

PUBLISHING NEWS

Collections

Papers presented last June at the Schenectady Conference on Semiconducting Compounds, which have been collected and published as a special supplement to the October issue of the *Journal of Applied Physics*, will also appear in a clothbound volume under arrangements the American Institute of Physics has completed with W. A. Benjamin, Inc.

The conference papers emphasize the physical ideas common to various classes of compound semiconductors and are particularly concerned with those compounds for which a large body of experimental information relevant to theoretical interpretation is available. Emphasis is placed on the 3-5 and 2-6 compounds, although the proceedings include some discussion of the lead compounds and transition metal oxides. The program of the meeting dealt specifically with such fundamental physical properties as energy band structure, transport (including tunneling), and optical, galvanomagnetic, and resonance phenomena.

The clothbound edition of the conference proceedings is scheduled to appear sometime this month. It is priced at \$10 per copy, and can be ordered directly from the publisher, W. A. Benjamin, Inc., 2465 Broadway, New York 25, N. Y.

A collection of spectrographic data, originally published under the auspices of the Commission for Spectroscopy at the Academy of Sciences of the USSR, has recently been published in a trilingual (English, French, and German) edition of 550 pages by Pergamon Press of New York and VEB Verlag Technik of Berlin. Compiled by A. N. Zaidel', V. K. Prokof'ev, and S. M. Raiskii, *Tables of Spectrum Lines* is intended as an aid to those engaged in the development and use of spectral techniques in qualitative and quantitative analysis.

The first part of the book, which lists 41 468 lines of 60 elements, covers the range from 8000 Å to 2000 Å, and arranges the lines in order of decreasing wavelength. Each entry gives the emitting element and the intensity relative to the brightest line of the given emitter. Intensities are tabulated for excitations by spark, arc, or Geissler tube. Accuracy of the wavelengths is generally 1/100 Å, but a few values are accurate to 1/1000 Å. The compilers have entirely omitted the spectra of certain elements considered of little practical use to spectral analysts, as well as certain low-intensity lines of elements whose brighter lines are included.

In the second part of the book, which contains 23 392 lines of 93 elements, the order of listing is by elements. Intensity data are again given, and, in about 75% of the cases, excitation energies are listed.

Various auxiliary tables make up the third section,

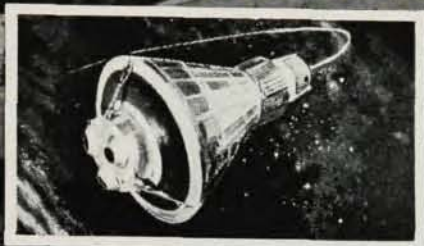
including information about ionization potentials, molecular weights and melting points, sensitive lines, extreme ultraviolet lines, and the spectra of molecular hydrogen and deuterium. The work is priced at \$14.

The American Society for Testing Materials has issued its 1961 *Book of ASTM Methods for Chemical Analysis of Metals*, covering sampling methods, chemical analysis of ferrous and nonferrous metals, analysis of metal powders, spectrochemical and microchemical analysis, and other testing procedures that have been approved by ASTM's Committee E-3. Methods included in older editions have been brought up to date; newer methods, involving shorter or more precise techniques, and methods for additional metals have been added. The 722-page volume can be ordered from ASTM headquarters, 1916 Race St., Philadelphia 3, Pa., at a price of \$11 per copy.

Nuclear safety is the theme of two recent publications of the International Atomic Energy Agency. One, a 97-page manual entitled *Safe Operation of Critical Assemblies and Research Reactors*, was prepared by several of the Agency's reactor specialists in cooperation with an international panel of experts on that subject. The manual, which is priced at \$1.50, is intended for those involved in reactor work or criticality experiments, as well as for those contemplating the design, manufacture, or purchase of critical assemblies or research reactors. Another IAEA publication (*Radioactive Waste Disposal into the Sea*; 169 pp.; \$2.50) is a report of a panel headed by Harry Brynielsson, managing director of AB Atomenergi of Sweden. The Brynielsson report represents the considered opinion of the panel that waste-disposal operations can be controlled in such a way as to safeguard man against the deleterious effects of radiation. A series of recommendations for an international agreement to that effect is offered, together with material for the practical guidance of those who are technically concerned with the problems of disposing of radioactive waste by putting it in the ocean. In announcing the publication of the book, the Agency acknowledged the controversial aspects of the subject by noting that the Brynielsson report does not necessarily represent the views of the IAEA or of the bodies to which the individual panel members belong.

Also published in recent months are the proceedings of two IAEA-sponsored meetings, one on dosimetry and the other on small and medium power reactors. The collection of papers published under the title, *Selected Topics in Radiation Dosimetry* (687 pp.; \$9.50), includes discussions of problems related to exposure and absorbed dose, new developments in instrumentation

ELECTRONICS



in astronautics



... aeronautics



... and automation

McDonnell achievements in aeronautics, astronautics and automation are often directly related to swift-paced developments in electronics. Wherever McDonnell requirements cannot be met by standard electronics systems, special equipment is designed and developed by McDonnell's own electronic engineers. These consistently demanding objectives have fashioned an electronics division geared to the design of highly specialized systems and components — products which often prove to be broad-scope advancements with many applications. McDonnell Electronics is now being expanded, and desirable openings exist for *electronic engineers* who are qualified to provide leadership in areas of systems and equipment development.

Advanced degree in E.E., M.E. or Physics required
(experience at the supervisory level is desirable
in at least one of the following areas:)

COMMUNICATIONS ● DIGITAL TECHNIQUES ● AUTOMATIC TEST EQUIPMENT ● MILITARY AIRBORNE
& SOLID STATE ELECTRONICS ● ELECTROMAGNETIC FIELD THEORY ● MASER AND LASER THEORIES ●
MICROWAVE TECHNIQUES ● RADIATION AND ABSORPTION PHENOMENA ● ELECTRODYNAMICS

For full details, please submit your resume in complete confidence to:
MR. R. F. KALETTA, PROFESSIONAL PLACEMENT, DEPT. E,

MCDONNELL

P.O. Box 516, St. Louis 66, Missouri

ALL QUALIFIED APPLICANTS WILL RECEIVE CONSIDERATION FOR EMPLOYMENT WITHOUT
REGARD TO RACE, CREED, COLOR OR NATIONAL ORIGIN.



INTEGRATED OCEANOGRAPHIC EQUIPMENT



UNDERWATER CAMERA

Automatic-cycling, battery-powered camera for use to ultimate depths of 37,500 ft. Data chamber records depth, time, location, date, ship with each exposure.



LIGHT SOURCE

Battery-powered, 100 watt-second source for photographic exploration, tracking of submerged submarines, etc. Cycling time: 12 seconds approx. Effective to 37,500 ft.



SONAR PINGER

Completely automatic, battery-powered pinger permits positioning of oceanographic equipment at precisely measured distances from bottom.



COMPLETE UNDERWATER PHOTOGRAPHY SYSTEM

Two 35mm. cameras, 100 watt-second light source, sonar pinger in a single, integrated unit. Up to 500 pairs of stereo photographs per lowering.



SONAR THUMPER

High-energy sound generator for marine geological surveys and underwater sound transmission studies. Emits up to 2 high-intensity thumps per second. Echoes indicate depth and bottom structure.



OTHER EQUIPMENT AND SERVICES

Underwater recorders and compasses... custom-designed housings for oceanographic equipment. EG&G is ready to furnish both personnel and equipment for deep sea photography and seismic surveys on a contract basis.

Full information on all products
and services available on request.



**Edgerton,
Germeshausen
& Grier, Inc.**

181 BROOKLINE AVENUE, BOSTON 15, MASS.

and methods, dosimetry for mixed neutron-gamma radiation and radiation from accelerators, reactors, and critical assemblies. *Small and Medium Power Reactors*, Vol. 1 (617 pp.; \$9), is the first of two volumes containing the papers presented in Vienna at the international conference held in September 1960 to review the latest developments in the technology and economics of such reactors and to discuss their role in meeting energy problems.

All IAEA publications are distributed in the United States by the National Agency for International Publications, Inc., 801 Third Avenue, New York 22, N. Y.

Bibliographies

A third revision of an Atomic Energy Commission reference list dealing with the safety of nuclear reactors has recently appeared. *Reactor Safety—A Literature Search* (TID-3525, Rev. 3) contains 741 references to unclassified AEC and non-AEC research and development reports that supplement the second revised version of the bibliography. Subjects covered include reactor systems, materials, and operation designed to provide maximum safety for the reactor, reactor personnel, and surroundings. Information about hazardous incidents and operating conditions is also given. Each entry indicates whether the report is available to the public and from what agency. The 76-page bibliography is available from the Office of Technical Services, US Department of Commerce, Washington 25, D. C., and is priced at \$1.75.

A bibliography covering 141 years of published material from all parts of the world dealing with the transmission of light in water and related optical properties of water has been compiled by E. F. DuPre and L. H. Dawson of the Naval Research Laboratory. Its 650 references to the literature span the period from 1818 to 1959. A subject and a geographical index are included, as is the usual alphabetical listing by principal author. Entitled *Transmission of Light in Water: An Annotated Bibliography*, it is 88 pages long and may be ordered as PB 171 133 from OTS, US Department of Commerce, Washington 25, D. C., for \$2.25.

A compilation of the book listings carried in the "Books Received" section of *Physics Today* during the year 1960 has been issued by the American Institute of Physics in the form of a pamphlet intended for physicists and librarians who may have need of a check list of recent books in physics and related areas. The titles are grouped into subject categories, and references to reviews appearing in *Physics Today* during 1960 and the early months of 1961 are included. The compilation was prepared by the Institute as part of its Documentation Research Project, which has the support of the National Science Foundation.

Copies of the list can be obtained from the Documentation Research Project, American Institute of Physics, 335 East 45th Street, New York 17, N. Y.

PHYSICS TODAY