

Societies and Academies.

PARIS.

Academy of Sciences, August 18.—M. Guillaume Bigourdan in the chair. Notice of the death of J. B. de Toni, Correspondant in the section of botany.—F. E. Fournier: Remarks on the interpretations to be given in future to the three special signals defined in the author's note on safety manœuvres for steamships passing each other in fog, published in the *Comptes rendus*, August 4.—S. Winogradsky: The microscopic study of the soil. A detailed description of the technique adopted for the direct observation of the soil bacteria, together with a short account of the results obtained.—E. Mathias: The noise of the lightning flash. The theory is propounded that the electrical discharge produces endothermic compounds of oxygen and nitrogen of the type O_4 , N_4 , O_6 , N_6 and that the noise of the flash is produced by the explosive decomposition of these substances. According to this theory the flash and noise are not produced simultaneously. No experimental evidence in support of the theory is given.—Charles Nicolle: Contribution to the knowledge of obscure infections. Examples drawn from the experimental study of exanthematic typhus. The term *infection inapparentes* is given to a type of acute septicæmic infection, existing exceptionally in the guinea-pig and frequently in the rat. There is no rise of temperature, and the existence of the disease can only be recognised by inoculation into other animals: the condition is quite distinct from what has been termed latent infection.—H. Mineur: The analytical theory of continued finite groups.—M. Paschoud: The problem of uniform regime in a fine tube the section of which is an isosceles right-angled triangle.—Carl A. Garabedian: Four methods for solving the problem of the rectangular beam.—Antonio Cabreira: The determination of geographical latitude, any three altitudes and the declination of the star being known.—Ernest Esclangon: The total eclipse of the moon of August 14, observed at the Strasbourg Observatory.—L. Dunoyer and P. Toulon: Some electro-mechanical applications of arc relays with external sheath.—Carl Benedicks: Method for the determination of the density of iron and of other refractory metals in the liquid state: an extension of the hydrostatic method of Dulong and Petit. The density of liquid iron at $1540^\circ C.$ was found to be $6.92 \pm .07$.—C. Gutton and G. Laville: Electro-metric measurements of very small alternating potential differences.—R. Bureau and A. Viant: Meteorological conditions and the appearance of certain atmospheric disturbances in receiving apparatus of wireless telegraphy. Atmospheric are always connected with invasions of polar air and are removed by the arrival of a warm front.—André Graire: The reversibility of the reactions of sulphuric acid formation in leaden chambers. Evidence of the reduction of sulphuric acid to sulphur dioxide by nitric oxide, reversing the ordinary reaction forming sulphuric acid in the leaden chamber.—Mme. Pauline Ramart: Molecular transpositions. Identification of the products of dehydration of 1.1.3-triphenyl-2.2-dimethyl-1-propanol.—H. Gault and B. C. Mukerji: The formation of hydrocellulose.—G. Vavon and A. Couderc: The isomerism of menthol and neomenthol. The addition of hydrogen to menthone, in the presence of platinum black, gives a mixture of stereoisomers in which neomenthol (cis) predominates over ordinary menthol (trans).—R. Fosse, Ph. Hagene, and R. Dubois: Researches on a new method of quantitative analysis of cyanamide in its calcium compound.—P. Nottin: The estima-

tion of maltose in the presence of other reducing sugars by means of Barfoed's solution.—Alfred Schoep: Sklodowskite, a new radioactive mineral. This was found in the Belgian Congo, in a layer containing several uranium minerals. Its composition is $MgO \cdot 2UO_3 \cdot 7SiO_2 \cdot 7H_2O$ and it has tellurium, nickel and alkalis as impurities.—R. Verneau: Recent prehistoric discoveries in Indo-China. These deposits were found in caves in the Bac-Son limestone massif, and have furnished several thousands of stone implements.—L. Blaringhem: The degenerescence of flax.—L. Emberger: Contribution to the study of the formation of plastics in plants.—G. Ramon: The properties of diphtheric anatoxine. The anatoxine, the preparation of which was described in an earlier communication, retains its immunising properties for long periods (twelve months) if kept in an ice box (3° to $4^\circ C.$). Keeping does not develop any toxicity, and the properties are unchanged after heating to 65° - $70^\circ C.$ for one hour.—Simionesco and André Lancien: The influence of the cinnamic radicle on the stimulation of the hæmatopoietic organs.

Official Publications Received.

Agricultural Experiment Station, Michigan Agricultural College. Special Bulletin No. 125: Michigan Potato Diseases. By G. H. Coons and J. E. Kotila. Pp. 55. Special Bulletin No. 129: Bean Growing in Michigan. By J. F. Cox and H. R. Pettigrove. Pp. 21. Special Bulletin No. 130: The Clovers and Clover Seed Production in Michigan. By J. F. Cox and C. R. Megee. Pp. 23. Special Bulletin No. 131: Tomato Growing in Michigan. By E. P. Lewis. Pp. 14. Special Bulletin No. 132: Common Pests of Field and Garden Crops. By R. H. Pettit. Pp. 60. Technical Bulletin No. 63: Studies on Michigan Celery Diseases. 2: A Study of the Early Blight Fungus, *Cercospora apii* Fres. By L. J. Klotz. Pp. 43. Circular Bulletin No. 62: The Simplex Lime Spreader. By H. H. Musselman. Pp. 7. (East Lansing, Mich.)
Proceedings of the Aristotelian Society. New Series, Vol. 24: Containing the Papers read before the Society during the Forty-fifth Session, 1923-1924. Pp. ii+272. (London: Williams and Norgate.) 25s. net.
University Correspondence College. London University Guide and University Correspondence College Calendar, 1924-1925. Pp. 204. (Cambridge: Burlington House; London: 34 Red Lion Square, W.C.1.) Gratis.
A Catalogue of Scientific Periodicals in Canadian Libraries. Prepared by Dr. Gerhard R. Lomer and Margaret S. Mackay. Pp. xx+255. (Montreal: McGill University.)

Diary of Societies.

MONDAY, SEPTEMBER 15.

CONFERENCE OF ENGINEERING SOCIETIES (at the British Empire Exhibition), at 10.30.—Miss C. Griff: The Working of Stainless Steel.—A. R. Page: Co-operation between the Works Chemist and the Engineer.—T. G. Hunter: Ceylon Plumbago—Its Uses and High Qualities.—A. S. E. Ackermann: Technical Popular Fallacies.

TUESDAY, SEPTEMBER 16.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—Dr. C. W. Saleeby: Light and Life.

THURSDAY, SEPTEMBER 18.

CERAMIC SOCIETY (Refractory Materials Section) (at the British Empire Exhibition).—T. W. Barley: A Comparison of Gas and Coke Fired Drying Stoves, together with a Description of the Construction and Operation of the Hütteneis Coke-Fired Air-Blown Furnace.—Prof. J. W. Cobb and H. S. Houldsworth: Some Properties of Clay Silimanite Mixtures.—W. Hugill and W. J. Rees: The Influence of Exposure on the Chemical and Physical Properties of Certain Fireclays.—W. Vernadsky: The Action of Heat on Kaolinite and Kaolinic Clays.—W. J. Rees: Alumina-Silica Minerals in Firebricks.—Dr. J. W. Mellor and A. Scott: The Action of Heat on Kaolinite and other Clays, Part II.—A. Scott: The Origin of the Austrian Magnesite Deposits.—A. Hadding: X-ray Investigation of Clays and other Ceramic Substances: Researches into the Application and Practical Value of the Method.—W. J. Rees: Note on the Storage of Silica Refractories.—W. J. Rees: The True Specific Gravity and After Expansion of Lime-bonded Silica Bricks.—W. Hugill and W. J. Rees: A Rapid Method for the Determination of True (or Powder) Specific Gravity.

FRIDAY, SEPTEMBER 19.

CERAMIC SOCIETY (Refractory Materials Section) (at the British Empire Exhibition).—(For Papers to be communicated see above.)
ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—Red Book Night (Affiliation of Photographic Societies with the Royal Photographic Society). The slides selected from the Affiliation lantern slide competition will be shown on the screen, and a criticism on the slides will be made by S. L. Coulthurst.