

past few years, will each receive unusual recognition at the Tenth Exposition of Chemical Industries to be held this year during the week of September 28 to October 3 at the Grand Central Palace, New York. Plans for the new "Court of Chemical Achievement," inaugurated at the recent meeting of the Advisory Committee of the Exposition, are rapidly taking shape. Outstanding achievements of American chemistry, whether in the research or industrial field, which have been completed during recent years, will be admitted to the court after they have passed a committee of approval of the American Chemical Society.

The new "Court of Achievement," which bids fair to be the outstanding feature of the Chemical Exposition this year, will be in the form of small unit exhibits together in one large specially arranged group. Among the new products which have been suggested for display are twenty-seven recent developments. This list will probably be increased several times by other new chemical products, instruments and explanation of new processes.

All exhibits will be passed upon and admission to the Court of Achievement will be granted by a committee of the American Chemical Society known as the committee of approval which is composed of Marston T. Bogert, chairman, C. M. Stine, E. R. Weidlein, F. W. Willard and John Johnston. A subcommittee of the Chemical Exposition Advisory Committee, composed of H. E. Howe, chairman, F. J. Metzger and T. B. Wagner, will act in an advisory capacity to the exposition management in the general conduct of the new project.

Entries for new products and processes for the Court of Achievement must be sent to Court of Achievement, Room 1102, Grand Central Palace, New York, prior to May 1, after which time applications will not be considered. A nominal fee will be charged for all exhibits in the court except those of institutions of learning and government bureaus or departments which will be accepted without charge if they pass the judges. A brochure will be printed and distributed from the Court of Achievement at the exposition. Full information can be secured by inquiring at the address indicated above.

THE NATIONAL ACADEMY OF SCIENCES

At the spring meeting of the National Academy of Sciences held in Washington on April 28, the following members were elected:

Section of Mathematics:

Solomon Lefschetz, University of Kansas.

Section of Physics:

Frederick Albert Saunders, Harvard University.

William David Coolidge, Schenectady, New York.

Section of Engineering:

Ralph Modjeski, Chicago.

Elmer Ambrose Sperry, Manhattan Bridge Plaza, Brooklyn, New York.

Section of Chemistry:

Charles August Kraus, Clark University.

Section of Geology and Paleontology:

Reginald Aldworth Daly, Harvard University.

Section of Botany:

Edward Murray East, Harvard University.

Section of Physiology and Pathology:

Florence Rena Sabin, The Johns Hopkins Medical School.

Harry Gideon Wells, University of Chicago.

Section of Anthropology and Psychology:

Walter Bowers Pillsbury, University of Michigan.

Foreign members were elected, as follows:

Sir Charles Parsons, the British engineer.

Professor Arthur Stanley Eddington, Plumian professor of astronomy in the University of Cambridge.

Dr. Adolph Engler, professor of botany in the University of Berlin.

Dr. Niels Bohr, professor of physics in the University of Copenhagen.

Mr. Charles P. E. Schneider, the French engineer.

Dr. Hans Speman, professor of zoology, University of Freiburg, i. Br.

SCIENTIFIC NOTES AND NEWS

DR. CHARLES D. WALCOTT, secretary of the Smithsonian Institution, was elected president of the American Philosophical Society at the general meeting of the society held in Philadelphia from April 23 to 25.

As a memorial to Dr. Charles P. Steinmetz, chief consulting engineer of the General Electric Company, the Schenectady Section of the American Institute of Electrical Engineers has initiated a series of annual lectures, to be known as the Steinmetz Lectures. The first will be given on May 8 by Professor M. I. Pupin, of Columbia University, president of the American Association for the Advancement of Science. His subject will be "Law, description and hypothesis in the electrical science."

THE seventieth birthday of Dean M. E. Cooley, of the University of Michigan, was recently celebrated at a general engineering assembly. A large silver loving cup was presented to him by the engineering and architectural students. Upon this cup was engraved the inscription, "An expression of the appreciation and affection of the students of the colleges of engineering and architecture for their dean, Mortimer Elwyn Cooley, March 28, 1925." L. W. Wallace, secretary of the American Engineering Council, of Washington, D. C., gave a eulogy of Dean Cooley and Acting President Alfred H. Lloyd congratulated him on behalf of the faculty and students.

DR. L. O. HOWARD and Dr. A. C. True, of the U. S. Department of Agriculture, represent the United States on the International Commission which is making arrangements for the twelfth International Congress of Agriculture which is to be held at Warsaw from June 21 to 24.

THE board of trustees of the Tropical Plant Research Foundation, at their annual meeting in Washington on April 27, elected as president Professor L. R. Jones; vice-president, Dr. Robert A. Harper, and trustees for five-year terms, Dr. William Crocker and Dr. W. D. Hunter.

DR. F. SODDY, professor of chemistry in the University of Oxford, has been elected a corresponding member of the Russian Academy of Sciences.

DR. F. W. ASTON, fellow of Trinity College, Cambridge, has been elected a member of the Athenaeum for distinguished eminence in science.

IN honor of the sixtieth birthday of Dr. Max Cremer, professor of physiology in the veterinary institute of the University of Berlin, a special number of the *Biochemische Zeitschrift* has been dedicated to him. The University of Cologne has conferred on Dr. Cremer the honorary degree of doctor of laws.

THE Scientific Club of Winnipeg has awarded its research prize of \$300 to Miss Mollie Weinberg, M.A., M.Sc., for her biophysical investigations in acoustics and on gustatory sensory reflexes, which were carried out in the department of physics, University of Manitoba, under the direction of Professor Frank Allen.

DR. ALEXANDER WETMORE, superintendent of the National Zoological Park, has been appointed an assistant secretary of the Smithsonian Institution with general supervision of the National Museum, the National Gallery of Art and the National Zoological Park.

CLAUDE B. GOUAUX, of the Louisiana State University, has been appointed by the Tropical Plant Research Foundation to be agriculturist on the staff of its Cuban Sugar Experiment Station, and D. L. Van Dine, entomologist, field director of the foundation's Sugar Experiment Station, with headquarters at Central Baragua, in the Province of Camagüey.

C. H. BURRAGE has been appointed forester in the Robinson Substation at Quicksand in eastern Kentucky, authorized by the state legislature with an appropriation of \$25,000 per annum.

DR. BENJAMIN T. TERRY, for six years professor of pathology, Vanderbilt University School of Medicine, Nashville, has been appointed director of pathologic

laboratories at the Toledo Hospital, Toledo, Ohio, effective on September 1.

DR. GEORGE R. HILL, JR., has resigned as professor of botany and plant pathology and dean of agriculture of the Agricultural College of Utah, effective at the close of the present school year, and has accepted the position of director of the department of agricultural research with the American Smelting and Refining Company at Salt Lake City, Utah.

THE Society for Experimental Biology and Medicine at its annual business meeting on April 15 elected the following officers: *President*, J. W. Jobling; *vice-president*, S. R. Benedict; *secretary-treasurer*, A. J. Goldfarb; *councilor*, W. W. Palmer; *nominating committee*, C. P. Sherwin, H. C. Sherman, V. C. Myers, H. C. Jackson, D. D. Van Slyke, L. B. Mendel, J. B. Collip.

AT the annual meeting of the Anthropological Society of Washington, D. C., the following officers were elected for the ensuing year: *President*, Mr. Neil M. Judd, succeeding Dr. Michelson; *vice-president*, Mr. J. P. Harrington, reelected; *secretary*, Dr. John M. Cooper, reelected; *treasurer*, Mr. J. N. B. Hewitt, reelected; *additional members of Board of Managers*, reelected, Dr. Chas. L. G. Anderson, Mr. Felix Neumann and Mr. Herbert Krieger, succeeding Mr. Judd.

THE American Engineering Standards Committee announces the formation of a committee of five leading executives, to act as an advisory body to the committee in standardization efforts, particularly as these affect the elimination of waste. This advisory committee will consist of J. A. Farrell, president of the United States Steel Corporation; G. B. Cortelyou, president of the Consolidated Gas Company, New York; J. W. Lieb, vice-president of the New York Edison Company; L. F. Loree, president of the Delaware & Hudson Company, and Gerard Swope, president of the General Electric Company.

AT the annual meeting of the National Clay Products Association in Montreal, the announcement was made that practically the whole sum required for the institution for a course in ceramic engineering at the University of Toronto had been pledged by members of the association. Andrew Dodds, of Mimico, Ont., was elected president for the ensuing year and the following were chosen vice-presidents: D. C. Merkle, Ottawa; B. McFarren, Toronto, and H. F. Bingle, Aldershot, Ont. The secretary is Gordon C. Keith, of Toronto.

SIR THOMAS H. HOLLAND has been elected president and Viscount Cowdray, Sir John Cargill, Alfred C. Adams, Alexander Duckham, Arthur W. Eastlake

and Robert Redwood have been elected vice-presidents of the British Institution of Petroleum Technologists for the ensuing year.

WILLARD C. THOMPSON, chief of the department of poultry husbandry at Rutgers College and the New Jersey station, has been given a two years' leave of absence to serve as temporary director of the National Poultry Institute of England, recently established at Harper Adams Agricultural College, Newport, Shropshire, with funds aggregating £50,000.

DR. H. S. WASHINGTON, of the geophysical laboratory of the Carnegie Institution of Washington, is in Europe to carry on archeological and volcanological studies in Italy and northern Africa.

EXPEDITIONS in which psychological tests were given to American Indians went out from the University of Denver under the direction of Dr. Thomas R. Garth this spring, one to the Pine Ridge Indian Reservation, in South Dakota, and the other to the United States Indian School, at Rapid City, South Dakota. Nearly one thousand Indian children were tested for intelligence, musical talent, will-temperament, color preference and handwriting.

ANNOUNCEMENT has been made in Berlin of plans for a German expedition to ascend Mount Everest in the Himalayas, under the auspices of the German Alpine Association and under the leadership of Captain von Peiser. The preliminary expedition plans to start on July 2.

DR. EDWIN E. SLOSSON, director of Science Service, Washington, is to give a public lecture in the Sterling Chemistry Laboratory of Yale University on the evening of May 22, under the auspices of the chemistry fraternity Alpha Chi Sigma.

K. S. JOHNSON, of the Bell Telephone Laboratories, Inc., of New York, lectured on "Electric wave filters" before the faculty, graduates and seniors of Yale University on April 21 and 22.

DR. CARLETON R. BALL, senior agronomist in charge of the office of cereal investigations, U. S. Department of Agriculture, delivered two lectures on the subject "Cooperation and research" before the class in organization and method of research in the graduate school of the U. S. Department of Agriculture, during February, and had been invited to address the Special Convention of the Directors of State Agricultural Experiment Stations, at St. Louis, on April 8 and 9, on the subject "Some elements of successful cooperation in research."

DR. J. PARSONS SCHAEFFER, Jefferson Medical College, recently addressed the New York Roentgen Society on "The paranasal sinuses in Roentgenology" and the Montgomery County and the Lycoming

County Medical Societies on "Anatomical variation in symptomatology, diagnosis and treatment."

UNDER the auspices of the department of zoology and of the Biological Club, Professor James H. McGregor, of Columbia University, delivered two lectures on "Prehistoric man" before the students of Oberlin College on April 23 and 24.

DR. ALBERT SCHNEIDER, dean of the school of pharmacy of the North Pacific College of Oregon, will give a course of lectures on "General detective methods and police microanalysis" at the summer sessions of the University of California. Arrangements have just been completed for Dr. Schneider to continue his investigations into the probable cause of cancer, begun at the University of Nebraska several years ago.

E. C. RHODES, of the school of economics of the University of London, who served as assistant to Dr. Karl Pearson for several years, will give two courses of lectures at the summer session of Northwestern University. One course is entitled "An introduction to statistical method," the other "The advanced mathematics of statistics."

DR. ALEXANDER KOTLAN, assistant professor and lecturer on zoology and parasitology at the Veterinary College of Buda Pest, is now in this country as exchange professor under the auspices of the American-Hungarian Foundation. He is carrying on investigations in certain poultry diseases in the department of bacteriology in cooperation with the veterinary department of the Michigan Agricultural College. He lectured at the University of Illinois under the auspices of the department of zoology, April 22, on "A survey of our knowledge on the development of parasitic nematodes with particular reference to the migratory phenomenon" and on April 23 on "The pathologic significance of recent discoveries in the field of the development of parasitic roundworms."

DR. L. SILBERSTEIN gave a lecture at the laboratory of the department of terrestrial magnetism of the Carnegie Institution of Washington on April 29, entitled, "Some cosmological consequences of the finite universe." The leaders in the discussion were Dr. P. R. Heyl, of the Bureau of Standards, and Dr. E. P. Hubble, of the Mount Wilson Observatory.

A COMMITTEE presided over by M. P. Appell, rector of the University of Paris, was appointed in 1914 to raise the necessary funds to strike a medal in honor of Henri Poincaré and to provide a prize to encourage students in the study of celestial mechanics, mathematical physics and the philosophy of the sciences. The subscription was interrupted by the war, but has now been resumed by a committee appointed by the Paris Academy of Sciences. Several copies of the medal

have been made, and at the session of the academy on April 30 were presented by President Bouvier to Mme. Henri Poincaré and M. Raymond Poincaré.

SIR RICKMAN JOHN GODLEE, the distinguished surgeon, died on April 20 at the age of seventy-six years. Sir Rickman had been president of Royal College of Surgeons and was the biographer of Lord Lister.

THE death is announced, at Ann Arbor, at the age of seventy-seven years, of Charles Kasson Wead, who was, from 1877 to 1885, professor of physics at the University of Michigan and later, until his retirement, examiner in the U. S. Patent Office.

THE International Research Council will hold its third meeting in Brussels on July 7. The secretary of the council is Sir Arthur Schuster, professor of physics in the University of Manchester.

THE annual meeting of the British Science Guild was held in London on April 21. Lord Askwith presided and the speakers were Sir William Bragg, Major-General Sir Frederick Maurice, Major the Honorable H. Fletcher Moulton, Sir Arthur Newsholme and Mr. A. A. Somerville, M.P.

THE after-Easter lecture session at the Royal Institution began in April when Professor Barcroft gave four lectures on "Some effects of climate on the circulation." The Tyndall lectures will be delivered by Professor Whiddington on "The passage of electricity through vacuum tubes," beginning on May 19. On April 23 Mr. F. Kingdon Ward began a course of two lectures on "A year's exploration in Tibet." On succeeding Thursday afternoons there will be two lectures by Professor H. J. Fleure on "Prehistoric trade and traders of the west coasts of Europe," and two by Professor F. O. Bower on "The natural classification of ferns." W. P. Pyecraft will give lectures on "Use and disuse and their effect on the bodily structure of animals." The Friday evening meetings were resumed on April 24, when Dr. W. A. Craigie delivered a lecture on "The Icelandic sagas." Other lectures will probably be given by Professor W. L. Bragg, Dr. H. H. Dale, Professor H. G. Darwin, Dr. Thorne M. Carpenter and Sir Henry Newbolt.

CHAS. M. UPHAM, director of the highway research advisory board of the National Research Council, announces the extension of the board by the appointment of contact men from the various engineering colleges of the country. At the present time, eighty colleges have responded to the call and have signified their willingness and desire for cooperation by the appointment of a member of their faculty to act with the board. The contact man in every case has been one who has done work along the lines of highway research.

THE first number of a mathematical journal entitled *Revista Matemática* appeared in October, 1924. It was published by the "Sociedad Matemática Argentina," and the first three numbers have appeared monthly.

THROUGH the generosity of Messrs. Watermeyer and Leonhardt, president and vice-president of Fritzsche Brothers, Inc., a research fellowship in the chemistry of perfumes and essential oils has been offered to Columbia University. The fellow is to be appointed by the university council, upon nomination of a committee of award composed of the president of Fritzsche Brothers and the senior professor of organic chemistry at Columbia, and approved by the department of chemistry. The recipient of the fellowship will receive \$3,000 per annum and the investigations will be conducted under the direction of Professor Marston T. Bogert.

WE learn from *Nature* that in publishing the first biological number of the Science Reports of the Tohoku Imperial University, Sendai, Japan, Professor S. Hatai announces the formal opening of the biological institute of this university and of a Marine Biological Station, located at Asamushi. Among the special features of this station is an under-sea laboratory and a spacious open marine pool for observations on the growth of marine organisms. Several residences and a large dormitory have been erected where investigators may live with their families and where students may find suitable accommodation. Professor Hatai hopes that his colleagues in Japan and in other countries may take advantage of the facilities offered for research.

THE governing body of the Imperial College of Tropical Agriculture has authorized Dr. Martin Leake, the principal, to arrange for a member of the college staff to visit the east, with a view to combating Panama disease, which has affected the plants in so many parts of the world. At the instigation of the West India Committee, this officer will also take the opportunity of studying limes, with a view to devising a method of meeting the Witherdip disease, which has caused so much damage to the lime plantations of Dominica.

THE French population figures for 1924 show that there were almost exactly the same number of marriages (355,923 to 336,501 in 1923), about 10,000 fewer births and 13,000 more deaths than in the previous year. The excess of births over deaths fell from 94,871 in 1923 to 72,216, but this was an improvement on the 70,579 of 1922. The birth rate per 10,000 of the population declined from 194 in 1923 to 192, and the death rate rose from 170 to 173.

The population is taken as 39,209,518. It may be added that in 1913 the marriage rate was 151 per 10,000, the birth rate 191, and the death rate 176.

UNIVERSITY AND EDUCATIONAL NOTES

THREE million dollars has been collected by the University of Pittsburgh toward the \$10,000,000 required for the erection of the fifty-two story building which it is planned to erect.

THE Neurological Institute of New York will become a part of the new Columbia University-Presbyterian Hospital Medical Center.

THE School of Pharmacy of the Pharmaceutical Society of Great Britain has been admitted as a school of the University of London in the faculty of medicine for a period of five years as from January 1, 1925.

WILLIAM W. STIFLER, acting professor of physics at Williams College, has accepted an appointment as associate professor of physics at Amherst College.

HORACE B. ENGLISH, professor of psychology at Antioch College, has been appointed associate professor of psychology at Wesleyan University. Herbert Gurnee (Wesleyan, '22) will also join the department.

DR. C. LADAME has been appointed to the chair of psychiatry in the University of Geneva in succession to Dr. R. Weber, who has been made emeritus professor.

DISCUSSION

DECAY AND REGENERATION OF RADIO-LUMINESCENCE

It is well known that the luminescence produced in certain materials subjected to the action of the radioactive rays decreases with time and that the color of the luminescence changes, while at the same time the material itself also changes in color. From experimental work covering more than two years and still under way, we are led to believe that the decrease in luminescence of phosphorescent zinc sulfid, etc., is probably due to the masking of the radiation luminosity by the color which the material acquires, due to the action of the radiation.

For example, small glass tubes containing radon initially glow quite brightly with a yellowish-green light, but the glass soon turns either brown or blue, and in the course of a few days the tubes glow very faintly if at all. If the tubes be heated sufficiently to just discharge the coloration, the glow returns. This operation can be repeated with no apparent change in

the property of the glass to glow under the action of the radon rays.

The coloration of the glass is not a surface phenomenon, and the color produced, whether brown or blue, seems to reach a color depth beyond which further radiation produces no apparent increase in the coloration.

Since the observation of the behavior of glass under radiation and the restoration of its luminescence by discharging the coloration by heating, phosphorescent zinc sulfid has been investigated. Here again the visible radio-luminescence and the phosphorescence decrease as the coloration increases, and eventually zinc sulfid, which originally gave a brilliant phosphorescence in daylight, no longer responds, and it is only faintly responsive to alpha radiation. However, on heating this zinc sulfid just sufficiently to discharge the coloration, no difference in any of its properties can be detected between such revived zinc sulfid and some of the same material which has not been subjected to radiation.

This investigation is being continued and a more detailed report will be given later.

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BAUXITE AND SIDERITE

UNDER the caption "Bauxite associated with siderite," published in Volume 35, Number 3, of Bulletin of the Geological Society of America, Mr. E. F. Burchard, of the United States Geological Survey, has published a description of the bauxite deposits of northeast Mississippi, the opening paragraphs of which are so worded as to leave an unfavorable impression of the work of geologists who preceded Mr. Burchard in Mississippi. Besides the various members of the State Geological Survey, numerous eminent geologists from other states and from the Federal Survey fall within this list. While Mr. Burchard was in Mississippi he visited the office of the State Geological Survey and was treated cordially and with due consideration, hence I do not think that he intended to be inconsiderate of this department, or of others, in his remarks.

In the opening sentence of his article Mr. Burchard said, "A new bauxite field in northeastern Mississippi was discovered in an interesting way by J. W. Adams, of Tusculumbia, Alabama, in 1921." Then, after quoting Hilgard's description of what has since turned out to be bauxite, he says:

More than sixty years elapsed between the publication