tics and the evaluation of procedures used in prophylaxis. Other recommendations include a simple guide for physicians in treating persons bitten and for dealing with the problem faced by governments importing cats and dogs from countries where rabies is known to exist.

In the Americas, the countries are receiving assistance with their rabies problems from the Pan-American Sanitary Bureau, Regional Office of WHO for the Americas.

Extensive studies in rabies from bats have been made in Mexico and in the United States-Mexico border area, with the assistance of PASB. Assistance was provided to Mexico in the establishment of equipment and techniques for the production of chick-embryo type of vaccines, including one for the immunization of cattle.

In 1957, a WHO Regional Rabies Training Course is planned which will be held in Caracas, Venezuela. This will be attended by rabies control personnel from each country in the Americas. In addition, PASB/WHO will provide a special adviser to the countries to assist in improving rabies diagnosis, the promotion of antirabies programs, and the production of rabies vaccines and antirabies serum.

## Permanent Magnet

A major advance in magnet technology, one that is expected to lead to the commercial development of an unusually versatile and powerful permanent magnet, has been announced by the General Electric Instrument Dept., West Lynn, Mass. The company reports that with a new fine-particle ferromagnetic material it has already produced experimental permanent magnets equal to the strongest commercial magnets now available, and there is every expectation that a magnet can be made that is 10 times stronger.

The new magnet is made from elongated single-domain iron particles of high coercive force with properties that confirm the existence of the shape-anisotropy effect. The submicroscopic particles can be imbedded in plastics, metals, rubber, or glass. The resulting magnets have properties not heretofore attainable, for they can be easily machined, drilled, tapped, and molded precisely into any desired shape, opening up new possibilities to the design engineer. The elimination of cobalt and nickel in the new process makes possible for the first time the application of magnets in nuclear reactors, which so far has been limited because of the potential radioactivity of cobalt.

Key members of the research team that developed the magnet are on the staff of the Measurements Laboratory of the company's Instrument Department at West Lynn, Mass. They are T. O. Paine, laboratory manager, F. E. Luborsky, and L. I. Mendelsohn. Paine and his associates were honored for their work at the recent Industrial Science Citation Dinner sponsored by the AAAS Industrial Science Section.

The permanent magnet is of fundamental importance to industry. Every year more than 50 million magnets are produced and used in the United States. A single bombing plane requires at least 200 magnets in its instrumentation, and a magnet is an essential part of radios and television sets.

## Transplantation of Human Tumors

Because of the many requests for such instruction, a 3-day session on the techniques and problems associated with the heterologous transplantation of human tumors will be held 4–6 Mar. at the Sloan-Kettering Institute, New York. In addition to lectures and laboratory demonstrations, opportunities will be provided for participants to work with various transplantable human tumors, a variety of animal hosts, and chick eggs. Tissue cultures derived from the transplantable human neoplasms will be demonstrated also. The value of these tumors in various research programs will be discussed.

The session, for which there will be no charge, will be given by H. Toolan, D. Karnofsky, A. Moore, G. Woolley, and J. Harris. Inasmuch as attendance will be limited to 25 people, requests for participation should be sent as soon as possible to Dr. Helene W. Toolan, Sloan-Kettering Institute, 410 E. 68 St., New York, N.Y.

## Spectrophotometric Data

M. J. Kamlet of the chemistry division, Naval Ordnance Laboratory, and H. E. Unguade of the Los Alamos Scientific Laboratory, Los Alamos, N.M., are preparing for publication a collection of all the spectrophotometric data in 60 journals for the period 1946–56. They are currently looking for additional contributors who might help in this project.

## New Science Journal for the Public

A new weekly popular science journal, *The New Scientist,* began publication in London late last year. The journal is "published for all those men and women who are interested in scientific discovery and in its industrial, commercial and social consequences." The magazine carries, among other sections, editorials, lead articles, news, an American newsletter, overseas news, book reviews, letters to the editor, and a scientific crossword puzzle. It is published by Cromwell House, Fulwood Place, High Holborn, London, W.C.1. The annual subscription rate for the U.S.A. is $8.50.

## Shutdown at AEC's Dana Plant

The U.S. Atomic Energy Commission has announced that operation of its heavy water plant near Dana, Ind., will be discontinued and the facility placed in a standby condition. Dana is one of the commission's two heavy water units. The other is at the Savannah River Plant in South Carolina. Forecasts of future heavy water requirements now indicate that only one of the heavy water production units will be needed during the next few years.

Shutdown at Dana will be accomplished over a period of 9 months, with first layoffs of the approximately 900 employees beginning in the early spring of 1957. A slow, orderly closure is planned to permit maximum recovery of the material in the plant vessels and to assure careful preservation of equipment. The plant is expected to be in full standby condition late in 1957.

## Marriage Statistics

The U.S. Public Health Service has announced that an improved system of collecting marriage statistics will be adopted by the National Office of Vital Statistics in cooperation with 29 states and four territories. The system will record data on more than half the marriages that occur in the nation, making it easier to obtain facts about the formation of new families in the participating states. Such information is needed for community planning and many other purposes.

The participating states and territories have agreed to maintain central files of marriage records by securing reports from local officials. (In many states, at present, marriage records are available only in local communities; this makes it difficult for heirs and others to locate old marriage records if they do not know exactly where the marriage occurred.) The 29 states have also agreed to cooperate in making periodic tests of the completeness and accuracy of their marriage registrations. The states will use most of the items on a recommended Standard Record of Marriage.

Standard birth and death registration statistics have been collected for many years and are now nation-wide, providing data which are used by health and

welfare agencies, industries, and other groups. The need for comparable, reliable data on marriages has long been recognized. The new Marriage Registration Area, embracing the 29 states and 4 territories, although not yet nation-wide, will help to meet this need.

## Victorian Studies at Indiana

Indiana University is sponsoring a new quarterly journal to be called *Victorian Studies*. It is expected to begin publication in the fall of 1957. It is to be an interdisciplinary journal dealing with the arts, humanities, and sciences as they relate to England approximately from 1830 to 1914. The editors welcome contributions which should be sent to: Victorian Studies, Indiana University, Bloomington, Ind.

## Polio Decline

According to a report of the U.S. Public Health Service, there was a marked decline in the number of cases of poliomyelitis during the polio year beginning in April 1956 in comparison with the similar period in 1955. The total number of cases since April 1956 was 14,061 in contrast to 27,753 for the polio year in 1955.

Of the estimated 66 million in the group that have been eligible up till now (persons under 20 and pregnant women), only 40 million have received one, two, or three injections of the Salk vaccine.

A surplus of about 21 million shots of the vaccine is now available through the manufacturers, and a good deal more is in the hands of retailers and physicians. The USPHS recommends that the rest of the population receive inoculations now that the supply is adequate.

## Beckman Acquires Watts

Beckman Instruments, Inc., has announced the acquisition of Watts Manufacturing Company, Inc., Ronceverte, W.Va., manufacturer of a new, continuous-action gas chromatograph. In addition, Watts makes temperature test stands for jet engine development and automatic flaw detectors for the textile industry.

## Nuclear Technology Fellowships

Applications are now being accepted for participation in the program of special fellowships in nuclear energy technology recently announced by the U.S. Atomic Energy Commission. The program will be administered by the Oak Ridge Institute of Nuclear Studies, which now administers for the commission the special fellowships in radiological physics, the special fellowships in industrial hygiene, and the ORINS graduate fellowship program.

The fellowships are open to students with the bachelor's degree in engineering, chemistry, mathematics, or physics, who have completed a course in ordinary differential equations. Applicants must be United States citizens and be granted fellowship clearance by the commission. Before fellowship appointments become effective, the applicant must be accepted as a candidate for a master's degree by an institution offering the necessary program of study.

The commission is making a selection of programs of graduate study which meet the fellowship requirements. Institutions offering these programs will be listed with the application forms and applicants may choose their institutions from this list. The program of study will include the following courses: nuclear physics, nuclear reactor analysis, nuclear reactor technology, radiochemistry and reactor materials, and advanced mathematics.

Fellowships will be awarded for 1 year's study. The fellowship award carries a basic stipend of $1800, with an additional allowance of $350 for a spouse and $350 each for a maximum of two dependent children. The award also includes the payment of normal tuition, required fees, and a travel allowance of 6 cents per mile for the fellow (not dependents) from his place of residence (or application) to his university. Fellows are expected to devote all their time to study and research and may not engage in work for remuneration, or receive aid from another scholarship, fellowship, or similar grant during the term of this fellowship.

Applications may be obtained from the Fellowship Office, Oak Ridge Institute of Nuclear Studies, Post Office Box 117, Oak Ridge, Tenn. Completed forms, supporting letters of reference, and transcripts must reach ORINS *not later than 15 Feb.*

## Scientists in the News

CLARENCE ZENER, formerly an associate director of the Westinghouse Research Laboratories and for the last year acting director, has been appointed director of the laboratories. Zener is author of the Zener theory of ferromagnetism, which explains why certain materials are strongly magnetic, and of the Zener effect, a theoretical explanation of the electric breakdown in semiconductors such as germanium and silicon.

WILLIAM P. JACOBS, associate professor in the biology department at Princeton University, is going to spend the spring and summer of 1957 at the Marine Station, Naples, Italy, where he will be studying the normal and experimental development of various siphonaceous algae. This research is being supported by the National Science Foundation under its senior postdoctoral fellowship program.

ROGER W. HOWELL, formerly professor of mental health at the University of North Carolina School of Public Health, has been appointed head of the Division of Preventive Psychiatry at the Lafayette Clinic, Michigan's neuropsychiatric center. He will teach and conduct research at the clinic and also at Wayne State University's College of Medicine.

FRANK GERBODE of Stanford Medical School has been unanimously elected an "Honorary Perpetual Student" of St. Bartholomew's Hospital Medical College, London, England. Gerbode served as an associate in surgery at St. Bartholomew's Hospital in 1949. He was recently chosen first vice president-elect of the American College of Surgeons, and is a past president of the San Francisco Heart Association.

JOHN P. FRAWLEY, formerly assistant chief in the chronic toxicity branch of the U.S. Food and Drug Administration, will fill the newly created post of toxicologist in the Hercules Powder Company's medical department.

W. F. CLAUSSEN, for the past 5 years a research chemist at the Corning Glass Works, Corning, N.Y., has been appointed a physical chemist in the metallurgy and ceramics research department of the General Electric Research Laboratory, Schenectady, N.Y.

URNER LIDDEL, research physicist with the National Institute of Arthritis and Metabolic Diseases, Bethesda, Md., has been named a program director in the Division of Scientific Personnel and Education of the National Science Foundation. His duties will include administration of the Academic-Year Institutes program as well as curriculum studies in the physical sciences. The Academic-Year Institutes program was inaugurated in 1956 to provide specially designed year-long courses of study for high-school science teachers.

ROBERT M. BURNS, manager of Stanford Research Institute's new European office in Zurich, Switzerland, has established temporary headquarters at the Eden-Au-Lac Hotel in Zurich.