

and the Manufacturing Chemists' Association of the United States. The foreign guests have also been invited to the smoker and entertainment of the American Chemical Society, which will be held on the evening of Wednesday, September 7.

Scientific sessions of the American Chemical Society, in which many matters concerning chemical research and applied chemistry will be discussed, are to be held at Columbia University. To these meetings the British and Canadian guests have been bidden. They will also be present at the banquet of the American Chemical Society on the evening of September 9 at the Waldorf-Astoria.

The fortnight beginning September 12 will be dedicated to American chemistry in all its phases, for it marks the holding of the National Exposition of Chemical Industries, which is to be held in the Coast Artillery Armory in the Bronx. There will be brought together under one roof a demonstration of what has been accomplished in this country since the European War in adapting the resources of the United States to national needs.

ORGANIZATION OF MEMBERS OF THE AMERICAN ASSOCIATION AT THE PENNSYLVANIA STATE COLLEGE

At the Pennsylvania State College, State College, Pa., the members of the American Association for the Advancement of Science, numbering about forty, met for dinner at the University Club on May 20. Professor A. J. Wood, of the school of engineering, presided. The speaker of the evening, Dr. Ira N. Hollis, president of the Worcester Polytechnic Institute, outlined the types of research suitable for educational institutions as differentiated from the purely applied types of investigations more appropriately undertaken by commercial firms. Dr. Hollis regretted that so much of the scientific effort of this age has had to go into methods of destruction of all that civilization has built up, and spoke in the highest terms of the utility of such researches as that of Professor Michelson in perfecting methods of accurate astronomical measurements which aid humanity in a comprehension of the immensity of the universe.

A discussion of the status and the prospects for scientific research at the institution was led by the deans of the various schools and the president of the college. A committee will plan for further meetings next year.

SCIENTIFIC NOTES AND NEWS

COLUMBIA UNIVERSITY at its commencement exercises conferred the degree of doctor of science on Mme. Curie, Dr. John C. Merriam, president of the Carnegie Institution of Washington, and Dr. Samuel W. Lambert, dean emeritus of the school of medicine. The degree of doctor of laws was conferred on Dr. James Rowland Angell, president elect of Yale University. The candidates were presented by Dr. James F. Kemp, professor of geology.

THE Case School of Applied Science has conferred the doctorate of science on Albert Sauveur, professor of metallurgy and metallography in Harvard University.

PROFESSOR JOHN M. COULTER, of the University of Chicago, and Dr. Samuel Garman, of the Harvard Museum of Comparative Zoology, have been elected foreign members of the Linnean Society of London.

THE Franklin Institute has conferred its Franklin medal and certificate of honorary membership on Professor Charles Fabry, of the University of Paris, for his studies in the field of light radiation.

PROFESSOR ALBERT EINSTEIN sailed for Liverpool on the *Celtic* on May 30. He will deliver the Adamson lecture of the University of Manchester. He will afterwards lecture at King's College, London, and other institutions.

MME. CURIE was given on May 26 the degree of doctor of laws by the University of Pittsburgh, being presented by Dr. W. J. Holland. During the day she visited the laboratories where was refined the gram of radium presented to her by President Harding on behalf of American women. On the following day she went to Canonsburg, Pa., to inspect the plant where the ore from which radium is obtained passes through the initial processes of

reduction. Previously Mme. Curie had spent two hours at the plant of the Welsbach Company, Gloucester, N. J., and the company presented her with 50 milligrams of mesothorium. Mme. Curie, accompanied by her daughters, is now visiting the Grand Canyon and the Yellowstone Park.

THE Rockefeller Foundation gave a dinner in honor of Dr. Carlos Chagas, head of the department of health in the Republic of Brazil, at the Waldorf-Astoria, on May 20. Dr. George E. Vincent presided as toastmaster, and addresses of welcome were made by John D. Rockefeller, Jr., Dr. Hermann M. Biggs, Dr. Paulo de Proenca and the Brazilian ambassador to the United States. Dr. Chagas, director of the Institute Oswaldo Cruz, Rio de Janeiro, gave a series of three lectures on "American trypanosomiasis" at the Harvard Medical School, May 26 and 27.

WE learn from *Nature* that the presentation of the first award of the Kelvin medal was made by the Right Hon. A. J. Balfour in the hall of the Institution of Civil Engineers to Dr. W. C. Unwin on May 4. The medal was founded in 1914, principally by British and American engineers, to commemorate the achievements of Lord Kelvin in those branches of science which are especially applicable to engineering.

A COMMISSION of five engineers has been appointed to visit England in June to present the John Fritz medal to Sir John Hadfield, in recognition of his scientific research work. The members of the commission are as follows: Dr. Ira N. Hollis, president of Worcester Polytechnic Institute; Charles T. Main, of Boston, representing the American Society of Civil Engineers; Col. Arthur S. Dwight, of New York, representing the American Institute of Mining and Metallurgical Engineers; Ambrose Swasey, of Cleveland, of the John Fritz medal award board and the American Society of Mechanical Engineers, and Dr. F. B. Jewett, of New York, of the American Institute of Electrical Engineers.

PRESIDENT HARDING, on June 3, designated Major Lawrence Martin as the representative

of the Department of State on the United States Geographic Board.

MR. FRANK C. BAKER, curator of the Museum of Natural History, University of Illinois, will spend the summer in Wisconsin, continuing his study of the molluscan fauna under the auspices of the Wisconsin Geological and Natural History Survey.

ARTHUR D. LITTLE, INC., announce that Chester M. Clark, formerly head of the corporation department of Stone & Webster, has been elected treasurer. Merton R. Sumner has been appointed chief engineer. Mr. Sumner was formerly chief engineer for New England of Fred T. Ley & Company, and more recently of the Fuller Industrial Engineering Corporation.

THE centenary of Bloomingdale Hospital at White Plains, N. Y., for the treatment of nervous and mental disorders, was celebrated on May 26. A special program of addresses had been arranged by Dr. William L. Russell, medical superintendent, for the morning session, and in the afternoon there were tableaux showing the origin of the asylum, its growth and the development of science in the treatment of the insane. Addresses were made by Dr. Pierre Janet, professor in the College of France, Paris; Dr. Richard G. Rowe, director of the Neuro-psychiatric Hospital, London; Dr. Llewellys F. Barker, of the Johns Hopkins Medical School, and Dr. Adolf Meyer, professor of psychiatry in the Johns Hopkins Medical School.

PROFESSOR WILLIAM CROCKER, in charge of the plant physiology department of the University of Chicago and director of the Thompson Institute for Plant Research at Yonkers, New York, gave an address on "The physiology of seed germination" before the biology club of the University of Minnesota at University Farm on May 16. The following afternoon Professor Crocker spoke on an "Effective attack on plant physiological problems" before the experiment station staff and other faculty men.

A LECTURE entitled "The study of organic reactions occurring in living matter" was de-

livered by Dr. Treat B. Johnson, professor of organic chemistry at Yale University, before the Philadelphia section of the American Chemical Society on the evening of May 14.

DR. JOHN C. MERRIAM, president of the Carnegie Institution of Washington, delivered a lecture at the State University of Iowa in April, entitled "Recent researches on the antiquity of man in California." He also addressed the Geology Club on "The Fauna of Rancho La Brea."

THE committee organized in 1911 by the late Professor MacGregor to promote a memorial to Professor Tait in the form of a second chair of natural philosophy at Edinburgh, reports that the Tait chair will shortly be established.

CHARLES PICKERING BOWDITCH, known for his research in the field of archeology, died on June 1, in his seventy-ninth year.

THE death is announced of Abbott Thayer, the distinguished artist, known also for his studies of protective coloration.

DR. E. J. MILLS, F.R.S., emeritus professor of technical chemistry in the Royal Technical College, Glasgow, died on April 21, at seventy-nine years of age.

THE American Society of Mechanical Engineers extended an invitation to members of the American Association for the Advancement of Science, to attend the May meeting of the Society at Chicago. The program of this meeting gave special emphasis to the problems of Chicago as a mid-western rail-water gateway. Two excursions were planned: one to McCook Field, for those interested in aeronautics, and the other to the Rock Island Arsenal.

THE Engineering Foundation assumes responsibility for sending the following note to the daily press: "Dr. Charles Benson Davis, of New York City, claims in a paper which he has prepared and submitted to Engineering Foundation, that he can make and has made some of the chemical elements, such as gold, silver, platinum and copper, by transmutation of a common element. He has shown samples of the metals he claims to have made to mem-

bers of the Engineering Foundation in New York City, and has requested that body to investigate his claims and his methods. Dr. Davis is a reputable chemist, a member of the Society of Chemical Industry, a Fellow of the British Chemical Society, and an Honorary Member of the Société Académique d'Histoire Internationale. He is the author of several papers which have been published in chemical journals."

DR. EDWARD A. SPITZKA, formerly professor of anatomy at Jefferson Medical College, Philadelphia, has donated to the U. S. National Museum his collection of brains of distinguished persons.

WE learn from the *Journal* of the American Medical Association that at the annual meeting of the New York Association for Medical Education held at the Academy of Medicine on March 7, the by-laws were amended and the board of directors was reconstituted to apportion the control of the association's affairs to the five medical schools of greater New York; namely, Columbia University, College of Physicians and Surgeons; Cornell University Medical College; the Long Island College Hospital; the New York Post-Graduate Medical School and Hospital, and the University and Bellevue Hospital Medical College. This means that for the first time in the history of New York City the five medical schools will cooperate to develop New York City as a medical teaching center. The mayor, the commissioner of health, and the commissioner of public welfare are ex-officio members of the board of directors. Unnecessary duplication of courses of instruction by the several medical schools will be done away with. New courses and a higher type of graduate work will be instituted. The new officers of the association are: president, Dr. Haven Emerson, formerly health commissioner of New York City, and at present in charge of the War Risk Bureau; secretary, Dr. Otto V. Huffman, at present associate professor of medicine at the New York Post-Graduate Medical School and Hospital, formerly secretary of the state board of medical examiners, and secretary-treasurer of the Federation of

State Medical Boards of the United States, and formerly dean of the Long Island College Hospital; treasurer, Dr. George W. Kosmak, attending surgeon of the Lying-In Hospital, and formerly secretary of the American Association of Obstetricians.

UNIVERSITY AND EDUCATIONAL NEWS

A DORMITORY for foreign students at Columbia University and other schools in New York has been made possible through a gift promised to members of the Cosmopolitan Club, an organization of students in Columbia and New York University. Plans for the dormitory provide for a building of 500 rooms to be erected at a cost approximating \$1,000,000, on Riverside Drive opposite Grant's tomb. The newspapers report that the donor is John D. Rockefeller, Jr.

DR. F. S. HARRIS, director and agronomist of the Utah Agricultural Experiment Station and professor of agronomy at the Utah Agricultural College, has resigned to become president of the Brigham Young University, at Provo, Utah, where he succeeds Dr. George H. Brimhall, who has been made president emeritus. Professor Wm. Peterson, station geologist and professor of geology in the college, has been appointed to succeed Dr. Harris as director of the station.

DR. NATHAN FASTEN, who went to the Oregon Agricultural College last September from the University of Washington, has been promoted to the headship of the department of zoology.

DR. JOHN W. M. BUNKER, who has been for several years at the head of the bacteriological department of the Digestive Ferments Company of Detroit, has been elected assistant professor of biochemistry and physiology at the Massachusetts Institute of Technology.

DISCUSSION AND CORRESPONDENCE CONCERNING RECENT AURORAS, MAY 13 AND MAY 14, 1921

TO THE EDITOR OF SCIENCE: On the evening of May 13, 1921, there occurred a great aurora,

not visible here on account of clouds, but again on the evening of May 14 there was another great display visible here in spite of the half moon and a low-lying fog which tended to spoil the visibility. As in other great auroras, the great bundles of streamers appeared to converge toward the zenith from the south as well as from the north, east and west. The sky at times was virtually covered with auroral light. The outburst of May 13 caused great disturbance to telegraph and telephone wire transmission and must have been of unusual magnitude. All the effects noted in the aurora of May 14 a day later conformed to the perspective ideas, pointed out in my paper, "Inferences concerning auroras," read at the Boston meeting of the National Academy of Sciences on November 14, 1916, and published in its *Proceedings*, Vol. 3, pp. 1-7, January, 1917.

It is rarely that one great aurora follows so closely on the heels of another and at an interval so short as a day. In fact I have no record or recollection of such a happening in my time of observation, which now extends over fifty years, more or less. Hence the conditions lead to the inquiry whether any unusual condition existed in this instance.

An examination of the solar surface appears to provide, or at least suggest, a possible explanation, and at the same time throw light on the nature of the relation of the aurora to the solar disturbances.

On May 15 there were to be seen on the solar surface two large spot areas, separated by an interval of about one-fourteenth of the diameter of the sun, the one following the other as the sun revolved. These two spot areas, quite distinct from each other, were nearly round, the first a single spot, the second a compact group with a much disturbed area adjacent. They were located near the center of the solar disc.

As the solar revolution takes place in nearly 26 days, the interval between the spots appears to be approximately one day of the surface movement.

This means that in about one day the sec-