

pose, especially for people at the periphery of cell biology. The author also identifies areas where data are insufficient or conflicting and on the whole succeeds in delineating the extent of our factual knowledge of cell reproduction and its regulation.

It is, however, a pity that Prescott did not see fit to elevate his book from the level of a review of the current literature by incorporating some of the insights accruing from his over 20 years' experience with work on the cell cycle. Such a treatment of the subject would have made for a more interesting book and could have extended the useful life of the volume significantly beyond that of the majority of the papers reviewed.

WALTER PLAUT

Department of Zoology,
University of Wisconsin, Madison

Atomic Physics

Atoms and Molecules in Electric Fields. NILS RYDE. Almqvist and Wiksell, Stockholm, 1976. iv, 456 pp., illus. Sw. kr. 315.

In this book Nils Ryde presents a unique survey of the spectroscopy of free atoms and molecules in electric fields. He discusses the characteristic difficulties of spectroscopic investigation of electric fields in sufficient detail to make clear why the use of spectroscopy to investigate magnetic fields has always been easier. It is no accident that Stark's discovery of the splitting of spectral lines in an electric field came so much later than Zeeman's work on the splitting of spectral lines in magnetic fields.

Ryde reviews the most fruitful experimental techniques for investigating the behavior of atoms and molecules in electric fields, from Stark's original work with canal rays to the more recent methods of optical double resonance, level crossing, and laser spectroscopy. Although he mentions the peculiarities of the Stark effect in rapidly oscillating fields, he is concerned mainly with the Stark effect in static electric fields.

The theory of the Stark effect is discussed with regard to both hydrogenic and nonhydrogenic atoms. A nice review of the use of parabolic coordinates is used to discuss the Stark effect in hydrogen. Field ionization is mentioned briefly, but much of the recent work on the ionization of Rydberg states by static or oscillating electric fields was completed too late to be included in the book. The theory of the Stark effect in molecules is also reviewed.

Approximately half the book is devoted to a thorough discussion of the literature on the Stark effect in atoms and atomic ions. Simple molecules are discussed in much less detail, with sufficient references to allow the reader to fill in the details from the original articles.

The numerous applications of the Stark effect in chemistry, plasma diagnostics, and astrophysics are mentioned, but they are not discussed in detail. The discussion of excitation mechanisms for the investigation of canal rays makes a fascinating story, and, on reading about some of the early experimental designs, one cannot help wondering if this or that Stark apparatus would have lased if appropriate mirrors had been provided.

One of the most valuable parts of the book is the extensive bibliography, which includes references to Stark's original publications in 1914 and also to articles published just before the book went to press in 1976.

The printing and proofreading of the book are excellent, and the tables and figures are instructive and well chosen. The book would be a valuable addition to any scientific or technical library.

W. HAPPER

Department of Physics,
Columbia University, New York

Books Received and Book Order Service

Books Received and the Book Order Service will be combined in issues in which there is a Readers' Service Card. To order any of the Book Order Service books, circle the corresponding number on the Readers' Service Card (pages 828A and 908A); the participating publisher(s) will ship the title(s) ordered and send you a bill.

Active RC Filters. Theory and Application. L. P. Huelsman, Ed. Dowden, Hutchinson and Ross, Stroudsburg, Pa., 1977 (distributor, Halsted [Wiley], New York). xviii, 318 pp., illus. \$30. Benchmark Papers in Electrical Engineering and Computer Science, vol. 15.

Advances in Inorganic Chemistry and Radiochemistry. Vol. 19. H. J. Emeléus and A. G. Sharpe, Eds. Academic Press, New York, 1976. viii, 326 pp., illus. \$31.50.

An Analysis of Earthquake Intensities and Recurrence Rates in and near Alaska. Herbert Meyers, R. J. Brazee, J. L. Coffman, and S. R. Lessig. NOAA National Geophysical and Solar-Terrestrial Data Center, Boulder, Colo., 1976. iv, 102 pp., illus. + microfiche. Paper. NOAA Technical Memorandum EDS NGADC-3.

Analysis of Vertebrate Populations. Graeme Caughley. Wiley-Interscience, New York, 1977. x, 234 pp., illus. \$17.95. *To order this book circle No. 373 on Readers' Service Card*

Anatomy of Seed Plants. Katherine Esau.

Wiley, New York, ed. 2, 1977. xxii, 550 pp., illus. \$16.95. *To order this book circle No. 396 on Readers' Service Card*

Annual Review of Entomology. Vol. 22. Thomas E. Mittler, Carroll N. Smith, and Vincent H. Resh, Eds. Annual Reviews, Palo Alto, Calif., 1977. x, 576 pp., illus. \$17.

Annual Review of Fluid Mechanics. Vol. 9. Milton Van Dyke, J. V. Wehausen, and John L. Lumley, Eds. Annual Reviews, Palo Alto, Calif., 1977. x, 510 pp., illus. \$17.

The Arctic Diary of Russell Williams Porter. Herman Friis, Ed. University Press of Virginia, Charlottesville, 1976. xii, 172 pp., illus. \$20.

Atlas of United States Trees. Vol. 3, Minor Western Hardwoods. Elbert L. Little, Jr. United States Department of Agriculture Forest Service, Washington, D.C., 1976 (available from the Superintendent of Documents, Washington, D.C.). Unpaged. \$9.10. U.S. Department of Agriculture Miscellaneous Publication No. 1314.

Behavioral Intervention. Contemporary Strategies. W. Robert Nay. Gardner Press, New York, 1977 (distributor, Halsted [Wiley], New York). xiv, 384 pp. \$19.95. *To order this book circle No. 397 on Readers' Service Card*

Biochemistry of Parasites and Host-Parasite Relationships. Proceedings of a symposium, Beersse, Belgium, June 1976. H. Van den Bossche, Ed. North-Holland, Amsterdam, 1976 (U.S. distributor, Elsevier, New York). xii, 664 pp., illus. \$53.95.

The Biology of Insects. C. P. Friedlander. Pica Press, New York, 1977 (distributor, Universe Books, New York). 190 pp., illus. \$12.50. Studies in the Biological Sciences.

Block Copolymers. Overview and Critical Survey. Allen Noshay and James E. McGrath. Academic Press, New York, 1977. xvi, 516 pp., illus. \$45.

Cell Genetics in Higher Plants. Proceedings of a course, Szeged, Hungary, July 1976. D. Dudits, G. L. Farkas, and P. Maliga, Eds. Akadémiai Kiadó, Budapest, 1976. xii, 252 pp., illus. \$15.

Cells and Organelles. Alex B. Novikoff and Eric Holtzman. Holt, Rinehart and Winston, New York, ed. 2, 1976. xii, 400 pp., illus. Paper, \$9.95. Modern Biology Series.

Clinical Evaluation of Immune Function in Man. Proceedings of a seminar, New York, Feb. 1976. Stephen D. Litwin, Charles L. Christian, and Gregory W. Siskind, Eds. Grune and Stratton, New York, 1976. xiv, 236 pp., illus. \$11.50.

Cyclic Nucleotides and the Regulation of Cell Growth. Proceedings of a conference. Morad Abou-Sabé, Ed. Dowden, Hutchinson and Ross, Stroudsburg, Pa., 1977 (distributor, Halsted [Wiley], New York). xvi, 296 pp., illus. \$20. *To order this book circle No. 374 on Readers' Service Card*

Density Gradient Centrifugation. Richard Hinton and Miloslav Dobrota. North-Holland, Amsterdam, 1976 (U.S. distributor, Elsevier, New York). 290 pp., illus. Paper, \$18.95. Laboratory Techniques in Biochemistry and Molecular Biology.

Detection of Developmental Problems in Children. A Reference Guide for Community Nurses and Other Health Care Professionals. Marilyn J. Krajicek and Alice I. Tearney, Eds. University Park Press, Baltimore, 1977. xvi, 204 pp., illus. Paper, \$6.95.

Dimensionless Parameters. Theory and Methodology. H. A. Becker. Halsted (Wiley), New York, 1977. xiv, 128 pp. \$20. Fuel and