

strengths of the text far outweigh its shortcomings, and I recommend it for its intended audience and purpose.

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new books

Optics and Acoustics

Acoustics of Worship Spaces. E. Lubman, E. A. Wetherhill, eds. 91 pp. AIP, New York, 1985. \$15.00. *Compendium*

Concert Hall Acoustics. *Springer Series in Electrophysics* 17. Y. Ando. 151 pp. Springer-Verlag, New York, 1985. \$41.50. *Monograph*

Fundamentals of Holography. Yu. N. Denisuk. 136 pp. Mir, Moscow (US dist. Imported Publications, Chicago), 1985. \$3.95. *Lay readers*

Illumination Engineering: From Edison's Lamp to the Laser. J. B. Murdoch. 541 pp. MacMillan, New York, 1985. \$44.50. *Text*

Integrated Optics. *Springer Series in Optical Sciences* 48. Proc. Third European Conf., ECIO '85, Berlin, May 1985. H. P. Nolthing, R. Ulrich, eds. 242 pp. Springer-Verlag, New York, 1985. \$27.50

Optical Fiber Communications, Vol. 1: Fiber Fabrication. I. Li, ed. 363 pp. Academic, New York, 1985. \$54.00. *Compendium*

Optical Fiber Communications: Principles and Practice. J. Senior. 558 pp. Prentice-Hall, Englewood Cliffs, N.J., 1985. *Text*

Optical Holography: Principles, Techniques and Applications. P. Hariharan. 319 pp. Cambridge U.P., New York, 1984. \$69.50. *Text*

Principles of Phase Conjugation. *Springer Series in Optical Sciences* 42. B. Ya. Zel'dovich, N. F. Pilipetsky, V. V. Shkunov. 247 pp. Springer-Verlag, New York, 1985. \$49.00. *Monograph*

Particles, Nuclei and High-Energy Physics

Frontiers in Particle Physics '83. Proc. IV Adriatic Mtg. on Particle Physics, Dubrovnik, Yugoslavia, June, 1983. Dj. Sijacki, N. Bilic, B. Dragovic, D. Popovic, eds. 416 pp. World Scientific, Singapore (US dist. Taylor and Francis, Philadelphia), 1984. \$60.00

Solutions in Nuclear and Elementary Particle Projects. Proc. Wksp. Lewes, Delaware, June 1984. A. Chodos, E. Hadjimichael, C. Tze, eds. 320 pp. World Scientific, Singapore (US dist. Taylor and Francis, Philadelphia), 1984. \$40.00

Symmetries in Particle Physics. I. Bars, A. Chodos, C.-H. Tze. 311 pp. Plenum, New York, 1984. \$47.50

The Beta-Decay of Hyperons. *Lecture Notes in Physics* 222. A. Garcia, P. Kelanowski. 173 pp. Springer-Verlag, New York, 1985. \$10.50. *Monograph*

The Physics of the Quark-Gluon Plasma. *Lecture Notes in Physics* 225. B. Müller.

142 pp. Springer-Verlag, New York, 1985. \$8.70. *Monograph*

Treatise on Heavy-Ion Science, Vol. 5. High-Energy Atomic Physics. D. A. Bromley, ed. 498 pp. Plenum, New York, 1985. \$79.50. *Compendium*

Treatise on Heavy-Ion Science, Vol. 1: Elastic and Quasi-Elastic Phenomena. D. A. Bromley, ed. 753 pp. Plenum, New York, 1984. \$95.00. *Compendium*

Interacting Particle Systems. *Series of Comprehensive Studies in Mathematics* 276. T. M. Liggett. 488 pp. Springer-Verlag, New York, 1985. \$54.00. *Monograph*

Mathematics in Action, Applications in Aerodynamics Statistics, Weather Prediction and Other Sciences. O. G. Sutton. 236 pp. Dover, Mineola, New York, 1984. \$4.95. *Reprint*

Monopole '83. *NATO ASI Series. Proc. Conf. Ann Arbor, Michigan, October 1983.* J. L. Stone, ed. 699 pp. Plenum, New York, 1984. \$105.00

Non-Linear Equations in Classical and Quantum Field Theory. *Lecture Notes in Physics* 226. N. Sanchez, ed. 400 pp. Springer-Verlag, New York, 1985. \$26.80. *Conference proceedings*

Instrumentation and Techniques

Calorimetry: Fundamentals and Practice. W. Hemminger, G. Höhne. 310 pp. Verlag Chemie, Deerfield Beach, Fla., 1984. \$60.00

Photography for the Scientist. Second Edition. R. A. Morton, ed. 542 pp. Academic, New York, 1985. \$98.00.

Quantitative Electron Microscopy. J. N. Chapman, A. J. Craven, eds. 445 pp. Scottish Universities Summer School in Physics, Edinburgh, 1984. \$45.00

Radiation Dosimetry: Electron Beams with Energies Between 1 and 50 MeV. *ICRU Report* 35. 157 pp. Intl. Commission on Radiation Units and Measurements. Bethesda, Md., 1984. \$23.00

Vibrational Spectroscopy of Phase Transitions. Z. Iobal, F. J. Owens, eds. 316 pp. Academic, New York, 1985. \$61.50. *Compendium*

Laboratory & Observational Infrared Spectra of Interstellar Dust. Proc. Wksp., Hilo, Hawaii, July 1983. R. D. Wolstencroft, J. M. Greenberg, eds. 174 pp. Royal Observatory, Edinburgh, 1984. *Price not stated*

Fluids and Plasmas

Principles of Plasma Electrodynamics. *Springer Series in Electrophysics.* A. F. Alexandov, L. S. Bogdankevich, A. A. Rukhadze. 488 pp. Springer-Verlag, New York, 1984. \$49.50

Cold Plasma Waves. H. G. Booker, ed. 349 pp. Nijhoff, Boston, 1984. \$59.50. *Monograph*

Computational Methods for Fluid Flow. *Springer Series in Computational Physics.* R. Peyret, T. D. Taylor. 358 pp. Springer-Verlag, New York, 1983. \$22.00. *Monograph*

Plasma Physics via Computer Simulation. C. K. Birdsall, A. B. Langdon. 479 pp. McGraw-Hill, New York, 1984. \$45.00. *Monograph*

Rotary-Wing Aerodynamics, Vol. 1 and Vol. 2. W. Z. Stepniewski, C. N. Keys. 365 pp. and 236 pp. Dover, New York, 1984. \$14.50. *Reprint*

Student Texts and Popularizations

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College Physics. A. Serway, S. Faughn. 800 pp. Holt, Rinehart and Winston, New York, 1985. \$37.95

General Physics with Bioscience Essays. Second edition. J. B. Marion, W. F. Hornyak. 592 pp. Wiley, New York, 1985. \$36.45. *Undergraduate text*

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Physical Science: With Modern Applications. Third edition. M. Merken. 550 pp. Holt, Rinehart and Winston, New York, 1984. \$29.95 *Undergraduate text*

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Physics. R. T. Weidner, E. Browne. 945 pp. Allyn and Bacon, Newton, Mass., 1985. \$43.67. *Undergraduate text*

Physics. H. C. Ohanian. 1011 pp. Norton, New York, 1985. \$36.95 one-volume edition; \$49.90 two-volume edition. *Undergraduate text*

Physics: An Introduction. J. Bolemon. 628 pp. Prentice-Hall, Englewood Cliffs, N.J., 1985. \$25.95. *Introductory text*

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The Fascination of Physics. J. D. Spears, D. Zollman. 568 pp. Benjamin/Cummings, Menlo Park, Cal., 1985. \$25.95. *Introductory text*

The World of Science: Astronomy. P. L. Brown. **Mathematics.** I. Fekete, J. Denyer. **Weather and Its Work.** D. Lambert, R. Hardy. **Your Body.** I. Fekete, P. D. Ward. **Insects and Their Relatives.** M. Burton. **How Everyday Things Work.** C. Cooper, T. Osman. 64 pp. each. Facts on File, New York, 1984. \$9.95 each. *Young readers*

Materials Science and Condensed Matter

Ceramics Advanced Energy Techniques. Proc. European Colloquium, Petten, The Netherlands, September 1982. H. Krockel, M. Merz, O. van der Biest, eds., 541 pp. Reidel, Boston, 1984. \$195.00

Coherence and Energy Transfer in Glasses. *NATO Conference Series. Proc.*

Wksp. Clare College, Cambridge, September 1982. P. A. Fleury, B. Golding, eds. 419 pp. Plenum, New York, 1984. \$62.50

Glass... Current Issues. *NATO ASI Series.* Proc. NATO Adv. Study Institute, Puerto de la Cruz, Tenerife, April 1984. A. F. Wright, J. Dupuy, eds. 718 pp. Nijhoff, Boston, 1985. \$82.00

High Pressure in Science and Technology. Part III: General Topics. *Materials Research Society Symposia Proc. Vol. 22.* 9th AIRAPT Intl. High Pressure Conf., Albany, N.Y., July 1983. C. Homan, R. K. MacCrone, E. Whalley, eds. 397 pp. North-Holland, New York, 1984.

Magneto-Structural Correlations in Exchange Coupled Systems. *NATO ASI Series C: Mathematical and Physical Sciences Vol. 140.* R. D. Willett, D. Gatteschi, O. Kahn, eds. 616 pp. Reidel, Boston, 1985. \$79.00

Methods and Applications in Crystallographic Computing. Proc. Symp. Intl. Summer School Kyoto, Japan, August 1983. Clarendon, Oxford (US dist. Oxford U.P., New York), 1984. \$32.50

Methods and Materials in Microelectronic Technology. Proc. Intl. Symp. Bad Neuenahr, Germany, October 1982. J. Baragon, ed. 367 pp. Plenum, New York, 1984. \$59.50

Notes on Radiation Effects on Materials. J. N. Anno. 342 pp. Hemisphere, New York, 1984. \$24.95. *Monograph*

Phase Transformations and Material Instabilities in Solids. M. E. Gurtin, ed. 217 pp. Academic, New York, 1984. \$17.00

Powder Technology. Proc. Symp. Kyoto, October 1981. K. Iinoya, J. K. Beddow, G. Jimbo, eds. 823 pp. Hemisphere, New York, 1984. \$108.50

Treatise on Materials Science and Technology, Vol. 26: Glass IV. M. Tomozawa, R. H. Doremus, eds. 333 pp. Academic, New York, 1985. \$69.50. *Compendium*

Theory and Mathematical Physics

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An Introduction to Kaluza-Klein Theories. Wksp. Chalk River/Deep River, Ontario, August 1983. H. C. Lee, ed. 380 pp. World Scientific, Singapore (US dist. Taylor and Francis, Philadelphia), \$42.00

Chaotic Behavior in Quantum Systems Theory and Applications. *NATO ASI Series.* Proc. NATO Adv. Research Wksp. Como, Italy, June, 1983. G. Casati, ed. 380 pp. Plenum, New York, 1985. \$59.50

Classical Mechanics. Second edition. T. W. B. Kibble. 310 pp. Longman, New York, 1985. \$17.50 paper. *Introductory text*

Computer Methods and Borel Summability Applied to Feigenbaum's Equation. *Lecture Notes in Physics* 227. J. P. Eckmann, P. Wittwer. 297 pp. Springer-Verlag, New York, 1985. \$16.60. *Monograph*

Critical Phenomena: 1983 Braşov School Conference: Progress in Physics 11. V. Ceausescu, G. Costache, V. Georgescu, eds. 438 pp. Birkhäuser, Boston, 1985.

Deterministic Chaos: An Introduction. H. G. Schuster. 220 pp. Physik-Verlag, Deerfield Beach, Fla., 1984. \$43.75. *Text*

Dynamical Problems in Soliton Systems. *Springer Series in Synergetics.* Proc. 7th Kyoto Summer Institute, Kyoto, Japan, August 1984. S. Takeno, ed. 281 pp. Springer-Verlag, New York, 1985. \$32.00

Ergodic Theory and Statistical Mechanics. *Lecture Notes in Mathematics* 115. J. M. Ollagnier. 147 pp. Springer-Verlag, New York, 1985. \$12.00. *Monograph*

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Fifth Workshop on Grand Unification. Proc. Wksp. Providence, Rhode Island, April 1984. K. Kang, H. Fried, P. Frampton, eds. 480 pp. World Scientific, Singapore (US dist. Taylor and Francis, Philadelphia), \$52.00

Gauge Interactions in Theory and Experiment. Proc. Intl. School of Subnuclear Physics, Erice, Italy, August 1982. A. Zichichi, ed. 799 pp. Plenum, New York, 1984. \$120.00

Gravitation and Relativistic Astrophysics. Proc. Wksp. Ahmedabad, India, January 1982. A. R. Prasanna, J. V. Narlikar, C. V. Vishveshwara, eds. 160 pp. World Scientific, Singapore (US dist. Taylor and Francis, Philadelphia), \$28.00.

Astronomy, Cosmology and Space Physics

Comets: The Swords of Heaven. D. Ritchie. 234 pp. New American Library, New York, 1985. \$8.95. *Lay readers*

Erwin Schrödinger: Gesammelte Abhandlungen (Collected Papers). 4 Vols. Austrian Academy of Sciences. 2656 pp. Vieweg, Wiesbaden, 1984. *Price not stated*

From Spacelab to Space Station. *Advances in the Astronomical Sciences.* Vol. 56. Proc. Symp. Hamburg, October 1984. H. Stoewer, P. M. Bainum, eds. 259 pp. American Astronautical Society, San Diego, Cal., 1985. \$50.00 hardcover; \$40.00 paper

Guidance and Control 1985. *Advances in the Astronomical Sciences* 57. R. D. Culp, E. J. Bauman, C. A. Cullian. 601 pp. American Astronautical Society, San Diego, 1985. \$65.00 hardcover; \$50.00 paper.

Relativistic Astrophysics and Cosmology. Proc. Intl. Seminar, Sant Felice de Guixols, Catalonia, Spain, June-July 1983. X. Fuster, E. Verdaguer, eds. World Scientific, Singapore (US dist. Taylor and Francis, Philadelphia), 320 pp. \$37.00.

Supernovae as Distance Indicators. *Lecture Notes in Physics* 224. Proc. Harvard-Smithsonian Center for Astrophysics, September 1984. N. Bartel, ed. 226 pp. Springer-Verlag, New York, 1985. \$13.70

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Frontiers of Laser Technology. M. R. Levitt, L. Holmes, eds. 160 pp. PennWell, Tulsa, Okla., 1985. \$21.95

Pulsed Light Sources. I. S. Marshak. 461 pp. Consultants Bureau, New York, 1984. \$75.00. *Monograph*

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Women in the Scientific Search: An American Bio-bibliography, 1724-1979. P. J. Siegel and K. T. Finley. 399 pp. Scarecrow, Metuchen, N.J., 1985. \$32.50

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James E. Keeler: Pioneer American Astrophysicist and the Early Development of American Astrophysics. D. E. Osterbrock. 411 pp. Cambridge U.P., New York, 1984. \$39.50

Imagery in Scientific Thought: Creating 20th-Century Physics. A. I. Miller. 355 pp. Birkhäuser, Cambridge, 1984. \$24.95. *Monograph*

Faraday to Einstein: Construction Meaning in Scientific Theories. N. J. Nersessian. 196 pp. Martinus Nijhoff, Boston, 1984. \$38.00. *Monograph*

The Spiritualists: The Passion for the Occult in the Nineteenth and Twentieth Centuries. R. Brandon. 315 pp. Prometheus, Buffalo, N.Y., 1984. \$11.95. *Paper*

The Acid Rain Sourcebook. T. C. Elliott, R. G. Schwiger, eds. 290 pp. McGraw-Hill, New York, 1984. \$37.50

On the Frontier: Flight Research at Dryden, 1946-1981. R. P. Hallion. 385 pp. NASA, Washington, D.C., 1984. \$

Space, Time, and Causality: An Essay in Natural Philosophy. J. R. Lucas. 206 pp. Oxford U. P., New York, 1985. \$28.00 hardcover; \$10.95 paper

Philosophical Problems of Modern Physics. Reprinted from *Synthese*, Vol. 50, Nos. 1, 2 and 3. H. S. Plendl, ed. 457 pp. Reidel, Boston, 1982. \$39.50. *Compendium*

Transformation and Tradition in the Sciences: Essays in Honor of I. Bernard Cohen. E. Mendelsohn, ed., 577 pp. Cambridge U. P., New York, 1985. \$54.50

The Making of a Profession: A Century of Electrical Engineering in America. A. M. McMahon. 304 pp. IEEE, New York, 1985. \$39.95

Radiant Science, Dark Politics: A Memoir of the Nuclear Age. D. Kamen. 348 pp. Univ. of California P., Berkeley, 1985. \$19.95