

# Bibliography

- Agrawal, G. W. (1989). *Nonlinear Fiber Optics*. Academic Press, Boston.
- Azzam, R. M. A. and Bashra, N. M. (1989). *Ellipsometry and Polarized Light*, 2nd edn. North Holland, Amsterdam.
- Altman, C. and Suchy, K. (1991). *Reciprocity, Spatial Mapping and Time Reversal in Electromagnetics*. Kluwer Academic Press, Dordrecht.
- Beckers, J. M. and Merckle, F. (eds) (1992). *High-Resolution Imaging by Interferometry II*, ESO Conference and Workshop Proceedings no. 39, European Southern Observatory, Garching-bei-München.
- Bell, R. J. (1972). *Introductory Fourier Transform Spectroscopy*. Academic Press, New York.
- Berry, M. V. (1984). Quantal Phase Factors Accompanying Adiabatic Changes, *Proc. R. Soc. London A* **392**, 45–57.
- Berry, M. V. (1987). Interpreting the Anholonomy of Coiled Light, *Nature* **326**, 277.
- Betzig, E., Trautman, J. K., Harris, T. D., Weiner, J. S. and Kostelak, R. L. (1991). Breaking the Diffraction Barrier: Optical Microscopy on a Nanometric Scale, *Science* **251**, 1468–70.
- Betzig, E. and Trautman, J. K. (1992). Near-field Optics: Microscopy, Spectroscopy and Surface Modification beyond the Diffraction Limit, *Science* **257**, 189–95.
- Binder, R. C. (1973). *Fluid Mechanics*, 5th edn. Prentice Hall.
- Binnig, G. and Rohrer, H. (1985). The Scanning Tunnel Microscope, *Scient. Am.* Aug. 1985, p. 40.
- Bloembergen, N. (1982). *Non-linear Optics*, 2nd edn. Benjamin, New York.
- Blundell, H. and Johnson, L. N. (1976). *Protein Crystallography*. Academic Press, New York.
- Born, M. and Wolf, E. (1980). *Principles of Optics*, 6th edn. Pergamon, Oxford.
- Bracewell, R. N. (1986). *The Hartley Transform*. Oxford University Press, Oxford.
- Brigham, E. O. (1988). *The Fast Fourier Transform and Applications*. Prentice Hall, New York.

- Brillouin, L. (1960). *Wave Propagation and Group Velocity*. Academic Press, New York.
- Brown, R. Hanbury (1974). *The Intensity Interferometer*. Taylor and Francis, London.
- Brown, R. Hanbury and Twiss, R. Q. (1956). Correlation between photons in two beams of light, *Nature* **177**, 27–9.
- Budden, K. G. (1966). *Radio Waves in the Ionosphere*. Cambridge University Press, Cambridge.
- Chiao, R. Y., Antaramian, A., Ganga, K. M., Jaio, H. and Wilkinson, S. R. (1988). Observation of a Topological Phase by means of a Non-planar Mach–Zehnder Interferometer, *Phys. Rev. Letts* **60**, 1214.
- Chiao, R. Y., Kwiat, P. G. and Steinberg, A. M. (1993). Faster Than Light?, *Scient. Am.* p. 38.
- Chow, W. W., Gea-Banacloche, J., Pedrotti, L. M., Sanders, V. E., Schleich, W. and Sculley, M. O. (1985). The Ring Laser Gyro, *Rev. Mod. Phys.* **57**, 61–104.
- Clarke, D. and Grainger, J. F. (1971). *Polarized Light and Optical Measurement*. Pergamon Press, Oxford.
- Cohen-Tannoudji, C., Diu, B. and Laloe, F. (1977). *Quantum Mechanics*. Wiley-Interscience, New York.
- Collier, R. J., Burckhardt, C. B. and Lin, L. H. (1971). *Optical Holography*. Academic Press, New York.
- Collin, R. E., (1991). *Field Theory of Guided Waves*, 2nd edn. IEEE, New York.
- Combes, J. M., Grossman, A. and Tchamitchian, Ph. (1990) (eds). *Time–Frequency Methods and Phase Space*, 2nd edn. Springer, Berlin.
- Cowley, J. M. (1984). *Diffraction Physics*, 2nd edn. North Holland, Amsterdam.
- Desurvire, E. (1992). Lightwave Communications: the 5th Generation, *Scient. Am.* Jan. 1992, p. 114.
- Ewald, P. P. (1962). *Fifty Years of X-ray Diffraction*. Oosthoek, Utrecht.
- Fienup, J. R. (1982). Phase Retrieval Algorithms: A Comparison, *Appl. Opt.* **21**, 2758.
- Fischer, B. and Sternklar, S. (1985). Image Transmission and Interferometry with Multimode Fibers Using Self-pumped Phase Conjugation. *Appl. Phys. Lett.* **46**, 113.
- Foot, C. J. (1991). Laser Cooling and Trapping of Atoms, *Contemp. Phys.* **32**, 369.
- Gasiorowicz, S. (1974). *Quantum Physics*. Wiley, New York.
- Ghatak, A. and Thyagarajan, K. (1980). Graded-Index Optical Waveguides: A Review, in *Progress in Optics*, XVIII, p. 1. North Holland, Amsterdam.
- Gloge, D. (1979). The Optical Fibre as a Transmission Medium, *Rep. Prog. Phys.* **42**, 1777.
- Goldin, E. (1982). *Waves and Photons – an Introduction to Quantum Optics*. Wiley, New York.
- Goodman, J. W. (1985). *Statistical Optics*. Wiley, New York.

- Grant, I. S. and Phillips, W. R. (1975). *Electromagnetism*. Wiley, London.
- Greenberger, D. M., Horne, M. A. and Zeikinger, A. (1993). Multiparticle Interferometry and the Superposition Principle, *Physics Today*, p. 22.
- Guenther, R. (1990). *Modern Optics*. Wiley, New York.
- Harburn, G. (1972). Optical Fourier Synthesis, p. 189 in *Optical Transforms*, ed. H. Lipson. Academic Press, London.
- Harburn, G., Taylor, C. A. and Welberry, T. R. (1975). *Atlas of Optical Transforms*. G. Bell and Sons, London.
- Hariharan, P. (1985). *Optical Interferometry*. Academic Press, Sydney.
- Hariharan, P. (1989). *Optical Holography*. Cambridge University Press, Cambridge.
- Haroche, S. and Kleppner, D. (1989). Cavity Quantum Electrodynamics, *Physics Today* **42**, 24–30.
- Haroche, S. and Raimond, J. M. (1993). Cavity Quantum Electrodynamics, *Scient. Am.*, April 1993, p. 26.
- Hecht, E. (1987). *Optics*, 2nd edn. Addison-Wesley, Reading MA.
- Hauptman, H. A. (1991). The Phase Problem of X-ray Crystallography, *Rep. Prog. Phys.* **54**, 1427.
- Hooke, R. (1665). *Micrographia*.
- Howells, M. R., Kirz, J. and Sayre, D. (1991). X-ray Microscopes, *Scient. Am.* Feb. 1991, p. 42.
- van de Hulst, H. C. (1984). *Scattering of Light by Small Particles*. Dover, New York.
- Hutley, M. C. (1982). *Diffraction Gratings*. Academic Press, London.
- Jacquinet, P. and Roizen-Dossier, B. (1964). Apodization, in *Progress in Optics*, ed. E. Wolf, vol. **III**, p. 29. North-Holland, Amsterdam.
- Jackson, J. D. (1975). *Classical Electrodynamics*. Wiley, New York.
- Jeans, J. (1982). *An Introduction to the Kinetic Theory of Gases*. Cambridge University Press, Cambridge.
- Jhe, W., Anderson, A., Hinds, E. A., Meschede, D., Moi, L. and Haroche, S. (1987). Suppression of Spontaneous Decay at Optical Frequencies, *Phys. Rev. Lett.* **58**, 666–9.
- Jones, R. and Wykes, C. (1989). *Holographic and Speckle Interferometry*. Cambridge University Press, Cambridge.
- Keiser, G. (1991). *Optical Fiber Communications*, 2nd edn. McGraw Hill, New York.
- Kellerman, K. I. and Thompson, A. R. (1988). Very Long Baseline Array, *Scient. Am.* Jan. 1988, p. 44.
- Kim, B. Y. and Shaw, H. J. (1986). Fiber-Optic Gyroscopes, *IEEE Spectrum*, March 1986, p. 54.
- Kimble, H. J., Dagenais, M. and Mandel, L. (1977). Photon Antibunching in Resonance Fluorescence, *Phys. Rev. Lett.* **39**, 691–5.
- Kingslake, R. (1978). *Lens Design Fundamentals*. Academic Press, New York.
- Kingslake, R. (1983). *Optical System Design*. Academic Press, Orlando.

- Kittel, C. (1986). *Introduction to Solid-State Physics*, 6th edn. Wiley, New York.
- Knox, K. T. and Thompson, B. J. (1974). Recovery of Images from Atmospherically-degraded Short-exposure Photographs, *The Astrophysical Journal* **193**, L45–8.
- Korpel, A. (1988). *Acousto-Optics*. Marcel Dekker Inc., New York.
- Krug, W., Rienitz, J. and Schulz, G. (1968). *Contributions to Interference Microscopy*, translated by J. H. Dickson. Hilger and Watts, London.
- Labeyrie, A. (1976). High Resolution Techniques in Optical Astronomy, in *Progress in Optics XIV* p. 47, ed. E. Wolf. North Holland, Amsterdam.
- Landau, L. D. and Lifshitz, E. M. (1980). *Statistical Physics*. Pergamon, Oxford.
- Lefevre, H. (1993). *The Fiber-Optic Gyroscope*, Artech House, Boston.
- Levenson, M. D. (1993). Wavefront Engineering for Microlithography, *Physics Today*, July, p. 26.
- Lewis, A., Isaacson, M., Harootunian, A. and Murray, A. (1984). Development of a 500 Å Resolution Light Microscope: I – Light is Efficiently Transmitted through a  $\lambda/6$  Diameter Aperture. *Ultramicroscopy* **13**, 227–30.
- Liddell, H. M. (1981). *Computer-aided Techniques for the Design of Multilayer Filters*. Hilger, Bristol.
- Lipson, H. (1968). *The Great Experiments of Physics*. Oliver and Boyd, Edinburgh.
- Lipson, S. G. (1972). Optical Transforms in Teaching, p. 349 in *Optical Transforms*, ed. H. Lipson. Academic Press, London.
- Lipson, S. G. (1990). Berry's Phase in Optical Interferometry – a Simple Interpretation, *Optics Letters* **15**, 154.
- Loewen, E. G. (1983). Diffraction Gratings, Ruled and Holographic, in *Applied Optics and Optical Engineering*, Vol. IX, ed. R. R. Shannon and J. C. Wyant. Academic Press, New York.
- Loudon, R. (1983), *The Quantum Theory of Light*, 2nd edn. Clarendon Press, Oxford.
- Machida, S., Yamamoto, Y. and Itaya, Y. (1987). Observation of Amplitude Squeezing in a Constant-Current-Driven Semiconductor Laser, *Phys. Rev. Lett.* **58** 1000–3.
- Macleod, H. A. (1989). *Thin-film Optical Filters*. Hilger, Bristol.
- Marchand, E. W. (1978). *Gradient Index Optics*. Academic Press, London.
- Marcuse, D. (1989) *Light Transmission Optics*, 2nd edn. van Nostrand-Reinhold, New York.
- Marcuse, D. (1991a) *Theory of Dielectric Optical Waveguides*, 2nd edn. Academic Press, Boston.
- Marcuse, D. (1991b). *Dielectric Optical Waveguides*, 2nd edn. Academic Press, San Diego CA.
- Meystre, P. and Sargent, M. (1991). *Elements of Quantum Optics*, 2nd edn. Springer, Berlin.

- Meystre, P. and Walls, D. F. eds (1991). *Non-classical Effects in Quantum Optics* (Key papers in physics, no. 4). American Institute of Physics, New York.
- Michelson, A. A. (1927). *Studies in Optics*, reprinted by University of Chicago Press, 1962.
- Michette, A. G. (1988). X-ray microscopy, *Rep. Prog. Phys.* **51**, 1525.
- Morgan, B. L. and Mandel, L. (1966). Measurement of Photon Bunching in a Thermal Light Beam, *Phys. Rev. Lett.* **16**, 1012–5.
- Moyen, P. and Paesler, M. (1995). *Near-field Optics*. Wiley Interscience, New York. (In press.)
- Myers, H. P. (1990). *Introductory Solid-State Physics*. Taylor and Francis, London.
- Paczynski, B. and Wambsganss, J. (1993). Gravitational Microlensing, *Physics World* **6**, no. 5, 26.
- Parker, T. J. (1990). Dispersive Fourier Transform Spectroscopy, *Contemp. Phys.* **31**, 335.
- Pearson, J. E., Freeman, R. H. and Reynolds, H. C. (1979). Adaptive Optical Techniques for Wavefront Correction, in *Applied Optics and Optical Engineering*, Vol. VII, ed. R. R. Shannon and J. C. Wyant. Academic Press, New York.
- Pepper, D. M. (1986). Applications of Optical Phase Conjugation, *Scient. Am.* Jan. 1986, p. 56.
- Pepper, D. M., Feinberg, J. and Kukhtarev, N. V. (1990). The Photorefractive Effect, *Scient. Am.* Oct. 1990, p. 34.
- Peres, A. (1993). *Quantum Theory – Concepts and Methods*. Kluwer, Dordrecht.
- Perley, R. A., Schwab, F. R. and Bridle, A. H. (1986). Synthesis Imaging (NRAO Summer School). NRAO, Green Bank WV, USA.
- Pfleegor, R. L. and Mandel, L. (1968). Further Experiments on Interference of Independent Photon Beams at Low Light Levels, *J. Opt. Soc. Am.* **58**, 946.
- Pohl, D. W., Denk, W. and Lanz, M. (1984). Optical Stethoscopy: Image Recording with Resolution  $\lambda/20$ , *Appl. Phys. Lett.* **44**, 651.
- Rae, A. I. M. (1986). *Quantum Physics: Illusion or Reality?* Cambridge University Press, Cambridge.
- Reynauld, S., Heidmann, A., Giacobino, E. and Fabre, C. (1992). Quantum Fluctuations in Optical Systems, in *Progress in Optics*, vol. XXX, ed. E. Wolf. North-Holland, Amsterdam.
- Rohlf, K. (1986). *Tools of Radio Astronomy*. Springer-Verlag, Berlin.
- Segré, E. (1984). *From Falling Bodies to Radio Waves*. Freeman and Co., New York.
- Schneider, P., Ehlers, J. and Falco, E. E. (1992). *Gravitational Lenses*. Springer, Berlin.
- Smith, F. G. (1962). *Radioastronomy*. Penguin Books, Harmondsworth.
- Squires, G. L. (1978). *Introduction to the Theory of Thermal Neutron Scattering*. Cambridge University Press, Cambridge.
- Steel, W. H. (1983). *Interferometry*. Cambridge University Press, Cambridge.

- Svelto, O. (1989). *Principles of Lasers*, 3rd edn. Plenum, New York.
- Tapster, P. R., Rarity, J. G. and Satchell, J. S. (1987). Generation of Sub-Poissonian Light by High-Efficiency Light-Emitting Diodes, *Europhys. Lett.* **4**, 293.
- Taylor, C. A. (1988). *The Art and Science of Lecture Demonstration*. Hilger, Bristol.
- Taylor, C. A. and Lipson, H. (1964). *Optical Transforms*. G. Bell and Sons, London.
- Teich, M. C. and Saleh, B. E. A. (1985). Observation of sub-Poisson Franck-Hertz Light, *J. Opt. Soc. Am.* **B2**, 275-82.
- Teich, M. C. and Saleh, B. E. A. (1990). Squeezed and anti-bunched light, *Physics Today*, June 1990, p. 26.
- Tolansky, S. (1973). *An Introduction to Interferometry*, 2nd edn. Wiley, New York.
- Tomita, A. and Chiao, R. Y. (1986). Observation of Berry's Topological Phase by Use of an Optical Fiber, *Phys. Rev. Letts.* **57**, 937.
- Tonomura, A. (1986). Electron Holography, in *Progress in Optics*, vol. **XXIII**, p. 183, ed. E. Wolf. North Holland, Amsterdam.
- Toraldo di Francia, G. (1952). Super-gain Antennas and Optical Resolving Power, *Suppl. Nuovo Cimento* **9**, 426.
- Tyson, R. K. (1991). *Principles of Adaptive Optics*. Academic Press, Boston.
- Villasenor, J. and Bracewell, R. N. (1987). Optical phase obtained by analogue Hartley transformation, *Nature* **330**, 735.
- Walker, J. S. (1988). *Fourier Analysis*. Oxford University Press, New York.
- Watson, G. N. (1958). *A Treatise on the Theory of Bessel Functions*, 2nd edn. Cambridge University Press, Cambridge.
- Weigelt, G. (1991). Triple-Correlation Imaging in Optical Astronomy, in *Progress in Optics*, vol. **XXIX**, ed. E. Wolf. North Holland, Amsterdam.
- Welford, W. T. (1986). *Aberrations of Optical Systems*. Adam Hilger, Bristol.
- Welford, W. T. and Winston, R. (1989). *High Collection Non-imaging Optics*. Academic Press, San Diego.
- Wille, K. (1991). Synchrotron Radiation Sources, *Rep. Prog. Phys.* **54**, 1005.
- Wilson, J. and Hawkes, J. F. B. (1989). *Optoelectronics – an Introduction*, 2nd edn. Prentice-Hall, Englewood Cliffs, New Jersey.
- Wilson, T. and Sheppard, C. J. R. (1984). *Theory and Practice of Scanning Optical Microscopy*. Academic Press, London.
- Wood, R. W. (1934). *Physical Optics*, MacMillan; 3rd edn. published by the Optical Society of America, 1989.
- Woolfson, M. M. (1970). *X-ray Crystallography*. Cambridge University Press, Cambridge.
- Woolfson, M. M. (1971). Direct Methods in Crystallography, *Rep. Prog. Phys.*, p. 369.
- Wu, L., Kimble, H. J., Hall, J. L. and Wu, H. (1986). Generation of Squeezed States by Parametric Down-Conversion, *Phys. Rev. Lett.* **57** 2520-3.

- Xiao, M., Wu, L. and Kimble, H. J. (1987). Precision Measurement beyond the Shot-Noise Limit, *Phys. Rev. Lett.* **59** 278–81.
- Yariv, A. (1989). *Quantum Electronics*, 3rd edn. Wiley, New York.
- Yariv, A. (1991). *Optical Electronics*, 4th edn. Holt, Reinhart and Winston, Philadelphia.
- Yariv, A. and Yeh, P. (1984). *Optical Waves in Crystals*. Wiley-Interscience, New York.
- Yablonovitch, E. (1993). Photonic Band Structures, *J. Opt. Soc. Am.* **B10**, 283–95.
- Yurke, B. (1984). Use of Cavities in Squeezed-State Generation, *Phys. Rev.* **A29**, 408–10.
- Zou, X. Y., Wang, L. J. and Mandel, L. (1991). Induced Coherence and Indistinguishability in Optical Interference, *Phys. Rev. Lett.* **67**, 318.