

the prolonged action of dilute saline solutions, by M. A. Dastre.—On the variations of terrestrial latitudes, by M. F. Gonessiat.—On the theory of a system of differential equations, by M. A. J. Stodolkievitz.—On a general definition of friction, by M. A. Paul Painlevé.—On Fourier's problem, by M. Le Roy.—Absorption of light in uniaxial crystals, by M. G. Moreau. The symmetry of uniaxial absorption is not so complete as the theory of the ellipsoid of absorption indicates. The dissymmetry is greater as the crystal is more birefringent.—On the potential of an electrified surface, by M. Jules Andrade.—Apparatus imitating the movements executed by certain animals in turning round without external fulcra, by M. Edm. Fouché. The explanation of the movements of a cat, enabling it to always fall on its feet, given by M. Guyou, is completely borne out by the successful reproduction of the rotatory movement with a strictly mechanical model.—The catoptric and symmetrical objective, by M. Ch. V. Zenger.—On a class of secondary batteries, by M. Lucien Poincaré. The author describes a secondary battery with mercury for poles and sodium iodide in concentrated solution for electrolyte. The mercury iodide formed remains in solution, and the sodium forms an amalgam with the mercury. On discharge the yield is more than 90 per cent. of the theoretical. The battery is not affected by short circuiting or the particular manner of its discharge, but is unlikely to be practically used on account of the expensive nature of the materials, and the necessity of removing the amalgam from contact with the liquid if the battery is to remain long charged.—On the effect of an alternating electromotive force on the capillary electrometer, by M. Bernard Brunhes.—Thermochemical carbon battery, by M. Désiré Korda. By the action of carbon on barium peroxide during the reduction of the latter to monoxide, an E.M.F. of nearly 1 volt is produced when arranged as a cell. In the case given an internal resistance of 136 ohms was found. A similar arrangement with copper peroxide, the latter being separated from the carbon pole by dry, pure potassium carbonate, gave 1.1 volt with an internal resistance of 3.2 ohms.—Action of nitrous oxide on metals and metallic oxides, by MM. Paul Sabatier and J. B. Senderens. A table is given showing the comparative reactions of N_2O , NO , and NO_2 , and air on a series of metals and oxides. The deduction is drawn that oxidations by means of N_2O are caused by the direct action of this gas without preliminary decomposition into its constituents.—Researches on the heats of combination of mercury with the elements, by M. Raoul Varet.—On the isomeric states of the oxides of mercury, by M. Raoul Varet. It is shown that yellow and red oxides dissolve in dilute HCN with liberation of the same amount of heat, and hence the transformation of yellow into red oxide gives no appreciable thermal effect.—On the heat of formation of some compounds of iron, by M. H. Le Chatelier.—On the chlor-aldehydes, by M. Paul Rivals. A thermochemical paper.—On a mercuric combination of thiophene, permitting the estimation of the latter in commercial benzene and its extraction therefrom, by M. G. Denigès. A very stable combination of mercury and thiophene, having the composition $(SO_2Hg.HgO)_2SC_4H_4.H_2O$, is obtained by treatment of thiophene with an acid solution of mercuric sulphate (made by dissolving fifty grams of mercuric oxide in 200 c.c. of pure sulphuric acid diluted with a litre of distilled water). On account of its insolubility and ease of formation, this compound may be used for the detection of traces of thiophene in benzene and for the purification of benzene.—On the amorphous state of melted substances, by M. C. Tanret.—Derivatives of active α -hydroxybutyric acid, by MM. Ph. A. Guye and Ch. Jordan. A paper giving optical rotations and products of asymmetry.—The production of wine and the utilisation of fertilising principles by the vine, by M. A. Muntz.—On the decortication of wheat, by M. Balland.—On the parts taken respectively by purely physical and by physiological actions in the disengagement of carbonic acid by muscles isolated from the body, by M. J. Tissot.—Therapeutic action of currents of high frequency (autoconduction of M. d'Arsonval), by MM. Apostoli and Berlioz. These currents have a powerful influence on the nutritive activity of the tissues, and hence are of first importance in the treatment of many functional troubles, caused by defective nutrition.—New application of the graphic method to music, by MM. A. Binet and J. Courtier.—Histological researches on the development of the Mucorini, by M. Maurice Léger.—On the geology of Ossola (*Alpes Lépointines*), by M. S. Traverso.—On an application of photography to oceanography, by M. J. Thoulet.

BOOKS, PAMPHLETS, and SERIALS RECEIVED

BOOKS.—Bird Notes: late J. M. Hayward (Longmans).—Statesman's Year-Book, 1895 (Macmillan).—Qualitative Chemical Analysis of Inorganic Substances (American Book Company, New York).—Annals of British Geology, 1893: J. F. Blake (Dulau).—A Handbook of Systematic Botany: Dr. E. Warming, translated and edited by Prof. M. C. Potter (Sonnenschein).—Illustrations of the Zoology of H. M. Indian Marine Surveying Steamer *Investigator*, Part 1 (Quaritch).—Stanford's Compendium of Geography and Travel (new issue)—Africa, Vol. 1: North Africa: A. H. Keane (Stanford).—Hygienische Meteorologie: Prof. Dr. W. J. van Biebler (Stuttgart, Enke).—Text-Book of Anatomy and Physiology for Nurses: D. C. Kimber (Macmillan).—Chemical Analysis of Oils, Fats, Waxes, &c.: Dr. R. Benedikt, revised and enlarged by Dr. J. Lewkowitsch (Macmillan).—Taschenbuch für Flugtechniker und Luftschiffer: H. W. L. Moedebeck, (Berlin, Kühl).—Le Pétrole, L'Asphalte et le Bitume: A. Jaccard (Paris, Alcan).

PAMPHLETS.—Madras Government Museum, Bulletin No. 3: Rámévaram Island and Fauna of the Gulf of Manaar: E. Thurston, 2nd edition (Madras).—Die Entwicklung: Dr. G. Pfeffer (Berlin, Friedländer).

SERIALS.—Royal Natural History, Part 17 (Warne).—Proceedings of the Royal Society of Victoria, Vol. vii, new series (Melbourne).—American Naturalist, March (Philadelphia).—Astrophysical Journal, March (Chicago).—Journal of the Institution of Electrical Engineers, No. 115, Vol. xxiv, (Spon).—Economic Journal, March (Macmillan).—Botanische Jahrbücher, Neunzehnter Band, v. Heft (Leipzig, Engelmann).—Transactions of the Astronomical and Physical Society of Toronto for the Year 1894 (Toronto, Rowsell).—Zeitschrift für Physikalische Chemie, xvi, Band, 3 Heft (Leipzig, Engelmann).—Minnesota Botanical Studies, Bulletin No. 9 (Minneapolis).—Notes from the Leyden Museum, Vol. xvi, Nos. 3 and 4 (Leyden, Brill).—Good Words, April (Isbister).—Sunday Magazine, April (Isbister).—Longman's Magazine, April (Longmans).—Quarterly Journal of Microscopical Science, No. 147 (Churchill).—Bulletin of the Geographical Club of Philadelphia, Vol. 1, No. 3 (Philadelphia).—Bulletin of the U.S. Geological Survey, No. 120 (Washington).

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