

PUBLISHING NEWS

Atomic and molecular data

An Atomic and Molecular Processes Information Center has been established at Oak Ridge National Laboratory. Sponsored jointly by the National Bureau of Standards and the Atomic Energy Commission, the center is part of the National Standard Reference Data Program and will collect, store, evaluate, and disseminate information from all over the world. At first the Center's activities will be limited to atomic and molecular cross-section data and other particle collision process information in three specific areas: (1) the interaction of heavy particles; (2) particle penetration through matter; and (3) excitation, dissociation, ionization, and detachment by external electric and magnetic fields.

The Center will begin full operation about July 1. After that date, inquiries may be addressed to C. F. Barnett, Director, Atomic and Molecular Processes Information Center, Oak Ridge National Laboratory, PO Box Y, Oak Ridge, Tenn.

Antarctic research

The American Geophysical Union has published *Geomagnetism and Aeronomy*, a 200-page volume of results of recent investigations of the ionosphere, geomagnetism, and atmospheric radio noise in Antarctica. The book is the fourth in the Antarctic Research Series, published by the AGU with the support of the National Science Foundation. Edited by Arthur H. Waynick, director of the Ionosphere Research Laboratory at Pennsylvania State University, the volume contains nine papers. Copies can be purchased from the AGU, Suite 506, 1145 19th Street, NW, Washington, D.C., 20036.

Proceedings

The *Proceedings of the International Conference on Nuclear Physics*, held at Paris in July 1964, are being published by the French Centre Na-

tional de la Recherche Scientifique. The meeting, which gathered 900 participants from 32 countries, dealt with five general topics: nuclear forces, nuclear matter, nuclear structure and models, reaction mechanisms, and radioactivity and weak interactions.

Volume 2, which is to appear first, contains all 434 contributed papers, classified by topic. Volume 1 is composed of the thirteen rapports presented in the plenary sessions and the three talks given at the last session (rapports by D. Amati, R. Wilson, R. Nataf, H. A. Bethe, G. E. Brown, M. Baranger, A. K. Kerman, C. Bloch, H. Feshbach, P. E. Hodgson, I. S. Shapiro, G. Bishop, and G. N. Flerov; talks by L. Rosenfeld, A. Bohr, and L. Van Hove), along with general conclusions offered by R. E. Peierls. The proceedings of discussion sections on the spectrometry of alpha particles and the optical model also appear in Volume 1, as well as the speeches given at the Sorbonne in commemoration of the thirtieth anniversary of the discovery of artificial radioactivity (J. Roche, E. Amaldi, F. Perrin, D. V. Skobelzyne, and H. C. Urey).

The two volumes can be ordered for \$25 from Editions du Centre National de la Recherche Scientifique, 15 quai Anatole-France, Paris 7, France.

Scientific biography

On February 23, the National Science Foundation granted more than a quarter million dollars to the American Council of Learned Societies for the production of a reference work in the history of science to be called the *Dictionary of Scientific Biography*. The *Dictionary* will be published in four or five volumes and will contain approximately 2600 essays describing the careers and achievements of scientists and mathematicians of all periods and all nationalities. The intention of the compilers of the new work is to make the

findings of contemporary research in the history of science available in a single comprehensive reference so that they may be more easily used by students, teachers, and writers.

Charles C. Gillispie, professor of history of science at Princeton University, will serve as editor-in-chief of the project; Charles Scribner's Sons of New York will be the publisher. Associate editors of the *Dictionary* include Carl B. Boyer, professor of mathematics at Brooklyn College; Marshall Clagett, professor of history at the Institute for Advanced Study in Princeton; Thomas S. Kuhn, professor of history of science at Princeton University; Leonard G. Wilson, associate professor of history of medicine at Yale University; and Harry Woolf, professor of history of science at Johns Hopkins University. Joseph G. E. Hopkins, managing editor of the *Concise Dictionary of American Biography*, will be managing editor of the new *Dictionary*. Further information about the project can be obtained from Edward White, Charles Scribner's Sons, 597 Fifth Ave., New York, N.Y., 10017.

Air Force research

The Historical Division of the Office of Aerospace Research, US Air Force, has published a 77-page paperback volume entitled *Cadmium Sulfide: A History of Semiconductor Research at the Aerospace Research Laboratories*. Written by Nick A. Komons, the booklet represents the addition of topics on basic and applied research to the operational topics that have formed the principal subject matter of the Air Force historical program up to the present. The work is for sale by the Superintendent of Documents, US Government Printing Office, for forty cents.

New journals

The first issue of the new quarterly *Metrologia*, an international journal for scientific metrology, appeared in January. The new journal is the official organ of the International Committee of Weights and Measures, for which it is published by Springer-Verlag of Berlin and New York under

the editorship of L. E. Howlett of Ottawa.

The magazine will publish articles in English, French, German, and Spanish. Manuscripts and editorial correspondence should be sent to The Editor, *Metrologia*, Division of Applied Physics, National Research Council, Ottawa, Ont., Canada. Subscriptions (at \$8.50 per year) can be ordered from Springer-Verlag New York, Inc., 175 Fifth Ave., New York, N.Y., 10010.

This month, the Institute of Electrical and Electronics Engineers plans to commence publication of a new monthly *Journal of Quantum Electronics*. Its editorial emphasis will be placed on the physics of quantum-electronic devices, such as masers and lasers, and associated techniques, such as modulation, detection, and non-linear optical effects.

Glen Wade of Cornell University and R. H. Kingston of the MIT Lincoln Laboratory are co-editors of the new publication, and E. I. Gordon of Bell Telephone Laboratories and A. Yariv of the California Institute of Technology are associate editors. The editorial advisory board includes: W. R. Bennett, Jr., of Yale University, N. Bloembergen of Harvard University, Benjamin Lax of MIT Lincoln Laboratory, and A. L. Schawlow of Stanford University. In addition, J. E. Thomas, Jr., of General Instruments Corporation and H. Heffner of Stanford University are ex officio members by virtue of their positions as chairman and vice chairman of the IEEE's Electron Devices Group.

The new journal is a joint venture of the IEEE and its Electron Devices Group. Until July it will be sent gratis to a selected list of subscribers. Starting in July a charge of \$5.00 per year will be made to IEEE members, \$12.75 to public libraries and colleges, and \$17.00 to non-members. A special affiliate rate of \$9.50 per year will be available to members of such societies as: the member societies of the American Institute of Physics, the American Chemical Society, the American Institute of Chemical Engineers, and the Electrochemical Society.

from Addison-Wesley

FEYNMAN LECTURES ON PHYSICS

By R. P. FEYNMAN, R. B. LEIGHTON, *California Institute of Technology*
M. L. SANDS, *Stanford University*

Volume I: *Mainly Mechanics, Radiation, and Heat*

Volume II: *The Electromagnetic Field*

Volume III: *Quantum Mechanics*

This three-volume work is designed for a two-year introductory physics course intended to take advantage of the increasing mathematical maturity of students and to provide a more accurate picture of present day physics. The aim of the books is to provide the student with a first-rate background for further study in physics, and to maintain and expand his excitement and interest in the subject.

Volume I, 519 pp. 342 illus, \$8.75

Volume II, 560 pp, 448 illus, \$8.75

Volume III, In Press

DEVELOPMENT OF CONCEPTS OF PHYSICS

By ARNOLD B. ARONS, *Amherst College*

Intended for introductory courses, this text presents general physics from the 17th Century rationalization of mechanics to the first theory of atomic structure. Throughout the text, historical and philosophical aspects of scientific thought are stressed. Although primarily designed for a one-year course for non-science majors—including prospective teachers—the text can also be used to supplement a two-year course for students of science and engineering.

In Press

ADVANCED QUANTUM THEORY

By PAUL ROMAN, *Boston University*

Designed for advanced graduate courses on quantum theory, this text presents a unified treatment of the subject that takes the student from the realm of basic quantum mechanics to the peaks of present-day research methods and concepts. Thus, it serves as preparation for further study in genuinely advanced special topics, such as relativistic field theory, theory of elementary particles, and the many body problem.

305 pp, 18 illus, \$12.50

CLASSICAL CHARGED PARTICLES

By F. ROHRICH, *Syracuse University*

Written at the graduate level, this text is intended to fill a gap in the usual electrodynamics-relativity sequence. Its purpose is to present the theory of classical charged particles consistently and completely and to use this theory as an example of the interrelationship of physical theories. Thus, the approach emphasizes the structure of physical theory in a way that cuts across many different areas of physics.

305 pp., 18 illus, \$12.50

ELEMENTARY PARTICLE PHYSICS

By GUNNAR KÄLLÉN, *University of Lund, Sweden*

Written at the graduate level, this book develops the field of elementary particle physics—including both strong and weak interactions—from a systematic and unified point of view. It is intended to be accessible to experimental physicists with a general theoretical background, but the main emphasis is on the theoretical aspects. In general, the development is quite complete, minimum demands being imposed upon the reader's credulity.

546 pp, 79 illus, \$15.00

PHYSICS OF NUCLEAR KINETICS

By G. ROBERT KEEPIN, *University of California, Los Alamos Scientific Laboratory*

This book is intended to serve either as a text for senior-graduate level courses in nuclear kinetics and reactor kinetics or as a reference for research workers in these fields. It assembles in one book, and in precise, clear, and directly usable form, the latest and best basic fission and reactor kinetics data. It then develops in detail the role of these basic data in determining the dynamic behavior of nuclear chain reacting systems. Throughout the book, there is a definite emphasis on the physics of reactor kinetics.

435 pp. 108 illus, \$12.50

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