

REFERENCES

4.2 (cont.)

- Young, R. A. (1975). Editor. *International discussion meeting on studies of lattice distortions and local atomic arrangements by X-ray, neutron and electron diffraction*. *J. Appl. Cryst.* **8**, 79–191.
- Zernike, F. & Prins, J. A. (1927). *Die Beugung von Röntgenstrahlen in Flüssigkeiten als Effekt der Molekülanordnung*. *Z. Phys.* **41**, 184–194.

4.3

- Allen, L. J., Josefsson, T. W., Lehmpfuhl, G. & Uchida, Y. (1997). *Modeling thermal diffuse scattering in electron diffraction involving higher-order Laue zones*. *Acta Cryst.* **A53**, 421–425.
- Andersson, B. (1979). *Electron diffraction study of diffuse scattering due to atomic displacements in disordered vanadium monoxide*. *Acta Cryst.* **A35**, 718–727.
- Andersson, B., Gjønnnes, J. & Taftø, J. (1974). *Interpretation of short range order scattering of electrons; application to ordering of defects in vanadium monoxide*. *Acta Cryst.* **A30**, 216–224.
- Clapp, P. C. & Moss, S. C. (1968). *Correlation functions of disordered binary alloys. II*. *Phys. Rev.* **171**, 754–763.
- Cowley, J. M. (1976a). *Diffraction by crystals with planar faults. I. General theory*. *Acta Cryst.* **A32**, 83–87.
- Cowley, J. M. (1976b). *Diffraction by crystals with planar faults. II. Magnesium fluorogermanate*. *Acta Cryst.* **A32**, 88–91.
- Cowley, J. M. (1981). *Diffraction physics*, 2nd ed. Amsterdam: North-Holland.
- Cowley, J. M. (1988). *Electron microscopy of crystals with time-dependent perturbations*. *Acta Cryst.* **A44**, 847–853.
- Cowley, J. M. (1989). *Multislice methods for surface diffraction and inelastic scattering*. In *Computer simulation of electron microscope diffraction and images*, edited by W. Krakow & M. O'Keefe, pp. 1–12. Worrendale, PA: The Minerals, Metals and Materials Society.
- Cowley, J. M. & Fields, P. M. (1979). *Dynamical theory for electron scattering from crystal defects and disorder*. *Acta Cryst.* **A35**, 28–37.
- De Meulenaere, P., Rodewald, M. & Van Tendeloo, G. (1998). *Anisotropic cluster model for the short-range order in Cu_{1-x}Pd_x-type alloys*. *Phys. Rev. B*, **57**, 11132–11140.
- De Ridder, R., Van Tendeloo, G. & Amelinckx, S. (1976). *A cluster model for the transition from the short-range order to the long-range order state in f.c.c. based binary systems and its study by means of electron diffraction*. *Acta Cryst.* **A32**, 216–224.
- Doyle, P. A. (1969). *Dynamical calculation of thermal diffuse scattering*. *Acta Cryst.* **A25**, 569–577.
- Ferrel, R. A. (1957). *Characteristic energy loss of electrons passing through metal foils*. *Phys. Rev.* **107**, 450–462.
- Fields, P. M. & Cowley, J. M. (1978). *Computed electron microscope images of atomic defects in f.c.c. metals*. *Acta Cryst.* **A34**, 103–112.
- Fisher, P. M. J. (1969). *The development and application of an n-beam dynamic methodology in electron diffraction*. PhD thesis, University of Melbourne. [See also Cowley (1981), ch. 17.]
- Freeman, A. J. (1959). *Compton scattering of X-rays from non-spherical charge distributions*. *Phys. Rev.* **113**, 169–175.
- Freeman, A. J. (1960). *X-ray incoherent scattering functions for non-spherical charge distributions*. *Acta Cryst.* **12**, 929–936.
- Fujimoto, F. & Kainuma, Y. (1963). *Inelastic scattering of fast electrons by thin crystals*. *J. Phys. Soc. Jpn*, **18**, 1792–1804.
- Gjønnnes, J. (1962). *Inelastic interaction in dynamic electron scattering*. *J. Phys. Soc. Jpn*, **17**, Suppl. BII, 137–139.
- Gjønnnes, J. (1966). *The influence of Bragg scattering on inelastic and other forms of diffuse scattering of electrons*. *Acta Cryst.* **20**, 240–249.
- Gjønnnes, J. & Høier, R. (1971). *Structure information from anomalous absorption effects in diffuse scattering of electrons*. *Acta Cryst.* **A27**, 166–174.
- Gjønnnes, J. & Taftø, J. (1976). *Bloch wave treatment of electron channelling*. *Nucl. Instrum. Methods*, **133**, 141–148.
- Hashimoto, S. (1974). *Correlative microdomain model for short range ordered alloy structures. I. Diffraction theory*. *Acta Cryst.* **A30**, 792–798.
- Høier, R. (1973). *Multiple scattering and dynamical effects in diffuse electron scattering*. *Acta Cryst.* **A29**, 663–672.
- Honjo, G., Kodera, S. & Kitamura, N. (1964). *Diffuse streak diffraction patterns from single crystals. I. General discussion and aspects of electron diffraction diffuse streak patterns*. *J. Phys. Soc. Jpn*, **19**, 351–369.
- Howie, A. (1963). *Inelastic scattering of electrons by crystals. I. The theory of small angle inelastic scattering*. *Proc. Phys. Soc. A*, **271**, 268–287.
- Iijima, S. & Cowley, J. M. (1977). *Study of ordering using high resolution electron microscopy*. *J. Phys. (Paris)*, **38**, Suppl. C7, 21–30.
- International Tables for Crystallography* (1999). Vol. C. *Mathematical, physical and chemical tables*, edited by A. J. C. Wilson & E. Prince. Dordrecht: Kluwer Academic Publishers.
- Kainuma, Y. (1955). *The theory of Kikuchi patterns*. *Acta Cryst.* **8**, 247–257.
- Krahl, D., Pätzold, H. & Swoboda, M. (1990). *An aberration-minimized imaging energy filter of simple design*. *Proceedings of the 12th international conference on electron microscopy*, Vol. 2, pp. 60–61.
- Krivanek, O. L., Gubbens, A. J., Dellby, N. & Meyer, C. E. (1992). *Design and first applications of a post-column imaging filter*. *Micros. Microanal. Microstruct. (France)*, **3**, 187–199.
- Krivanek, O. L. & Mooney, P. E. (1993). *Applications of slow-scan CCD cameras in transmission electron microscopy*. *Ultramicroscopy*, **49**, 95–108.
- Krivoglaz, M. A. (1969). *Theory of X-ray and thermal neutron scattering by real crystals*. New York: Plenum.
- Leapman, R. D., Rez, P. & Mayers, D. F. (1980). *L and M shell generalized oscillator strength and ionization cross sections for fast electron collisions*. *J. Chem. Phys.* **72**, 1232–1243.
- Loane, R. F., Xu, P. R. & Silcox, J. (1991). *Thermal vibrations in convergent-beam electron diffraction*. *Acta Cryst.* **A47**, 267–278.
- Marks, L. D. (1985). *Image localization*. *Ultramicroscopy*, **18**, 33–38.
- Maslen, W. V. & Rossouw, C. J. (1984). *Implications of (e, 2e) scattering electron diffraction in crystals: I–II*. *Philos. Mag.* **A49**, 735–742, 743–757.
- Moliere, G. (1948). *Theory of scattering of fast charged particles: plural and multiple scattering*. *Z. Naturforsch. Teil A*, **3**, 78–97.
- Mori, M., Oikawa, T. & Harada, Y. (1990). *Development of the imaging plate for the transmission electron microscope and its characteristics*. *J. Electron Microsc. (Jpn)*, **19**, 433–436.
- Ohshima, K. & Watanabe, D. (1973). *Electron diffraction study of short-range-order diffuse scattering from disordered Cu–Pd and Cu–Pt alloys*. *Acta Cryst.* **A29**, 520–525.
- Ohtsuki, Y. H., Kitagaku, M., Waho, T. & Omura, T. (1976). *Dechannelling theory with the Fourier–Planck equation and a modified diffusion coefficient*. *Nucl. Instrum. Methods*, **132**, 149–151.
- Rez, P., Humphreys, C. J. & Whelan, M. J. (1977). *The distribution of intensity in electron diffraction patterns due to phonon scattering*. *Philos. Mag.* **35**, 81–96.
- Sauvage, M. & Parthé, E. (1974). *Prediction of diffuse intensity surfaces in short-range-ordered ternary derivative structures based on ZnS, NaCl, CsCl and other structures*. *Acta Cryst.* **A30**, 239–246.
- Taftø, J. & Lehmpfuhl, G. (1982). *Direction dependence in electron energy loss spectroscopy from single crystals*. *Ultramicroscopy*, **7**, 287–294.
- Taftø, J. & Spence, J. C. H. (1982). *Atomic site determination using channelling effect in electron induced X-ray emission*. *Ultramicroscopy*, **9**, 243–247.
- Tanaka, N. & Cowley, J. M. (1985). *High resolution electron microscopy of disordered lithium ferrites*. *Ultramicroscopy*, **17**, 365–377.
- Tanaka, N. & Cowley, J. M. (1987). *Electron microscope imaging of short range order in disordered alloys*. *Acta Cryst.* **A43**, 337–346.

4. DIFFUSE SCATTERING AND RELATED TOPICS

4.3 (cont.)

- Uyeda, R. & Nonoyama, M. (1968). *The observation of thick specimens by high voltage electron microscopy*. *Jpn. J. Appl. Phys.* **1**, 200–208.
- Van Hove, L. (1954). *Correlations in space and time and Born approximation scattering in systems of interacting particles*. *Phys. Rev.* **95**, 249–262.
- Wang, Z. L. (1995). *Elastic and inelastic scattering in electron diffraction and imaging*. New York: Plenum Press.
- Whelan, M. (1965). *Inelastic scattering of fast electrons by crystals. I. Interband excitations*. *J. Appl. Phys.* **36**, 2099–2110.
- Yoshioka, H. (1957). *Effect of inelastic waves on electron diffraction*. *J. Phys. Soc. Jpn.* **12**, 618–628.

4.4

- Aeppli, G. & Bruinsma, R. (1984). *Hexatic order and liquid crystal density fluctuations*. *Phys. Rev. Lett.* **53**, 2133–2136.
- Aeppli, G., Litster, J. D., Birgeneau, R. J. & Pershan, P. S. (1981). *High resolution X-ray study of the smectic A–smectic B phase transition and the smectic B phase in butyloxybenzylidene octylaniline*. *Mol. Cryst. Liq. Cryst.* **67**, 205–214.
- Aharony, A., Birgeneau, R. J., Brock, J. D. & Litster, J. D. (1986). *Multicriticality in hexatic liquid crystals*. *Phys. Rev. Lett.* **57**, 1012–1015.
- Alben, R. (1973). *Phase transitions in a fluid of biaxial particles*. *Phys. Rev. Lett.* **30**, 778–781.
- Als-Nielsen, J., Christensen, F. & Pershan, P. S. (1982). *Smectic-A order at the surface of a nematic liquid crystal: synchrotron X-ray diffraction*. *Phys. Rev. Lett.* **48**, 1107–1110.
- Als-Nielsen, J., Litster, J. D., Birgeneau, R. J., Kaplan, M., Safinya, C. R., Lindegaard, A. & Mathiesen, S. (1980). *Observation of algebraic decay of positional order in a smectic liquid crystal*. *Phys. Rev. B*, **22**, 312–320.
- Bak, P., Mukamel, D., Villain, J. & Wentowska, K. (1979). *Commensurate–incommensurate transitions in rare-gas monolayers adsorbed on graphite and in layered charge-density-wave systems*. *Phys. Rev. B*, **19**, 1610–1613.
- Barois, P., Prost, J. & Lubensky, T. C. (1985). *New critical points in frustrated smectics*. *J. Phys. (Paris)*, **46**, 391–399.
- Beaglehole, D. (1982). *Pretransition order on the surface of a nematic liquid crystal*. *Mol. Cryst. Liq. Cryst.* **89**, 319–325.
- Benattar, J. J., Doucet, J., Lambert, M. & Levelut, A. M. (1979). *Nature of the smectic F phase*. *Phys. Rev. A*, **20**, 2505–2509.
- Benattar, J. J., Levelut, A. M. & Strzelecki, L. (1978). *Etude de l'influence de la longueur moléculaire les caractéristiques des phases smectique ordonnées*. *J. Phys. (Paris)*, **39**, 1233–1240.
- Benattar, J. J., Moussa, F. & Lambert, M. (1980). *Two-dimensional order in the smectic F phase*. *J. Phys. (Paris)*, **40**, 1371–1374.
- Benattar, J. J., Moussa, F. & Lambert, M. (1983). *Two dimensional ordering in liquid crystals: the SmF and SmI phases*. *J. Chim. Phys.* **80**, 99–107.
- Benattar, J. J., Moussa, F., Lambert, M. & Germian, C. (1981). *Two kinds of two-dimensional order: the SmF and SmI phases*. *J. Phys. (Paris) Lett.* **42**, L67–L70.
- Benguigui, L. (1979). *A Landau theory of the NAC point*. *J. Phys. (Paris) Colloq.* **40**, C3-419–C3-421.
- Bensimon, D., Domany, E. & Shtrikman, S. (1983). *Optical activity of cholesteric liquid crystals in the pretransitional regime and in the blue phase*. *Phys. Rev. A*, **28**, 427–433.
- Billard, J., Dubois, J. C., Vaucher, C. & Levelut, A. M. (1981). *Structures of the two discophases of rufigallol hexa-n-octanoate*. *Mol. Cryst. Liq. Cryst.* **66**, 115–122.
- Birgeneau, R. J., Garland, C. W., Kasting, G. B. & Ocko, B. M. (1981). *Critical behavior near the nematic–smectic-A transition in butyloxybenzylidene octylaniline (4O.8)*. *Phys. Rev. A*, **24**, 2624–2634.
- Birgeneau, R. J. & Litster, J. D. (1978). *Bond orientational order model for smectic B liquid crystals*. *J. Phys. (Paris) Lett.* **39**, L399–L402.

- Blinc, R. & Levanyuk, A. P. (1986). Editors. *Modern problems in condensed matter sciences, incommensurate phases in dielectrics, 2. Materials*. Amsterdam: North-Holland.
- Brisbin, D., De Hoff, R., Lockhart, T. E. & Johnson, D. L. (1979). *Specific heat near the nematic–smectic-A tricritical point*. *Phys. Rev. Lett.* **43**, 1171–1174.
- Brock, J. D., Aharony, A., Birgeneau, R. J., Evans-Lutterodt, K. W., Litster, J. D., Horn, P. M., Stephenson, G. B. & Tajbakhsh, A. R. (1986). *Orientalional and positional order in a tilted hexatic liquid crystal phase*. *Phys. Rev. Lett.* **57**, 98–101.
- Brooks, J. D. & Taylor, G. H. (1968). In *Chemistry and physics of carbon*, Vol. 3, edited by P. L. Walker Jr, pp. 243–286. New York: Marcel Dekker.
- Bruinsma, R. & Nelson, D. R. (1981). *Bond orientational order in smectic liquid crystals*. *Phys. Rev. B*, **23**, 402–410.
- Caillé, A. (1972). *Remarques sur la diffusion des rayons X dans les smectiques*. *A. C. R. Acad. Sci. Sér. B*, **274**, 891–893.
- Carlson, J. M. & Sethna, J. P. (1987). *Theory of the ripple phase in hydrated phospholipid bilayers*. *Phys. Rev. A*, **36**, 3359–3363.
- Chan, K. K., Deutsch, M., Ocko, B. M., Pershan, P. S. & Sorensen, L. B. (1985). *Integrated X-ray scattering intensity measurement of the order parameter at the nematic to smectic-A phase transition*. *Phys. Rev. Lett.* **54**, 920–923.
- Chan, K. K., Pershan, P. S., Sorensen, L. B. & Hardouin, F. (1985). *X-ray scattering study of the smectic-A1 to smectic-A2 transition*. *Phys. Rev. Lett.* **54**, 1694–1697.
- Chan, K. K., Pershan, P. S., Sorensen, L. B. & Hardouin, F. (1986). *X-ray studies of transitions between nematic, smectic-A1, -A2, and -Ad phases*. *Phys. Rev. A*, **34**, 1420–1433.
- Chandrasekhar, S. (1982). In *Advances in liquid crystals*, Vol. 5, edited by G. H. Brown, pp. 47–78. London/New York: Academic Press.
- Chandrasekhar, S. (1983). *Liquid crystals of disk-like molecules*. *Philos. Trans. R. Soc. London Ser. A*, **309**, 93–103.
- Chandrasekhar, S., Sadashiva, B. K. & Suresh, K. A. (1977). *Liquid crystals of disk like molecules*. *Pramana*, **9**, 471–480.
- Chapman, D., Williams, R. M. & Ladbroke, B. D. (1967). *Physical studies of phospholipids. VI. Thermotropic and lyotropic mesomorphism of some 1,2-diacylphosphatidylcholines (lecithins)*. *Chem. Phys. Lipids*, **1**, 445–475.
- Chen, J. H. & Lubensky, T. C. (1976). *Landau–Ginzberg mean-field theory for the nematic to smectic-C and nematic to smectic-A phase transitions*. *Phys. Rev. A*, **14**, 1202–1207.
- Chu, K. C. & McMillan, W. L. (1977). *Unified Landau theory for the nematic, smectic A and smectic C phases of liquid crystals*. *Phys. Rev. A*, **15**, 1181–1187.
- Coates, D. & Gray, G. W. (1975). *A correlation of optical features of amorphous liquid–cholesteric liquid crystal transitions*. *Phys. Lett. A*, **51**, 335–336.
- Collett, J. (1983). PhD thesis, Harvard University, USA. Unpublished.
- Collett, J., Pershan, P. S., Sirota, E. B. & Sorensen, L. B. (1984). *Synchrotron X-ray study of the thickness dependence of the phase diagram of thin liquid-crystal films*. *Phys. Rev. Lett.* **52**, 356–359.
- Collett, J., Sorensen, L. B., Pershan, P. S. & Als-Nielsen, J. (1985). *X-ray scattering study of restacking transitions in the crystalline-B phases of heptyloxybenzylidene heptylaniline 7O.7*. *Phys. Rev. A*, **32**, 1036–1043.
- Collett, J., Sorensen, L. B., Pershan, P. S., Litster, J., Birgeneau, R. J. & Als-Nielsen, J. (1982). *Synchrotron X-ray study of novel crystalline-B phases in 7O.7*. *Phys. Rev. Lett.* **49**, 553–556.
- Crooker, P. P. (1983). *The cholesteric blue phase: a progress report*. *Mol. Cryst. Liq. Cryst.* **98**, 31–45.
- Davey, S. C., Budai, J., Goodby, J. W., Pindak, R. & Moncton, D. E. (1984). *X-ray study of the hexatic-B to smectic-A phase transition in liquid crystal films*. *Phys. Rev. Lett.* **53**, 2129–2132.
- Davidov, D., Safinya, C. R., Kaplan, M., Dana, S. S., Schaezting, R., Birgeneau, R. J. & Litster, J. D. (1979). *High-resolution X-ray and light-scattering study of critical behavior associated with the nematic–smectic-A transition in 4-cyano-4'-octylbiphenyl*. *Phys. Rev. B*, **19**, 1657–1663.