

PUBLISHING NEWS

Periodicals

Science and Math Weekly, a news and feature paper for high-school students of physics, chemistry, biology, and mathematics, began publication in December. Intended as a teaching aid for classroom use, it is one of the American Education Publications of Wesleyan University, Middletown, Conn., as is its companion periodical, *Current Science*, which is now edited for junior-high-school students. In addition to news briefs, it contains four two-page sections, each containing a discussion of a topic of interest in physics, chemistry, biology, and mathematics. A lab notebook page outlines an experiment which the students can perform.

A teacher's edition is also provided, which gives the teacher suggestions about the use of the material and lists of topics to be covered in future issues. Rudolph Haffner is senior editor; Ainslie H. Drummond, Jr., chemistry editor; Charles Linn, mathematics editor; and Walter Scott Houston, physics editor. Advisors include J. Darrell Barnard, Vernet E. Eaton, Arnold B. Grobman, Edward G. Begle, Fletcher G. Watson, and Harry F. Lewis. The paper is published 32 weeks of the year and costs \$1.00 per year per student in class orders of 10 or more copies. Inquiries should be addressed to *Science and Math Weekly*, Education Center, Columbus 16, Ohio.

Another periodical aimed at high-school students is *Space Science*, a magazine containing articles and news items on astronomy, rocketry, and allied topics, which is edited and published monthly during the school year by Benjamin Adelman. The *Space Science Teaching Handbook*, a companion publication, is intended to aid the high-school science teacher in extending his own knowledge of astronomy. Suggestions are also given about the formation and activities of school astronomy clubs and astronomical projects for science fairs. Individual subscriptions to *Space Science* are 75 cents per year; the group rate (five or more) is 50 cents per year per subscription. The *Handbook* costs 25 cents a copy. Both are available from Space Science, 4211 Colie Drive, Silver Spring, Md.

The National Research Council of Canada has commenced publication of *Problems of the North*, an English translation of the Soviet journal *Problemy Severa*, published by the Academy of Sciences of the USSR. The original journal, which contains articles in Russian dealing with oceanography, geography, geophysics, biology, and economics as they relate to the study and development of the world's northern areas, first appeared in 1958.

The English translation of issue No. 1 (1958) was published in December 1960. Numbers 2 and 3 (1959)

will be published in 1961. Beginning with No. 4, translations will be available within a few months after receipt of the original. The Russian editors have announced a publication schedule of one or two numbers per year.

Subscriptions at \$7 per issue and single papers at \$1 may be ordered from the Translations Section of the Library of the National Research Council, Sussex Drive, Ottawa 2, Ont., Canada. Remittances should be made payable to the Receiver General of Canada, credit National Research Council.

Reference Listings

An index to the recently declassified reports of the World War II Office of Scientific Research and Development, announced in January by the Library of Congress as being available for public use, has been printed for sale by the Office of Technical Services, US Department of Commerce, Washington 25, D. C. The index is PB 161976 *Office of Scientific Research and Development Microfilm Index*, 770 pages, price \$8 (\$2 additional for foreign mailing).

While the index is a printed document, the reports themselves may be purchased only in microfilm or photocopy from the Photoduplication Service, Library of Congress, Washington 25, D. C. The index gives the titles of the OSRD reports and the necessary bibliographic information for ordering copies of the reports from the Library of Congress. The reports may be requested by readers in the Library of Congress Science Reading Room, Annex Building, in Washington, and bibliographic guides, including the index, will be available to assist visitors in requesting reports on topics in which they are interested. The reports will not be available for loan.

The National Bureau of Standards has prepared two new specialized bibliographies which have been released through the Office of Technical Services. A *Survey and Bibliography of Recent Research in the Propagation of VLF Radio Waves* (Technical Note 58), by J. R. Wait, contains a brief general survey of the field plus a 30-page bibliography covering 17 categories of very low-frequency research. It is 44 pages long and costs 75 cents (order PB 161 559). The second listing, *A Bibliography of the Physical Equilibria and Related Properties of Some Cryogenic Systems* (Technical Note 56), by T. M. Flynn, has 700 references concerning physical equilibria and related properties of cryogenic systems consisting of the pure components and mixtures of hydrogen, helium, nitrogen, carbon dioxide, carbon monoxide, methane, ethane, and propane. It is 123 pages long and costs \$1.75 (order PB 161 557). Both bibliographies can be ob-

The Group Leader Idea In Physics Research

Mature research physicists must be concerned with where they fit in the administrative structure of their laboratory. To do effective research, they must have sufficient technical authority to guide the programs they are interested in, yet must not be burdened with administrative details. On the other hand, a smoothly functioning physics research laboratory implies administrative responsibilities which must be undertaken by physicists. The Physics Division of Armour Research Foundation believes it has resolved this dichotomy by using its senior personnel as group leaders. Each of the sections listed at the right is headed by a supervisor who has over-all administrative responsibility for his section. Imbedded within the sections are technical groups formed around a particular scientist which undertake research of interest to him. The group leader develops the technical activities and personnel complement of the group according to his own desires. This freedom is possible because in contract research, support comes from organizations of many diverse interests. A group is formed whenever the personal interests of a senior staff member dictate that his most effective research contribution will be made by his technical direction and participation in one or a few research programs undertaken by a group of two to five physicists. We invite inquiries from physicists who feel they can take advantage of this opportunity to expand their professional careers.

All replies confidential; write to
Dr. L. Reiffel, Director of Physics Research
Dept. 2-S

**The following is a partial
list of projects currently
underway in our Physics Division.**

ACOUSTICS

- Shear waves in solids
- Kilomegacycle ultrasonics
- Non-linear magnetostriction
- Sound velocity in liquid-gas mixture
- Sound propagation and weather

CHEMICAL PHYSICS

- Radiation induced polymerization
- Structural effects in radiation chemistry
- Radiation produced free radicals
- Reactions in organic halogen compounds
- Ionization cross sections

NUCLEAR PHYSICS

- K-shell ionization by mesons
- Neutron imaging detectors
- Beta-excited x-ray sources
- Gamma-ray backscattering
- Low Temperature scintillations

OPTICS

- Image structure and information theory
- Fiber optics research
- IR and UV backgrounds
- Studies in frustrated total reflection
- Ultraviolet photon counters

PLASMA PHYSICS

- Stability of finite plasmas
- Shock wave reactions
- High resolution electron guns
- Gas discharge neutron source
- Luminescence in shocks

SOLID STATE PHYSICS

- Excess noise in semiconductors
- Organic semiconductors
- High temperature thermoelectricity
- Microwave absorption in solids
- Radiation effects on solid surfaces

REACTOR PHYSICS

- Plutonium recycle
- Dust fuel reactor studies
- Resonance integrals and fission
- Shielding and radiation streaming
- Weapons effects

ARF

**ARMOUR
RESEARCH
FOUNDATION**

OF ILLINOIS INSTITUTE OF TECHNOLOGY
10 W. 35th ST. • CHICAGO 16, ILLINOIS

PHYSICISTS • PHYSICAL CHEMISTS
MATHEMATICIANS • ECONOMISTS
ELECTRONICS ENGINEERS

THE
**OPERATIONS
EVALUATION
GROUP**
of M. I. T.

invites

**OUTSTANDING
SCIENTISTS**

to participate in advanced
research on

**OUTSTANDING
ASSIGNMENTS**

The Operations Evaluation Group, advisor to the Chief of Naval Operations, has been conducting military operations research since 1942. The OEG offers to outstanding scientists of all disciplines the opportunity to:

- Apply their abilities to a variety of analytical problems of critical importance to the U.S. Navy and national security.
- See the results of their research implemented in the growing capabilities of the Navy.
- Work in an atmosphere of free communication and individual enterprise.
- Advance their professional standing through association with colleagues of the same disciplines and by periods of academic study and research at the Massachusetts Institute of Technology.

Write to:

**OPERATIONS
EVALUATION
GROUP**

An Activity of the Massachusetts
Institute of Technology

Department H-1
Washington 25, D. C.

tained by writing to the Office of Technical Services, US Department of Commerce, Washington 25, D. C.

The Bureau has also compiled a collection of tables intended as an aid to designers of cryogenic equipment. NBS Monograph 21, *Specific Heats and Enthalpies of Technical Solids at Low Temperatures*, prepared by Robert J. Corruccini and John J. Gniwewek, includes tables of the specific heat, c_p , and the enthalpy of 28 metals, 3 alloys, 8 other inorganic substances, and 8 organic solids in the temperature range from 1° to 300° K. The document also contains a bibliography which the compilers believe is complete for the period from 1930 to 1958. It is 20 pages long, is priced at 20 cents a copy, and can be ordered from the Superintendent of Documents, US Government Printing Office, Washington 25, D. C.

Books

The Chemical Rubber Co. has recently published the 42nd edition of the *Handbook of Chemistry and Physics*. The 1960-61 volume, representing the combined efforts of more than 200 contributors, contains 3400 pages of mathematical, chemical, and physical data collected as a still further expanded version of the familiar one-source reference work.

Some of the tables which appear for the first time give data on the diffusion of metals into metals, triple points and boiling points, interplanetary orbits, and bond lengths between carbon and other elements. Many tables have been revised and expanded, including those on atomic weights, nuclear spins, electronic configuration of the elements, and properties of refractory materials.

The new edition has the same format and binding as those of recent years. It is priced at \$12 and may be ordered from the Chemical Rubber Publishing Co., 2310 Superior Ave., Cleveland 14, Ohio. Purchasers outside the United States should add 50 cents to the price.

The first thirteen volumes in a projected series of fifty-six monographs on the radiochemistry of the elements are now in print. Preparation of the series is being sponsored by the National Academy of Science—National Research Council, in cooperation with the US Atomic Energy Commission. The monographs are concise compilations of the latest available radiochemical information and procedures, written by specialists and intended as primary sources of radiochemical information. Each monograph collects the pertinent information required for radiochemical work with an individual element or group of related elements.

The volumes (priced from 50¢ to \$1.25) may be purchased individually or as a series by holders of Superintendent of Documents Accounts. Information on the available monographs as well as on the procedure for opening an account can be obtained from the Office of Technical Services, US Department of Commerce, Washington 25, D. C.