

emitted by a Röntgen tube; these rays pass through aluminium, paper, wood, are rectilinearly polarised on their emission, are susceptible of both rotatory and elliptical polarisation, can be reflected and refracted, but produce neither fluorescence nor photographic action.—The catalytic decomposition of ethyl alcohol by finely divided metals: the regular formation of aldehyde, by MM. Paul **Sabatier** and J. B. **Senderens**. The action of reduced copper, nickel, cobalt, and platinum upon alcohol has been studied at varying temperatures. With copper at about 300° C. the alcohol is split up into hydrogen and aldehyde without any secondary reactions. With the other metals the primary reaction would appear to be the same, but the aldehyde is attacked, methane and carbon monoxide accompanying the hydrogen.—On the spectrum of the comet 1902 *b*, by M. A. **de la Baume-Pluvinel**. Owing to the very feeble luminosity of the comet a special arrangement of apparatus was required in order to obtain a photograph of the spectrum, but a negative was finally obtained on October 24 sufficiently good for measurements to be taken. The wave-lengths found are referred to the carbon spectrum, hydrocarbon and cyanogen.—Propagation in conducting media, by M. Marcel **Brillouin**.—On the sub-salts of barium, by M. **Guntz**. By fusing the haloid salts of barium with sodium, compounds of the formula  $BaXNaX$ , where X represents the halogen, were obtained. Heated in a vacuum at 700° C., sodium is volatilised and the ordinary barium salt is left.—On methylmonobromocamphor, bromomethylcamphor and methylene-camphor, by M. J. **Minguin**.—On the hydration of the acetylene acids. A new method for the synthesis of non-substituted  $\beta$ -ketonic esters and acids, by MM. Ch. **Moureu** and R. **Delange**. The ordinary method of adding water to acetylene compounds by means of sulphuric acid or mercuric salts having given poor results, caustic alkalies were used with satisfactory results. A description is given of the preparation and properties of several ketonic acids synthesised in this way.—The action of phosphorus trichloride upon glycol, by M. P. **Carré**. The chief product is a compound  $P_2(O.CH_2)_4Cl_2$ , the decomposition products of which with water have been studied.—The action of mixed organo-magnesium compounds on bodies containing nitrogen, by M. Louis **Meunier**. Ammonia with ethyl-magnesium iodide gives ethane and  $NH_2.MgI$ , and aniline, diazoamidobenzene and phenylhydrazine give analogous products.—On the pyrogallol-sulphonic acids, by M. Marcel **Delage**.—Remarks on the soluble ferments which determine the hydrolysis of polysaccharides, by M. Em. **Bourquelot**. The number of soluble ferments or enzymes is greater than is usually supposed; the intervention of the enzymes in the natural phenomena of hydrolysis is governed by relatively simple laws.—The existence of glycerine in normal blood, by M. Maurice **Nicloux**. By applying the method of estimation described in a previous note the author has been able to prove the existence of glycerine in normal blood in very small proportion.—On the mechanism of lipolytic actions, by M. Henri **Pottevin**.—A contribution to the study of the Diplozoa, by M. P. A. **Dangeard**.—On the existence and extension of the pith in the petiole of Phanerogams, by M. **Bouygue**.—On the origin of leaves and on the foliar origin of the stem, by M. Léon **Flot**.—On the dust which fell on February 22, by M. A. B. **Chauveau**. The dust probably came from the Sahara.—Remarks by M. **Mascart** on the preceding note.—On the physiology of the internal ear, by M. **Marage**. A reply to a note of M. Pierre **Bonnier**.—Experimental researches on the psychophysiology of sleep, by MM. N. **Vaschide** and Cl. **Vurpas**.

## DIARY OF SOCIETIES.

THURSDAY, APRIL 2.

LINNEAN SOCIETY, at 8.—List of Marine Algae collected at the Maldivé and Laccadive Islands by J. Stanley Gardiner: Mrs. Gepp (Ethel S. Barton).—The Comparative Anatomy of Cyathaceae and other Ferns: D. T. Gwynne-Vaughan.

CHEMICAL SOCIETY, at 8.—On the Absorption Spectra of Nitric Acid in Various States of Concentration: W. N. Hartley.—The Dioximes of Camphorquinone and Other Derivatives of  $\beta$ -Nitrosocamphor: M. O. Foster.—Salts of a Mercaptoid Isomeric Form of Thioallophanic Acid, and a New Synthesis of Iminocarbamethioalkyls: A. E. Dixon.—Discoloured Rain: E. G. Clayton.—Derivatives of  $\alpha$ -Amino-benzophenone and  $\beta$ -Amino-benzophenone: F. D. Chattaway.

ROYAL GEOGRAPHICAL SOCIETY, at 4.—Geographical Education; with Special Reference to Globular Contoured Maps, Globes and Reliefs: Prof. E. Reclus.

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RÖNTGEN SOCIETY, at 8.30.—Some Effects produced by Radiations: J. H. Gardiner.

FRIDAY, APRIL 3.

MALACOLOGICAL SOCIETY, at 8.—Additions to the genus *Streptaxis*: G. K. Gude.—On a New Species of the genus *Xylophaga* from the English Coast: E. A. Smith.—Notes on some New or Little Known Members of the Family Dorididae: Sir Charles Eliot.—On a New Species of *Cerastus* from near Aden, with a Note on *Otopoma clausum*, Sby.: E. R. Sykes.—Descriptions of Two Supposed New Species of *Cyathopoma*: H. B. Preston.—On Shells Floating on the Surface of the Sea: August Krogh.

ROYAL INSTITUTION, at 9.—Drops and Surface Tension: Lord Rayleigh.

GEOLOGISTS' ASSOCIATION, at 8.—The Geology of North Staffordshire (with Special Reference to the Whitsuntide Excursion): Dr. Wheelton Hind.—Coal Measures of North Staffordshire: Walcot Gibson.

SATURDAY, APRIL 4.

ROYAL INSTITUTION, at 3.—Light: Its Origin and Nature: Lord Rayleigh.

MONDAY, APRIL 6.

VICTORIA INSTITUTE, at 4.30.—Modern Theories concerning the Composition of Holy Scripture: Rev. John Tuckwell.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Manufacture of Iodine from Nitrate Liquors: Dr. W. Newton.—New Modification of Coffinier's Prussian Blue Reaction, and a possible Application: Watson Smith.—The Explosion of Potassium Chlorate at St. Helen's: Dr. A. Dupré, F.R.S.

TUESDAY, APRIL 7.

INSTITUTION OF CIVIL ENGINEERS, at 8.—American Locomotive Practice: P. J. Cowan.

WEDNESDAY, APRIL 8.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Rotation Period of the Markings on Jupiter: W. F. Denning.—Standard Scale for Telescopic Observation: Percival Lowell.—The Madras Observatory and its Work: Prof. Michie Smith.

GEOLOGICAL SOCIETY, at 8.—On the Probable Source of the Pebbles of the Triassic Pebble-Beds of South Devon and of the Midland Counties: O. A. Shrubsole.—Note on the Occurrence of Keesley Limestone-Pebbles in the Red Sandstone-Rocks of Peel (Isle of Man): E. Leonard Gill.

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