

Gen Shirane

Highly Cited Publications from the HFBR

Gen Shirane is one of just 8 physicists to appear in both "The 1,000 Contemporary Scientists Most Cited 1965-1978" (where he was in the top 300) and "1,000 Most Cited Physicists, 1981-June 1997" (where he is number 27). Below is a list of Gen's most highly cited papers involving research at the HFBR---35 papers with >100 citations.

<i>Citations</i>	<i>Paper</i>
626	"Two dimensional antiferromagnetic quantum fluid state in La_2CuO_4 ," G. Shirane, Y. Endoh, R. J. Birgeneau, M.A. Kastner, Y. Hidaka, M. Oda, M. Suzuki, and T. Suzuki, <i>Phys. Rev. Lett.</i> 59 , 1613-6 (1987).
519	"Neutron diffraction determination of antiferromagnetic structure of Cu ions in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ with $x = 0.0$ and 0.15 ," J. M. Tranquada, D. E. Cox, W. Kunnmann, H. Moudden, G. Shirane, M. Suenaga, P. Zolliker, D. Vaknin, S. K. Sinha, M. S. Alvarez, A. J. Jacobson, and D. C. Johnston, <i>Phys. Rev. Lett.</i> 60 , 156-9 (1988).
440	"Structural phase transformations in K_2SeO_4 ," M. Iizumi, J. D. Axe, G. Shirane, and K. Shimaoka, <i>Phys. Rev. B</i> 15 , 4392-4411 (1977).
384	"Static and dynamic spin correlations in pure and doped La_2CuO_4 ," Y. Endoh, K. Yamada, R. J. Birgeneau, D. R. Gabbe, H. P. Jenssen, M. A. Kastner, J. M. Tranquada, G. Shirane, Y. Hidaka, M. Oda, Y. Enomoto, M. Suzuki, T. Murakami, C. J. Peters, P. J. Picone, and T. R. Thurston, <i>Phys. Rev. B</i> 37 , 7443-53 (1988).
302	"Critical neutron scattering in SrTiO_3 and KMnF_3 ," S. M. Shapiro, J. D. Axe, G. Shirane, and T. Riste, <i>Phys. Rev. B</i> 6 , 4332-41 (1972).
296	"Lattice dynamical study of the 110°K phase transition in SrTiO_3 ," G. Shirane and Y. Yamada, <i>Phys. Rev.</i> 177 , 858-63 (1969).
293	"Doping dependence of the spatially modulated dynamical spin correlations and the superconducting-transition temperature in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$," K. Yamada, C.H. Lee, K. Kurahashi, J. Wada, S. Wakimoto, S. Ueki, H. Kimura, Y. Endoh, S. Hosoya, G. Shirane, R.J. Birgeneau, M. Greven, M.A. Kastner, and Y.J. Kim, <i>Phys. Rev. B</i> 57 , 6165-72 (1998).
285	"Antiferromagnetic spin correlations in insulating, metallic and superconducting $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$," R. J. Birgeneau, D. R. Gabbe, H. P. Jenssen, M. A. Kastner, P. J. Picone, T. R. Thurston, G. Shirane, Y. Endoh, M. Sato, K. Yamada, Y. Hidaka, M. Oda, Y. Enomoto, M. Suzuki, and T. Murakami, <i>Phys. Rev. B</i> 38 , 6614-23 (1988).
258	"Antiferromagnetism in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$," J. M. Tranquada, A. H. Moudden, A. I. Goldman, P. Zolliker, D. E. Cox, G. Shirane, S. K. Sinha, D. Vaknin, D. C. Johnston, M. S. Alvarez, and A. J. Jacobson, <i>Phys. Rev. B</i> 38 , 2477-85 (1988).
251	"Neutron scattering investigation of phase transitions and magnetic correlations in the two-dimensional antiferromagnets: K_2NiF_4 , Rb_2MnF_4 , and Rb_2FeF_4 ," R. J. Birgeneau, H. J. Guggenheim, and G. Shirane, <i>Phys. Rev. B</i> 1 , 2211-30 (1970).
243	"Neutron scattering study of the dynamical spin susceptibility in $\text{YBa}_2\text{Cu}_3\text{O}_{6.6}$," J. M. Tranquada, P. M. Gehring, G. Shirane, S. Shamoto, and M. Sato, <i>Phys. Rev. B</i> 46 , 5561-75 (1992).

- 211 "Dimerization of CuGeO₃ in the spin-Peierls state,"
 K. Hirota, D. E. Cox, J. E. Lorenzo, G. Shirane, J. M. Tranquada, M. Hase, K. Uchinokura, H. Kojima, Y. Shibuya, and I. Tanaka, *Phys. Rev. Lett.* **73**, 736-9 (1994).
- 202 "Temperature Dependence of the Magnetic Excitations in La_{1.85}Sr_{0.15}CuO₄ (T_c = 33 K),"
 G. Shirane, R.J. Birgeneau, Y. Endoh, P.M. Gehring, M.A. Kastner, K. Kitazawa, H. Kojima, I. Tanaka, T. Thurston, and K. Yamada, *Phys. Rev. Lett.* **63**, 330-3 (1989).
- 195 "Soft phonon behavior and transport in single crystal La₂CuO₄,"
 R. J. Birgeneau, C. Y. Chen, D. R. Gabbe, H. P. Janssen, M. A. Kastner, C. J. Peters, P. J. Picone, T. Thio, J. D. Axe, P. Boni, and G. Shirane, *Phys. Rev. Lett.* **59**, 1329-32 (1987).
- 188 "Neutron scattering study of the 38 K and 54 K phase transitions in deuterated TTF-TCNQ,"
 R. Comès, S. M. Shapiro, G. Shirane, A. F. Garito, and A. J. Heeger, *Phys. Rev. Lett.* **35**, 1518-21 (1975).
- 187 "Inelastic neutron scattering study of acoustic phonons in Nb₃Sn,"
 J. D. Axe and G. Shirane, *Phys. Rev. B* **8**, 1965-77 (1973).
- 150 "Neutron scattering study of magnetic ordering in the re-entrant superconductor ErRh₄B₄,"
 D. E. Moncton, D. B. McWhan, J. Eckert, G. Shirane, and W. Thomlinson, *Phys. Rev. Lett.* **39**, 1164-6 (1977).
- 142 "Acoustic phonon instability and critical scattering in Nb₃Sn,"
 G. Shirane and J. D. Axe, *Phys. Rev. Lett.* **27**, 1803-6 (1971).
- 135 "Lattice instability and soft phonons in single-crystal La_{2-x}Sr_xCuO₄,"
 P. Böni, J. D. Axe, G. Shirane, R. J. Birgeneau, D. R. Gabbe, H. P. Janssen, M. A. Kastner, C. J. Peters, P. J. Picone, and T. R. Thurston, *Phys. Rev. B* **38**, 185 (1988).
- 135 "Magnetism and structural distortion in the La_{0.7}Sr_{0.3}MnO₃ metallic ferromagnet,"
 M.C. Martin, G. Shirane, Y. Endoh, K. Hirota, Y. Moritomo, and Y. Tokura, *Phys. Rev. B* **53**, 14285-90 (1996).
- 128 "Successive magnetic phase transitions in tetragonal YBa₂Cu₃O_{6+x},"
 H. Kadowaki, M. Nishi, Y. Yamada, H. Takeya, H. Takei, S. M. Shapiro, and G. Shirane, *Phys. Rev. B* **37**, 7932-5 (1988).
- 128 "Neutron scattering study of magnetic excitations in YBa₂Cu₃O_{6+x},"
 J. M. Tranquada, G. Shirane, B. Keimer, S. Shamoto, and M. Sato, *Phys. Rev. B* **40**, 4503-16 (1989).
- 128 "Static and dynamic spin fluctuations in superconducting La_{2-x}Sr_xCuO₄,"
 R. J. Birgeneau, Y. Endoh, Y. Hidaka, K. Kakurai, M. A. Kastner, T. Murakami, G. Shirane, T. R. Thurston, and K. Yamada, *Phys. Rev. B* **39**, 2868-71 (1989).
- 125 "Critical Magnetic Scattering in K₂NiF₄,"
 R. J. Birgeneau, J. Skalyo, Jr. and G. Shirane, *Phys. Rev. B* **3**, 1736-49 (1971).
- 123 "Development of antiferromagnetic correlations in the heavy fermion system UPt₃,"
 G. Aeppli, A.I. Goldman, G. Shirane, E. Bucher, and M.C. Lux-Steiner, *Phys. Rev. Lett.* **58**, 808-11 (1987).
- 122 "Low-energy spin excitations in superconducting La_{1.85}Sr_{0.15}CuO₄,"
 T.R. Thurston, P.M. Gehring, G. Shirane, R.J. Birgeneau, M.A. Kastner, Y. Endoh, M. Matsuda, K. Yamada, H. Kojima, and I. Tanaka, *Phys. Rev. B* **46**, 9128-31 (1992).

- 118 "Anomalous Acoustic Dispersion in Centrosymmetric Crystals with Soft Optic Phonons,"
J. D. Axe, J. Harada, and G. Shirane, *Phys. Rev. B* **1**, 1227–34 (1970).
- 117 "Temperature Dependence of the Soft Ferroelectric Mode in KTaO_3 ,"
G. Shirane, R. Nathans, and V. J. Minkiewicz, *Phys. Rev.* **157**, 396–9 (1967).
- 115 "A study of the α - β quartz phase transformation by inelastic neutron scattering,"
J. D. Axe and G. Shirane, *Phys. Rev. B* **1**, 342–8 (1970).
- 114 "Neutron scattering study of the lattice dynamical phase transition in Nb_3Sn ,"
G. Shirane and J. D. Axe, *Phys. Rev. B* **4**, 2957–63 (1971).
- 114 "Spin Correlations in a One-Dimensional Heisenberg Antiferromagnet,"
R.J. Birgeneau, R. Dingle, M.T. Hutchings, G. Shirane, and S.L. Holt, *Phys. Rev. Lett.* **26**, 718–21 (1971).
- 114 "Critical behavior of a site-diluted three-dimensional Ising magnet,"
R. J. Birgeneau, R. A. Cowley, G. Shirane, H. Yoshizawa, D. P. Belanger, A. R. King, and V. Jaccarino,
Phys. Rev. B **27**, 6747–6753 (1983).
- 110 "Dynamics of an $S = 1/2$ one-dimensional Heisenberg antiferromagnet,"
Y. Endoh, G. Shirane, R. J. Birgeneau, P. M. Richards, and S. L. Holt, *Phys. Rev. Lett.* **32**, 170–3 (1973).
- 109 "Neutron Scattering from K_2NiF_4 : A Two-Dimensional Heisenberg Antiferromagnet,"
R. J. Birgeneau, H. J. Guggenheim, and G. Shirane, *Phys. Rev. Lett.* **22**, 720–3 (1969).
- 101 "Soft Ferroelectric Modes in Lead Titanate,"
G. Shirane, J. D. Axe, J. Harada, and J. P. Remeika, *Phys. Rev. B* **2**, 155–9 (1970).