ist of the U. S. Bureau of Standards, died suddenly on February 6. He was sixty-one years of age.

JOHN HAROLD MORECROFT, professor of electrical engineering in Columbia University, died on January 26, at the age of fifty-two years.

ROBERT HENRY WOLCOTT, chairman of the department of zoology, University of Nebraska, died on January 23, at the age of sixty-five years.

DR. EDGAR L. TAGUE, professor of chemistry and assistant in protein chemistry for the Agricultural Experiment Station of the Kansas State College of Agriculture and Applied Science since 1914, has died.

DR. PAUL L. SAUREL, formerly head of the department of mathematics of the College of the City of New York, died suddenly on January 21. He was sixty-three years old.

THE death is announced at the age of sixty-four years of Andrew C. Life, professor of botany and member of the faculty of the University of Southern California since 1907.

DR. DUKINFELD HENRY SCOTT, British paleobotanist, formerly professor of botany at the Royal College of Science, died on January 29, at the age of seventy-nine years.

SIR WILLIAM BATE HARDY, director of food investigation of the Department of Scientific and Industrial Research, died on January 23, at the age of sixty-nine years.

DOUGLAS WILLIAM FRESHFIELD, known for his work in geographical exploration, formerly president of the Royal Geographical Society, died on February 9, in his eighty-ninth year.

SCIENTIFIC NOTES AND NEWS

PROFESSOR HAROLD C. UREY, of Columbia University, has been awarded the Willard Gibbs Medal of the Chicago Section of the American Chemical Society for his discovery of "heavy water." The medal is awarded annually by a national jury to one "whose work in either pure or applied chemistry has received world-wide recognition." The jury for 1934 was composed of Dr. Lee F. Supple, Lewis Institute, Chicago, chairman; Professor Joel H. Hildebrand, University of California; Professor Charles A. Kraus, Brown University; Dr. Carl S. Miner, Miner Laboratories, Chicago; Professor Julius Stieglitz, University of Chicago; Professor Roger Adams, University of Illinois; Dr. Harrison E. Howe, editor of *Industrial and Engineering Chemistry;* Dr. Phoebus A. Levene, Rockefeller Institute; Professor Hermann I. Schlesinger, University of Chicago; Professor Edward C. Franklin, Stanford University; Professor Moses Gomberg, University of Michigan; Professor Ross A. Gortner, University of Minnesota; Dr. Willis R. Whitney, General Electric Company.

DR. J. B. WHITEHEAD, dean of the School of Engineering of the Johns Hopkins University and president of the American Institute of Electrical Engineers, has been made an honorary member of the French Society of Electricians. On the occasion of the celebration of its fiftieth anniversary last month the society awarded this distinction to a leading electrical engineer in each of the larger European countries, in Japan and in the United States.

PROFESSOR FRANCIS CARTER WOOD, director of the Institute of Cancer Research, Columbia University, has been made an honorary member of the Norwegian Society for Medical Radiology.

DR. VICTOR MORITZ GOLDSCHMIDT, professor of mineralogy at Göttingen, has been elected an honorary member of the Mineralogical Society of Great Britain.

DR. FRANCESCO SEVERI, professor of mathematics at Rome, has been elected a corresponding member of the Prussian Academy of Sciences.

A GROUP of fifty friends and former students of Professor Albert Sauveur, Gordon McKay professor of metallurgy and metallography in the Graduate School of Engineering of Harvard University, recently gave a dinner in honor of his seventieth birthday. Many congratulatory letters and telegrams were received from distinguished metallurgists both in this country and abroad.

DR. JOHN ELMER WEEKS, professor emeritus of ophthalmology, New York University and Bellevue Hospital Medical School, was the guest of a group of medical friends at a dinner recently given in honor of his eightieth birthday. Dr. Frederick A. Kiehle presided and Drs. Hugh Cabot, Rochester, Minnesota; Ralph F. Davis and Ralph A. Fenton made addresses.

IN expression of appreciation of the work of Sir Flinders Petrie, on the occasion of his retirement from the Edwards professorship of Egyptology at University College, London, it is planned to present a portrait to University College. An appeal for funds for this purpose has been issued over the names of Professor J. H. Breasted, M. J. Capart, Dr. Howard Carter, Professor F. Ll. Griffith, Sir George Hill, Sir Henry Lyons, Dr. Allen Mawer, Sir Robert Mond and Dr. Margaret Murray. Subscriptions towards the fund will be received by Sir Henry Lyons, F.R.S., 3 York Terrace, Regent's Park, London, N.W. 1.

THE Edward L. Bok Award of $10,000 given annually to the "first citizen" of Philadelphia was presented on February 8 to Dr. Lucy L. W. Wilson, principal of the South Philadelphia Girls' High School.

THE secretary of the London Geological Society announces that the council has this year made the following awards: The Wollaston Medal to Sir Henry Alexander Miers, honorary professor of crystallography in the University of Manchester, for his researches on the mineral structure of the earth; the Murchison Medal to Dr. George Hickling, professor of geology in Armstrong College, Newcastle-on-Tyne, for his contributions to geology, especially in the stratigraphy of the coal measures and the structure of coal; the Lyell Medal to Dr. Finlay Lorimer Kitchin, Geological Survey, in recognition of his contributions to paleontology (Dr. Kitchin died on January 20); another Lyell Medal to the Rev. Walter Howchin, of the University of Adelaide, for his geological and paleontological researches in Australia; the Wollaston Fund to Dr. William Richard Jones, of the Royal School of Mines, for work in economic geology and recent investigations on silicosis; the Murchison Fund to Dr. John Wilfrid Jackson, assistant keeper in the Manchester Museum, for his contributions to Pleistocene geology and paleontology and to malacology, and the Lyell Fund to Mr. Frederick William Shotton, in recognition of his work on the upper Paleozoic and Quaternary rocks of the Midlands.

THE Central Executive Committee of the Russian Soviet Republic has awarded the title "Honorable Science Workers" to Professors M. J. Averbach and A. A. Kisel, of the Second Moscow Medical Institute, and to Professor V. P. Osipov, director of the Institute for the Study of the Brain. Professor Averbach founded a school of ophthalmology, organized a large hospital for eye diseases and is the permanent president of the Moscow Ophthalmologic Society. Professor Alexander A. Kisel, who organized the children's clinic of the Second Moscow Medical Institute, where he worked about twenty years, is the permanent president of the All-Union and Moscow district societies of pediatricians. Professor Victor P. Osipov since 1920 has been the director of the State Institute for the Study of the Brain at Leningrad.

OFFICERS of the History of Science Society elected for 1934 are as follows: *President,* Dr. Harvey Cushing, School of Medicine, Yale University; *First Vice-president,* Dr. Charles A. Browne, U. S. Bureau of Chemistry and Soils; *Second Vice-president,* Dr. Chauncey D. Leake, Medical School, University of California; *Chairman of the Publications Committee,* Dr. George S. Brett, University of Toronto; *Corresponding Secretary and Treasurer,* Frederick E. Brasch, Library of Congress; *Recording Secretary,* Dr. Lao G. Simons, Hunter College, New York City. *New members of the Council,* Dr. Frederick Barry, Columbia University; Dr. Richard H. Shryock, Duke University; Dr. Dorothea Waley Singer, London; Dr. Louis C. Karpinski, University of Michigan; Dr. Charles A. Morris, University of Chicago, and Dr. Raymond C. Archibald, Brown University.

DR. PERCY E. RAYMOND, professor of paleontology at Harvard University and curator of invertebrate paleontology in the Museum of Comparative Zoology, has been elected president of the Paleontological Society of America and a vice-president and member of the council of the Geological Society of America.

DR. W. A. F. BALFOUR-BROWNE, until his retirement in 1930 professor of entomology in the Imperial College of Science and Technology, London, was recently elected president of the Royal Microscopical Society.

DR. KIRTLEY F. MATHER, professor of geology at Harvard University, has been appointed director of the Harvard Summer School for 1934. Dr. Mather succeeds Assistant Professor Henry N. Black.

CEDRIC H. GUISE, assistant professor of forest management and utilization at the New York State College of Agriculture at Cornell University, has been promoted to a professorship.

DR. G. P. WRIGHT has been appointed to the Sir William Dunn chair of pathology tenable at Guy's Hospital Medical School. Since 1931 he has been assistant lecturer in morbid anatomy and curator of the Museum at University College Hospital Medical School and also pathologist to the hospital.

A NEW chair for racial hygiene has been founded in Berlin, with Professor Fritz Lenz, of Munich, as its first occupant. Professor Lenz has also been appointed departmental director for racial hygiene and eugenics at the Kaiser Wilhelm Institute for Anthropology.

DR. E. S. PEARSON has been appointed reader in statistics in the University of London.

MAJOR LAWRENCE H. DUNN, who has been medical entomologist and assistant director of the Gorgas Memorial Laboratory at Panama, during the past five years, has resigned and will soon return to the United States.

DR. HAVEN EMERSON, formerly health commissioner of New York City, now a professor of preventive medicine and public health in Columbia University, and Dr. Frank L. Babbott, Jr., have been appointed as members of the Board of Health, replacing Dr. Harry P. Swift and Dr. R. Percy Crandall.

PROFESSOR GREGORY P. BAXTER, Theodore William Richards professor of chemistry at Harvard Univer-

sity, has been appointed a member of a committee to advise on the use of the money contributed by the Rockefeller Foundation and by others for geophysical research.

FRED J. SIEVERS, director of the Graduate School and of the Experiment Station of the Massachusetts State College at Amherst, has been appointed state supervisor of a farm finance survey for Massachusetts.

THE *British Medical Journal* reports that Professor W. W. Jameson, dean of the London School of Hygiene and Tropical Medicine, arrived in Colombo on January 9. He is touring Ceylon and India with representatives of the Rockefeller Foundation. In view of the amalgamation of the Ross Institute with the London School of Hygiene and Tropical Medicine, Professor Jameson will, before returning, visit some of the Ross Institute research centers in Assam and Bengal, and will afterwards proceed to Malaya. During his absence, Professor R. T. Leiper has been appointed acting dean of the London School. Professor Jameson is expected back in London in April. Professor J. Gordon Thomson, director of the department of protozoology, is leaving London on January 31, and will travel by air to South Africa. He will proceed to East Africa, where he will spend six months in research work on malaria and sleeping sickness, with special reference to immunity.

AT the two hundred and fifty-sixth meeting of the Washington Academy of Sciences on January 18, Dr. Robert F. Griggs, professor of botany at the George Washington University, delivered his address as retiring president on "The Problems of Arctic Vegetation."

DR. WILLIAM L. BRAGG, professor of physics at Manchester University, arrived in New York City on February 5 on his way to Ithaca, where he is lecturing at Cornell University, under the auspices of the Baker Foundation.

DR. ERMINE C. CASE, professor of historical geology and paleontology of the University of Michigan, director of the Museum of Paleontology and curator of vertebrates for the University Museum, will be the ninth Henry Russell lecturer at the university.

DR. HARLOW SHAPLEY, director of the Harvard College Observatory, delivered the third annual James Arthur Lecture on "Time and its Mysteries" on February 6 at New York University. The James Arthur Foundation was established in 1931 with a bequest from the late James Arthur, New Rochelle manufacturer and collector. In addition to providing an annual lecture on "Time," the foundation maintains and enlarges the James Arthur Collection of Timepieces at New York University. The collection, valued at more than $150,000, is one of the largest and most comprehensive historical groups of clocks and watches in the world.

DR. ERNEST W. BROWN, emeritus professor of mathematics at Yale University, read a paper on "Time and its Determination" before the American Philosophical Society, Philadelphia, on February 2.

DR. HARLAN T. STETSON, director of the Perkins Observatory of the Ohio Wesleyan University, gave an illustrated lecture before the Rittenhouse Astronomical Society at Philadelphia on February 13.

DR. LOUIS T. MORE, dean of the Graduate School of the University of Cincinnati, on February 2 addressed the Ohio State University Chapter of the Society of Sigma Xi on "What Constitutes a Law in Science."

DR. ETIENNE B. RENAUD, professor of anthropology at the University of Denver, was the speaker for the January meeting of the Sigma Xi Club. He gave an illustrated lecture on "Old and New World Cultures."

PROFESSOR R. H. FOWLER gave a lecture on February 2 on "Heavy Hydrogen" under the auspices of the Liversidge Foundation of the University of Cambridge.

THE Federation of American Societies for Experimental Biology, formed by the American Physiological Society, the American Society of Biological Chemists, the American Society for Pharmacology and Experimental Therapeutics and the American Society for Experimental Pathology, will meet in New York City on March 28, 29, 30 and 31, under the auspices of the College of Physicians and Surgeons, Columbia University. The Hotel Pennsylvania will serve as headquarters of the federation and all scientific sessions, except the demonstrations of Friday afternoon, March 30, will be held in the hotel. These will be given in the laboratories of the College of Physicians and Surgeons, Columbia University.

AT its December meeting the American Physical Society formally ratified the formation of a Metropolitan Section of the society. There are more than 400 members of the society in or near New York and it is proposed to bring these together occasionally to aid the exchange of ideas and advance the science of physics. An informal organizing meeting was held on October 27 at Columbia University. On this occasion a constitution was adopted, officers elected and the meeting then listened to invited papers by Professor Rudolph Ladenburg, of Princeton University; Professor George B. Pegram, J. R. Dunning and Professor Harold C. Urey, of Columbia University. The section will probably meet again near the end of March and thereafter several times a year. The officers at present are:

Chairman, George B. Pegram; *Vice-chairman,* W. S. Gorton; *Secretary-Treasurer,* Henry A. Barton; *Members of the Executive Committee,* I. I. Rabi and G. Breit. Membership in the section is restricted to members of the American Physical Society, but its meetings will be open to all interested persons.

THE scientific library of the late Professor U. S. Grant, containing fifteen hundred bound and four thousand unbound volumes, was formally presented by Mrs. Grant on February 14 to the Department of Geology and Geography of Northwestern University. President Scott accepted the library on behalf of the university. Dr. Grant was head of the department for the thirty-three years preceding his death in September, 1932.

DISCUSSION

THE BIOCHEMISTRY OF ANESTHESIA

DUE to travel and other external circumstances, the publications of W. D. Bancroft, *et al.,* printed in the *Journal of Physical Chemistry* (35: 215, 1931, and 36: 273, 1932) were unfortunately traced only during the course of the autumn of this year by means of the *Chemisches Zentralblatt.* The reprints of those papers sent to me upon request reached me at the beginning of October, 1933, and so I may be permitted to refer to them briefly after an undue delay.

(1) The assumption referred to on page 216—that "it is known that during narcosis the permeability is first lowered and then increased"—has been abandoned by Hoefler and Weber in 1926,[1] and Nord and Franke expressed their position concerning this point as well as concerning the alleged "stimulation" or "activation" by means of ethylene in their extensive experiments with zymase solutions and yeast cells[2] as follows: "The hitherto unexplained effect of minute quantities of ethylene and related substances on cell systems appears to be due to an *initial* increased cell permeability, allowing an intensified interaction between reactants and enzymes, followed by the formation of a (reversible) adsorption film, which simultaneously acts as a protector against damaging transformation products."

(2) Nitrous oxide and acetylene does not belong to the same group of narcotizing agents, since, according to another series of investigations,[3] the former decreases the surface tension, whereas the latter (as well as ethylene) increases the surface tension of solutions of biocolloids. The "Erstickungstheorie" of Herm. Wieland can not be, therefore, valid, and on account of the opposed working mechanism of the two gases the adsorption theory can also not be regarded as satisfactory. Besides this, we could show by nephelometric measurements that solutions of biocolloids are not coagulated, either by nitrous oxide or by unsaturated hydrocarbons, and so we could not confirm any connection between narcosis and coagulation, all the less, since the activity of zymase solutions could be practically inhibited by the latter[4] without a noticeable coagulation of the carriers.

Besides many other statements in the papers of Bancroft *et al.,* which stimulate the reader to constant mental discussion, I wanted to refer especially to the above proven contradictions.[5]

F. F. NORD

PHYSIOLOGICAL INSTITUTE
TIERÄRZTLICHE HOCHSCHULE
BERLIN, NOVEMBER 25, 1933

[1] *Jahrbuch f. wiss. Botanik,* 65: 643–737.

[2] *Protoplasma,* 4: 595, 1928; *Jour. of Biolog. Chemistry,* 79: 50, 1928; *Z. f. angewandte Chemie,* 42: 1025, 1929. "Mechanism of Enzyme Action and Associated Cell Phenomena," Baltimore, Md., 1929.

[3] *Trans. Faraday Society,* 26: 760; *Z. f. Physikal. Ch.* (A) 150: 1, 1930, and 166: 1, 1933, and the monograph, "Zum Mechanismus der Enzymwirkung unter besonderer Berücksichtigung der Kryolyse," Stuttgart, 1933.

[4] *Z. f. Physiolog. Ch.,* 183: 217, 1929.

[5] Compare for further literature: "Ergebnisse der Enzymforschung," Vols. 1 and 2, Leipzig, 1932, 1933.

NAMING HYDROGEN ISOTOPES

THE wide-spread interest in heavy hydrogen and its compounds has been reflected in the discussion of suitable names and symbols for both H^1 and H^2. Of the letters in SCIENCE one of the most interesting is that of Professor Urey and others in the number dated December 29.

The awkwardness of the names protium and deuterium, however suitable they may be scientifically, appears to be commonly recognized. Various alternatives have been offered, but I have failed to see that any suggestion has been made of the following rather simple method of meeting the requirements for both names and symbols for these isotopes.

Our minds, as well as our literature, are so filled with the specific significance of the name hydrogen that to discard it would be certain to entail endless confusion. Both simplicity and understanding would be served by calling protium "hydrogen-p" and deuterium, "hydrogen-d," and the connection with the familiar hydrogen thus be maintained. Similarly, the symbols Hp and Hd would be specific, exact and almost self-explanatory.

The formulas H^1H^2, $NH^1H^2_2$, $NH^1_2H^2$ and $C_6H^1_2H^2_4$, cited by Professor Urey and others, would then be written HpHd, $NHpHd_2$, NHp_2Hd and $C_6Hp_2Hd_4$, thus reducing the symbols to a form