Raymond Osborn

List of Publications by Year
in descending order

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131 papers	6,598 citations	81900 39 h-index	66911 78 g-index
133 all docs	133 docs citations	133 times ranked	5348 citing authors

#	Article	IF	Citations
1	Enhanced superconductivity and ferroelectric quantum criticality in plastically deformed strontium titanate. Nature Materials, 2022, 21, 54-61.	27.5	41
2	Order-Disorder Transitions in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo stretchy="false">(</mml:mo><mml:mrow><mml:msub><mml:mrow><mml:mi>Ca</mml:mi></mml:mrow><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow><mml:mo stretchy="false">)</mml:mo><mml:msub><mml:mi>Co</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>As</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> Single Crystals. Physical Review Letters, 2022, 128, 095701.	7.8	7
3	Two-dimensional overdamped fluctuations of the soft perovskite lattice in CsPbBr3. Nature Materials, 2021, 20, 977-983.	27.5	89
4	A two-dimensional type I superionic conductor. Nature Materials, 2021, 20, 1683-1688.	27.5	15
5	Reciprocal space imaging of ionic correlations in intercalation compounds. Nature Materials, 2020, 19, 63-68.	27.5	34
6	Intertwined density waves in a metallic nickelate. Nature Communications, 2020, 11, 6003.	12.8	24
7	Cs<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>V</mml:mi><mml:msub><mml:mrow><mml:mi mathvariant="normal">Cl</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> : A <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="double-struck">Z</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review Letters, 2020, 125, 247002.	7.8	468
8	Coherent band excitations in CePd ₃ : A comparison of neutron scattering and ab initio theory. Science, 2018, 359, 186-191.	12.6	36
9	The relation of local order to material properties in relaxor ferroelectrics. Nature Materials, 2018, 17, 718-724.	27.5	113
10	Implementation of cross correlation for energy discrimination on the time-of-flight spectrometer CORELLI. Journal of Applied Crystallography, 2018, 51, 315-322.	4.5	80
11	Charge Density Wave in the New Polymorphs of RE₂Ru₃Ge₅ (RE = Pr, Sm, Dy). Journal of the American Chemical Society, 2017, 139, 4130-4143.	13.7	33
12	Observation of the magnetic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>C</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math> phase in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ca</mml:mi><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Physical Review B, 2017, 95, .	3.2	25
13	Detailed magnetic and structural analysis mapping a robust magnetic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>C</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math> in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sr</mml:mi><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Physical Review B, 2016, 93, .	3.2	34
14	Double-Q spin-density wave in iron arsenideÂsuperconductors. Nature Physics, 2016, 12, 493-498.	16.7	101
15	Cesium vacancy ordering in phase-separated<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">s</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mi mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal"></mml:mi></mml:msub></mml:mrow></mml:math>	3.2	6
16	Tetragonal magnetic phase in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ba</mml:mi><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub><mml:msub><mml:mi mathvariant="normal">K</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi>Fe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> x-ray and neutron diffraction. Physical Review B, 2015, 92, .	3.2	52
17	Emergence of coherence in the charge-density wave state of 2H-NbSe2. Nature Communications, 2015, 6, 6313.	12.8	123
18	The NeXus data format. Journal of Applied Crystallography, 2015, 48, 301-305.	4.5	133

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19	Magnetic and nematic phase transitions in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>BaF</mml:mi><mml:msub><mml:mi		

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37	Incommensurate spin-density wave and magnetic lock-in transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>CaFe</mml:mtext></mml:mrow><mml:mn>4</mml:mn></ Physical Review B, 2010, 81, .	3.2	21
38	Two-dimensional resonant magnetic excitation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>BaFe</mml:mi><mml:mn>1.84</mml:mn></mml:msub><mml:msub><mml:mi>Co</mml:mi><m Physical Review Letters, 2009, 102, 107005.	7.8	237
39	Inelastic neutron scattering studies of the spin and lattice dynamics in iron arsenide compounds. Physica C: Superconductivity and Its Applications, 2009, 469, 498-506.	1.2	18
40	Corelli: Efficient single crystal diffraction with elastic discrimination. Pramana - Journal of Physics, 2008, 71, 705-711.	1.8	32
41	Inelastic magnetic neutron scattering in CePd3. Physica B: Condensed Matter, 2008, 403, 783-785.	2.7	8
42	Unconventional superconductivity in Ba0.6K0.4Fe2As2 from inelastic neutron scattering. Nature, 2008, 456, 930-932.	27.8	543
43	Spin-glass order induced by dynamic frustration. Nature Physics, 2008, 4, 766-770.	16.7	73
44	Magnetic short-range correlations and quantum critical scattering in the non-Fermi liquid regime of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>URu</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:m widt. Physical Review B, 2008, 78, .	3.2	10
45	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:mtext>Tb</mml:mtext></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml: xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>TbCo</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:msub><mml:m A singlet ground state. Physical Review B, 2008, 78, .	3.2	8
46	Reentrant Orbital Order and the True Ground State ofLaSr2Mn2O7. Physical Review Letters, 2007, 98, 167201.	7.8	31
47	Magnetic dynamics of the spin-glass system PrAu2Si2: An inelastic neutron scattering study. Journal of Magnetism and Magnetic Materials, 2007, 310, 1535-1536.	2.3	8
48	Crystal field in the CeAl3 heavy-fermion compound. Physics of the Solid State, 2007, 49, 322-330.	0.6	2
49	Localized Excitation in the Hybridization Gap inYbAl3. Physical Review Letters, 2006, 96, 117206.	7.8	19
50	Crystal Field Potential ofPrOs4Sb12: Consequences for Superconductivity. Physical Review Letters, 2004, 93, 157003.	7.8	131
51	Orbital and Spin Chains inZnV2O4. Physical Review Letters, 2004, 93, 156407.	7.8	144
52	Crystalline electric field excitations in the heavy fermion superconductor CeCoIn5. Journal of Applied Physics, 2004, 95, 7201-7203.	2.5	12
53	Magnetic Correlations and the Anisotropic Kondo Effect inCe1â^'xLaxAl3. Physical Review Letters, 2002, 89, 147201.	7.8	12
54	Vibrational and electronic entropy of Î²-cerium and Î³-cerium measured by inelastic neutron scattering. Physical Review B, 2002, 65, .	3.2	31

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55	Orbital Ordering Transition in La4Ru2O10. Science, 2002, 297, 2237-2240.	12.6	102
56	New oxygen lattice modes in the metallic region of La 2-x Sr x CuO 4. Applied Physics A: Materials Science and Processing, 2002, 74, s1621-s1623.	2.3	0
57	Spin, Charge, and Lattice States in Layered Magnetoresistive Oxides. Journal of Physical Chemistry B, 2001, 105, 10731-10745.	2.6	92
58	Magnetic Correlations and the Quantum Critical Point ofUCu5â^'xPdx(x=1,1.5). Physical Review Letters, 2001, 87, 197205.	7.8	32
59	Neutron and x-ray evidence of charge melting in ferromagnetic layered colossal magnetoresistance manganites (invited). Journal of Applied Physics, 2001, 89, 6840-6845.	2.5	4
60	Large Harmonic Softening of the Phonon Density of States of Uranium. Physical Review Letters, 2001, 86, 3076-3079.	7.8	76
61	Crystal field excitations in YbT2Si2 (T = Fe, Co, Ni). Journal of Applied Physics, 2000, 87, 6818-6820.	2.5	15
62	Magnetic excitations in tetragonal HoCr2Si2. Journal of Applied Physics, 2000, 87, 6283-6285.	2.5	5
63	The magnetic properties of Pr in the Pb2Sr2PrCu3O8+Î´ cuprate. Physica C: Superconductivity and Its Applications, 2000, 333, 13-22.	1.2	2
64	Low-energy spin-wave excitations in the bilayer manganite La1.2Sr1.8Mn2O7. Journal of Applied Physics, 2000, 87, 5816-5818.	2.5	16
65	Anomalous magnetic response of Ce1â^'xLaxAl3. Journal of Applied Physics, 2000, 87, 5131-5133.	2.5	1
66	Evidence for Anisotropic Kondo Behavior inCe0.8La0.2Al3. Physical Review Letters, 2000, 84, 2211-2214.	7.8	17
67	POLARON ORDERING IN FERROMAGNETIC COLOSSAL MAGNETORESISTIVE OXIDES. International Journal of Modern Physics B, 2000, 14, 3711-3718.	2.0	2
68	SPIN CORRELATIONS OF THE MAGNETORESISTIVE BILAYER MANGANITE La1.2Sr1.8Mn2O7. International Journal of Modern Physics B, 1999, 13, 3820-3822.	2.0	0
69	Time-of-flight neutron-scattering study ofYbInCu4andYbIn0.3Ag0.7Cu4. Physical Review B, 1999, 59, 1134-1140.	3.2	27
70	Phonon densities of states ofLa2â^'xSrxNiO4:â€,â€,Evidence for strong electron-lattice coupling. Physical Review B, 1999, 60, 80-83.	3.2	23
71	Specific heat ofLa1.2Sr1.8Mn2O7. Physical Review B, 1999, 60, 6258-6261.	3.2	21
72	Charge Melting and Polaron Collapse inLa1.2Sr1.8Mn2O7. Physical Review Letters, 1999, 83, 4393-4396.	7.8	172

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73	Crystalline electric field of the rare-earth nickelatesRNiO3â€,(R=Pr,Nd, Sm, Eu,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 747 Td [ar 14857-14867.	3.2	29
74	Inelastic neutron scattering study of the spin dynamics of Yb1â^'xLuxAl3. Journal of Applied Physics, 1999, 85, 5344-5346.	2.5	10
75	Crystal field in the heavy fermion compound CeAl3. Journal of Applied Physics, 1999, 85, 6046-6048.	2.5	12
76	Magnetic correlations in the bilayer manganite La1.2Sr1.8Mn2O7. Journal of Applied Physics, 1998, 83, 7348-7350.	2.5	25
77	Magnetic ground state of Pr in. Journal of Physics Condensed Matter, 1998, 10, 4637-4643.	1.8	3
78	Neutron Scattering Investigation of Magnetic Bilayer Correlations inLa1.2Sr1.8Mn2O7: Evidence of Canting aboveTC. Physical Review Letters, 1998, 81, 3964-3967.	7.8	99
79	Two-dimensional ferromagnetic correlations above TC in the naturally layered CMR manganite La2â^'2xSr1+2xMn2O7 (x=0.3â€“0.4) (invited). Journal of Applied Physics, 1998, 83, 6374-6378.	2.5	21
80	Nonâ€“Fermi-liquid scaling in UCu 5 â^' x Pd x (x = 1,1.5): A phenomenological description. Europhysics Letters, 1997, 40, 245-250.	2.0	17
81	Importance of the magnetic ground state of Pr for T c suppression in high- T c superconductors. Europhysics Letters, 1997, 39, 663-668.	2.0	12
82	Wave-vector dependence of intermultiplet transitions inEuBa2Cu3Ox(x=6.1 and 7):mAn inelastic neutron-scattering study. Physical Review B, 1997, 55, 11629-11636.	3.2	4
83	Intermultiplet crystal field transitions in EuNiO3. Journal of Alloys and Compounds, 1997, 250, 577-580.	5.5	7
84	Magnetic properties of Pb2Sr2PrCu3O8. Journal of Alloys and Compounds, 1997, 250, 581-584.	5.5	8
85	Quantum critical scattering in uranium non-Fermi liquid compounds. Physica B: Condensed Matter, 1997, 241-243, 859-861.	2.7	3
86	Evolution of Ce dynamic magnetic response in Ce 1 â^' x La x Ni compounds. Europhysics Letters, 1996, 33, 141-146.	2.0	23
87	Non-Fermi-liquid scaling in (x= 1, 1.5). Journal of Physics Condensed Matter, 1996, 8, 9815-9823.	1.8	22
88	Non fermi liquid ground states in strongly correlated f-electron materials. Journal of Low Temperature Physics, 1995, 99, 223-249.	1.4	195
89	Non-Fermi-Liquid Scaling of the Magnetic Response in UCu5â^'xPdx(x=1,1.5). Physical Review Letters, 1995, 75, 725-728.	7.8	207
90	Energy levels of Co2+in CoF2and CsCoCl3. Journal of Physics Condensed Matter, 1995, 7, 2917-2929.	1.8	4

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91	Crystal Field-Split Intermultiplet Transitions and Their Q -Dependence in EuBa 2 Cu 3 O 7. Europhysics Letters, 1995, 31, 175-180.	2.0	6
92	Intermultiplet transitions in optically opaque EuBa2Cu3O7: an inelastic neutron scattering study. Journal of Alloys and Compounds, 1995, 225, 591-594.	5.5	6
93	Quadrupolar effects in PrCu2Si2. Journal of Applied Physics, 1994, 76, 6124-6126.	2.5	7
94	Crystal-field effects inPrCu2Si2: An evaluation of evidence for heavy-fermion behavior. Physical Review B, 1994, 50, 13863-13866.	3.2	18
95	Crystal-field excitations and gap opening in Tm: YBa2Cu4O8 by inelastic neutron scattering. Physica C: Superconductivity and Its Applications, 1994, 221, 227-236.	1.2	13
96	The magnetic state of Pr in PrBa2Cu3O7. Physica C: Superconductivity and Its Applications, 1993, 217, 425-438.	1.2	43
97	Crystal-field excitations inCeCu2Si2. Physical Review B, 1993, 47, 14280-14290.	3.2	67
98	Neutron Scattering Study of the Intermediate-Valent Ground State in SmB ₆. Europhysics Letters, 1993, 23, 347-353.	2.0	39
99	Evidence for localized 4fstates in Î±-Ce. Physical Review B, 1993, 48, 13981-13984.	3.2	44
100	Neutron-spectroscopy study of the heavy-fermion compoundCeCu6. Physical Review B, 1993, 47, 14580-14583.	3.2	15
101	Neutron-spectroscopic studies of the crystal field inErBa2Cu3Ox(6â‰xâ‰7). Physical Review B, 1993, 47, 6027-6036.	3.2	83
102	Evolution of the spin-orbit excitation with increasing Kondo energy inCeIn3â^'xSnx. Physical Review B, 1993, 48, 10606-10609.	3.2	28
103	Neutron-scattering investigation of the electronic ground state of neptunium dioxide. Journal of Physics Condensed Matter, 1992, 4, 3459-3478.	1.8	47
104	Crystal-field excitations inNd2CuO4,Pr2CuO4, and relatedn-type superconductors. Physical Review B, 1992, 45, 10075-10086.	3.2	117
105	High-energy paramagnetic spectral response of the valence fluctuation compound YbAl2. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1992, 65, 1333-1342.	0.6	7
106	Neutron spectroscopy of the crystalline electric field in high-Tc YbBa2Cu3O7. Solid State Communications, 1992, 81, 999-1002.	1.9	21
107	Crystal field potential of NdCu2Si2. Physica B: Condensed Matter, 1992, 179, 184-190.	2.7	19
108	High-energy-neutron spectroscopy of crystal-field excitations inNpO2. Physical Review B, 1991, 43, 1142-1145.	3.2	42

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109	Highâ€energy spin waves in bcc iron. Journal of Applied Physics, 1991, 69, 6219-6221.	2.5	33
110	Evidence of a lattice distortion in NpO2 below 25 K from neutron magnetic inelastic scattering. Solid State Communications, 1991, 79, 197-200.	1.9	11
111	Magnetism and crystal field in NdCu5. Physica B: Condensed Matter, 1991, 168, 251-256.	2.7	10
112	High-energy magnetic excitations in chromium. Physica B: Condensed Matter, 1991, 174, 22-24.	2.7	4
113	Neutron spectroscopic studies of crystalline electric fields in high-Tc ErBa2Cu3O7 doped with zn and Ni. Physica C: Superconductivity and Its Applications, 1991, 175, 587-594.	1.2	20
114	Crystal field excitations in electron superconductors. Bulletin of Materials Science, 1991, 14, 607-611.	1.7	2
115	High energy crystal field excitations in Pr x Y1â^'x Ba2Cu3O7â^'Î´. Bulletin of Materials Science, 1991, 14, 613-617.	1.7	5
116	High-energy spin waves inLa2CuO4. Physical Review Letters, 1991, 67, 3622-3625.	7.8	192
117	Molecular fields in Gd2Fe14B determined from inelastic neutron scattering. Journal of Applied Physics, 1991, 69, 5593-5595.	2.5	33
118	Neutron Inelastic Scattering Study of LiNiO2: a Candidate for the Spin Quantum Liquid. Journal of the Physical Society of Japan, 1990, 59, 3081-3084.	1.6	22
119	The effects of crystal symmetry on the hydrogen excitations in Î±-YHx observed with inelastic neutron scattering. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 151, 325-329.	2.1	13
120	High energy magnetic neutron scattering in heavy fermion compounds. Physica B: Condensed Matter, 1990, 163, 37-40.	2.7	26
121	Crystal field excitations in CeSix. Physica B: Condensed Matter, 1990, 163, 137-140.	2.7	7
122	Crystal field excitations in Nd2â^'xCexCuO4. Physica C: Superconductivity and Its Applications, 1990, 165, 17-24.	1.2	53
123	Observation of intermultiplet transitions inSmFe11Ti by inelastic magnetic neutron scattering. Physical Review B, 1990, 42, 1940-1943.	3.2	30
124	5f-electron states in uranium dioxide investigated using high-resolution neutron spectroscopy. Physical Review B, 1989, 40, 1856-1870.	3.2	128
125	A neutron spectroscopy study of magnetic excitations in uranium oxysulphide. Journal of Physics Condensed Matter, 1989, 1, 5711-5720.	1.8	15
126	High energy magnetic inelastic neutron scattering at ISIS. Physica B: Condensed Matter, 1989, 159, 151-160.	2.7	8

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127	Crystal field excitations in ErMn4Al8. Solid State Communications, 1989, 72, 249-251.	1.9	13
128	Intermultiplet Transitions in Praseodymium Using Neutron Spectroscopy. Physical Review Letters, 1988, 61, 1309-1312.	7.8	39
129	High-resolution neutron spectroscopy of crystal-field excitations in uranium dioxide. Journal of Physics C: Solid State Physics, 1988, 21, L931-L937.	1.5	26
130	Investigation of oxygen disorder, thermal parameters, lattice vibrations and elastic constants of UO2 and ThO2 at temperatures up to 2 930 K. Revue De Physique AppliquÃ©e, 1984, 19, 719-722.	0.4	23
131	Observation of Oxygen Frenkel Disorder in Uranium Dioxide above 2000 K by Use of Neutron-Scattering Techniques. Physical Review Letters, 1984, 52, 1238-1241.	7.8	87