

## Societies and Academies

## PARIS

Academy of Sciences, June 24 (*C.R.*, 200, 2129-2250). ALFRED LACROIX: The tectites of Indo-China without figured forms. These are not large drops of glass shaped by fusion in the course of their fall, but the debris of larger blocks, probably fractured by shock on striking the ground. GEORGES URBAIN, PIERRE WEISS and FÉLIX TROMBE: A new ferromagnetic metal, gadolinium. The specimen of gadolinium used was pure except for 0.7 per cent of silicon and 0.03 per cent of iron. This metal is ferromagnetic. The absolute saturation reached 253.5 C.G.S. units, that of iron being 221.7. The Curie point is 16° C. LUCIEN CAYEUX: The constitution of the Senonian phosphates of Egypt. JEAN BAPTISTE SENDERENS: The catalytic decomposition of the monobromo derivatives of fatty hydrocarbons. The alkyl bromides behave similarly to the chlorides, except that the temperatures required are higher. GEORGES DURAND-VIEL was elected a member of the Section of Geography and Navigation, in succession to the late Ernest Fournier. A. KULAKOFF: Some theorems connected with Burnside's problem. ANTONIO MONTEIRO: A class of Fredholm nuclei developable in series of the principal nuclei. HENRI MINEUR: The absolute magnitude of *B* stars with emission lines. The results of the analysis show that these stars do not differ from the ordinary *B* stars from the point of view of their absolute brightness, the emission arising from the large extension of their atmospheres. MARC DE HEMPPINNE and JEAN SAVARD: The ionisation potential of the nitrogen molecule. The method of electronic shocks has been utilised and the apparatus calibrated with argon and mercury. The energy of dissociation of the molecule  $N_2$ , calculated from the results, 6.72 volts, is in good agreement with the 6.8 volts deduced by Henry by another method. NICOLAS STOYKO and RAYMOND JOUAUST: The velocity of propagation of short radio-electric waves. FRANÇOIS CROZE: The general formulæ of refraction of a light pencil. YEU KI-HENG and YEU TA: A new method for studying the corrosion of aluminium by soda. The metal is attacked by dilute soda solution in the presence of sodium tartrate, and the reaction followed by measurements of the rotatory power. A higher accuracy can be obtained by following the rotation than by the usual loss of weight method. M. MAHMOUD GHALI: A method for measuring the velocity of fall of spheres in a viscous liquid. A photo-electric cell in conjunction with an electrical recording apparatus is used: the time can be measured to 0.001 second. ANDRÉ PIGNOT and HUBERT GAUDRY: The useful surface of the membranes of pressure regulators. LÉON ARTSIMOVITCH, IGOR KOURTSCHATOV, LÉON MICCOVSKII and PIERRE PALIBIN: Concerning the capture of slow neutrons by a nucleus. IGOR KOURTSCHATOV, LÉON NEMENOW and IVAN SELINOW: The artificial radioactivity of ruthenium bombarded by neutrons. R. GRÉGOIRE: Bragg's curve of the H-rays. A. PERRET and R. PERROT: The cryoscopy of mixtures of nitrogen peroxide and bromine. No evidence could be obtained for the existence of the compound  $NO_2Br$ . MARCUS BRUTZCUS: A method for calculating *a priori* the calorific power of a technical combustible. The method is based on the quantity of oxygen required for complete combustion. A. MICHEL and GEORGES CHAUDRON: The influence of

magnetisation at a high temperature and of crystallisation on the form of thermomagnetic curves. TCHENG DA-TCHANG and LI HOUONG: The precipitation of titanium as phosphate. Determination of the correct acidity for complete precipitation of titanium as phosphate. CLÉMENT DUVAL: A new method for studying complex compounds. A modified method for the study of the migration of ions under the action of an electric field can be applied to the examination of various complex compounds. Examples of the results obtained are given. EDMOND GRILLOT: Lead acetobromide. L. DOMANGE: The action of steam on some metallic fluorides. The results of experiments with the fluorides of silver, zinc and lead are given. PAUL BRASSEUR: Study of ferric orthophosphate. Description of the preparation and properties of anhydrous  $FePO_4$ . HENRI MOUREU and CLÉMENT HAMBLET: The mechanism of the reaction between liquid ammonia and tantalum pentachloride. The experiments show that in  $TaCl_5$  two of the atoms of chlorine are more readily removed than the remaining three. PIERRE TRUNEL: The electric moments of isobutyl, isopropyl and phenyl chlorosulphites. G. DARZENS and ANDRÉ LÉVY: A new method of synthesis of derivatives of hydrophenanthrene and phenanthrenic hydrocarbons. MARCEL GODCHOT and MAX MOUSSERON: Some derivatives of 1-methyl-2-cyclopentanone and of 1-methyl-2-cyclopentanol. GEORGES BRUHAT and LOUIS WEIL: The measurement of the rotation of the plane of polarisation in oblique crystalline refraction. ANTONIN LANQUINE: New tectonic and stratigraphical observations on the zone of folding of Aups (Var). ANDRÉ DEMAY: The alternating or simultaneous action of magmatic and dynamic phenomena in the northern Cévennes. LOUIS DANGEARD and CHARLES BATARD: The conglomerates interposed in the Brioverian schists, to the north of the Coëvrons (Mayenne and Sarthe), and the nature of the cadomian movements. GILBERT MATHIEU: The tertiary faults of Vendée. MARCEL GESLIN: The influence of a current of warm water on the air and radon dissolved in a cold water. V. FROLOW: The annual component (pluviometry and hydrometry in the Argentine). ALEXANDRE DAUVILLIER: Study of the terrestrial field, of the atmospheric ionisation and of the vertical current at Scoresby Sound during the polar year. Mlle. MADELEINE FRIANT: The jugal dental type of *Pteromys xanthipes*. Mlle. MADELEINE FOURCROY: Modifications of the insertions of the rootlets in wounded roots. PIERRE POTEL and RAYMOND CHAMINADE: The oxido-reduction potential of flours. SERGE TCHAKOTINE: Physiological researches on the Protozoa made by means of the ultra-violet micropuncture. JEAN RIPERT and OLIVIER GAUDIN: The relative toxicity of pyrethrines I and II. ETIENNE WOLFF and ALBERT GINGLINGER: The characters of the intermediate sexual forms obtained experimentally in the embryo of the fowl. PAUL CRISTOL, RAYMOND SEIGNEURIN and JEAN FOURCADE: The absence of dissociation of thiourea and substituted thioureas in dilute aqueous solution.

## AMSTERDAM

Royal Academy (*Proc.*, 38, No. 6, June 1935). W. H. KEESOM, J. MAZUR and J. J. MEIJHUIZEN: The vapour pressures of solid krypton. Measurements between 78° and 116° K. and their comparison with the theoretical formula. W. H. KEESOM and

C. J. MATTHIJS: Measurements on thermoelectric forces from  $17.5^{\circ}$  down to  $2.5^{\circ}$  K. Extension of previous work to other alloys and lower temperatures. W. H. KESOM and C. W. CLARK: The heat capacity of potassium chloride from  $2.3^{\circ}$  to  $17^{\circ}$  K. Measurements for the purpose of testing whether the rapid fall of the  $\theta$  values for silver at lowest temperatures is due to the heat capacity of the conduction electrons. H. R. KRUYT and TRUUS KRUYT: Investigation on positive and negative carbon surfaces by adsorption of thorium B. The results indicate that OH ions form the surface of positive carbon and COOH that of negative carbon. E. DUBOIS: On the gibbon-like appearance of *Pithecanthropus erectus*. While possessing many gibbon-like characteristics, *Pithecanthropus erectus* fills the previously vacant place between the *Anthropomorphae* and man as regards cephalic coefficient. J. WOUDA: A new type of colorimeter. An apparatus which determines the re-emission of a coloured surface and automatically calculates the colour point. J. F. SCHOUTEN: Foundations of a quantitative four-colour theory (1). H. BULTHUIS: The spectrum of  $\text{CO}^+$ . Rotational analysis and perturbations of the  ${}^2\Pi \rightarrow {}^2\Sigma$  bands. C. VISSER: On the angular derivative of univalent functions (2). C. S. MEYER: Integral representation of Lommel and Struve functions (1). W. VAN TONGEREN: Chemical analysis of rocks from Pulu Berhala. Analyses of the rocks described in the next paper. J. DRUIF: On rocks from Pulu Berhala (Malakka Strait). J. OUDMAN: Food reception and transport by the leaves of *Drosera capensis*, L. The growing leaves of this insectivorous plant do not form albumen from their food. IDA LUYTEN: The periodic development of *Iris reticulata*. J. B. THOMAS: The regulation of the breathing of *Lumbricus*. Oxygen consumption of worms in atmospheres of diminishing oxygen concentration was determined for normal specimens and for worms the haemoglobin of which had been destroyed by carbon monoxide. H. DE JONG and A. GALLINEK: On surgical catatonia. The position of the surgical brain lesions which lead to catatonia in cats was determined.

## BRUSSELS

Royal Academy (*Bull. Classe Sci.*, 21, No. 6, June 1935). L. GODEAUX: An observation on the rational correspondences between two algebraic surfaces. J. E. VERSCHAFFELT: The relation between the coefficients of the Etingshausen and Nernst transverse magnetic effects. A discussion of papers of the same title by Mlle. Dupont. E. DE WILDEMAN: Adventitious buds in *Hæmanthus*. P. MORTIER: Molecular polarisation and association of ethyl alcohol in various solvents. Measurements of the dielectric constant of solutions of ethyl alcohol in benzene, carbon tetrachloride, hexane, heptane and carbon disulphide. L. MARTON: Electronic microscopy of biological objects. Description of apparatus. M. H. WUYTS and Mlle. A. LACOURT: The constitution of the thiohydrazides. These compounds can be methylated both at the  $\alpha$  or  $\beta$  nitrogen atom and at the sulphur atom. A. DE WÆLE: Researches on the migrations of the Cestodes (5). Study of the infection of the definite host by the hydatid larva. M. and R. BOULLENNE: The soluble sugars in *Mercurialis Perennis*, L., (2). Nature of the soluble sugars and their respective amounts in the two sexes. P. DUSTIN: Note on the comparative histology of the splenic arterial coatings. Histological experi-

ments to determine the function of the arterial coatings. F. CORIN: Discovery of a spilitic series and of pillow-lavas in Hesbaye.

## MELBOURNE

Royal Society of Victoria, June 13. HELEN T. PATERSON: Notes on plant remains from Narracan and Darlimurla, South Gippsland. EDWIN SHERBON HILLS: A noteworthy specimen of *Spaniodon elongatus*, Pictet, from the Upper Cretaceous of Mount Lebanon, Syria. The specimen described shows the caudal half of a small fish (? *Spaniodon fry*) lying in the abdomen of a large individual of *Spaniodon elongatus*. It is argued that the small fish was swallowed by the large, and when fossilised, was lying with its anterior parts digested, in the stomach of the *Spaniodon*. The contents of part of the intestinal tube of the latter are also fossilised, and it is thought that this tube must have been relatively small and straight. The feeding habits of *Spaniodon*, as indicated by this specimen and by its large teeth, are considered to be incompatible with its taxonomic position in the *Engraulinae*.

## VIENNA

Academy of Sciences, May 16. JOVAN JURIŠIĆ: Contribution to the knowledge of *Bryophyllum tubiflorum*, Harvey. WOLF JOHANNES MÜLLER and O. HERING: Theory of passivity phenomena (27). Time phenomena in anodic polarisation at smooth platinum in 2N sulphuric acid. In this polarisation, the pore surfaces first become coated with oxide, oxygen being evolved only at a subsequent stage. GEORG KOLLER and WALTER MAASS: A component of *Baeomyces roseus*, Pers. A lichen acid,  $\text{C}_{19}\text{H}_{18}\text{O}_8$ , is described. ALEXANDER KÖHLER: Optical investigations on synthetic mixed members of the felparg group. FRITZ KERNER-MARILAUN: Studies on the winter temperatures in alpine zone seas of the Keuper period. ARMIN DADIEU and HANS KOPPER: Raman spectra of HSD and  $\text{ND}_3$ . The Raman spectrum of HSD consists of two lines of frequencies 1880 and  $2585\text{ cm}^{-1}$ , which correspond with those of the spectra of  $\text{D}_2\text{S}$  and  $\text{H}_2\text{S}$  respectively. The spectrum of  $\text{ND}_3$  consists of four lines of frequencies 2341, 2399, 2500 and  $1588\text{ cm}^{-1}$ , the relative intensities being 5, 5, 3 and 0 (?). ARMIN DADIEU and WOLF ENGLER: Raman spectra of  $\text{SeH}_2$ ,  $\text{SeD}_2$  and  $\text{SeDH}$ . The spectra of  $\text{SeH}_2$  and  $\text{SeD}_2$  consist each of a single strong line, the frequencies being 2312 and  $1665\text{ cm}^{-1}$  respectively. These compounds should yield at least two Raman-active frequencies, the appearance of only one being explained by a valency angle of about  $90^{\circ}$ . The two lines of the spectrum of  $\text{SeDH}$  have the frequencies 2313 and  $1671\text{ cm}^{-1}$ . KARL MAYR: The position of the first positive null points of Bessel's functions of the first type. ROBERT WILLHEIM and CHARLOTTE FRISCH: Chemistry of crab glycolysis (1). Boiled crab juice contains factors which exert a reducing action, so that they disturb oxidative reactions. OTTO KOLLER: Note on a zoological research expedition to the mountains of north-western Asia Minor. ODOMAR GUGENBERGER: Stratigraphical position of the cephalopod fauna of the Casale Mountains, Palermo. EMIL ABEL and L. BLUMENKRANZ: Oxidation of oxalic acid by iodic acid when the stationary condition of the intermediate product is disturbed. ALEXANDER ROLLETT, NIKOLAUS KUNZELMANN and MAGDA BALOG: Investigations on azo dyes.