

current density of 20 to 80 amperes per square decimeter dissolving from 0.4 to 0.6 gram per ampere hour. With barium cyanide, barium platinocyanide is formed by the action of the alternating current; the yield of the platinocyanide is good.—The origin of the Blondlot rays given off during chemical reactions: Albert **Colson**. Chemical reactions in which Blondlot rays are given off are always accompanied by physical actions, such as contraction or cooling.—On cacodylic acid and amphoteric bodies: P.-Th. **Muller** and Ed. **Bauer**. Different physicochemical methods all lead to the same conclusion, that cacodylic acid and its sodium salt have the same constitution; it follows that an amphoteric body is not necessarily a pseudo-acid.—The reduction of silica by hydrogen: A. **Dufour**. Silica is reduced at a high temperature by hydrogen, water and hydrogen silicide being formed. The inverse reaction is possible. This reduction explains the phenomenon of devitrification of silica tubes when heated in the blowpipe, and also gives a satisfactory explanation of the experiments of Boussingault and of Schutzenberger on the formation of the silicide of platinum by silica at a distance in a current of hydrogen.—On the zinc aluminium alloys: Hector **Pécheux**. By treating zinc with aluminium in various proportions, nine different well defined alloys have been obtained, the physical and chemical properties of which are described.—The action of diazobenzene chloride upon diphenylamine: Léo **Vignon** and A. **Simonet**. Phenyl-diazoamidobenzene is obtained in this reaction.—On allyl and propenyl-alkyl ketones: E. E. **Blaise**.—The application of the Grignard reaction to the halogen esters of tertiary alcohols: L. **Bouveault**. By carefully regulating the temperature the chloride of tertiary butyl alcohol reacts normally with magnesium; the product absorbs carbon dioxide, giving pyruvic acid. The reaction with ethyl formate was also studied.—On the symmetrical dichloromethyl ether: Marcel **Descudé**. Trichloride of phosphorus and polyoxymethylene react on heating in the presence of a little zinc chloride, giving a good yield of the above substance.—On a method of isolating cytoplasmic substances: Maurice **Nicloux**.—New researches on aucubine: Em. **Bourquetot** and H. **Hérissey**.—Abnormal hybrids: C. **Viguié**.—On the biology of *Sterigmatocystis versicolor*: Henri **Coupin** and Jean **Friedel**.—A food substance obtained from the pith of the Madagascar palm: R. **Gallerand**. The flour made from this palm is distinguished by its richness in albumenoid matter, of which it contains 10.5 per cent.—On the presence of tin in the department of Lozère: Marcel **Guédras**.—Nervous oscillations studied by means of the *n*-rays emitted by the nerve: Augustin **Charpentier**.—The modifications undergone by the digestive apparatus under the influence of diet: Camille **Spieß**.

DIARY OF SOCIETIES.

THURSDAY, MAY 12.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—If the discussion on Messrs. Merz and McLellan's paper is concluded at the meeting of May 5, Messrs. Parsons, Stoney and Martin's paper on the Steam Turbine as applied to Electrical Engineering will be read and discussed.  
 MATHEMATICAL SOCIETY, at 5.30.—Some Mathematical Instruments: C. Cooke (communicated) by Major P. A. MacMahon.—On the Evaluation of Certain Definite Integrals by Means of Gamma Functions: A. L. Dixon.—Generalisations of Legendre's Formula  
 $KE' - (K - E)K = \frac{1}{2}\pi$   
 A. L. Dixon.—Note on the Integration of Linear Differential Equations: Dr. H. F. Baker.—On Perpetuant Syzygies: A. Young and P. W. Wood.  
 SOCIETY OF ARTS, at 4.30.—British Grown Tea: A. G. Stanton.

FRIDAY, MAY 13.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Milky Way Charts of the Heavens to Argelander's Scale  $r = 20mm.$ , with description by H. Dennis Taylor and Alfred Taylor of the Lenses and Mount: J. Franklin-Adams.—Methods of Correcting Moon's Tabular Longitude: P. H. Cowell.—The Definitive Places of the Standard Stars for the Northern Zones of the Astronomische Gesellschaft: A. M. W. Downing.—Note on the Formulæ connecting "Standard Coordinates" with Right Ascension and Declination: F. W. Dyson.—*Probable Paper*.—On the Pivot Errors of the Radcliffe Transit-Circle: A. A. Rambaut.—On the new Greenwich Micrometer for Measurement of Photographs of Eros: Communicated by the Astronomer Royal.—Further Analyses of the Moon's Errors with the Mean Elongation as Argument: P. H. Cowell.  
 MALACOLOGICAL SOCIETY, at 8.—List of Mollusca collected during the Commission of H.M.S. *Waterwitch* in the China Seas, 1900-1903, with Descriptions of New Species: Surgeon K. Hurlstone Jones, R.N., and H. B. Preston.—On a Carboniferous Nautiloid from the Isle of Man: G. C. Crick.—Notes on the Genus *Anoma*: E. R. Sykes.—New Land Shells from New Zealand: Henry Suter.

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MONDAY, MAY 16.

SOCIOLOGICAL SOCIETY at 5.—Eugenics; its Definition, Scope and Aims Francis Galton, F.R.S.  
 ROYAL GEOGRAPHICAL SOCIETY, at 3.—Anniversary Meeting: Address by the President.  
 TUESDAY, MAY 17.  
 ROYAL INSTITUTION, at 5.—Meteorites: L. Fletcher, F.R.S.  
 ZOOLOGICAL SOCIETY, at 8.30.—On some Nudibranchs from East Africa and Zanzibar. Part v.: Sir Charles Eliot.—Description of a new Tree-Frog of the Genus *Hyla*, from British Guiana, carrying Eggs on the Back: G. A. Boulenger, F.R.S.—Notes upon the Anatomy of certain Boidea: F. E. Beddard, F.R.S.  
 ROYAL STATISTICAL SOCIETY, at 5.—Local Expenditure and Local Indebtedness in England and Wales: R. J. Thompson.  
 SOCIETY OF ARTS, at 8.—Pewter and the Revival of its Use: Lasenby Liberty.

WEDNESDAY, MAY 18.

ROYAL MICROSCOPICAL SOCIETY, at 8.—Note on Grayson's Rulings: E. M. Nelson.—Exhibition of Flower Seeds under Microscopes: C. Beck.  
 CHEMICAL SOCIETY, at 5.30.—Action of Nitrosyl Chloride on Pinene: W. A. Tilden.—The Electrolytic Estimation of Minute Quantities of Arsenic: H. J. S. Sand and J. E. Hackford.—The Decomposition of the Alkylureas (a Preliminary Note): C. E. Fawsitt.—The Action of Sodium Methoxide and its Homologues on Benzophenone Chloride and Benzal Chloride. Part ii.: J. E. Mackenzie and A. F. Joseph.—The Formation of Periodides in Nitrobenzene Solution, II. Periodides of the Alkali and Alkaline Earth Metals: H. M. Dawson and Miss E. E. Goodson.

THURSDAY, MAY 19.

ROYAL SOCIETY, at 4.30.—The Bakerian Lecture will be delivered by Prof. E. Rutherford, F.R.S., on the Succession of Changes in Radio-active Bodies.—The following papers will probably be read in title only:—On Saturated Solutions: Earl of Berkeley.—On the Liquefied Hydrides of Phosphorus, Sulphur, and the Halogens, as Conducting Solvents. Part i.: B. D. Steele and D. McIntosh. Part ii.: D. McIntosh and E. H. Archibald.—On the General Theory of Integration: Dr. W. H. Young.  
 INSTITUTION OF MINING AND METALLURGY, at 8.—Miners' Phthisis—its Causes and Prevention: Dr. J. S. Haldane and R. A. Thomas.  
 INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Discussion on Messrs. Parsons, Stoney and Martin's paper, entitled The Steam Turbine as applied to Electrical Engineering.  
 FRIDAY, MAY 20.  
 ROYAL INSTITUTION, at 9.—The Radiation and Emanation from Radium: Prof. E. Rutherford, F.R.S.

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