

Societies and Academies

Paris

Academy of Sciences (*C.R.*, 208, 313-396,
Jan. 30, 1939).

A. CHEVALIER: Future of cotton in the [French] possessions and organization of scientific researches on this crop.

P. LÉVY: A problem of M. Marcinkiewicz.

C. EHRESMANN: The variety of plane generators of a real quadric and the topology of an orthogonal group with n variables.

L. DEROUSSE: A differential equation for which the point $x = y = 0$ is a focus.

H. PAILLOUX: The movement of a thread on which a small ring slides.

G. SARTORY: Formation of thermal convection ascending currents above a region uniformly heated by radiation.

J. VIGNAL: Character of errors affecting levellings.

G. BECK: A theorem on the structure of the proton and of the neutron.

M. PARODI: A phenomenon of wave propagation in a line of magnets.

L. and E. BLOCH: Extension of the spectrum of tellurium into the extreme ultra-violet.

G. UNGAR: Theory of photo-dichroism.

M. E. NAHMIAS: Probable emission of mesons in certain nuclear disruptions.

F. JOLIOT: Experimental proof of the explosive disruption of the nuclei of uranium and thorium under the action of neutrons. The radio-elements formed in uranium and thorium, identified by chemists as barium or rare earths, are due to nuclear disruption with large release of energy.

MME. I. CURIE and P. SAVITCH: Radio-elements formed in uranium and thorium irradiated with neutrons. At least three radio-elements similar to the rare earths are produced, and also an alkali body of period 18 mm.

A. PORTEVIN, P. BASTIEN and L. GUILLET, JUN.: Nature and stability of some special cementites.

Mlle. M.-L. JOSIEN: Formation of bromous acid by the action of bromine on silver nitrate.

P. DUMANOIS, G. RETENAUER and M. PRETTRE: Combustion of mixtures of hydrocarbons: mixtures of decahydronaphthalene and tetrahydronaphthalene.

A. KIRRMANN: The ethylenic frequency in vinylic esters.

Mlle. B. TCHOUBAR: Action of magnesium bromide etherate on dimethyl-1.4 epoxy-1.2 cyclohexane.

A. LEMAN: Estimation of phenolic and naphtholic hydroxyl by means of benzoic anhydride.

R. PAUL and G. HILLY: Application of Raney nickel to the hydrogenation of some acids with the furanic nucleus.

A. BOUTILLIER: Reversible transformation in the copper-aluminium alloys containing between 7 parts and 16 parts in a hundred of aluminium.

F. D. LA TOUR: Dilatation and polymorphism in the fatty acids.

R. SOYER: The fallen cliff at Ivry-sur-Seine (Seine).

M. LEFÈVRE and P. BOURRELLY: Stability of ornamentation in species of the genus *Pediastrum* Meyen.

L. EMBERGER: Structure of the flower of the Polygonaceæ.

H. HUMBERT: An aberrant type of *Cesalpinia* of Madagascar.

R. HEIM: Existence of a group of *Boletus* [fungi] with free tubes.

A. DE CUGNAC and H. BELVAL: Nature of the glucide of a hybrid between two genera of Gramineæ differing in their glucidic reserves.

R. DUGHI: Domain of stability of lichen symbiosis: enantioxy [resistance to drought].

P. DE BERREDO-CARNEIRO: Curarization and chronaxy.

L. LAPICQUE: Observations on the preceding note.

F. RATHERY, M. DÉROT and P.-M. de TRAVERSE: Consecutive hypoglycaemia with digestive absorption of insulin. Effects were obtained, but not proportional to the quantity of insulin used, by limiting the action of proteolytic ferments with an antidiastase.

Mlle. M. HAMON: Chemical constituents of the envelopes of cephalopod spermatophores.

L. LESCEUR: Variations of the formol and phthalein acidities in the urine: interpretation by the graphic method.

L. LUTZ: Soluble ferments secreted by hymenomycete fungi: conjugated antioxygen action.

A.-R. PRÉVOT: Increase of the toxigenous power of a stock of *Plectridium tetani* by passage in acid brain broth at moderate temperature.

Budapest

Hungarian Academy of Science, January 23.

J. BARTA: Uniformly stretched and optionally loaded plates.

J. BARNÓTHY and M. FORRÓ: Influence of meteorological factors upon the intensity of cosmic ray showers. From the material measured during a year, the barometric, temperature and magnetic effects are determined as well as the phase and amplitude of the daily and sidereal wave. The differences between these values and those obtained with a corresponding vertical arrangement can even be quantitatively explained with the help of the meson disintegration hypothesis.

Prague

Czech Academy of Sciences and Arts, January 21, 1938.

K. HRUBÝ: Development of the embryo-sac in *Erythronium dens canis* F.

March 11.

J. MILBAUER: Prolonged action of concentrated sulphuric acid on acetylene in the cold. The solutions turn yellow to dark. This change is catalysed positively by $HgSO_4$, SeO_2 , $CuSO_4$, V_2O_5 , Ag_2SO_4 , MoO_3 ; practically inert are As_2O_3 , SiO_2 ; negative catalysts are Sb_2O_3 , $PbSO_4$, HCl , $ZnSO_4$, SO_2 , K_2SO_4 , $(NH_4)_2SO_4$.

J. PETRBOK: Historical evolution of the bay at Neseber.

A. VELICH: Effect of essential oils on the germinating grain and bacterial growth.

May 20.

J. MILBAUER: New behaviour of mannitol as a negative catalyst. It retards the oxidation of hydrogen or ferrous sulphate by hot sulphuric acid, but not that of carbon monoxide.

V. TRKAL: A fundamental equation of the electron theory.

ZD. KÖCHER: Experimental studies of the resorption of K-strophanthin and convallamarin.

ZD. KÖCHER: A contribution to the study of the accumulative effect of some cardiacs.

R. RŮŽIČKA: A contribution to the recognition of Barrandian trilobites. (2).

K. KOUTSKÝ: Some modifications of given topology.

ZD. ROTH: Geological conditions around Lučivná below High Tatra.

October 21.

J. MILBAUER: Dissociation of urea nitrate in aqueous solution.

J. MILBAUER: Application of Bunsen's photometer in enlargements.

J. MILBAUER and ZD. MILBAUER: The investigation of some relationships in the action of acetylene on sulphuric acid, at room temperature. The factors influencing this reaction. Concentration of sulphuric acid, of the positive catalyst, HgSO_4 , and of the negative catalyst $(\text{NH}_4)_2\text{SO}_4$ are expressed by empirical mathematical formulæ.

J. MLÉKOVSKÝ: Registration of the reaction of frog's iris to light.

J. PETRBOK: Stratigraphic chronology of non-marine layers of the Black Sea quaternary in Bulgaria.

K. KAVINA: Antholysis in *Cerastium Cespitosum*.

P. ČECH: The electromagnetic field of a dipole between two parallel planes.

Forthcoming Events

[Meetings marked with an asterisk are open to the public.]

Monday, March 6

UNIVERSITY OF LEEDS, at 5.15.—Prof. E. D. Adrian, F.R.S.: "Manifestations of Activity in the Nervous System".*

UNIVERSITY COLLEGE, LONDON, at 6.—Prof. A. Frey-Wyssling: "The Submicroscopic Morphology of Protoplasm and its Derivatives (succeeding lectures on March 7 and 9)."

Tuesday, March 7

WELLCOME RESEARCH INSTITUTION, at 5.30.—Prof. W. Schülemann: "Chemotherapy" (succeeding lectures on March 8 and 9).*

Friday, March 10

ROYAL INSTITUTION, at 9.—Dr. W. H. Hatfield, F.R.S.: "New Researches in Steel Metallurgy".

INSTITUTE OF METALS, March 8-9.—Annual General Meeting at the Institution of Mechanical Engineers.

Appointments Vacant

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:

TEACHER OF SCIENCE OR ENGINEERING in the Luton Technical College—The Director of Education, Shire Hall, Bedford (March 6).

PROFESSOR OF PHYSICS AND ELECTRICAL ENGINEERING in the Royal Naval College, Greenwich—The Director, Education Department, Admiralty, London, S.W.1 (March 15).

LECTURER IN PHYSICS in the University of Sydney—The Registrar (May 1).

ASSISTANT in the Intelligence Section of the Mineral Resources Department of the Imperial Institute—The Establishment Officer.

Reports and other Publications

(not included in the monthly Books Supplement)

Great Britain and Ireland

Two Lectures on the Development of the Chemistry of Commercial Synthetic Dyes (1856-1938). By Dr. Frederick Maurice Rowe. Pp. 106. (London: Institute of Chemistry.) [72]

Proceedings of the Royal Irish Academy. Vol. 45, Section A, No. 1: A Small Scale Differential Analyser, its Construction and Operation. By H. S. W. Massey, J. Wylie, R. A. Buckingham and R. Sullivan. Pp. 22+5 plates. 2s. Vol. 45, Section A, No. 2: Note on Group Theory and Kinematical Relativity. By W. H. McCrea. Pp. 23-30. Vol. 45, Section A, No. 3: Long Range Forces between Hydrogen Molecules. By H. S. W. Massey and R. A. Buckingham. Pp. 31-46. 1s. Vol. 45, Section A, No. 4: Diffusion and Fall of Atmospheric Condensation Nuclei. By J. J. Nolan and P. J. Nolan; with an Appendix by P. G. Gormley. Pp. 47-64. 1s. Vol. 45, Section B, No. 3: The Local Glaciers of Mount Leinster and Blackstairs Mountain. By A. Farrington. Pp. 65-72. 1s. Vol. 45, Section B, No. 4: The Silurian Inlier of Lisbellaw, County Fermanagh, with a Note on the Age of the Fintona Beds. By J. C. Harper and J. J. Hartley. Pp. 73-88+plates 13-16. 2s. 6d. Vol. 45, Section B, No. 5: Reports from the Limnological Laboratory. 4: The Phytoplankton of the River Shannon and Lough Derg. By R. Southern and A. C. Gardiner. Pp. 89-124+plates 17-21. 3s. Vol. 45, Section B, No. 6: On the Identity of *Monilopora* Nicholson and Etheridge, 1879, with *Cladococcus* McCoy, 1847. By Dorothy Hill and L. B. Smyth. Pp. 125-138+plates 22-23. 1s. 6d. (Dublin: Hodges, Figgis and Co., Ltd.; London: Williams and Norgate, Ltd.) [72]

The College of the Pharmaceutical Society. Annual Report of Research Work, 1938. Pp. 41. (London: Pharmaceutical Society.) [82]

Report for 1938 (No. 51) of the Marine Biological Station at Port Erin, Isle of Man. Drawn up by Dr. R. J. Daniel. Pp. 36. (Liverpool: University Press of Liverpool; London: Hodder and Stoughton, Ltd.) 1s. 6d. net. [82]

Other Countries

Indian Forest Records (New Series). Silviculture, Vol. 3, No. 2: An Investigation into the Best Date of Stump Planting Teak (*Tectona grandis*) at Begur (Wynaad Division), Dhoni (Palghat Division), and Topslip (South Coimbatore Division). By A. L. Griffith. Pp. iii+17-46+2 plates. (Delhi: Manager of Publications.) 1.8 rupees; 2s. 3d. [62]

University of California College of Agriculture: Agriculture Experiment Station. Circular 347: The Water-Culture Method for Growing Plants without Soil. By Prof. D. R. Hoagland and D. I. Arnon. Pp. 40. (Berkeley, Calif.: University of California.) [72]

Bulletin of the Bingham Oceanographic Collection. Vol. 6, Art. 6: Further Observations on *Pensacola* of the Northern Gulf of Mexico. By Martin D. Burkenroad. Pp. 62. (New Haven, Conn.: Yale University.) [72]

Proceedings of the American Academy of Arts and Sciences. Vol. 73, No. 1: Poetry and Music; Musical Interpretation; and some Remarks about American Orchestras. By Serge Koussevitzky. Pp. 4. 35 cents. Vol. 73, No. 2: American Policies in the Far East. By W. Cameron Forbes. Pp. 5-28. 70 cents. (Boston, Mass.: American Academy of Arts and Sciences.) [72]

U.S. Department of the Interior: Office of Education. Bulletin, 1937, No. 38: Vocational Education and Guidance of Negroes; Report of a Survey conducted by the Office of Education. By Ambrose Caliver. Pp. x+137. 20 cents. Bulletin, 1938, No. 5: Bibliography of Research Studies in Education, 1936-1937. By Ruth A. Gray. Pp. xiv+373. 35 cents. Vocational Education Bulletin No. 195 (Home Economic Series No. 22): Homemaking Education Program for Adults. By Mary S. Lyle and Rua Van Horn. Pp. vi+125. 15 cents. (Washington, D.C.: Government Printing Office.) [72]

Smithsonian Miscellaneous Collections. Vol. 97, No. 12: The Spence Shale and its Fauna. By Charles Elmer Besser. (Publication 3490.) Pp. 29+6 plates. (Washington, D.C.: Government Printing Office.) [72]

Western Australia. Annual Progress Report of the Geological Survey for the Year 1937. Pp. 24+5 plates. (Perth: Government Printer.) [72]

Fondation Universitaire. Dix-huitième Rapport annuel, 1937-1938. Pp. xxiii+159. (Bruxelles: Fondation Universitaire.) [72]

Indian Academy of Sciences. Sir Chandrasekhara Venkata Raman, 1888-7th November-1938: Jubilee Volume of Original Papers presented in commemoration of his Fiftieth Birthday. Pp. ii+243-566+14 plates. (Bangalore: Indian Academy of Sciences.) [72]

Havsforskningsinstitutets Skrift. No. 112: Vattenståndsvärden 1935-1936. Av S. E. Stenij. Pp. 92. No. 118: Jahreszeitlicher Verlauf der chemischen und biologischen Faktoren im Meerwasser bei Hangö im Jahre 1935. Von Kurt Buch und Stina Gripenberg. Pp. 26. No. 119: Havsforskningsinstitutets verksamhet under år 1937. Av Gunnar Granquist. Pp. 16. No. 120: Regular Observations of Temperature and Salinity in the Seas around Finland, July 1936-June 1937. By E. Palmén. Pp. 44+vi. No. 122: Zur Kenntnis der Temperatur und des Salzgehaltes des baltischen Meeres an den küsten Finnlands. Von Gunnar Granquist. Pp. 166+xxxii+3 plates. Havsvattnets Temperatur och Salthalt uti Finlands Kustvatten. Pp. 64. (Helsingfors: Havsforskningsinstitutet.) [72]

U.S. Treasury Department: Public Health Service. Changes in the Types of Visual Refractive Errors of Children: a Statistical Study. By Antonio Ciocco. (Reprint No. 1980 from the Public Health Reports, Vol. 53, No. 35.) Pp. 8. (Washington, D.C.: Government Printing Office.) 5 cents. [82]

Publications of the Kapteyn Astronomical Laboratory at Groningen. No. 49: Spectroscopic Absolute Magnitudes of Mount Wilson Contributions No. 511 and their Probable Errors. By Prof. Dr. P. J. Van Rhijn. Pp. ii+31. (Groningen: Hoitsema Brothers.) [82]