

ACADEMIES AND SOCIETIES

Indian Academy of Sciences: (Proceedings)

September 1941. SECTION A.—SIR C. V. RAMAN, V. S. RAJAGOPALAN AND T. M. K. NEDUNGADI: *Conical refraction in naphthalene crystals*. The angles of internal and external conical refraction for naphthalene are exceptionally large ($13^{\circ} 45'$) and the substance is well suited for exhibiting these phenomena as well as for a critical study of same. The so-called Poggendorff circle appears only in internal conical refraction and is an ultra-focal phenomenon. SIR C. V. RAMAN: *New methods in the study of light scattering. Part I. Basic ideas*. A method is described, based upon the use of a Nicol for polarising the incident beam in any desired azimuth, and of a Babinet compensator for observing the transversely scattered light which enables the Krishnan effect to be very conveniently studied. T. A. S. BALAKRISHNAN: *New methods in the study of light scattering. Part II. Pure liquids*. Using a Babinet compensator with an analysing nicol oriented so as to transmit vibrations in the plane of observation, the author has established the presence of a feeble partial polarisation in the scattered light. T. M. K. NEDUNGADI: *Studies on the Raman effect in single crystals of potassium nitrate*. New lattice vibrations at 100, 126 and 143 are recorded. These disappear just below the transition temperature of 129°C . There is no conspicuous change in the internal oscillation frequency shifts due to change of state. T. A. S. BALAKRISHNAN: *Effect of crystal orientation on the Raman spectrum of barytes*. None of the three orientations of the crystal gives the complete Raman spectrum, some of the components vanishing in particular orientations, while the intensities of the others vary. P. SURYAPRAKASA RAO AND T. R. SESHADRI: *Constitution of cannabiscitrin*. Cannabiscitrin is a monoglucoside of the flavanol cannabiscetin, carrying the sugar group in the side phenyl nucleus in the 3'-position. S. V. ANANTAKRISHNAN AND S. KRISHNAMURTI: *Kinetic studies in ester hydrolysis. Part I. The hydrolysis of halogeno-aliphatic esters*. S. V. ANANTAKRISHNAN AND S. KRISHNAMURTI: *Kinetic studies in ester hydrolysis. Part II. The influence of solvent on the reaction*. P. SURYAPRAKASA RAO AND T. R. SESHADRI: *Isolation and constitution of quercetagitritin, a glucoside of quercetagetin*. T. R. SESHADRI AND V. VENKATESWARLU: *Nuclear methylation of β -resorcylic aldehyde*. K. NEELAKANTAM AND L. RAMACHANDRA ROW: *The constitutional features of anthoxanthins in relation to the morin reaction in analytical chemistry. Part I. Some naturally occurring hydroxy-flavonols and flavonones*. SAHIB RAM MANDAN: *A relation between a pencil and a range of quadrics*.

SECTION B.—BHOLA NATH SINGH: *The growth of the sugarcane plant in India, Part I.*

Age-fertiliser effects on the physiology and chemistry of sugarcane. SYED IMDAD HASSAN: *The shell and the mechanism of its closure in the Indian pond terrapin, *Lissemys punctata punctata* (Bonnaterre)*. VIJAY PRATAP SINGH: *On a collection of algæ from the Chamba State, Panjab—I*. VIJAY PRATAP SINGH: *The chlorophyceæ of the Benares district, India—I*. T. C. SARKAR: *The alteration of radioactive minerals*. G. W. CHIPLONKER: *Ammonites from the Bagh beds*. RUSTOM JAL VAKIL: *An analysis of two hundred normal electrocardiograms*. P. KRISHNA RAO: *Infantile cirrhosis of the liver*. G. D. BHALERAO: *Subulura minetti n. sp. (Nematoda from an Indian fowl)*.

Indian Association for the Cultivation of Science: (Proceedings)

June 1941.—(MISS) CHANDRAKANTA: *Measurement of acoustical impedances*. G. R. PARANJPE AND D. J. DAVAR: *Determination of dipole moment in solution*. N. RAJESWARA RAO: *Electrolytic dissociation in Nitric acid as studied by Raman effect*. D. S. SUBRAHMANYAM: *Friction between a liquid surface and a solid not wetted by it*. N. R. SEN: *On a theoretical estimate of an upper limit of Stellar diameter*. N. R. SEN: *On some thermodynamic properties of a mixture of gas and radiation*. J. G. BECKERLEY: *The calculation of $\arg \Gamma(ia + i)$* . H. BOSE AND B. B. RAY: *Allotropies of tellurium by X-ray diffraction method*.

August 1941.—S. M. KERAWALA: *A rapid method for calculating the least squares solution of a polynomial of degree not exceeding the fifth*. H. BOSE: *Investigation of tellurium and arsenic sulphide in the colloidal state*. CHAMAN LAL: *Measurement of the angle of incidence at the ground of downcoming short-waves from the ionosphere*. B. SWAMINATHAN: *The short wave condenser field*.

Indian Chemical Society: (Journal)

July 1941.—A. L. SUNDARA RAO: *Studies in hydrogen bond formation. Part I. Amides*. S. S. BHATNAGAR, N. A. YAJNIK, P. L. KAPUR AND ANAND SWARUP BHATNAGAR: *Magnetism and catalysis. Part III. Chlorination of chloroform to carbon tetrachloride in presence of Ferric chloride*. R. K. BAHL AND MANOHAR LAL: *The action of chlorine on the hydrides of iron and chromium in the presence of iodine*. G. GOPALARAO AND CH. I. VARADANAM: *Photosensitisation of solids. Part III. Photosensitised oxidation of ammonia in aqueous solution with colloidal titania as the photosensitiser*. S. S. BHATNAGAR, P. L. KAPUR, ANAND SWARUP BHATNAGAR AND BRAHM PRAKASH: *Magnetism and catalysis. Part IV. Catalysis of the reaction between ammonium oxalate and mercuric chloride by ferric ions*. JYOTIRMOY DAS-GUPTA: *micro-analytical method for the estimation of ferrous and ferric iron in minerals*. JYOTIRMOY

DAS-GUPTA: Microchemical investigations on spotted muscovite mica. P. V. KRISHNAMURTHY: Complex formation by ascorbic acid with formaldehyde.

Indian Botanical Society: (Journal)

October 1941.—P. MAHESHWARI: Recent work on the types of embryo-sacs in Angiosperms—A critical review. V. PURI: The life-history of *Moringa oleifera* Lamk. GHAS-UD-DIN AHMAD: The growth of *Azolla filiculoides* in mineral solution without addition of 'Auximone'. M. J. THIRUMALACHAR: *Hapalophragmium ponderosum* Syd. on *Acacia leucophlæa* Willd. B. G. L. SWAMY: Contributions to the life-history of *Bignonia megapatomica*. T. S. RAGHAVAN AND A. R. SRINIVASAN: Cytogenetical studies in *nicotiana*. T. S. RAGHAVAN AND K. RANGASWAMY: Studies in the Rubiaceæ. K. N. SESHAGIRIAH: Morphological studies in Orchida-seæ. I. *Zeuxine sulcata* Lindley.

Geological, Mining and Metallurgical Society of India: (Journal)

The latest issue of the *Quarterly Journal of the Geological, Mining and Metallurgical Society of India* (Vol. XII, No. 4) contains a short paper by Mr. K. L. Bhola on Fuller's Earth deposits of Jodhpur State, Rajaputana. After giving a brief account of the geology of the area in which these deposits are found, the paper proceeds to give a description of the different deposits, together with the results of the tests conducted on the suitability of this material for various purposes—from which it appears that the quality is fairly satisfactory.

Mining, Geological and Metallurgical Institute of India: (Transactions)

The recent number of the *Transactions of the Mining, Geological and Metallurgical Institute of India* (Vol. 36, Pt. 2) contains a report of the contribution by Dr. S. K. Roy to the Discussion on Mr. Hobson's paper on "The development of the mineral deposit at Mawchi as determined by its geology and genesis" read some time back before the Society. In the course of his observations, Dr. Roy offers an explanation of the fact that the tinstone veins pinch out at the approach of the limestone on the basis of the experimental work by Dubrée and Gay Lussac. He also refers to the view of Mr. Hobson that the Mawchi ores were not formed under conditions of slowly falling temperature but under conditions of rapidly decreasing pressure and points out that this is not quite in agreement with observations made by Niggli based on his and Smits' experiments in Carnegie Institute.

The *Journal* also contains a valuable paper by Mr. James Lomax on "Some aspects of Surveying in Indian Coal Mines", at the end of which there is also a full Report of the Discussion on this subject in which Messrs. W. Kirsby, K. B. Swami, C. Forrester, J. K. Dholakia, H. K. Nag and others have taken part.

Meteorological Office Colloquium, Poona:

September 9, 1941.—J. M. SIL: Some aspects of fluid flow and fluid resistance.

September 16, 1941.—S. MAL: The structure and movement of western disturbances.

September 24, 1941.—B. N. DESAI: Frontal analysis of two winter depressions of North-west India.