

trons and protons to fight tumors. Computed tomography would have served as an excellent example of the application of radiation attenuation principles to both diagnostic and radiation oncology capabilities. Instead, virtually no examples are presented, let alone these. Neither is there a discussion of the dosimetry problems related to internally ingested radionuclides. The advent of emission tomography and the growth of clinical radioisotope procedures make this a glaring omission.

The reader will find the book singularly unique in its adherence to the new system of SI units for radiation dosimetry. Nevertheless, the reader who wishes to find an introductory presentation of radiation dosimetric principles and techniques in the medical field would be ill-advised to select Lovell's book over more comprehensive, albeit more difficult texts such as H. E. John's and J. R. Cunningham's *The Physics of Radiology*.

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book notes

Experiment, Theory, Practice: Articles and Addresses. P. L. Kapitza. 449 pp. Reidel, Hingham, Mass. (second Russian ed., 1977). \$47.35 hardbound, \$14.75 paperback.

This collection of writings by Nobel laureate physicist, Peter Leonidovich Kapitza, reveals his diverse interests. The book is divided into seven parts and concludes with a complete bibliography of Kapitza's publications. Part one includes an article on strong magnetic fields, a description of his original helium liquefaction plant, an account of his famous experiments with superfluid helium and a discussion of some problems associated with the production and use of oxygen. The second section describes the early days of the Institute of Physical Problems in Moscow, which he helped found in 1934. The following two parts are concerned with Kapitza's beliefs about the organization and planning of science and his ideas on education. Five articles on Kapitza's teacher, Lord Rutherford, comprise the fifth division of the book. Part six contains a number of articles on various scientists, such as Benjamin Franklin, Paul Langevin and L. D. Landau, while philosophical discussions of peace, disarmament and the energy crisis make up the final section.

Physical Principles of Audiology. P. M. Houghton. 216 pp. Hilger, Bristol, UK, 1980 (US dist.: Heyden, Philadelphia, Pa.) \$28.00

Volume 3 of Adam Hilger's "Medical Physics Handbook" series, *Physical Principles of Audiology*, provides a concise introduction to the field for medical physicists and graduate students. The book covers the fundamentals of acoustics, the anatomy and physiology of the human ear, the nature of hearing and its measurement, hearing disorders and hearing aids. In addition, the volume includes tables of audiometric

data and a list of international standards relating to audiology.

Handbook of Refractory Compounds. G. V. Samsonov, I. M. Vinitskii, eds. 567 pp. IFI/Plenum, New York, 1980 (first Russian ed., 1976). \$75.00

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thermal, electrical, magnetic, optical, mechanical and refractory properties. A general account of refractory compounds' resistance to the action of chemical reagents and molten media and to oxidation follows in the next two chapters. The closing section has tables that show basic data on the current and prospective uses of refractory materials in industry. Phase diagrams of selected binary systems ap-

pear in an appendix. The book lists many references to review-type papers that themselves contain references to various original publications. —SCA

new books

Particles, Nuclei and High-Energy Physics

Giant Multipole Processes (Proc. of a conf., Oak Ridge, Tennessee, October 1979). F. E. Bertrand, ed. 496 pp. Harwood, New York, 1980. \$42.50

Introduction to Nuclear Reactions. G. R. Satchler. 327 pp. Halsted (Wiley), New York, 1980. \$59.95

Nuclear Reactions with Heavy Ions R. Bass. 418 pp. Springer, New York, 1980. \$48.40

Deep-Inelastic and Fusion Reactions with Heavy Ions (Proc. of a symp., Berlin, Fed. Rep. Germany, October 1979). W. Oertzen, ed. 403 pp. Springer, New York, 1980. \$29.00

Nuclear Spectroscopy (Proc. of a wrkshp., Gull Lake, Michigan, August–September 1979). G. F. Bertsch, D. Kurath, eds. 257 pp. Springer, New York, 1980. \$19.00

Atomic, Molecular and Chemical Physics

Spectroscopic References to Polyatomic Molecules. V. N. Verma. 126 pp. IFI/Plenum, New York, 1980. \$75.00

Collision Theory and Statistical Theory of Chemical Reactions. S. G. Christov. 332 pp. Springer, New York, 1980. \$27.70

Organic Molecular Crystals: Their Electronic States. E. A. Silinsh. 406 pp. Springer, New York, 1980 (Russian ed., 1978). \$54.50

Advances in Chemical Physics, Vol. 44. I. Prigogine, S. A. Rice, eds. 671 pp. Wiley-Interscience, New York, 1980. \$65.00

Handbook of Refractory Compounds. G. V. Samsonov, I. M. Vinitskii, eds. 567 pp. IFI/Plenum, New York, 1980 (Russian ed., 1976). \$75.00

Optics and Acoustics

Acoustical Imaging, Vol. 9: Visualization and Characterization (Papers presented at a symp., Houston, Texas, December 1979). K. Y. Wang, ed. 853 pp. Plenum, New York, 1980. \$75.00

Light: Its Interaction with Art and Antiquities. T. B. Brill. 298 pp. Plenum, New York, 1980. \$29.50

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Electricity and Magnetism (Third Edition) W. J. Duffin. 493 pp. McGraw-Hill, Berkshire, UK, 1980 (first ed., 1965). \$7.50

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