, **2016**, 93,	3.3	15
68	Antiferromagnetism in a Family of S = 1 Square Lattice Coordination Polymers NiX2(pyz)2 (X = Cl, Br, I, NCS; pyz = Pyrazine). *Inorganic Chemistry*, **2016**, 55, 3515-29	5.1	15
67	Influence of HF2- geometry on magnetic interactions elucidated from polymorphs of the metal-organic framework [Ni(HF2)(pyz)2]PF6 (pyz = pyrazine). *Dalton Transactions*, **2012**, 41, 7235-43	4.3	15
66	μSR study of magnetic order in the organic quasi-one-dimensional ferromagnet F4BImNN. *Physical Review B*, **2013**, 88,	3.3	15
65	Unusual field dependence of spin fluctuations on different timescales in Tb2Ti2O7. *Physical Review B*, **2012**, 86,	3.3	15
64	Robustness of superconductivity to competing magnetic phases in tetragonal FeS. *Physical Review B*, **2016**, 94,	3.3	15
63	Unconventional magnetism on a honeycomb lattice in α-RuCl3 studied by muon spin rotation. *Physical Review B*, **2016**, 94,	3.3	14
62	NaLaTeO: Na conduction in a novel Na-rich double perovskite. *Chemical Communications*, **2018**, 54, 10040-10043	6.8	14
61	Phase transition in the localized ferromagnet EuO probed by μSR. *Physical Review B*, **2010**, 81,	3.3	14
60	Effect of magnesium doping on the orbital and magnetic order in LiNiO2. *Physical Review B*, **2008**, 78,	3.3	14
59	LiLaMO (M = W, Te) as a new series of lithium-rich double perovskites for all-solid-state lithium-ion batteries. *Nature Communications*, **2020**, 11, 6392	17.4	14
58	Quantum Spin Liquid from a Three-Dimensional Copper-Oxalate Framework. *Journal of the American Chemical Society*, **2018**, 140, 122-125	16.4	14

57	Stripe disorder and dynamics in the hole-doped antiferromagnetic insulator La5/3Sr1/3CoO4. *Physical Review B*, **2014**, 89,	3.3	13
56	Tuning the interlayer spacing of high-T_{c} Bi-based superconductors by intercalation: measuring the penetration depth and the two-dimensional superfluid density. *Physical Review Letters*, **2009**, 102, 087002	7.4	13
55	Muon-spin relaxation study of the spin-12 molecular chain compound Cu(HCO2)2(C4H4N2). *Physical Review B*, **2006**, 73,	3.3	13
54	Spatially homogeneous ferromagnetism below the enhanced Curie temperature in EuO(1-x) thin films. *Physical Review Letters*, **2013**, 110, 217208	7.4	12
53	Superconducting properties of noncentrosymmetric superconductor CaIrSi3 investigated by muon spin relaxation and rotation. *Physical Review B*, **2015**, 91,	3.3	11
52	Developments at the ISIS muon source and the concomitant benefit to the user community. *Journal of Physics: Conference Series*, **2014**, 551, 012067	0.3	11
51	Relaxation of muon spins in molecular nanomagnets. *Physical Review B*, **2010**, 81,	3.3	11
50	Magnetism and orbitally driven spin-singlet states in Ru oxides: A muon-spin rotation study. *Physical Review B*, **2008**, 77,	3.3	11
49	Anomalous temperature evolution of the internal magnetic field distribution in the charge-ordered triangular antiferromagnet AgNiO2. *Physical Review Letters*, **2008**, 100, 017206	7.4	11
48	Spin-liquid ground state in the frustrated J1□2 zigzag chain system BaTb2O4. *Physical Review B*, **2015**, 92,	3.3	10
47	Muon Spectroscopy for Investigating Diffusion in Energy Storage Materials. *Annual Review of Materials Research*, **2020**, 50, 371-393	12.8	10
46	Persistent dynamics in the S=1/2 quasi-one-dimensional chain compound Rb4Cu(MoO4)3 probed with muon-spin relaxation. *Physical Review B*, **2012**, 85,	3.3	10
45	Characteristic muon precession and relaxation signals in FeAs and FeAs2: Possible impurity phases in pnictide superconductors. *Physical Review B*, **2008**, 78,	3.3	10
44	Long-range dynamical magnetic order and spin tunneling in the cooperative paramagnetic states of the pyrochlore analogous spinel antiferromagnets CdYb2X4 (X=S or Se). *Physical Review B*, **2017**, 96,	3.3	9
43	Magnetic fluctuations and spin freezing in nonsuperconducting LiFeAs derivatives. *Physical Review B*, **2013**, 88,	3.3	9
42	Magnetic ground state of the two isostructual polymeric quantum magnets [Cu(HF2)(pyrazine)2]SbF6 and [Co(HF2)(pyrazine)2]SbF6 investigated with neutron powder diffraction. *Physical Review B*, **2015**, 92,	3.3	9
41	Magnetism in the S=1 frustrated antiferromagnet GeNi2O4 studied using implanted muons. *Physical Review B*, **2006**, 73,	3.3	9
40	Coexistence of magnetism and superconductivity in separate layers of the iron-based superconductor Li1□Fex(OH)Fe1□Se. *Physical Review B*, **2017**, 95,	3.3	8

39	Observation of a level crossing in a molecular nanomagnet using implanted muons. *Journal of Physics Condensed Matter*, **2011**, 23, 242201	1.8	8
38	Fabrication and Electrical Properties of Bulk Textured LiCoO2. *Journal of the American Ceramic Society*, **2010**, 93, 1856	3.8	8
37	Perspectives for next generation lithium-ion battery cathode materials. *APL Materials*, **2021**, 9, 109201	5.7	8
36	Evaluating lithium diffusion mechanisms in the complex spinel LiNiGeO. *Physical Chemistry Chemical Physics*, **2019**, 21, 23111-23118	3.6	8
35	From magnetic order to quantum disorder in the Zn-barlowite series of S = 1/2 kagom antiferromagnets. *Npj Quantum Materials*, **2020**, 5,	5	7
34	Magnetic surfactants as molecular based-magnets with spin glass-like properties. *Journal of Physics Condensed Matter*, **2016**, 28, 176002	1.8	7
33	Coupled commensurate charge density wave and lattice distortion in Na2Ti2Pn2O(Pn=As,Sb) determined by x-ray diffraction and angle-resolved photoemission spectroscopy. *Physical Review B*, **2016**, 94,	3.3	6
32	Slow spin tunneling in the paramagnetic phase of the pyrochlore Nd2Sn2O7. *Physical Review B*, **2017**, 95,	3.3	6
31	Magnetic transition and spin dynamics in the triangular Heisenberg antiferromagnet KCrO2. *Physical Review B*, **2013**, 88,	3.3	6
30	Local magnetism and magnetoelectric effect in HoMnO3 studied with muon-spin relaxation. *Physical Review B*, **2010**, 81,	3.3	6
29	Possible quadrupolar nematic phase in the frustrated spin chain LiCuSbO4: An NMR investigation. *Physical Review B*, **2017**, 96,	3.3	5
28	Probing the magnetic phases in the Ni-V alloy close to the disordered ferromagnetic quantum critical point with R. *Journal of Physics: Conference Series*, **2014**, 551, 012003	0.3	5
27	HiFi A new high field muon spectrometer at ISIS. *Physica B: Condensed Matter*, **2009**, 404, 978-981	2.8	5
26	Dynamic fields in the partial magnetization plateau of Ca Co O *Journal of Physics Condensed Matter*, **2011**, 23, 306001	1.8	5
25	Local magnetism in the molecule-based metamagnet [Ru2(O2CMe)4]3[Cr(CN)6] probed with implanted muons. *Physical Review B*, **2011**, 84,	3.3	4
24	Muon spin relaxation study of LaTiO(3) and YTiO(3). *Journal of Physics Condensed Matter*, **2008**, 20, 465203	2.3	4
23	Long- and short-range magnetism in the frustrated double perovskite Ba2MnWO6. *Physical Review Materials*, **2020**, 4,	3.2	4
22	In Situ Diffusion Measurements of a NASICON-Structured All-Solid-State Battery Using Muon Spin Relaxation. *ACS Applied Energy Materials*, **2021**, 4, 1527-1536	6.1	4

21	Quantum-critical spin dynamics in a Tomonaga-Luttinger liquid studied with muon-spin relaxation. *Physical Review B*, **2017**, 95,	3.3	3
20	SR and neutron diffraction studies on the tuning of spin-glass phases in the partially ordered double perovskites SrMn1WxO3. *Physical Review B*, **2019**, 99,	3.3	3
19	Elevated Curie temperature and half-metallicity in the ferromagnetic semiconductor LaxEu1O. *Physical Review B*, **2015**, 92,	3.3	3
18	Multiple diffusion pathways in LixNi0.77Co0.14Al0.09O2 (NCA) Li-ion battery cathodes. *Journal of Materials Chemistry A*, **2020**, 8, 11545-11552	13	3
17	Developing the Muon Facilities at ISIS **2018**,		3
16	Evidence for magnetic clusters in Ni1-xVxclose to the quantum critical concentration. *Journal of Physics: Conference Series*, **2015**, 592, 012089	0.3	3
15	Synthesis and characterization of two metallic spin-glass phases of FeMo4Ge3. *Physical Review B*, **2008**, 77,	3.3	3
14	A muon-spin relaxation study of BiMnO3. *Journal of Physics Condensed Matter*, **2007**, 19, 376203	1.8	3
13	Dynamic spin fluctuations in the frustrated A-site spinel CuAl2O4. *Physical Review B*, **2020**, 102,	3.3	3
12	Evidence for a Jeff=0 ground state and defect-induced spin glass behavior in the pyrochlore osmate Y2Os2O7. *Physical Review B*, **2019**, 99,	3.3	2
11	AC magnetic measurement of LiFeAs at pressures up to 5.2 GPa: The relation between T c and the structural parameters. *Journal of the Korean Physical Society*, **2013**, 63, 445-447	0.6	2
10	Thermodynamic and magnetic properties of the layered triangular magnet NaNiO2. *Physica B: Condensed Matter*, **2006**, 374-375, 47-50	2.8	2
9	Nanoscale depth-resolved polymer dynamics probed by the implantation of low energy muons. *Polymer*, **2016**, 105, 516-525	3.9	2
8	Magnetic Field Induced Quantum Spin Liquid in the Two Coupled Trillium Lattices of K_{2}Ni_{2}(SO_{4})_{3}. *Physical Review Letters*, **2021**, 127, 157204	7.4	1
7	Muon spin relaxation and fluctuating magnetism in the pseudogap phase of YBa2Cu3Oy. *Physical Review B*, **2021**, 103,	3.3	1
6	The Internal Field in a Ferromagnetic Crystal with Chiral Molecular Packing of Achiral Organic Radicals. *Magnetochemistry*, **2021**, 7, 71	3.1	1
5	Probing magnetic order and disorder in the one-dimensional molecular spin chains CuF(pyz) and [Ln(hfac)(boaDTDA)] (Ln = Sm, La) using implanted muons. *Journal of Physics Condensed Matter*, **2019**, 31, 394002	1.8	1
4	Stoichiometrically driven disorder and local diffusion in NMC cathodes. *Journal of Materials Chemistry A*, **2021**, 9, 10477-10486	13	1

3	Ion dynamics in fluoride-containing polyatomic anion cathodes by muon spectroscopy. *JPhys Materials*, **2021**, 4, 044015	4.2	1
2	Signatures of a Spin-1/2 Cooperative Paramagnet in the Diluted Triangular Lattice of Y_{2}CuTiO_{6}. *Physical Review Letters*, **2020**, 125, 117206	7.4	0
1	Questioning Antiferromagnetic Ordering in the Expanded Metal, Li(NH3)4: A Lack of Evidence from SR. *Journal of Physical Chemistry Letters*, **2015**, 6, 3966-70	6.4	