

most important publications. Wherever possible the student is requested to exhibit a recent photograph and publications of the scientist under discussion. A typewritten copy of the matter to be presented must be submitted to the professor in charge of the field of chemistry covered, on the Saturday preceding the seminar period.

While this course is intended primarily for graduate students majoring in chemistry, others interested in any of these topics are cordially invited to attend the seminar. The program is as follows:

Oct. 5, 1923—J. L. Young	H. G. J. Moseley
Oct. 12, " —J. E. Rosenberg	F. W. Aston
Oct. 19, " —A. N. Parrett	F. Soddy
Oct. 26, " —W. L. Nelson	M. & Mme. P. Curie
Nov. 2, " —E. W. Felkel	Niels Bohr
Nov. 9, " —J. Nevyas	W. Nernst
Nov. 16, " —E. W. Ohl, Jr.	Wilhelm Ostwald
Nov. 23, " —R. A. Gagnon	J. Perrin
Dec. 7, " —E. R. Clarke	T. Svedberg
Jan. 4, 1924—W. A. S. Wright	Wolfgang Ostwald
Jan. 11, " —R. McClure	K. Szigmondy
Jan. 18, " —W. A. Rudisill	P. Sabatier
Jan. 25, " —J. Lebarthe	W. Ramsay
Feb. 8, " —A. H. Weitz	J. H. Van't Hoff
Feb. 15, " —W. W. Lewers	M. LeBlanc
Feb. 29, " —L. D. Myers	S. Arrhenius
Mar. 7, " —R. E. Flikkema	E. Fischer
Mar. 14, " —J. F. Conn	H. von Baeyer
Mar. 21, " —H. J. Robertson	F. Haber
Mar. 28, " —C. G. Denny	H. Moissan
Apr. 4, " —A. E. Wood	P. Ehrlich
Apr. 11, " —E. S. Ross	J. W. Mellor
Apr. 25, " —G. D. Kammer	G. Lange
May 2, " —Miss L. V. Hjort	L. Pasteur

THE AMERICAN SOCIETY OF ZOOLOGISTS

THE American Society of Zoologists will hold its twenty-first annual meeting at Cincinnati from Thursday to Saturday, December 27–29, 1923. The society headquarters will be at the Hotel Gibson which will also serve as headquarters for the botanists, naturalists and geologists.

Professors N. K. Koltzoff and P. P. Lazareff, of Moscow, will be the guests of the society at these meetings. The former will speak on Thursday afternoon at four P. M. on the subject: "Experimental zoology and the Moscow Institute." The latter will speak at the same time on the following day on: "The theory of nervous activity and the theory of sight."

A symposium on "Morphogenesis" has been arranged for Saturday afternoon in conjunction with the botanists and naturalists. Professors Child, R. S. Lillie, Buller and Harper will speak.

Through an agreement of long standing the arrangement of the zoological aspect of the program of Section F of the American Association rests with the American Society of Zoologists when the two meet together. Zoologists who are not members of the society may have papers placed on the program if sponsored by some member. All titles submitted for

the program must be accompanied by an abstract of not more than 250 words and must reach the secretary by November 20. Titles and abstracts on all phases of zoology, evolution included, other than genetics should be sent directly to the secretary. Titles and abstracts in genetics should be sent to Dr. D. F. Jones at the Connecticut Agricultural Station, New Haven, Conn.

The abstracts will be published in the *Anatomical Record* preceding the meeting and reprints will be available for distribution before the meetings convene. Persons desiring these abstracts sent them on publication may order them from the secretary at a cost of thirty cents per copy.

W. C. ALLEE,
Secretary

ZOOLOGICAL BUILDING,
THE UNIVERSITY OF CHICAGO

DEDICATION OF THE STEINHART AQUARIUM

THE Steinhart Aquarium of the California Academy of Sciences was formally dedicated and opened to the public on Saturday afternoon, September 29, 1923.

The exercises were held out doors in the large court in front (north side) of the building which is located in Golden Gate Park, San Francisco, adjoining the museum of the California Academy of Sciences. An audience of more than five thousand was present.

Brief addresses were given by: Honorable C. E. Grunsky, president of the academy; Honorable Wm. H. Crocker, president of the Board of Trustees; Honorable William Sproule, president of the Southern Pacific Railroad Company and member of the Board of Park Commissioners; Honorable James Rolph, Jr., mayor of San Francisco; Dr. David Starr Jordan, chancellor emeritus Stanford University, and Dr. Barton Warren Evermann, director of the Aquarium. Music was furnished by the Park Band. The address given by Dr. Evermann will be published in *The Scientific Monthly*.

The Steinhart Aquarium is proving the most popular attraction in San Francisco, the number of visitors daily reaching more than 25,000.

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SCIENTIFIC NOTES AND NEWS

THE degree of doctor of science has been conferred by the University of Wales on Sir Charles Sherrington, president of the Royal Society.

DR. HIDEYO NOGUCHI, of the Rockefeller Institute for Medical Research, has been elected to membership in the Imperial Academy of Japan.

DR. CLIFTON D. HOWE, dean of the faculty of for-

estry of the University of Toronto, has been elected president of the Canadian Forestry Association.

PROFESSOR R. A. SEATON, dean of engineering in the Kansas State Agricultural College, was elected president of the Kansas-Nebraska section of the Society for the Promotion of Engineering Education at the annual meeting held at Lincoln, Nebr., on October 20 and 21.

JOHN HOWE HALL, of the Taylor-Wharton Iron & Steel Company, of High Bridge, N. Y., has been awarded the J. H. Whiting gold medal of the American Foundrymen's Association at its recent meeting, for outstanding achievements in metallurgy.

IN connection with the celebration of the centenary of the birth of Pasteur, the French government has made awards in "La Légion d'honneur" of 2 "grands officiers," 9 "commandeurs," 28 "officiers" and 52 "chevaliers."

MEMBERS of the Pasteur Institute, Paris, were awarded promotions as follows: M. Calmette, "grand officiers," 9 "commandeurs," 28 "officiers" and 52 Radot, "commandeurs"; MM. Fernbach, Fourneau, Marie, Mesnil, Prévot, Tourtel, Dr. Veillon, "officiers." Drs. Abt, A. Berthlot, Besredka, Dumas, Duclaux, Dujarie de la Rivière, Pozerski, Weinberg, MM. Boquet, Danysz, Pontenay-Fontête, Mlle. Ledebt, MM. Ramon, Viala, Agulghon, Cesari, "chevaliers."

DR. ARTHUR S. RHOADS, pathologist of the Missouri State Fruit Experiment Station, has accepted the position of assistant plant pathologist of the Florida Agricultural Experiment Station.

RICHARD FISHER, formerly of the department of chemistry of the University of Illinois, and William B. Plummer, formerly research chemist of the Grasselli Chemical Co., have joined the research staff of the Combustion Utilities Corp., Long Island City, New York.

THE National Lamp Works of General Electric Company in entering upon a policy of general reduction and retrenchment in home office expenses has felt obliged to restrict the scope of its scientific research to problems bearing more immediately upon its chief business interests. In consequence the company has reluctantly decided to discontinue the research work in biology in Nela Research Laboratories, a research section recently established under the direction of Dr. Ralph S. Lillie, with Dr. Samuel E. Pond as associate, and Dr. Marie Hinrichs as research assistant. This decision affects not only the biological work at Cleveland but that which has been conducted during the summer months in the company's laboratory at Woods Hole, Mass.

DR. W. H. PERKIN, of the University of Oxford,

engineer and director of research for the British Dyestuffs Corporation, Limited, has been appointed director of research of the corporation to succeed Professor A. G. Green, who recently resigned.

WE learn from *Nature* that Mr. A. Eastham, who has held botanical and seed-testing appointments in Canada, has been appointed to be chief officer of the Official Seed Testing Station for England and Wales.

DR. CHARLES H. HERTY, president of the Synthetic Organic Chemical Manufacturers' Association, has sailed for a short visit to Europe.

OTTO H. SWEZEY, entomologist, and Gerril P. Wilder, botanist, have completed for the present their investigations in Samoa and have returned to Honolulu. In addition to conducting investigations relating to economic problems, collections were made for Bishop Museum.

PROFESSOR R. B. THOMSON, of the University of Toronto, who has been interested in the establishment of botanical gardens in Toronto, has been granted leave of absence by the university until February, that he may visit Australia and New Zealand. Professor Thomson read a paper at the Liverpool meeting of the British Association as a delegate from the Royal Society of Canada.

DR. GEORGE OTIS SMITH, director of the U. S. Geological Survey, addressed the Boston Section of the American Institute of Mining and Metallurgical Engineers on October 16, on "Lessons from the coal commission's work."

DR. H. W. WILEY gave an address in Pittsburgh on the evening of October 26, before the Langley Science Teachers' Association, on the "Relation of nutrition to biology."

PROFESSOR A. BIEDL, of the University of Prague, will give the Harrington Lecture at the University of Buffalo on Saturday, November 10.

PROFESSOR W. D. TREADWELL, of the Technical High School, Zurich, lectured on "Electrometric methods in analytical chemistry" on November 2, under the auspices of the Manchester sections of the Society of Chemical Industry, the Institute of Chemistry, the Society of Dyers and Colorists and the Manchester Literary and Philosophical Society.

DR. H. FREEMAN STECKER, professor of mathematics in the Pennsylvania State College, died on October 30, aged fifty-six years.

DR. BORIS SIDIS, known for work in psychopathology, died at his home in Portsmouth, N. H., on October 25, aged fifty-six years.

PROFESSOR HERBERT McLEOD, F.R.S., distinguished

as a chemist, physicist and scientific bibliographer, died on October 1, aged eighty-two years.

DR. JOHN ALLEN HARKER, F.R.S., chief assistant and head of the Thermometry Division of the British National Physical Laboratory, died on October 10, aged fifty-three years.

THE Astronomy and Physics Club, of Pasadena, began its third year on October 5, the program for the month is: October 5, "Report on the Liverpool Meeting of the British Association and on the condition of scientific work in Europe," Dr. Paul S. Epstein. October 12, "The Hall-effect and specific resistance of cathodically sputtered films," Dr. Stewart S. Mackeown. October 19, "The Errors of Diffraction Gratings," Dr. John A. Anderson. October 26, "The ruling of diffraction gratings, Dr. John A. Anderson.

LECTURES are being given during November at the New York Botanical Garden on Saturdays and Sundays at 3:30 p. m., as follows:

- November 3—"Mountain scenery of the United States and Mexico": Mr. Le Roy Jeffers.
- " 4—"Rare pines and firs": Mr. K. R. Boynton.
- " 10—"Botanical rambles in Panama": Dr. M. A. Howe.
- " 11—"The origin of cultivated plants": Dr. A. B. Stout.
- " 17—"Ferns": Dr. R. C. Benedict.
- " 18—"Java and the Javanese people": Dr. H. A. Gleason.
- " 24—"A trip to Ecuador": Dr. F. M. Chapman.
- " 25—"British Guiana": Miss Ruth Rose.

It is proposed to establish a Banting Medical Research Foundation, plans for which were announced on October 31, at London, Ontario. Dr. Banting was the first contributor to the proposed \$1,000,000 fund, having signified his intention to donate \$10,000, a portion of his share of the 1923 Nobel Prize. A committee to take preliminary charge of the foundation and its financing includes John Rogers, of Toronto, chairman; Dr. Stewart, president of the New York Academy of Medicine; Professor Fitzgerald, University of Toronto, and Dr. George W. Ross, of Toronto.

Chemical and Metallurgical Engineering reports that a new chemical and physical research laboratory is planned by the National Tube Company, of Pittsburgh. It will be situated on Forbes Street, adjoining property held by the federal government, including the United States Bureau of Mines. A small tract of government property is needed to square the site for the proposed building, and application has been made at Washington for the transfer of the land.

THE editorial office of International Critical Tables has finished the preparation of a table of the viscosity

of water at 1° intervals between 0° and 100° C. This table is based upon a thorough and critical evaluation of all the data available on the subject. While prepared primarily for the use of the cooperating experts of the International Critical Tables, a number of extra copies are available. Copies of the sixteen-page pamphlet entitled "Fundamental Constants and Conversion Factors" are also available. This pamphlet contains the latest data on the fundamental constants of nature, including definitions, dimensional equations, conversion factors, etc.

THE *Journal* of the American Medical Association states that under the direction of the national public health service and under the auspices of the Spanish Cancer Research Society, an institution has been opened for the study of cancer at Madrid. The clinical section includes twenty-eight beds, with rooms for operations and medical treatment, and a free outpatient service. There is a complete installation for radiotherapy and radiologic diagnosis. The section of anatomy, pathology and bacteriology includes several laboratories, as also the chemical section. The institution is mainly supported by the government, but part of the running expenses is paid by the patients and private donations. Dr. J. Govant is medical director.

THE *British Medical Journal* reports that the Advisory Committee on Industrial Hygiene, which has just ended its sittings at the International Labor Office of the League of Nations at Geneva, adopted a resolution stating that the most effective method of securing the success of research into the prevention of anthrax would be the constitution of national committees to work under the general direction of the Health Committee of the League of Nations. Members might be appointed after consultation between the Health Committee of the League of Nations and the government departments in each country which are responsible for the administration of the Factory Acts. Dr. Smyth, assistant professor of industrial hygiene at the University of Pennsylvania, described his method of iodine disinfection to the committee, which expressed the hope that his observations would be followed up. The committee also discussed the possibility of sterilization of the effluents of tanneries.

WE learn from *Nature* that an Empire Mining and Metallurgical Congress is to be held at the British Empire Exhibition in London during the first week in June, 1924. The Institution of Mining and Metallurgy, the Institution of Mining Engineers, the Institution of Petroleum Technologists, the Iron and Steel Institute and the Institute of Metals, representing the scientific and technical interests of the mineral and metal industries, with the Mining Association of Great Britain and the National Federation of Iron and Steel

Manufacturers, are cooperating as conveners of the Congress. This is the first such congress to be held, and it is anticipated that succeeding sessions will be held in the Dominions under the auspices of an Empire Council of Mining and Metallurgical Engineering Institutions, which it is hoped will be constituted as a result of the inaugural congress. Viscount Long of Wraxall will deliver the Sir Julius Wernher Memorial Lecture of the Institution of Mining and Metallurgy at the opening session, taking mineral resources and their relation to the prosperity and development of the Empire as his subject. The May Lecture of the Institute of Metals to be delivered by Dr. F. W. Aston, on "Atoms and isotopes," will also form part of the program.

TWENTY leaders in the American pulp and paper industry have been asked by Secretary of Agriculture Wallace to form an advisory committee to work with the United States Department of Agriculture in formulating and carrying out its forestry policies which relate to the supply and use of timber in making paper and kindred products. Hugh P. Baker, secretary of the American Pulp and Paper Association, has been active in the formation of the advisory committee and has conferred concerning the matter with Chief Forester Greeley and E. H. Clapp, director of research for the Forest Service. Secretary Wallace states that the creation of an advisory committee composed of men intimately concerned with the pulp and paper industry will, in his opinion, insure thorough consideration of requests for advice as well as bring forth advice itself which would deal in a searching and practical way with the fundamental problems of the industry. Among the activities of the department closely concerned with the pulp and paper industry are the research in pulp and paper-making conducted at the Forest Products Laboratory at Madison, Wis., forest research in the growing of timber crops now under way at the various forest experiment stations, and the development of federal and state policies for the production of timber upon the country's forest lands.

HITHERTO the mathematical, physical and biological papers submitted to the Cambridge Philosophical Society have been published in one series of proceedings. In order to facilitate the publication of the results of biological research carried out in Cambridge, it has been decided to attempt the publication of a separate series of *Biological Proceedings*. The new series will consist largely of papers representing the results of completed work, and notices of preliminary investigations will be added as an appendix. The following constitute a committee to whom papers are referred prior to publication: H. R. Dean, F. G. Hopkins, A. C. Seward, J. T. Wilson, J. Barcroft, J. Gray, T. C. Nicholas and F. A. Potts.

UNIVERSITY AND EDUCATIONAL NOTES

Two Atlanta women have left large legacies to Atlanta colleges. Miss Jane Walker Inman left \$259,000 to Agnes Scott College to be used in establishing an endowment in honor of her brother. Mrs. Robt. J. Lowry left \$275,000 to Ogelthorpe University to establish a school of commerce and banking in honor of her deceased husband, Colonel Robt. J. Lowry.

EDGAR ALLEN, formerly of Washington University, St. Louis, has been appointed professor of anatomy at the University of Missouri.

FRANK A. FERGUSON, associate professor of physics at Rutgers College, has been appointed head of the department of physics of the Connecticut Agricultural College.

JOHN L. BRAY has resigned his position as metallurgist with the U. S. Tariff Commission to accept the professorship in metallurgy at Purdue University.

DR. JOSEPH P. HETWER and Dr. Harry A. Beckman have been appointed instructors of physiology and pharmacology, respectively, in the Marquette Medical School.

WALTER C. KRAATZ, PH.D. (Ohio State University, '23), who has been instructor in the department of zoology at Ohio State University, is this year assistant professor and acting head of the department of zoology at Miami University, during the leave of absence of Professor S. R. Williams.

PROFESSOR JOHN READ, of the University of Sydney, and Professor Adam Patrick, of the University of Glasgow, were installed in the chairs of chemistry and medicine, respectively, at the University of St. Andrews on October 5.

DR. JAMES FRANCK has been appointed to the chair of physics in the University of Berlin, vacant by the death of Dr. Heinrich Rubens.

DISCUSSION AND CORRESPONDENCE

ACTIVE HYDROGEN BY ELECTROLYSIS

IN 1907 Fischer and Massenez¹ obtained a concentration of 17 per cent. by weight of ozone when they electrolyzed a solution of sulfuric acid, using a very high current density. Since ozone can be produced by this method, it would seem probable that a high current density at the cathode might aid in the production of the ozone form of hydrogen. When a solution of sulfuric acid is electrolyzed, using the above principle, the hydrogen that escapes at the cathode contains an active constituent which combines with pure nitrogen to form ammonia. Some of the am-

¹ *Z. Anorg. Chem.*, 52, 202 (1907).