conditions on the so-called chloride of bromine, and comes to the conclusion that no such compound really exists. The crystals which can be obtained by cooling sufficiently a solution of bromine in liquefied chlorine have a composition depending on the temperature at which they are formed, and are mixed crystals of the two halogens.—Protoxide of cæsium: E. **Rengade.** It is possible to prepare the oxide of cæsium Cs_2O in a pure and well-crystallised condition by admitting a limited quantity of oxygen to a weighed amount of the metal. When about two-thirds the amount of oxygen necessary to form the Cs_2O has been admitted, the excess of the metal is slowly distilled off in a vacuum at 200° C. The oxide remains in the form of orange-red crystals, reacting violently with water, and decomposing at about 500° C. in contact with silver, and in the cold in the presence of liquefied ammonia, the latter giving a mixture of the amide and hydrate of cæsium.—The pure alloys of tungsten and manganese, and the preparation of tungsten: G. **Arrivaut.** In the reduction by aluminium a suitably high temperature of reaction is obtained by using Mn_3O_4, WO_3, MnO_2, and WO_2 in varying proportions. Manganese-tungsten alloys can be prepared containing from 12 per cent. to 60 per cent. of tungsten. By preparing an ingot containing 45 per cent. of tungsten and submitting this to the action of hydrochloric acid, the residue was nearly pure tungsten, 99·5 per cent.—The products of condensation of acetylenic esters with amines: Ch. **Moureu** and I. **Lazennec.** The products of the condensation of the acetylenic esters $R—C\equiv C—CO_2R'$ with amines are non-basic bodies, easily hydrolysed by acids. Hydrolysis regenerates the amine, with formation of the ketonic ester $R—CO—CH_2—CO_2R'$. The reaction furnishes a new method of passing from the acetylenic esters to the β-ketonic esters.—The atomic weight of dysprosium: G. **Urbain** and M. **Demenitroux.** A set of determinations, carried out on the products of different fractions, gave 162·54 (O=16) as a mean of twelve very concordant results.—The presence of formol in certain foods: G. **Perrier.** By applying the very sensitive reaction proposed by Voisenet for the detection of minimal proportions of formol, the author has proved the presence of this substance in various articles of food, the formaldehyde arising from the mode of preparation, and not having been specially added. In view of these results the author discusses the advisability of altering the existing law, which absolutely prohibits the presence of formaldehyde in food, substituting a maximum limit.—The azo colouring matters: heat of combustion and constitutional formulæ: P. **Lemoult.**—The liquid crystals of cholesteryl propionate: Fred. **Wallerant.**—The action of copper salts on the germination of Penicillium: M. **Le Renard.**—The variations of assimilation with light and temperature: W. **Lubimenko.**—The swimming mechanism of *P. maximus*: Fred **Vles.**—*Mesoglicola Delagei*, a parasite of *Corynactis viridis*: A. **Quidor.**—The unity of the hæmatozoa of paludism: M. **Thiroux.**—The Dolichopodidæ of amber from the Baltic: Fernand **Meunier.**

DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 1.

ROYAL SOCIETY, at 4.30.—On Intravascular Coagulation in Albinoes and Pigmented Animals, and on the Behaviour of the Nucleo-proteids of Testes in Solution in the Production of Intravascular Coagulation: G. P. Mudge.—Nitrification of Sewage: Dr. G. Reid.—A General Consideration of the Subaërial and Freshwater Algal Flora of Ceylon: Dr. F. E. Fritsch.—The Anæsthetic and Lethal Quantity of Chloroform in the Blood of Animals: Dr. G. A. Buckmaster and J. A. Gardner.

CHEMICAL SOCIETY, at 8.30.—A Development of the Atomic Theory which correlates Chemical and Crystalline Structure and leads to a Demonstration of the Nature of Valency: W. Barlow and W. J. Pope.—The Explosive Combustion of Hydrocarbons, ii.: W. A. Bone, J. Drugman and G. W. Andrew.—Contributions to the Theory of Solutions: (1) The Nature of the Molecular Arrangement in Aqueous Mixtures of the Lower Alcohols aad Acids of the Paraffin Series; (2) Molecular Complexity in the Liquid State; (3) Theory of the Intermiscibility of Liquids: J. Holmes.—The Hydrolysis of Nitro-cellulose and Nitro-glycerol: O. Silberrad and R. C. Farmer.—The Determination of the Rate of Chemical Change by Measurement of Gases Evolved: F. E. E. Lamplough.—Experiments on the Synthesis of the Terpenes Part IX., The Preparation of δ-Ketohexahydrobenzoic Acid (δ-Keto*cyclo*hexanecarboxylic Acid) and of γ-Keto*cyclo*pentanecarboxylic Acid: F. W. Kay and W. H. Perkin, jun.—Experiments on the Synthesis of the Terpenes, Part X., Synthesis of Δ'-*m*-Menthenol (8) and of Carvestrene: W. H. Perkin, jun., and G. Tattersall.—Some Derivatives of Catechol, Pyrogallol, Benzophenone and of Other Substances allied to the Natural Colouring Matters: W. H. Perkin, jun., and C. Weizmann.

LINNEAN SOCIETY, at 8.—The Structure of Bamboo Leaves: Sir Dietrich Brandis, K.C.I.E., F.R.S.—On a Collection of Crustacea Decapoda and Stomatopoda, chiefly from the Inland Sea of Japan, with Descriptions of New Species: Dr. J. G. de Man.—On *Hectorella caespitosa*, Hook. f., with Remarks on its Systematic Position: Prof. A. J. Ewart.—*Exhibitions:* Young Plaice Hatched and Reared in Captivity: the President.—Abnormal Specimens of *Equisetum Telmateia*, Ehrh.: George Talbot.

CIVIL AND MECHANICAL ENGINEERS' SOCIETY, at 8.—Bridge Work Design: P. J. Waldram.

FRIDAY, NOVEMBER 2.

GEOLOGISTS' ASSOCIATION, at 8.—Conversazione.

MONDAY, NOVEMBER 5.

SOCIOLOGICAL SOCIETY, at 8.—Psychological Factors in Social Transmission: Dr. J. W. Slaughter.

LONDON INSTITUTION, at 5.—Earthquakes and Volcanoes: Sir Robert Ball, F.R.S.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Advantages of Investigating the Unlikely: Sir William Ramsay, K.C.B., F.R.S.

TUESDAY, NOVEMBER 6.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Address by the President, Sir Alexander B. W. Kennedy, and Presentation of Medals and Prizes Awarded by the Council.

WEDNESDAY, NOVEMBER 7.

ENTOMOLOGICAL SOCIETY, at 8.—A Permanent Record of British Moths in their Attitude of Rest: A. H. Hamm.

GEOLOGICAL SOCIETY, at 8.—On the Upper Carboniferous Rocks of West Devon and North Cornwall: E. A. Newell Arber.—The Titaniferous Basalts of the Western Mediterranean: H. S. Washington.

SOCIETY OF PUBLIC ANALYSTS, at 8.—The Analyst and the Medical Man: Dr. F. Gowland Hopkins, F.R.S.

THURSDAY, NOVEMBER 8.

ROYAL SOCIETY, at 4.30.—*Probable Papers:* Note on the Continuous Rays observed in the Spark Spectra of Metalloids and some Metals: Prof. W. N. Hartley, F.R.S.—The Composition of Thorianite, and the Relative Radio-activity of its Constituents: Dr. E. H. Büchner.—On a Compensated Micro-manometer: B. J. P. Roberts.—Experimental Investigation as to the Dependence of Gravity on Temperature: L. Southerns.—A Numerical Examination of the Optical Properties of Thin Metallic Plates: Prof. R. C. Maclaurin.

MATHEMATICAL SOCIETY, at 5.30.—Annual General Meeting.—Presidential Address: Partial Differential Equations; some Criticisms and some Suggestions: Prof. A. R. Forsyth.—Harmonic Expansions of Functions of Two Variables: Prof. A. C. Dixon.—The General Solution of Laplace's Equation in n Dimensions: G. N. Watson.—On Sub-groups of a Finite Abelian Group: H. Hilton.—On Bäcklund's Transformation and the Partial Differential Equation $s=F(x, y, z)$.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Presentation of Premiums awarded for Papers Read or Published during 1905-06.—Inaugural Address by the President, Dr. R. T. Glazebrook, F.R.S.

FRIDAY, NOVEMBER 9.

ROYAL ASTRONOMICAL SOCIETY, at 5.

PHYSICAL SOCIETY, at 8.—Exhibition and Description of Experiments Suitable for Students in a Physics Laboratory: G. F. C. Searle.

MALACOLOGICAL SOCIETY, at 8.—Description of a New Species of Calliostoma from S. Formosa: E. A. Smith, I.S.O.—Description of a New Sub-genus and Species of Alycæus from Ke-lan-tan: H. B. Preston.—Description of Six New Species of Shells and of *Leptomya lintea*, Hutton, from New Zealand: H. Suter.—Descriptions of some Tertiary Shells from New Zealand: H. Suter.

CONTENTS.