

new fellows and four foreign honorary members was announced. The list of those elected in the sciences follows:

MATHEMATICAL AND PHYSICAL SCIENCES

Isadore Amdur, assistant professor of physical chemistry, Massachusetts Institute of Technology.
 Arthur Robert von Hippel, associate professor of electrical engineering, Massachusetts Institute of Technology.
 Ronald Wyeth Percival King, associate professor of physics, Harvard University.
 Saunders MacLane, associate professor of mathematics, Harvard University.
 Richard Martin Edler von Mises, lecturer on aerodynamics, Harvard University.
 John von Neumann, professor of mathematics, Institute for Advanced Study, Princeton, N. J.
 Linus Carl Pauling, professor of chemistry, California Institute of Technology, Pasadena.
 Karl Terzaghi, lecturer on soil mechanics, Harvard University.
 Edgar Bright Wilson, Jr., associate professor of chemistry, Harvard University.

NATURAL AND PHYSIOLOGICAL SCIENCES

Maxwell Finland, assistant professor of medicine, Harvard University.

Paul Rupert Gast, assistant professor of forestry, Harvard University.
 Columbus O'Donnell Iselin, 2d, director of the Oceanographic Institution, Woods Hole.
 Eugene Markley Landis, professor of physiology, Harvard University.
 William Malamud, clinical director of the Worcester State Hospital, Massachusetts.
 Hugh Miller Raup, assistant professor of plant ecology, Harvard University.
 Albert Charles Smith, curator of the herbarium, Arnold Arboretum.
 Harald Ulrik Sverdrup, director of the Scripps Institution, La Jolla, Calif.
 George Widmer Thorn, physician-in-chief, Peter Bent Brigham Hospital, Boston.

Ezequiel Ordoñez, geologist, Mexico, D.F., was elected an honorary member.

The following officers were elected for the year 1944-1945:

President, Howard Mumford Jones.

Vice-presidents, George R. Harrison, Alfred C. Lane, Ralph E. Flanders, Fred N. Robinson.

Corresponding Secretary, Abbott Payson Usher.

Recording Secretary, Hudson Hoagland.

Treasurer, Horace S. Ford.

Librarian, Frederick H. Pratt.

Editor, Robert P. Blake.

SCIENTIFIC NOTES AND NEWS

DR. ERNEST W. GOODPASTURE, professor of pathology and associate dean of the School of Medicine of Vanderbilt University, was presented on May 9 at the fifty-eighth annual meeting, held in Atlantic City, of the Association of American Physicians, with the George M. Kober Medal in recognition of his work on viruses. The award is made annually to a member of the association "for outstanding contributions to the progress and achievements of preventive medicine."

THE Willard Gibbs Medal for outstanding work in chemistry of the Chicago Section of the American Chemical Society has been awarded to Dr. George Oliver Curme, Jr., of New York, director of research for the Carbide and Carbon Chemicals Corporation, "in recognition of his work in aliphatic chemistry." The medal will be presented at the coming meeting of the section.

THE Gold Medal of the American Institute of Chemists was presented on May 13 to Dr. Willard H. Dow, president of the Dow Chemical Company, "for his contribution to the war in the large-scale production of magnesium and styrene." At this meeting Dr. Gustav Egloff, research director of the Universal Oil Products Company, Chicago, who presided

over the sessions, was reelected president of the institute.

DR. OLAF ANDREAS HOUGEN, professor of chemical engineering at the University of Wisconsin, was presented with the 1944 William H. Walker Award at the Cleveland meeting of the American Institute of Chemical Engineers in recognition of "outstanding contributions to chemical engineering literature." Dr. T. H. Chilton, of the du Pont Experimental Station, made the presentation.

PROFESSOR V. C. ILLING, professor of oil technology at the Imperial College of Science and Technology, London, has been awarded the Murchison Medal of the Geological Society, London.

THE Council of the Royal Society of Edinburgh has awarded the Keith Prize for 1941-43 to Professor James Ritchie, professor of natural history at the University of Edinburgh, "for his papers in the *Proceedings* of the society, in recognition of his distinguished contributions to natural history," and the Neill Prize for 1941-43 to Dr. Douglas A. Allan, director of the Liverpool Public Museums, for his papers published in the *Transactions* on "The Geology of the Highland Border Region."

PROFESSOR EVGENI PAVLOVSKY, of the Academy of Sciences of the U.S.S.R., since 1929 professor of zoology and comparative anatomy at the Military Medical Academy and lieutenant-general of the Soviet Medical Service, was awarded on the occasion of his sixtieth birthday the Order of Lenin "in recognition of his work in the field of parasitology."

THE degree of LL.D., *honoris causa*, will be conferred by the University of Aberdeen on Professor A. Findlay, president of the Royal Institute of Chemistry, and on Dr. V. M. Goldschmidt, professor of mineralogy and geology at Oslo.

DR. HUGH S. CUMMING, director of the Pan American Sanitary Bureau, was elected president of the fifth Pan American Conference of National Directors of Health, which met from April 22 to 29 in the Pan American Union in Washington. Vice-presidents elected were Dr. Manuel Baez, of Mexico; Dr. Eugenio Suarez, of Chile; Dr. Cesar Zuleta, of Peru; and Dr. Leopoldo Perez, of Ecuador. Dr. Aristides A. Moll was elected secretary-general.

THE officers of the American Institute of Nutrition for the coming year are Dr. Icie Macy Hoobler, *President*; Dr. Wm. C. Rose, *Vice-president*; Dr. Arthur H. Smith, *Secretary*; Dr. E. M. Nelson, *Treasurer*, and Drs. Geneviève Stearns, T. H. Jukes and C. A. Elvehjem, *Councillors*.

THE meeting on May 5 of the Section of Chemistry of the Ohio Academy of Science was presided over by Dr. H. J. Garber, assistant professor of chemical engineering of the University of Cincinnati. At this meeting Dr. Roy G. Bossert, of the department of chemistry of the Ohio Wesleyan University, was elected chairman for the coming year, and Dr. P. Rothmund was elected a member of the committee on membership.

AT the twenty-sixth annual business meeting of the American Society of Mammalogists, held in New York, the following officers were elected for 1944: *President*, E. Raymond Hall; *Vice-presidents*, E. A. Goldman and E. A. Preble; *Recording Secretary*, Seth B. Benson; *Corresponding Secretary*, Emmet T. Hooper; *Treasurer*, Viola S. Schantz; *Chairman of the Editorial Board*, William B. Davis; *Directors for 1943-45*, Victor H. Cahalane, William J. Hamilton, Jr., J. Eric Hill, Remington Kellogg and Otis Wade; *Directors for 1944-46*, R. M. Anderson, W. Reid Blair, William H. Burt, J. Kenneth Douth and Claude W. Hibbard. H. E. Anthony was elected a trustee for the period from 1944 to 1947.

AT the annual meeting on May 5 of the New York Section of the American Chemical Society, Dr. Beverly L. Clarke, head of the analytical department of

the Bell Telephone Laboratories, Inc., was elected chairman. He succeeds Professor Vincent du Vigneaud, head of the department of biochemistry of the Cornell University Medical College. Dr. R. A. Baker, head of the department of chemistry of the College of the City of New York, was made chairman-elect; Professor E. J. Durham, of New York University, was appointed secretary, and Dr. William W. Winship, manager of the American Division of Thermal Syndicate, Ltd., was elected treasurer. At this meeting Dr. Leonor Michaelis, of the Rockefeller Institute for Medical Research, gave an address on "Organic Molecular Compounds of the Quinhydrone Type."

THE title of emeritus has been conferred on Dr. Louis J. Curtman, of the College of the City of New York, with which he has been associated since 1907, becoming professor of chemistry in 1934.

DR. WALTER H. BROWN, chairman of the department of hygiene of the University of California at Berkeley, has been made acting dean of the newly established School of Public Health, for which an appropriation has been made by the State Assembly of California. Other schools and departments of the university, including medicine, medical research, education, nursing, home economics and sanitary engineering, will participate in its work. The name of the department of hygiene has been changed to the department of public health.

SIR JOHN FRASER, regius professor of clinical medicine of the University of Edinburgh, has been appointed principal of the university.

DR. HOMER L. SHANTZ, since 1936 chief of the Division of Wildlife Management of the U. S. Forest Service, previously for eight years president of the University of Arizona, retired early in April.

JAMES H. QUINN, chief preparator in the division of paleontology of the Chicago Natural History Museum, has left the museum to enlist in the Navy.

DR. CHRISTIAN A. RUCKMICK, who recently served as chief civilian psychologist in charge of mental testing at the U. S. Armed Forces Induction Station at Peoria, Ill., has been appointed supervisor of training on the staff of the Chicago and North Western Railway Company. He is in charge of a project which will ultimately involve the training of the thirty-two thousand employees of the railroad in cooperation with the Section of the Training within Industry of the War Manpower Commission. He is also serving as chairman of the committee on psychological techniques in the Organization of Techniques of the Office of Civilian Defense for the Metropolitan District of Chicago.

DR. FRED M. BULLARD, professor of geology and mineralogy at the University of Texas, will continue his studies on Parícutin this summer under a grant from the Geological Society of America. He will teach a course on the "Volcanoes of Mexico" in the Summer School of the National University of Mexico, in collaboration with Dr. Ezequiel Ordoñez, as a member of the faculty of the field school sponsored by the Institute of Latin American Studies of the University of Texas. Following the session he plans to spend approximately three months in a field study of Parícutin and related areas.

DR. ALBERT L. HENNE, professor of chemistry at the Ohio State University, an authority on fluorine compounds, is spending several weeks as research associate at the University of California at Los Angeles. While there he will deliver the William Conger Morgan Memorial Lecture, speaking on "Aliphatic Fluorides."

THE Messenger Lectures of Cornell University for 1943-44 were given during April by Dr. Griffith Taylor, professor of geography at the University of Toronto. The series of six lectures was entitled "Our Evolving Civilization."

DR. HOWARD T. KARSNER, professor of pathology at Western Reserve University, delivered on May 18 the first Frederick Robert Zeit Lecture sponsored by the Xi chapter of the Alpha Kappa Kappa Fraternity at the Medical School of Northwestern University. He spoke on "Hepatic Cirrhosis."

DR. R. R. SPENCER, chief of the National Cancer Institute, Bethesda, Md., delivered on May 3 the George Chase Christian Cancer Lecture at the Medical School of the University of Minnesota. The lecture was entitled "Biological Adjustment and Its Relation to the Carcinogenic Process." He also spoke on "Newer Techniques in Cancer Research" and on "The Public Stake in Cancer Research."

THE American Physical Society will meet at Rochester, N. Y., on June 23 and 24. The two hundred and sixty-second meeting will be held on July 22 at the University of California at Berkeley.

THE twentieth annual meeting of the West Virginia Academy of Science was held at Fairmont State Teachers College on May 5 and 6. While the program was somewhat smaller than usual there was an unusually large attendance considering the travel restrictions. The Division of Higher Education of the State Education Association was invited to hold its meeting with the academy and to participate in the program. Dr. Horace B. English, of the Ohio State University, gave the address at the annual banquet. He spoke on "Psychology in the Post-war World." The officers elected for the coming year are E. Meade McNeill, Athens, *President*; Hanibal A. Davis, Morgantown, *Vice-president*; Nelle Ammons, Morgantown, *Treasurer*; J. E. Judson, Buckhannon, *Secretary*. The next annual meeting will be held at Concord State Teachers College at Athens, W. Va.

RUTGERS UNIVERSITY has established a research council to promote research in all departments of the university. A survey is now being made of personnel and facilities to determine where new funds for research can best be invested. The council consists of nine members representing various fields of knowledge and colleges of the university. Dr. William H. Cole, since 1928 professor of physiology and biochemistry, has been appointed director of the council. He will serve in a staff relationship to deans, heads of departments and members of the faculty concerning research programs, and will represent the university in developing reciprocal arrangements with governmental, industrial, business and professional institutions outside the university. A special research fund has been placed at the disposal of the council and applications for grants for next year are now being considered.

DISCUSSION

THE OPERATIONAL VIEWPOINT IN HARDNESS MEASUREMENTS

THE appearance of a recent book¹ on the subject of hardness—the first, so the author says, to be written by a physicist—reopens an old question (actually it was never closed) which is of vital importance in the war effort as well as of general interest to science and industry.

The problem of hardness is distinctly a problem for the physicist, but the realm of physics must be under-

stood to include such extensive fields as metallurgy, chemistry, x-rays, quantum theory and mathematics; and the subject of hardness is not only of interest to these but to a host of professions and industries ranging from the iron and steel industry to dentistry, and from ordnance to pottery. The importance of the concept needs no demonstration when one considers that the hardness of armor plate or shell tips might mean the difference between the survival or downfall of democracy and freedom.

In recent years the long existing confusion about hardness has been partially but not completely clari-

¹"Hardness and Hardness Measurements," by Professor S. R. Williams, Amherst College. Published by American Society for Metals. 1942.