

ties of each of these are given.—A characteristic reaction of ethyl glyoxylate: the action of ammonia on this ether and its derivatives: L. J. Simon and G. Chavanno. By the action of ammonia on ethyl glyoxylate a substance  $C_4H_5N_3O_4$  is formed. This is blue-black in colour, and possesses very powerful tinctorial properties, and hence may form a useful test for this ester. The composition of this substance has not yet been established.—The acid properties of starch: E. Demoussy. Starch possesses all the characters of a feeble acid, comparable with carbonic acid, and resembling in this respect the other carbohydrates. It forms compounds with metallic hydroxides which are dissociable by water, and can absorb small quantities of neutral salts. These properties probably play a part in the absorption of mineral matters by plants.—The state of colouring matters in crystals coloured artificially: P. Gaubert. It has been shown in previous papers that there are two cases in the artificial colouring of crystals; in the first case the crystal is only coloured when the solution from which the crystal is depositing is nearly saturated with the colouring material; in the other case the crystal is coloured, whatever the dilution of the colouring material. The present paper gives details of measurements made on crystals of the latter class, phthalic acid, with methylene blue in solution. It was found that the ratio of the concentrations of the methylene blue in the liquid and crystals was practically constant, although the absolute concentration of the methylene blue was made to vary within wide limits. Similar results were found with methylene blue and crystals of urea nitrate.—The Vesuvian origin of the dry storm observed at Paris on the morning of April 11: Stanislas Meunier. A microscopical examination of the dust deposited during this storm showed it to be identical in nature with the dust from Vesuvius in 1822.

DIARY OF SOCIETIES.

THURSDAY, MAY 3.

ROYAL SOCIETY, at 4.—Election of Fellows.—At 4.30.—On a Static Method of Comparing the Densities of Gases: R. Threlfall, F.R.S.—The Stability of Submarines: Sir William H. White, K.C.B., F.R.S.—The Action on Bacteria of Electrical Discharges of High Potential and Rapid Frequency: A. G. R. Foulerton and A. M. Kellas.—The Action of Pituitary Extracts upon the Kidney: Prof. E. A. Schäfer, F.R.S., and P. T. Herring.  
 ROYAL INSTITUTION, at 5.—The Digestive Tract in Birds and Mammals: Dr. P. Chalmers Mitchell.  
 CHEMICAL SOCIETY, at 8.30.—The Relation between Absorption Spectra and Chemical Constitution, part v.: The *iso*-Nitroso-compounds: E. C. C. Haly, E. G. Marsden, and A. W. Stewart.—The Action of Triisobromopropane on the Sodium Derivative of Ethyl Malonate, part ii.: W. H. Perkin, jun., and J. L. Simonsen.—Braziliin and Hamatoxylin, part vii., Some Derivatives of Braziliin: P. Engels, and W. H. Perkin, jun.—Pipitazobioic Acid: J. M. Sanders.—The Constitution of the Hydroxides and Cyanides obtained from Acridine, Methyl-acridine and Phenanthridine Methiodides: C. K. Tinkler.—The Constitution of Ammonium Amalgam: E. M. Rich and M. W. Travers.—Action of Light on Potassium Ferrocyanide: G. W. A. Foster.  
 LINNEAN SOCIETY, at 8.—Origin of Gymnosperms (*Continuation of Discussion*): Dr. D. H. Scott, F.R.S.  
 CIVIL AND MECHANICAL ENGINEERS' SOCIETY, at 8.—Some Observations on Bacterial Tank Operations: Dr. W. O. Travis.

FRIDAY, May 4.

ROYAL INSTITUTION, at 9.—The Steam Turbine on Land and at Sea: Hon. Charles A. Parsons, C.B., F.R.S.  
 GEOLOGISTS' ASSOCIATION, at 8.—The Erosion of the Batoka Gorge of the Zambesi: G. W. Lamplugh, F.R.S.

MONDAY, MAY 7.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—From the Victoria Nyanza to Kilimanjaro: Col. G. E. Smith, R.E.  
 SOCIETY OF CHEMICAL INDUSTRY, at 8.—Some Notes on the Gutzzeit Test for Arsenic: J. Goode and Dr. F. Mollwo Perkin.—The Separation of Brucine and Strychnine. Influence of Nitrous Acid in Oxidation by Nitric Acid: W. C. Reynolds and K. Sutcliffe.—Absorption of Gallic Acid by Organic Colloids: W. P. Dreaper and A. Wilson.  
 VICTORIA INSTITUTE, at 4.30.—The Zodiac: its History and Biblical References: Rev. A. B. Grimaldi.

TUESDAY, MAY 8.

SOCIETY OF ARTS, at 8.—Damascening, and the Inlaying and Ornamenting of Metallic Surfaces: Sberard Cowper-Coles.  
 UNIVERSITY OF LONDON, at 5.—The Atmospheric Circulation and its Relation to Weather: Dr. W. N. Shaw, F.R.S.  
 ROYAL INSTITUTION, at 5.—Glands and their Products: Prof. W. Stirling.

WEDNESDAY, MAY 9.

SOCIETY OF ARTS, at 8.—Bridge Building by Means of Caissons, including Remarks upon Compressed Air Illness: Prof. Thomas Oliver.  
 GEOLOGICAL SOCIETY, at 8.—The Eruption of Vesuvius in April, 1906: Prof. Giuseppe de Lorenzo.—The Ordovician Rocks of Western Caermarthenshire: D. C. Evans.

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THURSDAY, MAY 10.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: "Adsorption" and "Occlusion": the Law of Distribution in the Case in which one of the Phases possesses Rigidity: Prof. M. W. Travers, F.R.S.—Cyanogenesis in Plants, part iv., Phaseolunatin in Common Flax (*Linum usitatissimum*): part v., The Occurrence of Phaseolunatin in Cassava (*Manihot Aipi and Manihot Utilissima*): Prof. W. R. Dunstan, F.R.S., Drs. T. A. Henry, and S. J. M. Auld.—A Variety of Thorianite from Galle, Ceylon: Prof. W. R. Dunstan, F.R.S., and B. Mouat Jones.—The Mechanism of Carbon Assimilation in Green Plants: the Photolytic Decomposition of Carbon Dioxide *in vitro*: F. L. Usher and J. H. Priestley.  
 INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Long Flame Arc Lamps: L. Andrews (Adjourned Discussion).

FRIDAY, MAY 11.

ROYAL INSTITUTION, at 9.—Some Astronomical Consequences of the Pressure of Light: Prof. J. H. Poynting, F.R.S.  
 PHYSICAL SOCIETY, at 8.—The Effect of a Rapid Discharge on the Throw of a Galvanometer: A. Russell.—Exhibition of Lippmann Capillary Dynamo and Electromotor: Prof. H. A. Wilson.—Exhibition of an Apparatus for demonstrating the Movements of the Diaphragms of Telephonic Transmitters and Receivers and the Current flowing into and out of the Cable during Speech: W. Duddell.  
 ROYAL ASTRONOMICAL SOCIETY, at 5.  
 MALACOLOGICAL SOCIETY, at 8.—Notes on the Subgenus *Malluvium*: E. A. Smith, I.S.O.—Notes on some Species of the Genus *Mitra*, with the Description of *M. Brettinghami*, n.sp.: E. A. Smith, I.S.O.—On some Land- and Fresh-water Mollusca from Sumatra, part ii.: Rev. R. A. Hington Bullen.—Notes on a Collection of Nudibranchs from the Cape Verde Islands: C. Crossland and Sir Charles Eliot, K.C.M.G.—Notes on Indian and Ceylonese Species of *Glossula*: Col. R. H. Beddome.

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