helm University in Berlin to hand you, Professor Wood, the diploma of doctor of philosophy *honoris causa*. I am very happy indeed that through the kindness of Ambassador von Prittwitz I am enabled to execute my mission thus solemnly on German territory, and I should therefore at the same time like to thank the ambassador on behalf of Berlin University.

The designation of doctor *honoris causa* is the highest distinction a German university can confer. I may add that the University of Berlin rarely confers this honor and that it is only made possible with the consent of all members of the faculty.

In conferring this diploma upon you, Professor Wood, the Berlin physicists desire to do homage to you. As a master of experimental science you have opened up new roads for science, undeterred by theoretical speculation, and through your investigations concerning the optical nature of matter, especially of gases and vapors, you have made important disclosures concerning the structure of molecules and atoms.

However, the diploma is not only intended to express our admiration for the fundamental researches you have made; it is also a token of thanks for the many inspirations you have given German physicists in their work. In this connection I should like to mention only such men as Franck, Pohl and Pringsheim, who are all closely allied with the Berlin Physical Institute. Moreover, you are also not unknown to other German physicists. Several of your numerous publications have appeared in German reviews and we have several times had the pleasure of seeing you in Berlin. We are proud to know that three and a half decades ago you received part of your scientific training in Berlin. What you had learned of German science you repaid later with high interest after having returned to America.

The doctor's diploma, which in the first place represents a personal honor, is also a greeting from Berlin University to the celebrated Johns Hopkins University in Baltimore. I should be particularly happy if it might also be looked upon as a greeting from German natural scientists doing research work to their American colleagues. Exact research in natural science is a field of work which knows no political boundaries. Personal opinion on the historical development of the world around has no importance for it. I am convinced that this opinion is also fully shared in the United States. I have evidence of this daily in the fulfilment of my task here in Washington, which is devoted to the collaboration of the Bureau of Standards with the "Physikalisch Technischen Reichsanstalt." Physics is truly international. Mankind honors and admires the great man who has shown new ways towards the knowledge of nature regardless of what his nationality may be.

You, Professor Wood, have experienced this often, for many honors have been bestowed upon you abroad. Permit me to add one more doctor diploma to the many you already possess and to ask you to accept from Berlin University the title of Doctor of Philosophy.

Permit me also, in handing you the diploma, to read to you the letter which the dean of the faculty of philosophy addresses to you.

The letter of transmittal from Professor Jaeger, dean of the faculty of philosophy of the University of Berlin, reads:

Die Philosophische Fakultät der Friedrich Wilhelms-Universität zu Berlin hat Ihnen den Titel eines Doktors der Philosophie honoris causa verliehen. Es ist mir eine angenehme Pflicht, Ihnen dies mitzuteilen und das Diplom darüber zuzustellen.

Ihre ausgezeichnete Experimentierkunst, verbunden mit scharfem, unvoreingenommenen Beobachtungsblick hat Sie zu so vielen überraschenden, zum Teil ganz ungeahnten Entdeckungen in allen Zweigen der physikalischen Optik geführt, dass ich auf eine Aufzählung verzichten muss. Nur die grösste und schönste sei erwähnt, die Ihren Namen für alle Zeiten in die Annalen Ihrer Wissenschaft eingetragen hat: Die Auffindung der Resonanzstrahlung bei Gasen und Dämpfen aller Art. Keine Atomtheorie der Gengenwart und Zukunft kann an den Tatsachen vorübergehen, welche Sie als Erster an dieser Strahlung, beobachtet und beschrieben haben.

Mit besonderer Freude erinnert sich die Fakultät bei dieser Gelegenheit, dass Sie einen Teil Ihrer physikalischen Ausbildung an ihr erhalten haben, dass Sie auch später mehrmals auf kürzere Zeit in das physikalische Institut unserer Universität zurückgekehrt sind. Sie ist stolz auf die Erfolge ihres ehemaligen Schülers.

Indem ich Ihnen, sehr geehrter Herr Doktor, zu der verleihenen Würde, der höchsten, welche die Fakultät zu vergeben hat, auf das herzlichste gratuliere, bitte ich Sie, den Ausdruck meiner ausgezeichneten Hochschätzung entgege nehmen zu wollen.

SCIENTIFIC NOTES AND NEWS

CAPETOWN UNIVERSITY conferred the honorary degree of doctor of science on General Smuts on May 19 in recognition of his scientific achievements and with special reference to his election as president of the British Association.

THE Technical Institute at Zurich, on the occasion of its seventy-fifth anniversary, conferred an honorary doctorate on Professor Ludwig Prandtl, of the University of Göttingen.

OGLETHORPE UNIVERSITY, Atlanta, Georgia, has conferred the doctorate of laws on Dr. Harlow Shapley, director of the Harvard College Observatory.

DR. WILLIAM HENRY WELCH, of the Johns Hopkins University, received on May 20 at the University of Frankfurt the Harben Medal, the highest honor awarded by the British Institute of Public Health. The institute meets on the continent every other year and Frankfurt was chosen this year in honor of the

late Paul Ehrlich, the eminent bacteriologist. It was the first session in Germany in nineteen years.

DR. GOTTLIEB HABERLANDT, professor of botany in the University of Berlin, has been elected a foreign member of the Physiographical Society of Lund.

DR. HANS DRIESCH, professor of philosophy at Leipzig, has been elected an honorary member of the Philosophical Society at Budapest and of the Psychological Society of Buenos Aires.

SIR JAMES FRAZER, the British anthropologist, has been elected an honorary master of the Bench of the Middle Temple, London.

DR. BERNARD SACHS, of New York City, was elected president of the American Neurological Association at the recent meeting at the Boston Psychopathic Hospital. He succeeds Dr. James B. Ayer, of Boston.

DR. J. A. CHATARD has been elected the fifth president of Osler Historical Society at the Johns Hopkins University.

THE following officers were elected by the Philadelphia section of the American Society of Mechanical Engineers at its recent annual dinner: J. M. Barnes, *chairman;* E. P. Kiehl, *vice-chairman,* and George C. Crowfoot, *secretary and treasurer.*

LEIGH J. YOUNG, associate professor of silviculture at the University of Michigan, was elected on May 6 president of the Michigan Forestry Association.

SIR SIDNEY F. HARMER, treasurer of the Ray Society, London, has been elected president *ad interim* in succession to the late Professor W. C. M'Intosh.

Nature reports that the council of the Royal Society of Edinburgh has awarded the Makdougall-Brisbane Prize, for the period 1926–30, to Dr. Nellie B. Eales, department of zoology, University of Reading, for her papers "On the Anatomy of a Foetal African Elephant" published in the *Transactions* of the society. The Bruce-Preller Lecture, to be delivered on July 6 by Professor Horace Lamb, will be devoted to a commemoration of the centenary of the birth of James Clerk Maxwell. On June 15, Professor A. H. R. Buller, professor of botany in the University of Manitoba, will address the society on "Recent Advances in our Knowledge of the Higher Fungi."

AT a meeting of the Royal College of Physicians on May 14 the following appointments to lectureships were announced: Lumleian (1932), Dr. C. E. Lakin; Goulstonian (1932), Dr. L. J. Witts; Fitz-Patrick (1932), Dr. James S. Collier, and Croonian (1933), Dr. W. E. Dixon.

PROFESSOR G. H. F. NUTTALL, Quick professor of biology at the University of Cambridge, will retire in October after serving for twenty-five years. *Nature* reports that by the terms of Mr. Quick's will, the benefaction must always be used to promote "study and research in the sciences of vegetable and animal biology." Authority is given to the managers, however, to propose to the university changes in the particular field of biology with which the chair shall be associated. From 1906 until 1919 this field was defined as protozoology; in 1919 parasitology replaced protozoology. The managers now recommend to the university that the next tenure of the Quick professorship should be associated with the field of research which they define as the study of the "Biology of the Cell." If this recommendation is approved, they intend to offer the chair to Mr. D. Keilin, who has for some years been carrying on research work of this type in the Molteno Institute.

DR. R. L. KAHN, who was one of three scientific men in honor of whom resolutions were adopted by the Michigan Legislature, is referred to in a recent issue of SCIENCE as a member of the staff of the State Department of Health. Dr. Kahn resigned his position there three years ago and is now director of laboratories of the hospital of the University of Michigan and assistant professor of bacteriology.

DR. JOHN CHARLES BOILEAU GRANT, professor of anatomy at the University of Manitoba Faculty of Medicine, Winnipeg, since 1919, has been appointed to the chair of anatomy at the University of Toronto to succeed Professor J. Playfair McMurrich.

AT Harvard University, Dr. George Bernays Wislocki, associate professor of anatomy at the Johns Hopkins Medical School, has been appointed Parkman professor of anatomy. Dr. John Lewis Bremer, associate professor of histology, will become Hersey professor of anatomy, and Dr. Frederic Thomas Lewis, associate professor of embryology, will become James Stillman professor of comparative anatomy.

DR. LEONARD CARMICHAEL, professor of psychology in Brown University, has been appointed visiting professor of psychology in Clark University for the academic year 1931–32. Dr. Carmichael will give a graduate seminar in sensory psychology and will be a member of the general departmental seminar. Dr. Clarence Henry Graham has been appointed assistant professor of psychology in Clark University. He has been given a one-year's leave of absence at the beginning of his appointment in order that he may continue as National Research Council Fellow in the department of general physiology at the University of Pennsylvania.

DR. IRA VAUGHAN HISCOCK, associate professor of public health at Yale University, has been promoted to a professorship.

DR. S. M. TROXEL, of the Du Pont Rayon Company, has become a research associate at the U. S. Bureau of Standards.

MRS. FLORENCE W. NICHOLS, of Ames, Iowa, has been appointed editor of the Iowa Academy of Science to replace Dr. G. H. Coleman, of the University of Iowa, who has resigned.

THE Weston fellowship in electrochemistry for 1931–32 has been awarded to Mr. Marlin E. Fogle, M.S. in chemical engineering of the University of Iowa. He will carry out his research in electrochemistry at Columbia University under Professor C. G. Fink.

AT the University of California Dr. R. J. Trumpler, of the Lick Observatory, has been granted leave of absence for a year from July 1, for study in Europe. In the department of mathematics, Professor B. A. Bernstein has been granted leave from July to December to complete papers on the foundation of mathematics and a book on the algebra of logic. Dr. S. E. Flanders has been given an extension of leave until December 31 to continue his collecting of insect parasites in Australia and elsewhere. J. W. Gilmore, professor of agronomy, has leave from July to December to study fiber-bearing plants and soils in Mexico. In the department of anthropology, Professor A. L. Kroeber has been granted leave from January 1, 1932, to June 30, to accept a visiting professorship at Columbia University. Professor R. H. Lowie has been granted leave from July 1 to June 30, 1932, in order that he may serve as chairman of the division of anthropology and psychology of the National Research Council, and Professor M. Randall of the chemistry department has been given a sabbatical leave from July 1 to June 30, 1932, for study in Europe.

DR. W. A. NOYES, who is spending a year in Europe, attended the meetings of the Bunsen Society and the German Chemical Association in Vienna. He gave a paper before the Bunsen Society on "Die Elektronen Struktur des Stickdioxyd." On June 4 he lectured before the Heidelberg Chemical Society on "Oxydation und Reduktion als Elektronenvorgänge," and gave the same lecture in Karlsruhe on June 15. Dr. Noyes will represent the University of Illinois and the American Chemical Society at the Faraday Centenary in London on September 21.

AN illustrated lecture, based on his botanical trip through New Zealand, was delivered on May 20, by Dr. Charles J. Chamberlain, at the University of California in Los Angeles. Dr. Chamberlain is professor emeritus of the University of Chicago and lecturer in botany at the University of California at Los Angeles during 1931. The lecture was arranged by the Sigma Xi Club of the university.

DR. ARTHUR BEVAN, state geologist of Virginia, gave lectures on May 25 at Oberlin College on "The Geology and Mineral Resources of Virginia" and on "The Geologic History of the Appalachian Mountains in Virginia."

PROFESSOR ROSS AIKEN GORTNER, head of the division of biochemistry in the University of Minnesota, made the principal address at the Phi Kappa Phi Recognition Day Convocation at North Dakota Agricultural College on May 20. His subject was "Biochemistry and the World To-day." In the afternoon of the same day he addressed those faculty and student groups primarily interested in biological problems on the subject "Colloids and Water in Living Processes." In the evening he gave the annual Phi Kappa Phi lecture, speaking on the subject "Science and Civilization."

THE following message from President Hoover was read at the recent annual banquet of the chemical industries in New York: "The chemical industries are foremost among those which ally themselves continuously with workers in science, thereby quickly transforming discoveries of creative research into practical products for human use. To all industries founded upon research the nation and the world look for the advancement which scientific development makes possible for mankind. The comprehensive gathering on this occasion made up of chemists, engineers, industrialists and salesmen symbolizes the close bond so desirable in all industry. In your continued progress I wish you success."

THE annual meeting of the eastern section of the Seismological Society of America will meet on June 11 and 12 at the University of South Carolina. Professor G. D. Louderback is president.

THE Medical Research Club of the University of Illinois College of Medicine held its two hundredth meeting in the library of the research laboratory building on May 27. The following program was given: Greetings from President Chase; Greetings from the Graduate School, Dean A. H. Daniels; "The Origin and Aims of the Club," Dean D. J. Davis, first president of the club; "X-ray Diffraction of Studies of Natural Materials Including Human Tissues," Dr. George L. Clark, professor of chemistry, University of Illinois. The Research Club was founded soon after the University of Illinois had taken over the College of Physicians and Surgeons,

as the College of Medicine of the university. Since its formation a chapter of Sigma Xi, a Medical History Club and a Clinical Conference have been founded. Each organization holds bi-weekly meetings.

THE Southwestern Archeological Federation met on May 16, at San Diego, California, for its second meeting of the year. The San Diego Museum acted as host to the organization. Papers were presented by Charles Amsden, of Los Angeles; Odd S. Halseth, of Phoenix, Arizona, and Spencer L. Rogers, of San Diego. Membership of the society includes teachers, professional archeologists and laymen interested in the problems of early man in America.

THE Storrow Fellowships in geology and geography, given in memory of James J. Storrow, of Boston, by Mrs. Storrow, are again available. Information in regard to them can be obtained from Arthur Keith, chairman of the fellowship committee, division of geology and geography, National Research Council, Washington, D. C.

BEQUESTS in the will of William E. Harmon include the sum of $1,246,385 for the Harmon Foundation.

BY the will of the late Otto M. Eidlitz the Presbyterian Hospital at the Columbia University Medical Center will receive $229,576; the Roosevelt Hospital $153,056. Cornell University receives $25,000.

THE French Ministry of Education announces that Mr. William Nelson Cromwell, a lawyer of New York, has contributed $50,000 to provide each of ten investigators with about 100,000 francs to use for scientific research.

DURING the sixth annual Aircraft Engineering Research Conference on May 27, Dr. Joseph S. Ames, president of the Johns Hopkins University and chairman of the National Advisory Committee for Aeronautics, put in operation equipment for aeronautical research at Langley Field, Virginia. This consisted of a full-scale wind tunnel and a seaplane channel. The tunnel has an oval-shaped throat measuring 60 by 30 feet, permitting the testing of full-size airplanes in an air stream at velocities up to 115 miles an hour. The seaplane channel is 2,050 feet long, a narrow tube of concrete filled with water and covered with a sheet metal house to prevent sunlight and winds from affecting measurements on seaplane floats and flying boat hulls. It has what is said to be the smoothest riding trolley car in the world, a special device for towing floats and hulls which runs on wide rails constructed to be as smooth as the still water in the long basin.

Museum News reports that the Natural History Museum at San Diego, California, has selected the site for its new building, the plot of ground in Balboa Park formerly occupied by the Civic Auditorium, diagonally across the Prado from the present building. This plot has been officially allotted to the museum by the Park Board, along with enough room to the north or west to care for future growth. The building to be erected will include exhibition halls, research laboratories, children's museum, library, auditorium and other requirements for an up-to-date museum. Mr. W. Templeton Johnson has been retained as architect and is already at work on plans not only for immediate needs but for the ultimate development of the site. The cost of the plans has been defrayed by Miss Ellen B. Scripps.

THE Council of University College, Hull, has decided to put into operation a scheme of fishery research, which is to be organized by Professor A. C. Hardy, under the department of zoology and oceanography. The scheme provides for an investigation over a period of five years of the distribution of plankton in the North Sea. A new section will be added to the accommodation of the department and the scheme includes the appointment of three research biologists. The capital expenditure will be borne by the college, but the greater part of the maintenance charges will be met by a grant from the treasury, which has been made on the recommendation of the Development Commissioners. A grant towards the cost has also been made by the Fishmongers' Company.

THE Aeronautical Research Institute of Tokyo Imperial University was opened in the presence of the Emperor on May 11. The building, which cost £380,000, has 14 acres of floor space for departments engaged in the specialized study of aeronautical problems. It is equipped with air tunnels, one of which is over three yards in diameter, and can generate a wind of a velocity of 135 m.p.h. for testing, while another reproduces the low air pressures and temperatures of altitudes up to 6,000 feet.

THE area of the Pinnacles National Monument, California, recently was enlarged to include 1,926.35 acres of additional lands adjacent and continuous to its north, east and west boundaries. Proclamation effecting this enlargement was signed by President Hoover on April 13. The total area of the monument is now 4,906.61 acres. It is administered by the National Park Service of the Department of the Interior. The newly-added area was donated to the government by the County of San Benito, California, and is of value from an administrative standpoint and also scientifically and educationally. The principal natural exhibits of the monument, as the name implies, are a series of spirelike rock forms of volcanic origin which rise from 600 to 1,000 feet above the floors of its several canyons, forming a landmark

visible many miles in every direction. The formations are extraordinary in shape and beautiful in coloring. Unusual caves and subterranean passages add to the beauty of the Pinnacles National Monument. According to the custodian of the monument, W. I. Hawkins, the caves are of a type he has encountered nowhere else, and represent vividly the processes of world-building. In his opinion the massive grandeur of these caves is second only to the Carlsbad Caverns in the national park of that name. In addition to the area of almost 2,000 acres which the County of San Benito donated for the enlargement of the monument, condemnation proceedings are now under way for the purpose of acquiring a private holding of 160 acres which was embraced within the original monument boundaries.

Nature describes an exhibition of British glass and glassware held in the exhibition hall of Messrs. Selfridge and Company. The exhibition was organized by the Glass Manufacturers' Federation in order to indicate to the general public the variety and quality of the products of the glass industry. The exhibits included artistic glassware and fine crystal tableware; glass bottles and jars of various shapes and sizes; sheet-glass in different forms and plate-glass from ⅛-inch in thickness to 1½-inch; glass transparent to ultra-violet light, and glass which excludes about 80 per cent. of the heat rays. The varied range of exhibits of chemical, scientific, laboratory and medical glassware, and of fused silica glassware, gave evidence of the remarkable progress that has been made in these branches of the industry. The application of glass in the electrical industry was illustrated by wireless valve bulbs; electric lamp bulbs, which are produced by automatic machinery; a 10 kw. electric lamp, such as is used in lighthouses and in aerodrome pilot lights; photocells; and neon lights for decorative and publicity purposes. Two large blocks of fine optical glass were shown, and also a polished telescope disc of 24 inches diameter. Amongst the spectacle lenses exhibited were samples of specially computed cataract lenses of light weight and trifocal lenses made by fusing as many as six pieces of glass to form the complete lens. Spun glass, known as glass silk or glass wool, was shown in skeins and also woven into cloth and mats. This is now being largely manufactured and used for heat insulation purposes on boilers and steam-pipes. It is more efficient than many other substances used for this purpose, and, in the form of mattresses or strips, can be easily and quickly applied or removed.

DISCUSSION

IS AN INTERNATIONAL ZOOLOGICAL NOMENCLATURE PRACTICABLE?

THE article under this title by Dr. C. W. Stiles in SCIENCE for January 3 suggests that an affirmative answer to his question meets with grave difficulties (in which we shall all agree), and that those difficulties have been increased by events at the last International Congress of Zoologists, held in Padua, 1930. Is it not possible to take a more hopeful view of the situation?

When one looks back at the great divergences in principle and practice that obtained only 35 years ago, one must concede that the International Commission on Zoological Nomenclature has worked wonders, and no small part of its success has been due to the labors of Dr. Stiles himself as its secretary. That the ground thus gained is to be given up because of a temporary setback is hardly to be admitted. That, however, could scarcely fail to be the result if a local section of zoologists, especially so important a section as the zoologists of the United States, were to break away and adopt their own code. Their example might well be followed by other groups and the curse of Babel would redescend upon us.

As one who has been striving for many years to harmonize conflicting views, and to help on united action, I beg permission to make a few plain comments on the remarks of my friend and colleague, Dr. Stiles.

The source of the trouble was an interpretation of the phrase "Binary Nomenclature." What Dr. Stiles in his heart of hearts thinks this means I don't know; he has, I fancy, not always held the same view. As secretary to the commission, however, he has, ever since the phrase was interpreted by an opinion of the commission, very properly upheld that interpretation. Some of us, both within the commission and outside it, have always questioned the correctness, even the validity, of that opinion, and a movement to alter the opinion has been gathering force, with the result that at Padua there was in the section of nomenclature a large majority in favor of the change—a change, be it noted, not of the rules but of their interpretation. As I pointed out in the meeting, the adoption of this interpretation, while satisfying what I may call the intellectual conscience of the majority, need not cause the alteration of a single name.

Now I do not propose, any more than Dr. Stiles, to discuss this particular proposition. There are arguments on both sides. The real trouble is this. The resolution of the section upset an opinion of the commission; but the chairman of the section was bound to transmit the resolution to the general session of the congress. Here I entirely agree with Dr.