

tension at the surface of separation of two liquids. The influence of temperature.—Stephane **Domrowsky**: The regime of concentrations established by lateral diffusion in a convection current.—M. **Lardy**: Study of the propagation of short waves (in wireless telegraphy). An account of the phenomena observed (fading, scintillation) of signals of wave-lengths of 450, 115, and 50 metres at distances between 180 and 4500 kilometres. The superiority commonly attributed to the shorter wave-lengths was not confirmed.—E. **Briner**: Remarks on the origin of radioactivity. It has been advanced as a difficulty against the acceptance of the theory of the spontaneously explosive atom, that the enormous emission of energy accompanying this change is irreconcilable with the exothermic synthesis of the elements starting with their primordial constituents, protons and electrons. The author shows by analogies drawn from the destruction of chemical molecules that there is no real incompatibility between the radioactive atom, the destruction of which frees a large amount of energy, and the exothermic formation of the atom.—Mlle. **Berthe Perrette**: Contribution to the study of the isotopy of lead. A comparison of lead extracted from a pitchblende (Belgian Congo) with an atomic weight of 206.14 and ordinary lead of atomic weight 207.2. The densities were: radioactive lead, 11.278; common lead, 11.336; and both had the same atomic volume. In the comparison of the arc spectra, the Fabry and Perot interference method was used, the diameters of the rings formed by the corresponding lines of the two isotopes being measured. All the lines have shown a difference in the same sense with an increase in the wave-length for the lead with the lowest atomic weight.—Nobuo **Yamada**: The long range particles emitted by the active deposit of thorium. The experiments described prove that the active deposit of thorium emits only one group of α particles of 11.5 cm. range, in addition to the ordinary α rays. The two other groups found by Bates and Rogers were not confirmed.—**d'Huart**: The absorption of water vapour and of some other vapours by the surface of glass. An apparatus is described and figured which can be used to measure the amount of water vapour adsorbed by glass surfaces. It can also be used to determine the vapour density of very volatile liquids.—Paul **Pascal**: Magnetochemical researches on the formation of closed chains and nuclear groups in organic compounds.—**Grandadam**: The purification of potassium and sodium cyanides. Their melting points. The purification of the alkaline cyanides can be effected by solution and recrystallisation in liquid anhydrous ammonia. The melting points were determined in a silver crucible in an atmosphere of dry nitrogen, using a gold-silver thermocouple. Sodium cyanide melts at 564° C., potassium cyanide at 634° C.—F. **Bourion** and J. **Picard**: The kinetic study of the reduction of mercuric bromide by sodium formate.—V. **Auger**: A new type of alkaline borates; the pentaborates.—Pierre **Lesage**: Inheritance of the early character and the conservation of this character in old seeds.—P. **Lavielle**: The antipodes and the chalazian region of the ovule of the Dipsacæ.—Jules **Amar**: Cellular hydration and vitality.—J. **Cluzet**, A. **Rochaix**, and Th. **Kofman**: The variations of the agglutinating power of a mixed immunoserum under the influence of a continuous electric current.—A. **Vandel**: Physiological amixia and incipient species in the isopod *Trichoniscus (Spiloniscus) provisorius*.—Phillippe **Bunau-Varilla** and Emile **Techoueyres**: Induced antiseptis or, in other words, the microbaccidial action exercised at a distance, without material contact, on a bacterial dilution by a very dilute solution of sodium hypochlorite.

NO. 2904, VOL. 115]

Official Publications Received.

- Bulletin of the National Research Council. Vol. 10, Part 1, No. 51, March: Radioactivity. Report of Committee on X-rays and Radioactivity, National Research Council. By A. F. Kovarik and L. W. McKeahan. Pp. 203. (Washington: National Academy of Sciences.) 2.25 dollars.
- Observatoire de Zi-ka-wei. Notes de sismologie, No. 6: Étude sur le ondes de dilatation et les ondes de condensation. Principaux sismogrammes, 1924. Par le R. P. E. Gherzi. Pp. 22+6 planches. (Zi-ka-wei, Chang-hai.)
- Annual Report of the Auckland Institute and Museum for 1924-1925, adopted at the Annual Meeting held February 27th, 1925. Pp. 37. (Auckland, New Zealand.)
- Journal of the College of Agriculture, Hokkaido Imperial University, Sapporo, Japan. Vol. 15, Part 3: An Enumeration of the Butterflies and Moths from Saghalien, with Descriptions of new Species and Subspecies. By Dr. S. Matsumura. Pp. 83-196+plates 8-11. (Sapporo.)
- Imperial Department of Agriculture for the West Indies. Report on the Agricultural Department, Grenada, January-December 1924. Pp. iv +11. (Trinidad.) 6d.
- The Science Reports of the Tôhoku Imperial University, Sendai, Japan. Second Series (Geology). Vol. 7, No. 2: A Geological Problem concerning the raised Coral-Reefs of the Riukiu Islands and Taiwan; a Consideration based on the Fossil Foraminifera Faunas contained in the raised Coral-Reef Formation and the youngest Deposits Underlying It. By Hisakatsu Yabe and Shôshirô Hanzawa. Pp. 29+6 plates. (Tokyo and Sendai: Maruzen Co. Ltd.)
- Indian Medical Research Memoirs, Memoir No. 3. Supplementary Series to the *Indian Journal of Medical Research*. Provisional List and Reference Catalogue of the Anophelini. Part 1: Provisional List of Species. Part 2: Descriptive Synopsis. By Lt.-Col. S. R. Christophers. Pp. 105. (Calcutta: Thacker, Spink and Co.) 1.12 rupees; 2s. 6d.
- Department of Commerce: Bureau of Standards. Miscellaneous Publication of the Bureau of Standards, No. 68: Report of Board of Visitors to Bureau of Standards of the Department of Commerce for the Secretary of Commerce. Pp. iv+14. (Washington: Government Printing Office.) 5 cents.
- Hundredth Annual Report of the Committee of the Bath Royal Literary and Scientific Institution for the Year 1924. Pp. 16. (Bath.)
- Aeronautical Research Committee. Reports and Memoranda, No. 960 (E. 18): Variation of Engine Power with Height. By H. L. Stevens. (B. 4. Engines 50, T. 1952.) Pp. 8+11 plates. 9d. net. Reports and Memoranda, No. 961 (E. 14): The Variation of Engine Power with Height. By H. M. Garner and W. G. Jennings. (B. 4. Engines 51, T. 1964.) Pp. 3+6 plates. 6d. net. (London: H.M. Stationery Office.)
- Proceedings of the Royal Society of Edinburgh, Session 1924-1925. Vol. 45, Part 3, No. 18: The Equation of Conduction of Heat. By Marion C. Gray. Pp. 230-244. 1s. 6d. Vol. 45, Part 3, No. 19: Note on Professor Whittaker's Atomic Model. By John A. Eldridge. Pp. 245-248. 9d. Vol. 45, Part 3, No. 20: Unilateral Vasodilatation on the Senile Male of the Domestic Fowl. By F. A. E. Crew. Pp. 249-251. 6d. (Edinburgh: R. Grant and Son; London: Williams and Norgate, Ltd.)
- The Physical Society of London. Proceedings. Vol. 37, Part 4, June 15. Pp. 195-267. (London: Fleetway Press, Ltd.) 6s. net.

Diary of Societies.

MONDAY, JUNE 29.

ARISTOTELIAN SOCIETY (at University of London Club), at 8.—Prof. W. H. Moberly: Some Ambiguities in the Retributive Theory of Punishment.

TUESDAY, JUNE 30.

ROYAL DUBLIN SOCIETY, at 4.15.
ROYAL ANTHROPOLOGICAL INSTITUTE (Indian Section), at 8.15.—H. de B. Codrington: Periods in Indian Archaeology.
INTERNATIONAL CONGRESS OF RADIOLOGY (at Royal Society of Medicine), at 8.30.—Reception.

WEDNESDAY, JULY 1.

INTERNATIONAL CONGRESS OF RADIOLOGY (at Central Hall, Westminster), at 2.30.—Official Opening.—At 9 P.M.—Duc de Broglie: Absorption of X and γ Radiations and the Secondary Radiations which accompany them (Silvanus Thompson Memorial Lecture).

THURSDAY, JULY 2.

INTERNATIONAL CONGRESS OF RADIOLOGY (at Central Hall, Westminster), at 10 A.M.

FRIDAY, JULY 3.

INTERNATIONAL CONGRESS OF RADIOLOGY (at Central Hall, Westminster), at 10 A.M.; at 9 P.M.—Sir Berkeley Moynihan, Bart.: The Relationship of Radiology and Surgery (Mackenzie Davidson Memorial Lecture).
GEOLOGISTS' ASSOCIATION (at University College), at 7.30.—Prof. W. W. Watts: The Geology of South Shropshire (Lecture).

SATURDAY, JULY 4.

INTERNATIONAL CONGRESS OF RADIOLOGY (at Central Hall, Westminster), at 10 A.M.
BRITISH MYCOLOGICAL SOCIETY (Phytopathological Excursion to Cambridge).—Prof. Sir R. H. Biffen and F. L. Engledow: The Inheritance of Disease Resistance.—F. T. Brooks and W. C. Moore: Silver-leaf Disease.—N. J. G. Smith: Helminthosporium Disease of Cereals.—D. Weston: The Control of Bunt in Wheat.—R. C. Woodward: Apple Mildew.—Mrs. M. N. Kidd: Fungal Invasion in Apples in Relation to Senescence.—S. M. Wadham: Clover Rot.—A. Smith: Perennial Rust Mycelia.—Prof. Nuttall, Dr. Hare, and Mr. Tait: Fungi Pathogenic to Man.
PHYSICAL SOCIETY OF LONDON (at Oxford).