SCIENTIFIC NOTES AND NEWS

THE William du Bois Duddell Memorial Medal of the London Physical Society has been awarded to Dr. Ernest O. Lawrence, professor of physics at the University of California at Berkeley and director of the Radiation Laboratory. It is expected that the presentation will be made on December 27 by Lord Lothian, British ambassador to the United States, at the meeting of the American Physical Society, which will be held at Philadelphia in conjunction with the American Association for the Advancement of Science.

AT a special convocation on November 24, Columbia University conferred four honorary degrees. These included the doctorate of science conferred on Dr. Karl T. Compton, president of the Massachusetts Institute of Technology. The degree was to have been presented to Dr. Compton at commencement last June, but he was unable to be in New York at that time.

DR. TORALD SOLLMAN, dean of the School of Medicine of Western Reserve University, and Dr. J. M. T. Finney, professor emeritus of surgery of the Johns Hopkins University, received the degree of merit of Nu Sigma Nu at a dinner given on November 23, which closed the annual convention in Detroit of the fraternity.

THE Remington Medal, awarded annually by the New York branch of the American Pharmaceutical Association for constructive work in the interest of American pharmacy, was presented to Dr. Robert L. Swain, editor of *Drug Topics* and *Drug Trade News*, at a testimonial dinner given at the Hotel Pennsylvania, New York, on November 28.

THE Gedge Prize of the University of Cambridge has been divided equally between Dr. D. A. Webb and D. K. Hill, both of Trinity College, for research in physiology.

NOMINATIONS for officers of the American Electrochemical Society include: for president, Raymond R. Ridgway, research engineer with the Norton Company of Chippewa, Canada; Frank E. Lathe, technical assistant to the president of the National Research Council of Canada, and A. F. Grant Cadenhead, director of plant research with Shawinigan Chemicals, Ltd.; for vice-presidents, Albert E. R. Westman, director of chemical research at the Ontario Research Foundation; Sherlock Swann, Jr., professor of chemistry at the University of Illinois; John W. Marden, assistant director of research of the Westinghouse Lamp Division, Bloomfield, N. J.; Malcolm Dole, professor of physical chemistry at Northwestern University, and Frank W. Brooke, consulting engineer.

DR. HENRY E. MELENEY, associate professor of preventive medicine and public health at Vanderbilt University, has been appointed Hermann M. Biggs professor of preventive medicine and director of the laboratories of the New York University Medical School. He succeeds the late Dr. William H. Park.

DR. ELMO N. STEVENSON, of the Eastern Oregon College of Education at La Grande, has been appointed professor of science education at Oregon State College, Corvallis.

DR. JACOB LEVITT, formerly research fellow of the Royal Society of Canada, working at the University of Minnesota, and sessional lecturer in botany at McGill University, has been appointed junior plant physiologist in the Division of Plant Pathology and Botany at University Farm, St. Paul.

AT the Texas Agricultural Experiment Station C. H. McDowell, joint superintendent for the station and the Soil Conservation Service of the Blackland Substation of the U. S. Department of Agriculture, became on September 1 vice-director and agronomist of the station. He took the place of Dr. Paul C. Mangelsdorf, who resigned recently to become professor of economic botany and assistant director of the Botanical Museum of Harvard University. H. O. Hill, project supervisor of the Soil Conservation Service at the Blackland Substation, has been appointed joint superintendent.

IN the issue of SCIENCE for November 22, Dr. James Franck was referred to as professor of physics at the Johns Hopkins University. Dr. Franck came from the University of Göttingen to the Johns Hopkins University in 1934, but accepted a professorship of physical chemistry at the University of Chicago in 1938.

DR. ROBERT CUSHMAN MURPHY, of the American Museum of Natural History, has been elected president of the Long Island Biological Association. He succeeds Arthur W. Page, who for twelve years has presided over the affairs of the Biological Laboratory at Cold Spring Harbor, Long Island.

DR. EDWARD BARTOW, emeritus professor of chemistry at the State University of Iowa, has joined the research laboratories of the Johns-Manville Corp., Manville, N. J. Dr. Bartow will act as research consultant in connection with chemical problems involved in all phases of the research activities of the company.

COLONEL SIR EDWARD THORNTON, secretary for public health and chief health officer of the Union of South Africa, has been appointed director-general of the Medical Defense Services of the Union of South Africa.

DR. JAMES A. TOBEY, of New York, has been appointed chairman of the committee on food and nutrition in national defense of the Institute of Food Technologists. Dr. Tobey is director of the department of nutrition of the American Institute of Baking and is also lieutenant-colonel in the Sanitary Corps Reserve of the Medical Department of the Army. The Institute of Food Technologists was organized as a professional society in 1939, and now has more than 900 members throughout the United States.

GRANTS-IN-AID for research have been received recently by the following members of the College of Medicine of the State University of Iowa: Dr. Harry M. Hines, of the department of physiology, $5,000, from the National Foundation for Infantile Paralysis for study of regeneration of nerve and muscle; Dr. W. D. Paul, of the department of internal medicine, $3,500, from the Emerson Drug Company for the study of the action of bromides, and Dr. P. C. Jeans, of the department of pediatrics, $3,000, from the Mead-Johnson Company for a continuation of studies on infant nutrition.

A GRANT of $7,800 a year for three years from the Commonwealth Fund of New York is to be used for the study of kidney disease by Dr. Joseph M. Hayman, Jr., professor of clinical medicine and therapeutics at the School of Medicine and the Frances Payne Bolton School of Nursing of Western Reserve University. A similar grant was made by this fund for the same purpose in December, 1937.

THE Committee on Scientific Research of the American Medical Association has made a grant to Dr. David Polowe, who was recently appointed research fellow at Harlem Hospital, New York City, in support of his work on amylase activity in the blood.

DR. P. H. ROLFS, emeritus life member of the American Association for the Advancement of Science, who for nearly twenty years has lived in Brazil, is returning to the United States and will reside at Gainesville, Fla. The Agricultural College was founded by the State of Minas Geraes under Dr. Rolfs's direction.

DR. VICTOR K. LAMER, professor of chemistry at Columbia University, gave on November 15 at Yale University a lecture on "Kinetics and Equilibria of Exchange Processes in Deuterium Oxide," the third of the series of lectures on "The Applications of Stable and Radioactive Isotopes" sponsored by the department of physiological chemistry of the university.

HAROLD J. COOLIDGE, JR., of the Museum of Comparative Zoology of Harvard University, spoke on December 1 before the Men's Faculty Club of Columbia University. His lecture was entitled "To Asia for Apes," and was illustrated with motion pictures and sound recordings made in the jungles of Siam, Borneo and Sumatra.

DR. I. I. RABI, professor of physics at Columbia University, lectured on December 4 at a joint meeting of the Franklin Institute, the Physics Club and the Physics Colloquium of Philadelphia. His lecture was entitled "Radio Frequency Spectra of Atoms."

THE Pittsburgh Section of the American Chemical Society is sponsoring a popular public lecture on "Glass: To-day and To-morrow" by Dr. Alexander Silverman, head of the department of chemistry of the University of Pittsburgh, on the evening of December 11, in Carnegie Music Hall. The lecture will be illustrated with exhibits from the Glass Center in the New York World's Fair and from the Glass House in the Town of To-morrow.

DR. ELMER O. KRAEMER, biochemist in the research laboratories of the Franklin Institute, Philadelphia, delivered two lectures on December 3 under the auspices of the Foster Lecture Foundation of the University of Buffalo. The lectures were open to the public as well as to students. In the afternoon he spoke on "The Application of Centrifugal Methods in Colloid Research" and in the evening on "The Size and Shape of Large Molecules." Dr. Groves H. Cartledge, head of the department of chemistry and chairman of the Foster Lecture Committee, presided. The Foster Fund is endowed with the sum of $25,000 by Mrs. Orin D. Foster in memory of her husband.

THE first lectures of the De Lamar Institute for 1940–1941 of the School of Hygiene and Public Health of the Johns Hopkins University were given on November 19 by Dr. Virgil Sydenstricker, of Emory University, Georgia, on "Dietary Problems of the Southern United States"; on November 26 by Dr. Otto A. Bessey, of the Harvard Medical School, on "Morphological Defects in Dietary Deficiency States," and on December 3 by Dr. George R. Cowgill, of the Yale School of Medicine, on "Nutritional Deficiencies in Tropical America." On February 18 Dr. Edward H. Hatton, of the Northwestern University Dental School, will speak on "The Etiology of Dental Caries," on March 4 Dr. Max Theiler, of the Rockefeller Foundation, on "Studies on Poliomyelitis," and on March 18 Dr. Charles N. Leach, of the National Health Division at Montgomery, Ala., on "Recent Studies in the Epidemiology of Rabies."

THE Massachusetts Institute of Technology Chapter of the Society of the Sigma Xi has arranged for this year three lectures on "Man's Relation to his Environment." The subjects and the lecturers are: November 12, "Man's Relation to the Cosmos," by Dr. Cecilia Payne-Gaposchkin, Phillips astronomer at the

Harvard Observatory; January 14, "Man's Relation to the Earth," by Dr. Robert R. Shrock, assistant professor of geology at the Massachusetts Institute of Technology, and May 23, "Man's Relation to Other Men," by Dr. Kirtley F. Mather, professor of geology at Harvard University.

THE fifth annual symposium of the Division of Physical and Inorganic Chemistry of the American Chemical Society will be held in Havemeyer Hall, Columbia University, on December 30 and 31 and January 1. The general subject will be "The Structure of Molecules and Aggregates of Molecules."

THE Southern Section of the American Society for Horticultural Science will participate in the meetings of the Association of Southern Agricultural Workers to be held in Atlanta, Ga., from February 5 to 7. The program of the Southern Section will extend for a period of three days. On February 5 a conference will be held on the national sweet potato research program. On February 6 two symposia will be given, one entitled "Research with Tomatoes Grown in the South" and one other entitled "Research with Peaches." On February 7 a joint session will be held with the Soil Fertility Section of the American Society of Agronomy. Information may be obtained from Dr. J. B. Edmond, Clemson Agricultural College, South Carolina.

THE program of scientific and technical departments at the Rochester Athenaeum and Mechanics Institute in Rochester, N. Y., will be expanded and strengthened as the result of an endowment campaign of approximately $750,000. George H. Clark, Rochester industrialist, who offered to contribute two thirds of a dollar for every dollar pledged by the public before December 31, 1940, has given approximately $300,000. He offered to give $400,000 if $600,000 were raised from other sources. Three-year, post-high school courses are given at the institute in the industrial chemistry, electrical, mechanical, photographic technology, construction, food administration, home economics, applied art, retailing and publishing and printing fields.

DISCUSSION

DENTAL RESEARCH AT THE NATIONAL BUREAU OF STANDARDS

THE vital significance of the physical and chemical properties of dental restorative materials has, during the last twenty-one years, been amply demonstrated by a program of research at the National Bureau of Standards. The research was initiated by Souder and Peters in 1919, at the request of the War Department. The former, as chief of the bureau's dental reesarch laboratory, continues to supervise the research.

These men were able to show, through laboratory tests, defects in dental amalgam alloys, such as shrinkage and flow, in a large number of popular brands, which made it practically impossible for the dentists to place a filling which would give satisfactory service when these brands were used. As the research was extended to dental cements, gold alloys, denture resins and similar items, again many inferior trade brands were found indiscriminately assembled with and equally advertised with the superior brands.

The Weinstein Research Laboratories of New York City cooperated from 1922 to 1928 in the program of basic research. In 1928 the American Dental Association joined forces with the bureau. This was a most fortunate affiliation, as it permitted the extension of the research to include ample clinical tests by the association's members when and where desirable.

The first performance specification for a restorative dental material (dental amalgam alloy) was written by the National Bureau of Standards in 1925. With the assistance of the American Dental Association the number has been extended until there are now 12 such specifications. Each specification reflects the following influences:

1. Engineering principles involved in, and demands of typical dental restorations and appliances.
2. The suggestions and advice of representative members of the dental profession.
3. Information supplied by the manufacturers of dental materials.
4. A survey of the chemical and physical properties having a dental significance is conducted on each material.

The following items have been surveyed under the four-point program and are available to the dental profession, upon request, in specification quality: Amalgam, inlay casting investments, impression compound, inlay casting wax, inlay casting gold alloys, mercury, wrought gold wire alloys, zinc phosphate cements, silicate cements, denture rubber, hydrocolloidal impression materials and acrylic denture resin. These specifications are revised from time to time as new and improved materials are developed, thus enabling the dentist who demands specification quality always to be supplied with the highest quality materials available.

THE CERTIFICATION PLAN

The following plan was adopted to protect more completely the dentist in the purchase and use of materials and to guarantee the practical effectiveness of the specifications.

1. Following the adoption of a specification by the