ELECTIONS OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES

SCIENCE

AT the annual meeting of the American Academy of Arts and Sciences the following were elected foreign honorary members:

Francis Crawford Burkitt, of Cambridge, England Henry Hallett Dale, of London Peter Debye, of Zurich Léon Duguit, of Bordeaux Willem Einthoven, of Leyden Ejnar Hertzsprung, of Leyden Vincent d'Indy, of Paris Victor Laloux, of Paris Friedrich von Mueller, of Munich Gilbert Murray, of Oxford Henri Rabaud, of Paris Josef Redlich, of Vienna Richard Wettstein, of Vienna

At the same time the active membership of the academy was increased by the admission of thirtyfive fellows. These are:

Kenneth Daniel Blackfan, of Brookline Robert Pierpont Blake, of Cambridge George Whitefield Chadwick, of Boston William John Crozier, of Cambridge Philip Drinker, of Brookline Gordon Maskew Fair, of Cambridge William Cameron Forbes, of Norwood James Lawder Gamble, of Brookline Wallace Goodrich, of Boston Harvey Monroe Hall, of Berkeley Arthur Norman Holcombe, of Cambridge Earnest Albert Hooton, of Cambridge Charles Hopkinson, of Manchester Percy Rogers Howe, of Boston Ivan Murray Johnston, of Cambridge Alfred Vincent Kidder, of Andover Donald Hamilton McLaughlin, of Cambridge James Howard Means, of Boston Axel Leonard Melander, of New York George James Peirce, of Stanford University, Calif. Frederick Haven Pratt, of Dedham Joseph Hersey Pratt, of Boston Edwin Arlington Robinson, of New York Allan Winter Rowe, of Boston George Sarton, of Cambridge Andrew Watson Sellards, of Brookline John Clarke Slater, of Cambridge Willard Learoyd Sperry, of Cambridge Harlan True Stetson, of Cambridge Edmund C. Tarbell, of Boston Langdon Warner, of Cambridge Joseph Treloar Wearn, of Boston Robert Spurr Weston, of Boston Westel Woodbury Willoughby, of Baltimore Quincy Wright, of Chicago

One associate was elected: Nathaniel T. Kidder, of Milton. The officers chosen for the year 1927-28 are:

President: EDWIN B. WILSON Vice-president for Class I: ARTHUR E. KENNELLY Vice-president for Class II: GEORGE H. PARKER Vice-president for Class III: GEORGE L. KITTREDGE Corresponding Secretary: ROBERT P. BIGELOW Recording Secretary: CHARLES B. GULICK Treasurer: INGERSOLL BOWDITCH Librarian: HARRY M. GOODWIN Editor: WILLIAM S. FRANKLIN

THE MEDAL MEETING OF THE FRANKLIN INSTITUTE

THE Medal Meeting of the Franklin Institute, Philadelphia, was held on Wednesday afternoon, May 18. Presentation of medals was made according to the following program:

Longstreth medals to Mr. Wilfred Lewis, of the Tabor Manufacturing Company, and Mr. James F. Smathers, Smathers Power Typewriting Company.

The Wetherill medal to North East Appliances, Inc., with special mention of Mr. Russell G. Thompson.

The Levy medal to Dr. William David Coolidge, of the General Electric Company.

Potts medals to George Earle Beggs, associate professor of civil engineering, Princeton University, and Commander Marion Eppley, of the Eppley Scientific Laboratories.

Cresson medals to Dr. Edward Learnington Nichols, professor emeritus of physics, Cornell University, and Dr. Dayton Clarence Miller, research professor of physics, Case School of Applied Science.

The Franklin medal and certificate of honorary membership to Professor Max Planck, of the University of Berlin. Received by the Counselor of Embassy, Dr. O. C. Kiep, the German Embassy, Washington, D. C.

The Franklin medal and certificate of honorary membership to Dr. George Ellery Hale, honorary director, Mt. Wilson Observatory. Received by Dr. Harlow Shapley, professor of astronomy and director of the Harvard College Observatory, Harvard University.

After the presentation of the medals the following papers were read:

"The Physical Reality of Light Quanta," by Professor Max Planck. Presented by Professor T. D. Cope, University of Pennsylvania.

"The Sun as a Research Laboratory," by Dr. George Ellery Hale. Presented by Professor Harlow Shapley, Harvard University.

SCIENTIFIC NOTES AND NEWS

DR. GEORGE H. F. NUTTALL, professor of parasitology in the University of Cambridge, has been made professor, *honoris causa*, in the University of Strasbourg. AN honorary doctorate of law was conferred upon Dr. A. F. Joffe, director of the Institute of Physics in Leningrad, by the University of California at the commencement exercises on May 11.

RALPH MODJESKI, civil engineer of Chicago, will receive the degree of doctor of engineering on June 15 at the annual commencement of the Pennsylvania Military College.

DR. FRANK BILLINGS, emeritus professor of medicine at the University of Chicago, has been decorated with the legion of honor by the French government.

THE American Society for Testing Materials has elected Robert W. Lesley, William R. Webster and A. A. Stevenson honorary members of the society. The formal presentation of certificates of honorary membership will be made at the anniversary dinner in connection with the June meeting at French Lick, Ind.

THE following visiting professors at Cornell University have been elected members of the Cornell Chapter of Sigma Xi: Dr. A. V. Hill, of the University of London; Dr. W. H. Pearsall, of the University of Leeds, and Dr. Otto Rahn, of the University of Kiel.

ON April 12 the King of Denmark and Iceland conferred on Austin H. Clark and on Adam Giede Böving, both of the Smithsonian Institution, the Cross as a Knight of the Order of Dannebrog in recognition of their services to Danish science and to Danish scientific institutions.

ALEXANDER F. BUCHOLTZ, research assistant at the Missouri Botanical Garden, has been elected a member of the German Botanical Society.

FRIENDS of Dr. Edward N. Brush, Mount Washington, superintendent emeritus of the Sheppard and Enoch Pratt Hospital, Baltimore, attended a dinner at the Maryland Club on April 23, given by the trustees of the hospital to celebrate his seventy-fifth birthday. Dr. Brush is editor-in-chief of the American Journal of Psychiatry.

AT the annual meeting of the Boston Society of Natural History, held on May 4, the Walker prizes in natural history were awarded as follows: a first prize of sixty dollars to J. B. Looper, of the University of Virginia, for a manuscript entitled "Observations on the Food Reactions of Actinophrys sol"; a second prize of fifty dollars to Miss Edith W. Mank, Lawrence, Mass., for a manuscript entitled "The Life History of Baris scolopacea Germ." At this meeting all the present officers of the society were reelected, as follows: President, Thomas Barbour; vice-presidents, Nathaniel T. Kidder, William M. Wheeler and Frederic T. Lewis; secretary, Francis Harper; treasurer, William A. Jeffries; trustees, Joseph A. Cushman, Laurence B. Fletcher, Frederic H. Kennard, W. Gordon Means, John C. Phillips and Charles H. Taylor.

DR. CHARLES J. WHITE has resigned as Edward Wigglesworth professor of dermatology at the Harvard Medical School and will become professor emeritus. He has taught at the school since 1898.

THE following officers were elected at the annual meeting of the Society for Experimental Biology and Medicine, held at the City College of New York, on April 20: *President*, S. R. Benedict, Cornell University Medical College; *vice-president*, Peyton Rous, Rockefeller Institute; *secretary-treasurer*, A. J. Goldforb, City College of New York; *new councillors*, H. D. Senior, Bellevue Medical College, and Alfred E. Cohn, Rockefeller Institute.

AT the recent Philadelphia meeting of the American Electrochemical Society the following officers were elected: *President*, Professor S. C. Lind, of Minnesota; *vice-presidents*, Dr. Duncan McRae, head of the Guggenheim Research Laboratories, P. J. Kruesi, president of the Southern Ferro Alloys Co., Chattanooga, Robert Turnbull, consulting engineer, Niagara Falls; *managers*, O. C. Ralston, Bureau of Mines, R. L. Baldwin, Niagara Falls, H. C. Cooper, Chicago; *treasurer*, Acheson Smith, Niagara Falls; *secretary*, Colin G. Fink. Columbia University, New York.

H. T. TIZARD has been appointed successor to Sir Frank Heath as secretary of the committee of the British Privy Council for Scientific and Industrial Research.

DR. HENRY HALLETT DALE, F.R.S., has been appointed to be for five years a member of the general council of medical education and registration in the United Kingdom, in succession to Sir Nestor I. C. Tirard.

DR. W. O. FISCHER, since 1919 engaged in research work with Bayer 205 in the Congo, Africa, has been appointed special medical research officer to the Rand Mines; Dr. Fischer has a laboratory at City Deep, and his initial investigation has been on hookworm in mine natives.

EDWIN H. BRYAN, JR., formerly entomologist on the staff of Bishop Museum, has succeeded Dr. Stanley C. Ball, as curator of collections.

DR. THOMAS C. WHITNER, Jr., associate in chemistry at the Johns Hopkins University, has been appointed chemist in the research department of the Standard Oil Company. SCHENCE

DR. O. C. MAGISTAD, soil chemist for a commercial fruit company in Honduras, has been appointed associate professor of agricultural chemistry at the University of Arizona and associate chemist in the experiment station.

A RESEARCH table at the Zoological Station at Naples, Italy, has been awarded to Dr. Mathilde Margarethe Lange, associate professor of zoology at Wheaton College, by the Association to Aid Scientific Research among Women.

DR. CHARLES F. ADAMS, Chicago, has been made director of the Indiana state bacteriologic laboratory, to succeed Dr. Thurman B. Rice, who resigned several months ago.

WALTER W. TUPPER, assistant professor of botany at the University of Michigan, has sabbatical leave of absence from that university for the second half of the current academic year and is working at Yale University on the microscopic structure of tropical woods.

DR. WARREN C. HUNTER has resumed his work at the University of Oregon School of Medicine, having returned from a leave of absence spent at the University of Michigan in the completion of a fellowship with the National Research Council in the department of pathology under Dr. A. S. Warthin.

DR. WARDLE, lecturer in economic zoology at the University of Manchester, has been granted leave of absence for the coming year and will offer advanced and graduate courses in the division of entomology of the University of Minnesota.

DR. HARRY N. EATON, of the department of geology of Syracuse University, is on sabbatic leave in Utah with headquarters at Provo, where he is investigating the structure and physiographic history of some of the smaller Utah mountain ranges, and is collaborating in part with Dr. Murray O. Hayes, of Brigham Young University.

STANLEY F. MORSE, consulting agricultural engineer, who recently returned from an inspection trip to British Guiana, sailed on May 12 for Colombia, South America. Mr. Morse will make an agricultural survey of a new region in the Department of the Cauca Valley.

C. W. BOYCE, of the office of forest economics of the U. S. Forest Service, has been awarded a Sterling fellowship at Yale University for the next school year and will be granted leave of absence beginning next October.

DR. KNIGHT DUNLAP, professor of psychology at the Johns Hopkins University, has been granted a year's leave of absence to serve as chairman of the division of anthropology and psychology of the National Research Council in Washington. During the first half of next year Dr. Karl Buehler, professor of psychology in the University of Vienna, will take Dr. Dunlap's place. Dr. John Edgar Coover, of Leland Stanford University, California, will lecture in his stead during the second half year.

DR. VENING MEINESZ, engineer of the Dutch geodetic commission, has returned to his home in Holland after completing a voyage on a submarine from Holland to Java, by way of the Panama Canal. During the voyage he made observations for gravity determinations. After arriving at Java he made a short voyage into the Indian Ocean on his submarine and made further gravity observations.

PROFESSOR HERMANN LUDWIG WINTZ, director of the gynecological clinic at Erlangen, has been invited by the Radiological Society of North America to deliver addresses before several American universities on the X-ray treatment of carcinoma.

SIR CHARLES S. SHERRINGTON, Waynflete professor of physiology at Oxford University, will give the second Listerian oration of the Canadian Medical Association on June 17. The association meets in Toronto from June 13 to 18.

ON April 30, Professor J. J. R. Macleod, of the department of physiology in the University of Toronto, delivered an address before the Royal Canadian Institute, on the subject "Lister as a Scientist."

DR. FREDERICH VON MUELLER, professor of internal medicine at the University of Munich, has been invited to give two lectures in Copenhagen by the Danish Society of Internal Medicine. The lectures are supported by the Rask-Oersted fund.

PROFESSOR JAMES KENDALL, of the department of chemistry at the Washington Square College of New York University, addressed the Chicago section of the American Chemical Society on April 22 on "Separations by the Ionic Migration Method." The same lecture, together with a more informal talk on "The Abuse of Water," was delivered at Wellesley College on May 6.

A TALK by Dr. Arthur D. Little on "Important Research Problems of To-day" was presented at the Polytechnic Institute at Brooklyn, N. Y., on the evening of May 3 and was broadcast through Station WNYC. A similar talk was given the next day to day students of the institute.

PROFESSOR G. W. STEWART, of the State University of Iowa, recently gave to the graduate students in communication engineering at Yale University a series of twelve lectures on various phases of acoustic phenomena.

A LECTURE on "Physiological Research Institutions of Europe" was recently given at the University of New Hampshire by Dr. Francis G. Benedict, director of the Nutrition Laboratory of the Carnegie Institution of Washington, Boston.

DR. EDGAR ALLEN, professor of anatomy at the University of Missouri, addressed the science club of the Kansas State Agricultural College on the subject, "Endocrinology, with Special Emphasis on an Ovarian Hormone," on May 9.

G. W. LITTLEHALES, of the U. S. Hydrographic Office, gave a lecture on "The Progress of Science in Oceanography" before the students of the Postgraduate School of the U. S. Naval Academy, Annapolis, on May 7.

DR. GEORGE L. CLARK, professor of applied chemical research and divisional director of the research laboratory of applied chemistry in the Massachusetts Institute of Technology, has been selected to deliver the second Edgar Marburg lecture at the annual meeting of the American Society of Testing Materials, at French Lick, Ind., which opens on June 20. Dr. Clark's subject will be "X-rays in Industry."

PROFESSOR WILLIAM WOOLSEY JOHNSON, formerly professor of mathematics in the U. S. Naval Academy, died on May 14, aged eighty-five years.

DR. WILLIAM P. WILSON, formerly professor of botany at the University of Pennsylvania and since 1894 director of the Philadelphia Commercial Museums, died on May 12, aged eighty-three years.

DR. ALFRED H. LLOYD, professor of philosophy and dean of the graduate school of the University of Michigan, died on May 10 at the age of sixty-three years.

DR. IRA WOOLSON, consulting engineer, formerly adjunct professor of civil engineering in Columbia University, died on May 8 at the age of seventy-one years.

PROFESSOR ERNEST STARLING, who held a Foulerton professorship of the Royal Society at University College, London, died on board a steamer as it was entering Kingston Harbor, Jamaica, on May 2. Professor Starling was sixty-one years of age.

DR. ABRAHAM LEVIN, the Russian physiologist, who has been associated with Professor A. V. Hill at University College, London, died on April 20.

PROFESSOR JENS FREDRIK SCHROETER, head of the University Observatory at Oslo and the author of various works on astronomy, died on April 28, aged seventy years. DURING the absence of Dr. R. G. Harrison in Europe (June, 1927–September, 1928), manuscripts intended for publication in the *Journal of Experimental Zoology* should be sent to the Wistar Institute, 36th Street and Woodland Avenue, Philadelphia, Pa.

THE Rumford Fund of the American Academy of Arts and Sciences offers an opportunity to research workers in the domain of heat and light (including X-rays) to receive financial aid in obtaining apparatus, material or experimental equipment, or in publishing results. The committee in charge of the fund welcomes applications for such aid from duly qualified persons anywhere in North America or in any of the American islands. Applications for grants should be addressed to the Chairman Rumford Committee, American Academy of Arts and Sciences, 28 Newbury Street, Boston, Massachusetts, and should specify the nature of the research and the sort and amount of aid desired.

THE United States Civil Service Commission announces a vacancy in the position of senior aeronautical engineer at the Langley Memorial Aeronautical Laboratory, Langley Field, Va., and that in view of the importance of the position in the field of aeronautical research, and in order to secure the appointment of a thoroughly qualified man for the work, instead of the usual form of civil service examination. the qualifications of candidates will be passed upon by a special board of examiners, composed of Dr. G. W. Lewis, director of aeronautical research, National Advisory Committee for Aeronautics; Dr. F. C. Brown, acting director of the Museums of the Peaceful Arts; Mr. Starr Truscott, aeronautical engineer. National Advisory Committee, and Messrs. A. S. Ernest and A. W. Volkmer, examiners of the Civil Service Commission. The entrance salary for the position is \$5,000 a year. Applications must be received before June 14.

DR. A. M. PETER, secretary of the Kentucky Academy of Science, writes that the academy held its fourteenth annual meeting on May 7 at the University of Kentucky. The division of philosophy and psychology was added to the organization and held a successful meeting. Officers elected were: President, Dr. W. D. Valleau; vice-president, Professor C. S. Crouse; secretary, Dr. A. M. Peter; treasurer, Professor W. S. Anderson, all of the University of Kentucky; representative in the council of the American Association for the Advancement of Science, Dr. Austin R. Middleton, University of Louisville. President of the division of biological sciences, Dr. G. D. Buckner; secretary, Professor E. N. Fergus. President of the division of physical sciences, Dr. W. R. Jillson; secretary, Professor C. S. Crouse. President of the diviMAY 20, 1927]

sion of philosophy and psychology, Dr. M. A. Caldwell; secretary, same.

THE thirtieth annual meeting of the American Society for Testing Materials, which will be held at the French Lick Springs Hotel, French Lick, Ind., will open on Monday, June 20. The first day has been reserved for committee meetings and registration. The general opening session will be held on Tuesday afternoon at 2 o'clock. Immediately following this, two simultaneous technical sessions will be convened at 3 p. m. As in the past, simultaneous sessions on a number of occasions will be necessary but the general opening session and the closing session and two other sessions, one devoted to testing and the presidential address and the other to a discussion of corrosion and fatigue, will be single sessions. In addition one session devoted exclusively to the Edgar Marburg Lecture has been arranged for Wednesday afternoon. In all, thirteen sessions will be held.

DR. IRVING LANGMUIR, of the Research Laboratories, General Electric Company, Schenectady, gave the following series of lectures at the University of Texas during the week of April 11–15: "Electric Discharges in High Vacuum," "Ionization of Gases and Fundamental Effects of Positive Ions," "The Use of Collectors in the Study of Gaseous Discharges," "Velocities and Directions of Motion of Electrons and Ions," "Discharges at Higher Pressures—The Streamer Discharges," "Recent Advances in Astronomy," "Absorption and Chemical Reactions on Surfaces," "Interfaces between Liquids and in Solutions of Organic Substances."

PUBLIC lectures will be given in the museum building of the New York Botanical Garden at 4:00 o'clock on Sunday afternoons as follows: May 7, "Tulips," Mr. Kenneth R. Boynton; May 14, "The Present Status of Evolution," Professor Henry C. Cowles; May 21, "Irises for the Home Garden," Mrs. Wheeler H. Peckham; May 28, "New Varieties of Old Perennials," Professor Alfred C. Hottes; June 4, "Relation of Soils to Plant Growth," Dr. B. A. Keen; June 11, "Louis Pasteur," Dr. Israel Weinstein; June 18, "Botanizing in the Mountains of Colorado," Dr. F. J. Seaver; June 25, "The Plant Life of the Sea," Dr. Marshall A. Howe.

PLANS for the organization of the scientific men of Chicago were formulated at a meeting of thirtytwo university scientists and business men in lines associated with the sciences at the Union League Club on May 16. The plan is to bring into affiliation for the purpose of following the progress of science the large group of men in business, the professions and the universities in the Chicago area. The 450 or more members of Sigma Xi, national honorary, scientific fraternity, living in the city and its environs, will constitute the nucleus. Speakers representing the University of Chicago, Northwestern University, the University of Illinois, Armour Institute, the Field Museum and the Western Electric Company endorsed the plan and pledged their support. Forrest R. Moulton, national president of Sigma Xi, and one of the speakers, was elected chairman of the temporary executive committee, and Mr. Donald H. Sweet, patent attorney, was elected corresponding secretary.

THE Daniel Guggenheim Fund for the Promotion of Aeronautics has authorized a grant of \$5,000 to help finance the second University of Michigan expedition, which will investigate atmospheric and climatic conditions in Greenland and in the north Atlantic Ocean. This grant represents a fourth of the estimated cost of the expedition, and is contingent upon the raising of the additional \$15,000.

AT a meeting of the New York and New Jersey branches of the Society for the Promotion of Engineering Education at Princeton University on May 14, it was announced that the Carnegie Corporation has presented \$7,500 to the society for two summer schools, one at Cornell University and one at the University of Wisconsin, for three weeks of instruction to engineering teachers.

A FELLOWSHIP in the chemotherapy of cancer will be established at Cornell University Medical College under the terms of a gift of \$5,000 a year for five years, made by L. N. Littauer, of Gloversville, according to an announcement of Dr. James Ewing, professor of pathology in the college.

THE receipt of two fellowships amounting to \$750 each by the Princeton School of Engineering has been announced by Arthur M. Greene, Jr., dean of the school. The fellowships given by the Du Pont Company of Delaware are to be granted for a fifth-year course, one in chemistry and one in engineering.

ANNOUNCEMENT of the temporary closing of the University Museum, at Ann Arbor, has been made by Alexander G. Ruthven, director. The exhibits are now being packed and will be stored until the completion of the new building now under construction. Work on the new structure is progressing rapidly. The foundations of the west wing have been laid and the excavation for the north wing is nearly completed.

THE museum in Yosemite Park is now completed and has been formally turned over to the Park Service. It was made possible by a gift from the Laura Spelman Rockefeller Memorial and gifts from other sources, including the Yosemite Natural History Association of Museums. The museum consists of four large exhibition rooms, a lecture hall and library and stack room, headquarters for the natural guide service, workrooms and laboratories, and a large supply of exhibition material. It is to be used by visiting scientists, students and casual visitors. Funds are also in hand for starting the construction of a similar museum at the Grand Canyon, and surveys are being made in other national parks.

UNIVERSITY AND EDUCATIONAL NOTES

THE General Education Board has promised a gift of \$850,000 to the Yale School of Medicine for medical teaching and study, provided that a new endowment of \$1,150,000 is procured for the school from other sources.

A GIFT from the Rockefeller Foundation, said to be between \$1,500,000 and \$2,000,000, has enabled the University of London to obtain the Bloomsbury site for which it has been negotiating with the British government for years. The Rockefeller gift, together with a government grant of \$1,000,000, covers the purchase of about thirty acres of land near the British Museum and part of the cost of constructing several new buildings.

THE International Education Board has given to the University of Edinburgh the sum of \$150,000 towards the establishment of a chair for research in animal diseases.

DR. WILLIAM F. VERDI, professor of clinical medicine in the Yale Medical School, has given \$10,000 as an addition to the Yale endowment fund for the establishment of a scholarship fund in memory of his mother, Mrs. Rosa Verdi, of New Haven.

DR. ARTHUR B. COBLE, professor of mathematics at the University of Illinois, has been appointed professor of mathematics at the John's Hopkins University.

DR. WILLIAM DILLER MATTHEW, for more than thirty years connected with the American Museum of Natural History and since 1922 head of its paleontological work, has been appointed professor of paleontology at the University of California.

DR. VICTOR C. MYERS has been appointed professor of biochemistry in the school of medicine, Western Reserve University. Dr. Myers left the Post-Graduate Hospital in New York in 1924 to take the chair of biochemistry at the University of Iowa and will assume his new duties in Cleveland in September of this year.

DR. WILLIAM PHILLIPS GRAVES, professor of gynecology in the Harvard Medical School, has been elected the first incumbent of the W. H. Baker chair of gynecology in the school.

AT Yale University, Dr. J. P. Peters, associate professor of medicine, and Dr. R. G. Hussey, associate professor of pathology, have been promoted to full professorships. Dr. H. W. Haggard has been promoted to an associate professorship of applied physiology. Promotions to assistant professorships include those of Dr. O. L. Lawrence, in physics; Dr. W. M. Agar, geology; Dr. N. I. Adams, physics, and Dr. H. M. Gehman, mathematics.

PROFESSOR ALAN D. CAMPBELL, of the University of Arkansas, has been appointed professor of mathematics at Syracuse University, where he will carry on courses in advanced mathematics.

DR. MELVILLE H. HATCH, assistant professor of entomology of the department of zoology of the University of Minnesota, has been appointed assistant professor of zoology at the University of Washington.

THE faculty of medicine of the University of Padua has called Professor Cesare Frugoni, director of the Institute of Medical Pathology at the University of Florence, to the chair of clinical medicine, to succeed Professor Lucatello.

DISCUSSION AND CORRESPONDENCE

LABILITY IN FERRIC OXIDE HYDROSOLS

RESULTS obtained in this laboratory point to the existence of a labile state in concentrated ferric oxide hydrosols. The particular sol studied was prepared by hydrolysis of FeCl_3 at the boiling point of water and dialysis of the resulting impure sol at 92° C. The final product contained 3.5788 grams of iron per liter and showed a completely negative test for chloride ions.

Partial coagulation of this sol was induced by shaking at room temperature, by very gentle stirring with a cold glass rod or by inoculation with a drop of mechanically coagulated ferric oxide sol containing a few particles of the freshly formed coagulum. Coagulation was not complete in any case but reached a fairly definite value and then ceased. The supernatant sol, obtained by centrifuging out the coagulated portion, contained approximately 3.2 grams of iron per liter, was clear to transmitted light and showed complete stability toward agitation and inoculation. Agitation at 92° C., the temperature at which the sol was dialyzed, did not induce any coagu-