

vanadium-molybdenum steel. Tests on the steel under load at temperatures between 450° and 600° C. show important changes. As neither the measurements of resistance, expansion or magnetisation showed any appreciable physicochemical modification, the softening observed must be due to a structural modification of the alloy. It is pointed out that these facts must be taken into account when designing machines required to work at a high temperature. **MARIUS AUBERT, PIERRE CLERGET and ROGER DUCHÊNE**: The influence the addition of various substances on the combustion of gas oil in injection motors. Study of the effect of adding ethyl nitrate to the gas oil in regulating the combustion and suppressing detonation. **HENRI CAMICHEL**: The constants of the movement of the *F*-type stars. **LÉON DUBAR**: The internal and superficial conductivity of cuprous oxide. Cuprous oxide possesses a very high superficial conductivity, which is reduced by the adsorption of water vapour. **Mlle. SUZANNE VEIL**: An electrometric control of displacement reactions. **GEORGES BRUHAT and LOUIS WEIL**: The rotatory power of quartz for rays perpendicular to the optic axis and its dispersion between 2537 Å. and 5780 Å. In the whole of the interval of the spectrum studied the rotatory dispersion of quartz is the same for rays perpendicular and parallel to the axis. **JEAN LAVAL**: The diffusion of X-rays varies in a discontinuous manner with the angle of diffusion. **EDMOND ROTHÉ and MME. A. HÉE**: The radiometric exploration of a rhyolite *coulée*. The rhyolite near Welschbruch is strongly radioactive, and it has been found possible to map out the volcanic *coulées* by radiometric measurements. **OSIAS BINDER**: The hydrolysis of solutions of copper sulphate. **VICTOR HENRI and PIERRE ANGENOT**: The relation between the ultra-violet absorption spectrum and the Raman spectrum of pyridine. The analysis of the ultra-violet absorption spectrum of pyridine vapour proves the existence in the lower level of the molecule of five fundamental frequencies. These correspond with the Raman spectra of pyridine and benzene. **JEAN TABUTEAU**: The application of the Raman effect to the study of the *cis-trans* isomerism of the methylcyclohexanols. It has been proved that the Raman spectra of the *cis* and *trans* isomers are different and the variations are greatest for frequencies between 300 cm^{-1} and 900 cm^{-1} . **PIERRE CARRÉ and HENRI PASSEDOUET**: The influence of an element or a negative group on the relative mobilities of alkyl radicals in their chloroformates. **GEORGES LÉVY**: The nitration of α -ethylnaphthalene. **GEORGES DARZENS and ANDRÉ LÉVY**: The preparation of 1, naphthyl- β -propionic, 2, naphthyl- β -propionic and 2, tetrahydronaphthyl- β -propionic acids. The synthesis of dihydrophenalene and of 5, 6-tetrahydrobenzo-1-indanone. **ANDRÉ GUILLEMONAT**: The oxidation of 3-methyl-2-pentene and of 2-methyl-2-pentene by means of selenious anhydride. **MOSHEH AVNMELECH**: The Vindobonian in Palestine. **FERNAND JACQUET and THÉODORE MONOD**: The fossiliferous Primary of the south of Mauritanian Adrar. **RENÉ SOUÈGES**: The embryogeny of the Resedaceæ. The development of the embryo in *Reseda luteola*. **JEAN RÉGNIER and ANDRÉ QUEVAUVILLER**: The concomitant variations of chronaxy and of nervous excitability under a pharmacodynamic influence (action on the motor nerve of *Rana esculenta* of cocaine and its substitutes). **Mlle. CATHERINE VEIL**: The mechanism of the colour change in fishes.

Forthcoming Events

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

Saturday, December 14

NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS, at 2.30.—Prof. G. Hickling: "William Hutton's Observations on Coal, 1833".

BRITISH PSYCHOLOGICAL SOCIETY, at 3.—Annual General Meeting.

Prof. J. Drever: "The Status and Qualifications of Professional Psychologists" (Presidential Address).

Sunday, December 15

BRITISH MUSEUM (NATURAL HISTORY), at 3 and 4.30.—Miss M. R. J. Edwards: "Pests".*

Monday, December 16

BRITISH MUSEUM (NATURAL HISTORY), at 11.30.—Capt. Guy Dollman: "Pouched Mammals".*

Wednesday, December 18

INSTITUTION OF CIVIL ENGINEERS, at 6.30.—Prof. A. H. Gibson: "Tidal and River Models" (Vernon-Harcourt Lecture).

Official Publications Received

Great Britain and Ireland

International Tin Research and Development Council. Miscellaneous Publications. No. 4: Tin and its Uses. By D. J. Macnaughtan. Pp. 16. Free. No. 5: Tin and Civilisation. By D. J. Macnaughtan. Pp. 9. Free. Technical Publications. Series A, No. 22: Improvement in the Quality of Tinplate by Superimposed Electrodeposition of Tin. By A. W. Hotherhall and W. N. Bradshaw. Pp. 16. Free. Series A, No. 24: The Atmospheric Corrosion and Tarnishing of Tin. By L. Kenworthy. Pp. 17. Free. Series A, No. 25: Electrodeposition of Tin Alloys from Alkaline Stannate Baths. By R. G. Monk and H. J. T. Ellingham. Pp. 12. Free. (London: International Tin Research and Development Council.) [2911]

Other Countries

Journal of the Faculty of Agriculture, Hokkaido Imperial University. Vol. 39, Part 1: The Isolation and some Cultural Characters of *Bacillus cellulosea dissolvens*. By Jun Hanzawa and Sadahiko Yoshimura. Pp. 48+1 plate. (Tokyo: Maruzen Co., Ltd.) [2911]

Territory of Papua. Anthropology, Report No. 16: The Blending of Cultures; an Essay on the Aims of Native Education. By F. E. Williams. Pp. iii+46. (Port Moresby: Government Printer.) 1s. [3011]

Tide Tables for the Atlantic Coast of Canada for the Year 1936: including the River and Gulf of St. Lawrence, the Bay of Fundy, Northumberland and Cabot Straits, Hudson Bay, and Information on Currents; in addition Tide Tables for New York and Boston, U.S.A. (Fortieth year of Issue.) Pp. 96. Ottawa: Government Printer. [3011]

Report on the Administration of the Meteorological Department of the Government of India in 1934-35. Pp. ii+35+1 plate. (Delhi: Manager of Publications.) [212]

Comisión de Estudio del Túnel submarino de Gibraltar. El Túnel submarino de Gibraltar: Estado actual de los trabajos. Pp. 118+5 plates. (Madrid: Comisión de Estudio del Túnel submarino de Gibraltar.) [212]

Royal Agricultural Society. Summarised translation of Bulletin No. 20, Chemical Section: Preliminary Investigations on the Phosphoric Acid Supply in the Soils of the Bahtim Permanent Experiments. By Ahmed Mahmoud. Pp. 47. Summarised translation of Bulletin No. 21, Chemical Section: Phosphatic Fertilisers, Comparative Trials on Immediate and Residual Effects. By Ahmed Mahmoud. Pp. 30. (Cairo: Royal Agricultural Society.) [212]

Indian Forest Records. New Series, Vol. 1, No. 5: Neue Attelabiden aus Indien (Curculionidae, Col.) Von Eduard Voss. Pp. ii+95-104. (Delhi: Manager of Publications.) 5 annas; 6d. [212]

Punjab Irrigation Research Institute. Research Publication, Vol. 2, No. 7: A Siltometer for Studying Size Distribution of Silts and Sands. By Dr. Amar Nath Puri. Pp. 6+4 plates. 5 annas; 7d. Research Publication, Vol. 4, No. 7: Soil Deterioration in the Canal Irrigated Areas of the Punjab. Part 1: Equilibrium between Ca and Na ions in Base Exchange Reactions. By Dr. E. McKenzie Taylor, Dr. Amar Nath Puri and A. G. Ashgar. Pp. 15+4 plates. 8 annas; 9d. Research Publication, Vol. 4, No. 8: Soil Deterioration in the Canal Irrigated Areas of the Punjab. Part 2: Relation between Degree of Alkalisatation and Dispersion Co-efficient in Deteriorated Soils. By A. G. Ashgar, Amar Nath Puri and E. McKenzie Taylor. Pp. 7+4 plates. 4 annas; 5d. (Lahore: Punjab Irrigation Research Institute.) [212]

Obras completas y Correspondencia científica de Florentino Ameghino. Vol. 13: Paleontropología Argentina. Edición Oficial ordenada por El Gobierno de la Provincia de Buenos Aires. Dirigida por Alfredo J. Torcelli. Pp. 704+33 plates. (La Plata: Director de la Edición Oficial de Obras de Florentino Ameghino.) [312]