

quake in the Balkans, April 4: Th. **Moureaux**.—Electrical osmosis in methyl alcohol: A. **Baudouin**. The method adopted by M. Perrin in studying electrical osmosis in aqueous solutions has been applied by the author to solutions in methyl alcohol. The effects observed are similar to the case of water, but smaller in magnitude, so that higher differences of potential had to be employed. Osmosis is very sensitive to traces of dissolved materials provided that these are electrolytes. Non-electrolytes, even in comparatively large proportions, are without effect.—On the calculation of the heats of combustion of organic compounds containing nitrogen: P. **Lemoult**. A general formula for calculating the heat of combustion of any compound containing carbon, hydrogen, oxygen, and nitrogen is worked out, and numerous examples are given of the degree of approximation obtained.—On the application of the Blondlot rays to chemistry: Albert **Colson**. By means of the effects on a phosphorescent screen the author has been able to detect differences in the interaction of solutions of potash and zinc sulphate according to the order in which they are mixed, and these differences have been subsequently borne out by their chemical behaviour.—On a new mode of formation of calcium carbide: L. M. **Bullier**. Calcium carbide can be obtained by the electrolysis of a mixture of calcium chloride and lime, but the method has no commercial value.—The estimation of nitrogen: Léon **Débourdeaux**. Methods of estimating nitrogen based on the production of ammonia are all liable to be vitiated by the production of amines, notably methylamine. The method now described, which is based on the dry distillation of the nitrogen compound with a mixture of potassium monosulphide and potassium thiosulphate, gives ammonia free from amines. A list is given of the classes of compounds to which this method is applicable.—The influence of hydriodic acid on the oxidation of sulphurous acid: A. **Berg**. Hydriodic acid may either retard or accelerate the oxidation of sulphurous acid according to its concentration. For a given strength of sulphurous acid, there appears to exist a strength of hydriodic acid which is without influence on the rate of oxidation. Other substances besides hydriodic acid can affect the rate of oxidation.—The chlorination of phenyl carbonate in the presence of iodine: Et. **Barral**.—The action of oxidising agents on the purity of industrial fermentations: Henri **Alliot** and Gilbert **Gimel**. Various oxidising agents were tried with a view to see which exerted the greatest effect in reducing the production of butyric acid during an alcoholic fermentation. Manganese dioxide and bleaching powder gave the best results.—On *Randia Lujae*, a new myrmecophyte and acarophyte of the family Rubiaceæ: E. **de Wildeman**.—On the sense of rotation of water eddies in central Europe: Jean **Brunhes**. In more than 90 per cent. of the vortices observed in the small rapids of central Europe, the sense of rotation was always opposite to that of the hands of a watch.—New researches on the static work of a muscle: Charles **Henry**.—The specific reinforcement of phosphorescence by extracts of organs in physiological exploration: Augustin **Charpentier**.—Biological observations made at Chamonix and on Mt. Blanc during August and September, 1903: Raoul **Bayeux**. The quantity of oxyhæmoglobin increases in normal blood with the altitude, but, on the contrary, the speed of reduction of the oxyhæmoglobin diminishes with increasing altitude.—The amounts of catalase in different animal tissues: F. **Battelli** and Mlle. L. **Stern**.—On the origin of lactose: Ch. **Porcher**.—The agglutination and hæmolysis of the blood corpuscles by chemical precipitates: M. **Gengou**.—On the yellow spot disease of the cork oak: F. **Bordas**.

DIARY OF SOCIETIES.

THURSDAY, APRIL 21.

ROYAL INSTITUTION, at 5.—Dissociation: Prof. Dewar, F.R.S.
 LINNEAN SOCIETY, at 8.—On British Freshwater Rhizopoda: J. Cash.—
Exhibitions: Drawings by Mrs. C. Reid of Fruits and Seeds of British
 pre-Glacial and inter-Glacial Plants. II. Calycifloræ: Clement Reid,
 F.R.S.—Holograph Letter of Linnæus to Haller, dated from Upsala,
 May 23, 1747: R. Morton Middleton.
 INSTITUTION OF CIVIL ENGINEERS, at 8.—"James Forrest" Lecture:
 Internal Combustion Engines: Dugald Clerk.
 INSTITUTION OF MINING AND METALLURGY, at 8.—Adjourned dis-
 cussion on the Equipment of Laboratories for Advanced Teaching and
 Research in the Mineral Industries.

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FRIDAY, APRIL 22.

ROYAL INSTITUTION, at 9.—Sleeping Sickness in Uganda: Colonel
 David Bruce, F.R.S.
 PHYSICAL SOCIETY, at 5.—Calculation of Colours for Colour Senseto-
 meters and the Illumination of "Three Colour" Photographic Trans-
 parencies by Spectrum Colours: Sir W. de W. Abney, F.R.S.—On
 Normal Pileing as connected with Osborne Reynolds's Theory of the
 Universe: Prof. J. D. Everett, F.R.S.—Note on the Diffraction Theory
 of the Microscope as applied to the Case when the Object is in Motion:
 Dr. R. T. Glazebrook, F.R.S.
 INSTITUTION OF CIVIL ENGINEERS, at 8.—No. 2 River-pier of the Beckton
 Gasworks: A. Trewby.

MONDAY, APRIL 25.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—The German Antarctic Ex-
 pedition: Dr. Eric von Drygalski.
 VICTORIA INSTITUTE, at 4.30.—Old Testament Chronology: F. G. Fleay.
 INSTITUTE OF ACTUARIES, at 5.—On Life Premium Book-keeping: J.
 Chatham.

TUESDAY, APRIL 26.

ROYAL INSTITUTION, at 5.—The Transformation of Animals: Prof. L. C.
 Miall, F.R.S.
 ANTHROPOLOGICAL INSTITUTE, at 8.15.—The Origin of Jewellery: Prof.
 W. Ridgeway.
 INSTITUTION OF CIVIL ENGINEERS, at 8.—Annual General Meeting.

WEDNESDAY, APRIL 27.

SOCIETY OF ARTS, at 8.—The Need of Duty-Free Spirit: Thomas Tyrer.
 GEOLOGICAL SOCIETY, at 8.—On a New Species of Escorpions from the
 Upper Carboniferous Rocks of Lancashire: W. Baldwin and W. H. Sut-
 cliffe.—The Genesis of the Gold-Deposits of Barkerville (British
 Columbia) and the Vicinity: A. J. R. Atkin.

THURSDAY, APRIL 28.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Further Experiments on the
 Production of Helium from Radium: Sir William Ramsay, K.C.B.,
 F.R.S., and Frederick Soddy.—The Effects of Changes of Temperature
 on the Modulus of Torsional Rigidity of Metal Wires: Dr. F. Horton.
 —The Sparking Distance between Electrically Charged Surfaces. Pre-
 liminary Note: Dr. P. E. Shaw.—Studies on Enzyme Action. Part II.
 The Rate of Change Conditioned by Sucroclastic Enzymes, and its Bear-
 ing on the Law of Mass Action. Part III. The Influence of the Products
 of Change on the Rate of Change Conditioned by Sucroclastic Enzymes:
 Dr. E. F. Armstrong.—Part IV. The Sucroclastic Action of Acids as
 Contrasted with that of Enzymes: Dr. E. F. Armstrong and R. J. Cald-
 well.—Enzyme Action as bearing on the Validity of the Ionic-dissocia-
 tion Hypothesis, and on the Phenomena of Vital Change: Prof. H. E.
 Armstrong, F.R.S.—On the Changes of Thermoelectric Power produced
 by Magnetisation, and their Relation to Magnetic Strains: Dr. Shelford
 Bidwell, F.R.S.—The Behaviour of the Short-period Atmospheric Pres-
 sure Variation over the Earth's Surface: Sir Norman Lockyer, K.C.B.,
 F.R.S., and Dr. W. J. S. Lockyer.

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