

MINUTES OF MEETINGS OF THE ROYAL SOCIETY.

March 25, 1926.

Sir ERNEST RUTHERFORD, O.M., President, followed by Sir CHARLES SHERRINGTON, O.M., Vice-President, in the Chair.

A list of nominations by Council for Foreign Membership was read, as follows :—

Martinus Willem Beijerinck (Gorssel).
Niels Bohr (Copenhagen).
Ernst Cohen (Utrecht).
Willem Einthoven (Leyden).
Karl Ritter von Goebel (Munich).
Henry Fairfield Osborn (New York).
Max Planck (Berlin).
Arnold Sommerfeld (Munich).

The following papers were read :—

- I. "The Secretion of Pituitrin in Mammals, as shown by Perfusion of the Isolated Kidney of the Dog." By E. B. VERNEY. Communicated by Prof. T. R. ELLIOTT, F.R.S.
 - II. "Rouget Cells and their Function." By H. W. FLOREY and H. M. CARLETON. Communicated by Sir CHARLES SHERRINGTON, F.R.S.
 - III. "The Relation between Oxygen Requirement and Speed in Running." By R. M. SARGENT. Communicated by Prof. A. V. HILL, F.R.S.
 - IV. "Oogenesis in *Oniscus Asellus*." By S. KING. Communicated by Prof. E. S. GOODRICH, F.R.S.
 - V. "On the Geometry of Dynamics." By J. L. SYNGE. Communicated by Prof. A. W. CONWAY, F.R.S.
 - VI. "Tribo-Electricity and Friction." By P. E. SHAW and C. S. JEX. Communicated by Sir WILLIAM HARDY, F.R.S.
 - VII. "The Absorption-Spectra of some Naphthalene Derivatives in Vapour and Solution." By H. G. DE LASZLO. Communicated by Sir ERNEST RUTHERFORD, Pres.R.S.
 - VIII. "Some Thermal Constants of Solid and Liquid Carbon Dioxide." By O. MAASS and W. H. BARNES. Communicated by Prof. T. H. BARNES, F.R.S.
 - IX. "An Interpretation of the Spectrum of Ionised Oxygen (O II)." By R. H. FOWLER, F.R.S., and D. R. HARTREE.
 - X. "On Lightning." By G. C. SIMPSON, F.R.S.
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April 29, 1926.

Sir ERNEST RUTHERFORD, O.M., President, in the Chair.

The following Foreign Members, nominated by Council, were balloted for, and were declared duly elected :—

Martinus Willem Beijerinck (Gorssel).
Niels Bohr (Copenhagen).
Ernst Cohen (Utrecht).
Willem Einthoven (Leyden).
Karl Ritter von Goebel (Munich).
Henry Fairfield Osborn (New York).
Max Planck (Berlin).
Arnold Sommerfeld (Munich).

The following papers were read :—

- I. "Oxidation and Storage of Glucose under the Action of Insulin." By C. H. BEST, H. H. DALE (Sec. R.S.), J. P. HOET and H. P. MARKS.
- II. "The Fate of the Sugar disappearing under the Action of Insulin." By C. H. BEST, J. P. HOET and H. P. MARKS. Communicated by Dr. H. H. DALE, Sec. R.S.
- III. "Observations on the Onset of Rigor mortis." By J. P. HOET and H. P. MARKS. Communicated by Dr. H. H. DALE, Sec. R.S.
- IV. "On the Effects of Beta Rays from Radium upon Division and Growth of Cancer Cells." By J. C. MOTTRAM, G. M. SCOTT and S. RUSS. Communicated by Prof. A. W. PORTER, F.R.S.

May 6, 1926.

ANNUAL MEETING FOR ELECTION OF FELLOWS.

Sir ERNEST RUTHERFORD, O.M., President, in the Chair.

The Statutes relating to the Election of Fellows were read. A ballot was then taken, and the following Candidates were declared duly elected into the Society :—

Arkwright, Joseph Arthur.	Jeffery, George Barker.
Butler, Edwin John.	Jones, Owen Thomas.
Christophers, Samuel Rickard.	Lewis, William Cudmore
Cole, Frank Joseph.	McCullagh.
Egerton, Alfred Charles Glyn.	Milne, Edward Arthur.
Griffiths, Ezer.	Richardson, Lewis Fry.
Hartley, Harold Brewer.	Tizard, Henry Thomas.
Hartridge, Hamilton.	Troup, Robert Scott.

The BAKERIAN LECTURE was delivered by Prof. A. S. EDDINGTON, F.R.S., on "Diffuse Matter in Interstellar Space."

May 20, 1926.

SIR ERNEST RUTHERFORD, O.M., President, in the Chair.

Dr. J. A. Arkwright, Dr. E. J. Butler, Prof. F. J. Cole, Mr. A. C. G. Egerton, Dr. E. Griffiths, Mr. H. B. Hartley, Dr. H. Hartridge, Mr. L. F. Richardson and Mr. H. T. Tizard were admitted into the Society.

The CROONIAN LECTURE was delivered by Prof. A. V. HILL, F.R.S., on "The Laws of Muscular Motion."

June 3, 1926.

SIR ERNEST RUTHERFORD, O.M., President, in the Chair.

Dr. R. J. Tillyard, Prof. G. B. Jeffery, Prof. W. C. McC. Lewis and Dr. R. S. Troup were admitted into the Society.

The following papers were read :—

- I. "The Alkali Perchlorates, and a New Principle concerning the Measurement of Space-Lattice Cells." By A. E. H. TUTTON, F.R.S.
- II. "On the Flow of Gases at High Speeds." By T. E. STANTON, F.R.S.
- III. "The Distortion of Crystals of Aluminium under Compression. Part I." By G. I. TAYLOR, F.R.S., and W. S. FARREN.
- IV. "On the Nature of Atmospheric.—II, III." By E. V. APPLETON, R. A. WATSON WATT and J. F. HERD. Communicated by Sir HENRY JACKSON, F.R.S.
- V. "On the Determination of the Specific Heats of Gases at Constant Pressure and at Constant Volume, and their Ratio by Adiabatic Expansion." By C. H. LEES, F.R.S.
- VI. "A General Configuration in Space of any Number of Dimensions Analogous to the Double-Six of Lines in Ordinary Space." By T. G. ROOM. Communicated by H. F. BAKER, F.R.S.

- VII. "A Comparison between Unimolecular and Bimolecular Gaseous Reactions. The Thermal Decomposition of Gaseous Acetaldehyde." By C. N. HINSHELWOOD and W. K. HUTCHISON. Communicated by N. V. SIDGWICK, F.R.S.
- VIII. "(1) The Elimination of the Nodes in Quantum Mechanics." By P. A. M. DIRAC. Communicated by R. H. FOWLER, F.R.S.
- IX. "(2) Relativity Quantum Mechanics, with an application to Compton Scattering." By P. A. M. DIRAC. Communicated by R. H. FOWLER, F.R.S.
- X. "On the Drag of an Aerofoil for Two-Dimensional Flow." By A. FAGE and L. J. JONES. Communicated by H. LAMB, F.R.S.
- XI. "On the Action of a Locomotive Driving Wheel." By F. W. CARTER. Communicated by A. E. H. LOVE, F.R.S.
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June 10, 1926.

Sir ERNEST RUTHERFORD, O.M., President, followed by Sir DAVID PRAIN, Vice-President, in the Chair.

Dr. O. T. Jones and Prof. E. A. Milne were admitted into the Society. The following papers were read:—

- I. "The Heat Production of Stimulated Nerve." By A. C. DOWNING, R. W. GERARD and A. V. HILL, F.R.S.
- II. "Observations on the Œstrous Cycle of the Albino Mouse." By A. S. PARKES. Communicated by J. P. HILL, F.R.S.
- III. "On the Occurrence of the Œstrous Cycle after X-Ray Sterilisation." By A. S. PARKES. Communicated by J. P. HILL, F.R.S.
- IV. "The Development of the Calcareous Test of *Echinocardium cordatum*." By I. GORDON. Communicated by E. W. MACBRIDE, F.R.S.
- V. "Studies in Colour Changes of Fish.—II-IV." By H. R. HEWER. Communicated by E. W. MACBRIDE, F.R.S.
- VI. "The Viscous-Elastic Properties of Smooth Muscle." By A. V. HILL, F.R.S.

- VII. "Contributions to the Knowledge of Lower Carboniferous Plants." By J. WALTON. Communicated by F. E. WEISS, F.R.S.
- VIII. "On the Macro-Chemistry of the Endodermis." By J. H. PRIESTLEY and E. RHODES. Communicated by F. F. BLACKMAN, F.R.S.
- IX. "A Comparative Study of Turacin and Hæmatin and its Bearing on Cytochrome." By D. KEILIN. Communicated by J. BARCROFT, F.R.S.
- X. "The Equations applicable to Simple Hæmolytic Reactions." By E. PONDER. Communicated by Sir E. SHARPEY SCHAFER, F.R.S.
- XI. "Observations on the Muscles of Normal and Moulting Crustacea." By J. P. HOET and P. M. T. KERRIDGE. Communicated by A. V. HILL, F.R.S.
- XII. "Additional Note on the Effect of Insulin on the Lactacidogen Content of the Skeletal Muscles." By C. H. BEST and H. P. MARKS. Communicated by H. H. DALE, Sec. R.S.

June 17, 1926.

Sir ERNEST RUTHERFORD, O.M., President, in the Chair.

Prof. Henry Fairfield Osborn, Foreign Member, was admitted into the Society.

The following papers were read :—

- I. "A Review of Mr. George W. Walker's Magnetic Survey (1915)." By Sir ARTHUR SCHUSTER, F.R.S.
- II. "The Continuous Spectrum of Mercury Vapour in relation to the Resonance Line, 2536·52." By Lord RAYLEIGH, F.R.S.
- III. "Structure in the Secondary Hydrogen Spectrum.—IV." By O. W. RICHARDSON, F.R.S.
- IV. "The Structure of Beryl, $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$." By W. L. BRAGG, F.R.S., and J. WEST.
- V. "On the Change of Refractive Index of Linseed Oil in the Process of Drying and its Effect on the Deterioration of Oil Paintings." By A. P. LAURIE. Communicated by Sir ARTHUR SCHUSTER, F.R.S.
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June 24, 1926.

Sir ERNEST RUTHERFORD, O.M., President, in the Chair.

- I. "On the Structure of the Arc Spectrum of Gold." By J. C. McLENNAN, F.R.S., and A. B. McLAY.
- II. "On the Series Spectra of Palladium." By J. C. McLENNAN, F.R.S., and H. G. SMITH.
- III. "The Mobility of Ions in Air. Part III." By A. M. TYNDALL and L. R. PHILLIPS. Communicated by A. P. CHATTOCK, F.R.S.
- IV. "Investigations on Paramagnetism at Low Temperatures. Part II." By L. C. JACKSON. Communicated by Sir WILLIAM BRAGG, F.R.S.
- V. "Responses to Rhythmical Stimulation of the Cerebral Cortex." By SYBIL COOPER and D. DENNY-BROWN. Communicated by Sir CHARLES SHERRINGTON, O.M., F.R.S.
- VI. "Researches on the Mode of Distribution of the Constants of Samples taken at Random from a Bivariate Normal Population." By KARL PEARSON, F.R.S.
- VII. "Further Spectroscopic Studies on the Luminous Vapour distilled from Metallic Arcs." By Lord RAYLEIGH, F.R.S.
- VIII. "A Microscopic Study of the Freezing of Gel. Part I and Part II." By Sir WILLIAM HARDY, F.R.S.
- IX. "Studies in Adhesion.—I." By Sir WILLIAM HARDY, F.R.S., and MILLICENT NOTTAGE.
- X. "The Freezing of Gelatin Gels." By T. MORAN. Communicated by Sir WILLIAM HARDY, F.R.S.
- XI. "The More Refrangible Band System of Cyanogen as developed in Active Nitrogen." By W. JEVONS. Communicated by A. FOWLER, F.R.S.
- XII. "The Equilibrium of Heterogeneous Systems including Electrolytes. Part I." By J. A. V. BUTLER. Communicated by F. G. DONNAN, F.R.S.
- XIII. "Primary and Secondary Vortices in Oscillating Fluids: their Connection with Skin Friction." By (the late) Mrs. HERTHA AYRTON. Communicated by T. MATHER, F.R.S.

- XIV. "Isotherms of Hydrogen, of Nitrogen and of Hydrogen-Nitrogen Mixtures at 0° and 20° C. up to a Pressure of 200 Atmospheres." By T. T. H. VERSCHOYLE. Communicated by F. A. FREETH, F.R.S.
- XV. "The Loss of Energy in Metal Plates of Finite Thickness, due to Eddy Currents produced by Alternating Magnetic Fields." By E. W. MARCHANT and J. L. MILLER. Communicated by Sir ERNEST RUTHERFORD, Pres. R.S.
- XVI. "On the Specific Heat of Ferromagnetic Substances." By W. SUCKSMITH and H. H. POTTER. Communicated by A. P. CHATTOCK, F.R.S.
- XVII. "The Effect of Occluded Hydrogen on the Tensile Strength of Iron." By L. B. PFEIL. Communicated by H. C. H. CARPENTER, F.R.S.
- XVIII. "The Infra-red Secondary Spectrum of Hydrogen." By T. E. ALLIBONE. Communicated by S. R. MILNER, F.R.S.
- XIX. "The Scattering of Alpha Particles through Small Angles." By D. C. ROSE. Communicated by Sir ERNEST RUTHERFORD, Pres. R.S.
- XX. "Effects of Thermal Treatment on Glass as shown by Precise Viscometry." By V. H. STOTT, D. TURNER and H. A. SLOMAN. Communicated by W. ROSENHAIN, F.R.S.
- XXI. "The Forces between Atoms and Ions.—II." By J. E. LENNARD-JONES and Miss B. M. DENT. Communicated by S. CHAPMAN, F.R.S.
- XXII. "Tables of $\log K_0(x)$ over the Range $x = 2$ to $x = 12$ at Intervals of 0.001." By J. TOPPING and A. E. LUDLAM. Communicated by S. CHAPMAN, F.R.S.
- XXIII. "An Investigation of the Effects of Variations in the Radiation Factor on the Efficiency of Dewar Vessels." By B. LAMBERT and K. T. HARTLEY. Communicated by F. SODDY, F.R.S.
- XXIV. "The Molecular Fields of Hydrogen, Nitrogen and Neon." By J. E. LENNARD-JONES and W. R. COOK. Communicated by S. CHAPMAN, F.R.S.
- XXV. "Observations on the Resolution of Stasis in the Finer Blood Vessels." By H. FLOREY. Communicated by Sir CHARLES SHERRINGTON, F.R.S.

- XXVI "Experimental Studies on the Differentiation of Embryonic Tissues growing *in vivo* and *in vitro*.—II. The Development of the Isolated Early Embryonic Eye of the Fowl when cultivated *in vitro*." By T. S. P. STRANGEWAYS and HONOR B. FELL. Communicated by Sir WILLIAM HARDY, F.R.S.
- XXVII: "The Aloinae—A Cytological Study, with especial reference to the Form and Size of the Chromosomes." By NESTA FERGUSON. Communicated by Sir JOHN FARMER, F.R.S.
- XXVIII. "The Antiseptic Properties of the Amino Derivatives of Styryl and Anil Quinoline." By J. B. COHEN, F.R.S., C. H. BROWNING, S. ELLINGWORTH and R. GULBRANSEN.
- XXIX. "The Effects of X-Rays upon Mitotic Cell Division in Tissue Cultures *in vitro*." By T. S. P. STRANGEWAYS and F. L. HOPWOOD. Communicated by Sir WILLIAM HARDY, F.R.S.
- XXX. "Observations on Concurrent Contraction of Flexor Muscles in the Flexion Reflex." By Sir CHARLES SHERRINGTON, F.R.S., and R. S. CREED.
- XXXI. "On the Flexure of Thick Circular Plates." By C. A. CLEMMOW. Communicated by A. E. H. LOVE, F.R.S.
- XXXII. "The Amplitude of Sound Waves in Pipes." By E. G. RICHARDSON. Communicated by A. W. PORTER, F.R.S.
- XXXIII. "The Effect of Superposed Alternating Current on the Polarizable Primary Cell Zinc—Sulphuric Acid—Carbon.—II." By A. J. ALLMAND and H. C. COCKS. Communicated by S. SMILES, F.R.S.
- XXXIV. "The Polarization of Zinc Electrodes in Neutral and Acid Solutions of Zinc Salts by Direct and Alternating Currents.—I." By A. J. ALLMAND and H. C. COCKS. Communicated by S. SMILES, F.R.S.
- XXXV. "The Solubility and Rate of Solution of Oxygen in Silver." By E. W. R. STEACIE and F. M. G. JOHNSON. Communicated by A. S. EVE, F.R.S.
- XXXVI. "The Structure of Thin Films.—VIII, IX." By N. K. ADAM and G. JESSOP. Communicated by Sir WILLIAM HARDY, F.R.S.

- XXXVII. "The Origin of the Electrical Charge on Air Bubbles in Water." By T. ALTY. Communicated by Sir JOSEPH THOMSON, F.R.S.
- XXXVIII. "A Comparison of the Records from British Magnetic Stations, Underground and Surface." By C. CHREE, F.R.S., and R. E. WATSON.
- XXXIX. "On the motion of a Sphere in a Rotating Liquid." By S. F. GRACE. Communicated by J. PROUDMAN, F.R.S.
- XL. "A Further Note upon 'Interaction.'" By Sir ALMROTH WRIGHT, F.R.S.
- XLI. "On the Gyration of Light by Multiplet Lines." By G. C. DARWIN, F.R.S.
- XLII. "Atomic States and Spectral Terms." By J. C. McLENNAN, F.R.S.
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