ACADEMIES AND SOCIETIES.

Indian Academy of Sciences:

December 1937. SECTION A.—K. L. RAMASWAMY: *Dielectric Polarisation and the Form of the Carbon Dioxide Molecule.*—There is no change in the polarisation over the range 20° to 210° C., indicating that the gas is non-polar and that there is no change in the shape of the molecule at 145° C. as postulated by Ibbs and Wakemann. M. K. THOMAS AND D. C. MANDEVILLE: *The Electrical Conductivity of Potassium Chloride in Methyl Alcohol-Water Mixtures.*—The conductivity decreases on addition of alcohol to a minimum at 70–80 per cent., and when the conductivity is plotted against $\sqrt{c}$ for any mixture, maxima and minima are obtained. The latter is explained on the basis of solvation in steps. K. SATYANARAYANA MURTY, P. SURYAPRAKASA RAO AND T. R. SESHADRI: *Geometrical Inversion in the Acids derived from the Coumarins. Part VI. The Behaviour of the Acids Derived from 4-Methyl-Coumarins.*—The acids and their ethers derived from 4-methyl-coumarins are *trans*-compounds. The ready formation of the acids and their reconversion to coumarins are due to the tautomeric mechanism which renders the geometric inversion very facile. R. K. ASUNDI AND S. MUJTABA KARIM: *On the Emission Spectrum of* CCl_4. D. S. SUBBARAMAIYA: *Diffraction of Light by Ripples on Liquid Surfaces. Part I.* By employing the diffraction method, a quantitative study has been made of the damping of progressive ripples on the surface, and also of the damping of ripples due to surface contaminations. The distribution of intensity in the spectra is a function of the amplitude of the ripples, the problem being similar to the one discussed by Raman and Nath in their paper entitled "Diffraction of Light by High Frequency Sound Waves". BAWA KARTAR SINGH AND BHUTNATH BHADURI: *Studies on the Dependence of Optical Rotatory Power on Chemical Constitution. Part XV.—Chloroaryl Derivatives of Stereoisomeric Methylenecamphors.*

SECTION B.—C. BHASHYAKARLA RAO: *The Myxophyceæ of the United Provinces, India—III.*—Deals with algæ, hitherto unrecorded, collected from Benares and its environs from 1934 onwards. One hundred and five forms, representing twenty-five genera and out of these, two species, sixteen varieties and twenty-seven forms are new. M. V. KOTASTHANE AND N. NARAYANA: *The Proteins of Groundnut (Peanut)* Arachis hypogæa, *Linn.*—A detailed chemical analysis of the proteins of groundnut is reported. A comparison of the amino-acid made up of the globulins of groundnuts and the total proteins of soyabean indicates that the nutritive value of the proteins of groundnut is superior to that of soyabean. C. R. NARAYAN RAO: *On Some New Forms of Batrachia from S. India.*—The distribution, mode of occurrence and general habits of the anuran fauna, collected from selected types of localities marked by distinctive physical features in South India, have been recorded. (MISS) CHINNA-VIRKKI: *On the Occurrence of Winged Spores in the Lower Gondwana Rocks of India and Australia.*—The two winged spores show a striking resemblance to Prof. Seward's *Pityosporites antarcticus*, and as was suspected by him in the case of his specimens, most probably belong to the pollen grain of *Glossopteris.*

National Academy of Sciences, India:

December 18, 1937.—K. B. MATHUR: *Ionization in the F-layer before sunrise.* A. B. SEN: *Action of Para-toluene-sulphonic chloride on Phenols containing azo groups.*

Indian Chemical Society:

September 1937.—J. C. GHOSH, T. BANERJEE AND S. K. MUKHERJEE: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part I.—Tungstic Acid, Molybdic Acid, Chromic Tungstate, etc., as Photo-active Reagents. Optical properties of these Sols; Circular Dichroism in the Ultra-violet.* J. C. GHOSH, T. BANERJEE, S. K. BHATTACHARYA AND S. K. DAS GUPTA: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part II.—Photochemical Reduction of Tungstic Acid Sol by Glucose, Lævulose, Formaldehyde, Lactic Acid, Sodium Hypophosphite, Leucine and Glutamic Acid.* J. C. GHOSH, T. BANERJEE AND MD. SURAT ALI KHAN: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part III.—On the effect of pH on the Photoreduction of Tungstic Acid Sol in Unpolarised Light.* J. C. GHOSH, T. BANERJEE, K. M. BHATTACHARYA AND MD. SURAT ALI KHAN: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part IV.—Photochemical Reduction of Molybdic Acid Sol by Glucose, Formaldehyde, Ethyl Alcohol, Sodium Hypophosphite, Leucine, Glutamic Acid and α-Alanine.* J. C. GHOSH, T. BANERJEE AND MD. SURAT ALI KHAN: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part V.—On the effect of pH on the Photoreduction of Molybdic Acid Sol in Unpolarised Light.* J. C. GHOSH, T. BANERJEE AND S. K. BHATTACHARJEE: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part VI.—Photochemical Reduction of Vanadic Acid Sol with Ethyl Alcohol in Acid Medium.* J. C. GHOSH, T. BANERJEE AND J. C. BOSE: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part VII.—Photochemical Reduction of Uranic Acid Sol by Sodium Tartarate.* M. L. KUNDU, S. S. DE AND B. N. GHOSH: *Enzymes in Snake-venom. Part III.—Effect of Temperature and Chemicals on their Activity.* NIHAR KUMAR DUTT: *A Note on the two Different Modifications of Cobalt Quinaldinate.*

October 1937.—TARAPADA BANERJEE AND J. C. GHOSH: *Photochemical reaction with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part VIII.—On the Internal Filter Action of Reduced Tungstic Acid and Molybdic Acid Sols.* J. C. GHOSH, T. BANERJEE, S. K. NANDY AND N. GUPTA: *Photochemical Reaction with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part IX.—The Photochemical Oxidation of Alcohol and Glucose by Iodine in Acid Medium with Tungstic Acid Sol as Photosensitiser.* J. C. GHOSH, T. BANERJEE AND S. K. BHATTACHARJEE: *Photochemical Reaction with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part X.—On the Photochemical Oxidation of Glucose by Potassium indigo-tetrasulphonate with Tungstic Acid Sol as Photo-catalyst.* J. C. GHOSH, T. BANERJEE AND J. C. BOSE: *Photochemical Reactions with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part XI.—The Photochemical Oxidation of Glucose by Methylene Blue with Uranic Acid Sol as Photosensitiser.* T. BANERJEE, S. K. BHATTACHARJEE AND N. MUKHERJEE: *Photochemical Reaction with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part XII.—The Photochemical Oxidation of Glucose and Lævulose by Methylene Blue with Ferric Hydroxide Sol as the Photosensitiser.* TARAPADA BANERJEE: *Photochemical Reaction with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part XIII.—Influence of State of Polarisation of Light on the Velocity of Photo-Oxidation of Organic Substances by Hydrogen Peroxide with Colloids as Photosensitisers.* J. C. GHOSH AND T. BANERJEE: *Photochemical Reaction with some Inorganic Colloids as Active Agents under the Influence of Light in various States of Polarisation. Part XIV.—Influence of Circularly Polarised Light on Photochemical Reactions with pre-excited Colloids as Photosensitisers.* K. GANAPATHI: *Synthesis in the Alloxazine,* iso-*Alloxazine (Flavin) and Lumazine Groups. Part I.—Synthesis of* 6- *or* 7-*Phenol and* 6 : 7-*Diphenyllumazines.* J. K. CHOUDHURY AND M. A. SABOOR: *Oxidation of Hydrocarbons in the Vapour Phase. Part I.—Aromatic Hydrocarbons.* J. K. CHOUDHURY AND M. A. SABOOR: *Oxidation of Hydrocarbons in the Vapour Phase. Part II.—Hydroaromatic Hydrocarbons.*

Indian Botanical Society:

December 1937.—F. BOERGESEN: *Contributions to South Indian Marine Algal Flora—Part II.* S. N. DAS GUPTA: *On the culture behaviour of a species of* Rosellinia. *Part I.—Inhibitory effect of certain chemicals on the production of perithecia.*

Association of Economic Biologists, Coimbatore:

November 15, 1937.—P. VENKATARAMIAH AND C. RAGHAVENDRACHAR: *The Colour of Black Soils—The Influence of Organic Matter.*—The examination of a number of black soil profiles, leads to the conclusion that the dark colour of the soil is due to the association of organic matter with a clay having a high SiO_2/R_2O_3 ratio and a Ca and Mg silicate complex which gives a darker colour to an already grey soil. T. V. RANGASWAMI: *Absorption of Soil Moisture during Germination in Cotton Seed.*—Different varieties of cotton seeds were examined. It was observed that water enters the embryo through the seed-coat in addition to the micropyle, during germination.

December 1, 1937.—P. D. KARUNAKAR, M. SANYASI RAJU, R. RAJAGOPALAN AND M. SUNDARAM: *Investigations on the Decomposition of Molasses under Paddy Soil Conditions.*—The death of paddy seedlings when transplanted soon after the application of molasses to paddy soils, is due to (1) Displacement of oxygen by CO_2, H and methane evolved in considerable quantities and (2) Production of organic acids and the dissolution effect they may have had on minerals. These effects pass off after about two weeks.

December 22, 1937.—C. R. SREENIVASA AYYANGAR AND S. RAMANUJAM: *Induction of Somatic Mutations as a Method of Crop Improvement in Rice.*—The cause of the occurrence of the mutations and the method employed for artificially producing them and their importance in practical breeding are discussed. V. RAMANATHA AYYAR: *India and the Present Cotton Situation.—A General discourse.*

Errata.

Vol. VI, No. 3, September 1937.

Review entitled "Lectures on College Algebra":

Page 121, Column 1—(1) line 22, *for* 'then' *read* 'them'; (2) line 36, *omit* the repeated portion, *viz.*, "into the fabric of which are oven the tissues"; and (3) line 39, *for* "Choherent" *read* "Coherent".

Vol. VI, No. 5, November 1937.

(1) Contribution entitled "The Thermodynamics of Duststorms":

Page 209, Column 1, last line, and Column 2, first line *for* "following table gives the monthly frequencies of duststorms brought out by this analysis" *read* "following table gives the monthly distribution of these 152 duststorms as brought out by this analysis".

(2) Contribution entitled "Diagonsis of Colour Defect":

Page 252, Column 2, line 3, *for* "field" *read* "first".

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