

Peter Gehring

List of Publications by Year in descending order

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126
papers

6,886
citations

46984

47
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134
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times ranked

4379
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#	ARTICLE	IF	CITATIONS
1	Phase diagram of the relaxor ferroelectric $(1-x)\text{Pb}(\text{Zn}_{1/3}\text{Nb}_{2/3})\text{O}_3-x\text{PbTiO}_3$. Physical Review B, 2002, 65, .	1.1	303
2	Neutron-scattering study of the dynamical spin susceptibility in $\text{YBa}_2\text{Cu}_3\text{O}_{6.6}$. Physical Review B, 1992, 46, 5561-5575.	1.1	278
3	The high-flux backscattering spectrometer at the NIST Center for Neutron Research. Review of Scientific Instruments, 2003, 74, 2759-2777.	0.6	259
4	Phase instability induced by polar nanoregions in a relaxor ferroelectric system. Nature Materials, 2008, 7, 562-566.	13.3	253
5	Temperature dependence of the magnetic excitations in $\text{La}_{1.85}\text{Sr}_{0.15}\text{CuO}_4$ ($T_c=33$ K). Physical Review Letters, 1989, 63, 330-333.	2.9	236
6	Neutron elastic diffuse scattering study of $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$. Physical Review B, 2004, 69, .	1.1	232
7	Three-dimensional magnetic structures and rare-earth magnetic ordering in Nd_2CuO_4 and Pr_2CuO_4 . Physical Review B, 1990, 42, 10098-10107.	1.1	217
8	Static magnetic correlations near the insulating-superconducting phase boundary in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$. Physical Review B, 2002, 65, .	1.1	214
9	Local Magnetic Order vs Superconductivity in a Layered Cuprate. Physical Review Letters, 2000, 85, 1738-1741.	2.9	210
10	Observation of incommensurate magnetic correlations at the lower critical concentration for superconductivity in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ ($x=0.05$). Physical Review B, 1999, 60, R769-R772.	1.1	201
11	X-ray and neutron diffraction investigations of the structural phase transformation sequence under electric field in $0.7\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})_0.3\text{PbTiO}_3$ crystal. Journal of Applied Physics, 2004, 96, 1620-1627.	1.1	189
12	Temperature-induced magnetism in LaCoO_3 . Physical Review B, 1989, 40, 10982-10985.	1.1	188
13	Neutron diffuse scattering from polar nanoregions in the relaxor $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$. Physical Review B, 2002, 65, .	1.1	169
14	Direct observation of a one-dimensional static spin modulation in insulating $\text{La}_{1.95}\text{Sr}_{0.05}\text{CuO}_4$. Physical Review B, 2000, 61, 3699-3706.	1.1	165
15	Soft Mode Dynamics above and below the Burns Temperature in the Relaxor $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$. Physical Review Letters, 2001, 87, 277601.	2.9	164
16	Ferroelectric ordering in the relaxor $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ as evidenced by low-temperature phonon anomalies. Physical Review B, 2002, 65, .	1.1	148
17	Low-energy incommensurate spin excitations in superconducting $\text{La}_{1.85}\text{Sr}_{0.15}\text{CuO}_4$. Physical Review B, 1992, 46, 9128-9131.	1.1	144
18	Soft Phonon Anomalies in the Relaxor Ferroelectric $\text{Pb}(\text{Zn}_{1/3}\text{Nb}_{2/3})_0.92\text{Ti}_0.08\text{O}_3$. Physical Review Letters, 2000, 84, 5216-5219.	2.9	137

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19	Quantum Impurities in the Two-Dimensional Spin One-Half Heisenberg Antiferromagnet. Science, 2002, 295, 1691-1695.	6.0	129
20	Role of random electric fields in relaxors. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1754-1759.	3.3	129
21	The relation of local order to material properties in relaxor ferroelectrics. Nature Materials, 2018, 17, 718-724.	13.3	113
22	Evidence of decoupled lattice distortion and ferroelectric polarization in the relaxor system $\text{PMN}_{1-x}\text{PT}_x$. Physical Review B, 2003, 68, .	1.1	112
23	Reassessment of the Burns temperature and its relationship to the diffuse scattering, lattice dynamics, and thermal expansion in relaxor $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$		

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37	Stoichiometry, percolation, and Verwey ordering in magnetite. Physical Review Letters, 1993, 70, 1635-1638.	2.9	62
38	Lead-free and lead-based $A_3B_3O_{10}$ perovskite relaxors with mixed-valence $A_2B_2O_7$ site and $A_2B_2O_7$ site. Journal of Physics Condensed Matter, 2004, 16, 7113-7121.	1.1	62
39	The non-rhombohedral low-temperature structure of PMN-xPT. Journal of Physics Condensed Matter, 2004, 16, 7113-7121.	0.7	61
40	Anomalous transverse acoustic phonon broadening in the relaxor ferroelectric $Pb(Mg_{1/3}Nb_{2/3})_{0.8}Ti_{0.2}O_3$. Physical Review B, 2002, 65, .	1.1	58
41	The anomalous skin effect in single crystal relaxor ferroelectric PZN-xPT and PMN-xPT. Phase Transitions, 2006, 79, 135-152.	0.6	56
42	Interplay between static and dynamic polar correlations in relaxor $Pb(Mg_{1/3}Nb_{2/3})O_3$. Physical Review B, 2010, 81, .	1.1	55
43	Neutron and x-ray diffraction study of cubic $[111]$ field-cooled $Pb(Mg_{1/3}Nb_{2/3})O_3$. Physical Review B, 2007, 76, .	1.1	51
44	Neutron-scattering studies of the two magnetic correlation lengths in terbium. Physical Review B, 1994, 49, 11967-11978.	1.1	50
45	Unusual Structure, Phase Transition, and Dynamics of Solid Cubane. Physical Review Letters, 1997, 78, 4938-4941.	2.9	50
46	Coexistence and competition of local- and long-range polar orders in a ferroelectric relaxor. Physical Review B, 2006, 74, .	1.1	48
47	Spectral shift of the magnetic cross section in superconducting $YBa_2Cu_3O_{6+x}$. Physical Review B, 1991, 43, 8690-8693.	1.1	47
48	Temperature scaling of the integrated dynamical susceptibility in $YBa_2Cu_3O_{6.5}$ ($T_c = 50$ K). European Physical Journal B, 1992, 87, 15-19.	0.6	47
49	Solid cubane: A brief review. Carbon, 1998, 36, 809-815.	5.4	47
50	Soft phonon columns on the edge of the Brillouin zone in the relaxor $PbMg_{1/3}Nb_{2/3}O_3$. Physical Review B, 2009, 79, .	1.1	46
51	Persistence and memory of polar nanoregions in a ferroelectric relaxor under an electric field. Physical Review B, 2005, 72, .	1.1	39
52	Electric-field effects on the diffuse scattering in $PbZn_{1-x}Nb_{2x}O_3$ doped with 8% $PbTiO_3$. Physical Review B, 2004, 70, .	1.1	36
53	Structural studies of decomposition in $Fe_{1-x}Ga_x$ alloys. Journal of Alloys and Compounds, 2008, 465, 244-249.	2.8	35
54	Magnetic correlations and energy gap in superconducting $YBa_2Cu_3O_{6.6}$ with $T_c = 53$ K. Physical Review B, 1991, 44, 2811-2814.	1.1	33

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55	Neutron-scattering investigation of molecular reorientations in solid cubane. Physical Review B, 1999, 60, 314-321.	1.1	31
56	Phase diagram of the relaxor ferroelectric (1-x)Tl _{1-x} ETQq0 ₀ 0 ₀ rgBT / Overlock 10 Tf 50 707 Td ($\hat{\alpha}^x$)Pb(Mg _{1/3} Nb _{2/3}) ₂ a neutron powder diffraction study of the relaxor skin effect. Phase Transitions, 2015, 88, 283-305.	0.6	31
57	Antiferromagnetic interlayer correlations in annealed Ni ₈₀ Fe ₂₀ /Ag multilayers. Physical Review B, 1996, 54, 9870-9882.	1.1	30
58	Diagonal static spin correlation in the low-temperature orthorhombic Pccn phase of La _{1.55} Nd _{0.4} Sr _{0.05} CuO ₄ . Physical Review B, 2001, 64, .	1.1	27
59	Magnetic x-ray-scattering study of Tb. Physical Review B, 1992, 45, 243-248.	1.1	26
60	NEUTRON DIFFUSE SCATTERING IN LEAD-BASED RELAXOR FERROELECTRICS AND ITS RELATIONSHIP TO THE ULTRA-HIGH PIEZOELECTRICITY. Journal of Advanced Dielectrics, 2012, 02, 1241005.	1.5	24
61	Dynamic origin of the morphotropic phase boundary: Soft modes and phase instability in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$		

#	ARTICLE	IF	CITATIONS
73	Neutron Scattering Study of Soft Phonons and Diffuse Scattering in Insulating La _{1.95} Sr _{0.05} CuO ₄ . Journal of the Physical Society of Japan, 2004, 73, 3413-3417.	0.7	14
74	Magnetic properties of cubic R _{1-x} Al ₂ (R=Dy, Tb) intermetallic random anisotropy magnets (invited). Journal of Applied Physics, 1994, 76, 6180-6185.	1.1	13
75	Neutron inelastic scattering measurements of low-energy phonons in the multiferroic BiFeO ₃ . Physical Review B, 2015, 91, .		
76	Test of the Dynamic-Domain and Critical Scattering Hypotheses in Cubic Methylammonium Lead Triiodide. Physical Review Letters, 2020, 125, .	2.9	13
77	Low field hysteresis and loss in sintered samples of YBa ₂ Cu ₃ O _{7-x} . Solid State Communications, 1988, 67, 253-256.	0.9	12
78	Nature of the interlayer coupling in annealed Ni ₈₀ Fe ₂₀ /Ag multilayers. Journal of Applied Physics, 1996, 79, 4762.	1.1	12
79	Dynamics and Structure of PMN and PZN. Ferroelectrics, 2005, 321, 7-19. Fragile morphotropic phase boundary and phase stability in the near-surface region of the relaxor ferroelectric	0.3	12
80			

#	ARTICLE	IF	CITATIONS
91	High-q-resolution neutron scattering technique using triple-axis spectrometers. Acta Crystallographica Section A: Foundations and Advances, 2004, 60, 598-603.	0.3	8
92	Freezing of the local dynamics in the relaxor ferroelectric [Pb(Zn _{1/3} Nb _{2/3})O ₃] _{0.955} [PbTiO ₃] _{0.045} . Physical Review B, 2012, 86, .	1.1	8
93	Neutron scattering study of elastic magnetic signals in superconducting La _{1.94} Sr _{0.06} CuO ₄ . Journal of Physics and Chemistry of Solids, 1999, 60, 1079-1081.	1.9	7
94	The NIST high-flux backscattering spectrometer. Applied Physics A: Materials Science and Processing, 2002, 74, s311-s313.	1.1	7
95	Depth dependant element analysis of PbMg _{1/3} Nb _{2/3} O ₃ using muonic x-rays. Journal of Physics Condensed Matter, 2018, 30, 125703.	0.7	7
96	Neutron diffraction study of the magnetic ordering of the Cu ⁺⁺ spins in Nd _{1.5} Ba _{1.5} Cu ₃ O _{6+x} . Physica C: Superconductivity and Its Applications, 1991, 185-189, 1167-1168.	0.6	6
97	Low-frequency excitations of oriented DNA. Physica B: Condensed Matter, 1995, 213-214, 780-782.	1.3	6
98	Dependence of the interlayer coupling on anneal temperature in Ni ⁴⁺ Fe/Cu evaporated multilayers. Journal of Applied Physics, 1997, 81, 3771-3773.	1.1	5
99	The magnetic phase transition of a lattice-matched holmium thin film. Journal of Physics Condensed Matter, 1998, 10, 6803-6812.	0.7	5
100	Electric field effect on short-range polar order in a relaxor ferroelectric system. Physical Review B, 2019, 100, .	1.1	5
101	Spin-glass behaviour in dilute weak random-anisotropy magnets DyxY _{1-x} Al ₂ . Journal of Physics Condensed Matter, 1994, 6, 4779-4794.	0.7	4
102	Design of a High-Flux Backscattering Spectrometer for Ultra-High Resolution Inelastic Neutron Measurements. Materials Research Society Symposia Proceedings, 1994, 376, 113.	0.1	4
103	Interplay of structural and electronic phase separation in single-crystalline La ₂ CuO _{4.05} studied by neutron and Raman scattering. Physical Review B, 2004, 69, .	1.1	4
104	Separation of magnetic and superconducting behavior in YBa ₂ Cu ₃ O _{6.33} (T _c =8.4K). Physical Review B, 2015, 91, .	1.1	4
105	Correspondence: Phantom phonon localization in relaxors. Nature Communications, 2017, 8, 1935.	5.8	4
106	Cold Neutron Inelastic Scattering Measurements of the Spin-Peierls and Antiferromagnetic Excitations in Si-doped CuGeO ₃ Single Crystals. Journal of the Physical Society of Japan, 2000, 69, 592-597.	0.7	3
107	Guest Editors TM Note. Phase Transitions, 2006, 79, 1-2.	0.6	3
108	X-ray diffraction study of the pressure-induced bcc-to-hcp phase transition in the highly magnetostrictive Fe _{1-x} Ca _x alloy. Physical Review B, 2019, 100, 014407.	1.1	3

#	ARTICLE	IF	CITATIONS
109	The expansion of the NIST Center for Neutron Research. Neutron News, 2013, 24, 29-31.	0.1	3
110	Phonon coupling to dynamic short-range polar order in a relaxor ferroelectric near the morphotropic phase boundary. Physical Review B, 2015, 92, .	1.1	3
111	Comment on "Giant electromechanical coupling of relaxor ferroelectrics controlled by polar nanoregion vibrations" Science Advances, 2019, 5, eaar5066.	4.7	3
112	Broadband critical dynamics in disordered lead-based perovskites*. Journal of Physics Condensed Matter, 2020, 32, 374012.	0.7	3
113	Ferro-, quasiferro- and antiferromagnetic spin-glass orders in random anisotropy crystalline DyxY1â~xAl2 compounds. Journal of Magnetism and Magnetic Materials, 1992, 104-107, 243-245.	1.0	2
114	Composition dependence of the diffuse scattering in the relaxor " (and 0.10). Physica B: Condensed Matter, 2006, 385-386, 123-125.	1.3	2
115	Growth and characterization of large and		