

of radiation it is absolutely essential to use an integral receiver. In the present paper a form of receiver is described satisfying the necessary conditions, and with this apparatus the exactitude of Stefan's law has been proved. The constant found is 6.30×10^{-12} watt/cm.², as against the earlier figure of 5.32 , for πa , from which a is 2×10^{-12} watt/cm.²—The atmosphere of rooms for the inhalation of mineral water in the form of fine spray. The identification of the mineral water spray with the water of the spring: M. **Cany**.—The formation of graphitic oxide and the definition of graphite: Georges **Charpy**. Brodie's reagent, fuming nitric acid and potassium chlorate, may be replaced by other oxidising mixtures, such as concentrated sulphuric acid and potassium permanganate or chromic acid. The reaction is accelerated by a rise of temperature, but with loss of carbon as carbon dioxide. The definition of graphite based on the action of such oxidising mixtures is unsatisfactory.—The preparation of pure iodic anhydride: Marcel **Guichard**. The iodic acid prepared by the action of sulphuric acid on barium iodate is not pure, containing either barium iodate or barium sulphate, according as the salt or the acid is in excess. Iodic acid is very soluble in water (187.4 per 100), but is much less soluble in nitric acid (S.G. 1.4), and advantage is taken of this fact for the purification of iodic acid. A better method is the oxidation of iodine with nitric anhydride; a yield of 40 per cent. of the theoretical is thus obtained.—The complete synthesis of laudanose: Amé **Pictet** and Mlle. M. **Finkelstein**. This synthesis of laudanose (methyl-tetrahydropapaverine) is the first artificial preparation of an opium alkaloid.—The catalytic preparation of the ketones: J. B. **Senderens**. The catalytic production of ethers by the action of alumina on the alcohols has been found to be limited in practice to methyl and ethyl ethers, other condensation products appearing with the higher alcohols. The corresponding reaction for the production of ketones, on the other hand, is much more general. Anhydrous thoria is used as the catalytic agent, and the fatty acid is found to give good yields of ketone at a temperature of about 400° C. A description is given of the preparation of diethylketone, dipropylketone, and di-isopropylketone by this method.—The formation of peroxides in the oxidation of the organo-magnesium compounds: H. **Wuyts**.—The tetrahydronaphthylglycols (*cis* and *trans*) and their combination: Henri **Leroux**.—A new region with sodic rocks in Auvergne. Tephrites and nephelinites in "la Comté": J. **Giraud** and A. **Plumandon**.—The composition of bauxite: M. **Arsandaux**.—Some variations of *Monophyllaea Horsfieldii*: M. **Chiffot**.—The sexual reproduction of *Endomyces Magnusii*: A. **Guilliermond**.—The exact estimation, by gasometry, of urea and urinary ammonia: M. **Florence**.—New analogies between the natural and artificial oxydases: J. **Wolff**.—Animal invertins and lactases: H. **Bierry**.—Bovine piropiasmosis in the neighbourhood of Algiers: H. **Soulié** and G. **Roig**.—The calcification of tuberculous lesions in bovine animals: their richness in Koch bacilli: M. **Piettra**. Calcification of tuberculous lesions is no sign of cure, and any therapeutic method based on the introduction of calcium salts into the economy is illusory.—The palæal cavity and its attachments: Rémy **Perrier** and Henri **Fischer**.—The fossil Bryozoa of the Middle Miocene of Marsa-Matrouh: Ferdinand **Canu**.—The cause of the heat developed in the terrestrial rocks: J. A. **Le Bel**. The effect observed appears to be due to radiation, and not to radio-activity.

DIARY OF SOCIETIES.

FRIDAY, APRIL 16.

MALACOLOGICAL SOCIETY, at 8.—Description of *Pomatias Harmeri*, n.sp., from the Red Crag of Essex: A. S. Kennard.—Fossil Pearl Growths: J. Wilfred Jackson.—The New Zealand Athoracophoridae, with Descriptions of Two New Forms: Henry Suter.—On the Family Ampullariidae, No. 1, Ampullarina (*sensu stricto*), List of Species, Varieties, and Synonyms, with Descriptions of New Forms: G. B. Sowerby.

TUESDAY, APRIL 20.

ROYAL INSTITUTION, at 3.—The Brain in Relation to Right-handedness and Speech: Prof. F. W. Mott, F.R.S.
INSTITUTION OF CIVIL ENGINEERS, at 8.—The *New York Times* Building: C. T. Purdy.
ROYAL SOCIETY OF ARTS, at 4.30.—South Africa: Hon. C. G. Murray.
ROYAL ANTHROPOLOGICAL INSTITUTE, at 8.15.—The Blackfeet Indians of Montana: W. MacLintock.

WEDNESDAY, APRIL 21.

ROYAL METEOROLOGICAL SOCIETY, at 7.30.—Percolation, Evaporation, and Condensation: B. Latham.—The Meteorological Conditions in the Philippines, 1908: Rev. José Algué, S.J.

ROYAL MICROSCOPICAL SOCIETY, at 8.—On the Recent and Fossil Foraminifera of the Shore-sands of Selsea Bill, Sussex: E. Heron-Allen.—The Disappearance of the Nucleolus in Mitosis: E. J. Sheppard.

THURSDAY, APRIL 22.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Dynamic Osmotic Pressures: The Earl of Berkeley, F.R.S., and E. G. J. Hartley.—(1) The Theory of Ancestral Contributions in Heredity; (2) The Ancestral Gametic Correlations of a Mendelian Population Mating at Random: Prof. Karl Pearson, F.R.S.—The Intracranial Vascular System of Sphenodon: Prof. A. Dendy, F.R.S.—On the Graphical Determination of Fresnel's Integrals: J. H. Shaxby.

MATHEMATICAL SOCIETY, at 5.30.—The General Principles of the Theory of Integral Equations: F. Tavaní.—The Equations of Electrodynamics and the Null Influence of the Earth's Motion on Optical and Electrical Phenomena: H. R. Hassé.—The Solution of a Certain Transcendental Equation: G. N. Watson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Electrical System of the London County Council Tramways: J. H. Rider.

FRIDAY, APRIL 23.

ROYAL INSTITUTION, at 9.—Tantalum and its Industrial Applications: A. Siemens.

PHYSICAL SOCIETY, at 5.—On a Want of Symmetry shown by Secondary X-Rays: Prof. W. H. Bragg, F.R.S., and J. L. Glasson.—Transformations of X-Rays: C. A. Sadler.—Theory of the Alternate Current Generator: Prof. T. R. Lyle.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Development of Hydroelectric Power Schemes; with Special Reference to Works at Kinlochleven: J. M. S. Culbertson.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Presidential Address: J. A. F. Aspinall.

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