

- "Indian Forest Records," Vol. 6, No. 4.
 "Transactions of the Faraday Society," Vol. 36, No. 232.
 "Indian Farming," Vol. 1, No. 9.
 "Transactions of the Geological, Mining and Metallurgical Society of India," Vol. 12, No. 2.
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 "Review of Applied Mycology," Vol. 19, Pt. 7.
 "The Mathematics Student," Vol. 8, No. 2.
 "The Bulletin of the American Meteorological Society," Vol. 21, No. 6.
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ACADEMIES AND SOCIETIES

Indian Academy of Sciences: (*Proceedings*)

September 1940. SECTION A.—MATA PRASAD AND K. V. MODAK: *Measurement of opacity during the coagulation of the concentrated sols of zirconium and stannic hydroxides and the gelation of stannic phosphate and zirconium hydroxide gel-forming mixtures.*—The results fail to show any distinct differences between the processes of coagulation and gelation. GURDAS RAM AND V. I. VAIDHIANATHAN: *Pressure under a flush floor with inclined sheet piles.* B. K. MALAVIYA AND SIKHIBHUSHAN DUTT: *Chemical examination of the essential oils derived from Anethum soa Roxb. oil from the green herb and the seeds.* S. A. SETLUR AND V. V. NADKARNY: *Action of phosphorus halides and thionyl chloride on benzoic acid. α -Chlorodiphenylacetic acid is formed in good yields.* D. C. MIDHA: *A note on the negative pressure and moisture content of a Punjab soil.* K. GANAPATHI: *Chemotherapy of bacterial infections—Part III. Synthesis of (N¹)-amino-substituted heterocyclic derivatives of sulphanilamide.*—For pronounced anti-bacterial action the heterocyclic ring should be substituted in the sulphonamide radical leaving a free amino group, which appears to play some significant role in the mechanism of therapeutic action. T. VIJAYARAGHAVAN: *The general rational solution of some diophantine equations of the form*

$$\sum_{r=1}^{k+1} A_r x^r = 0.$$

S. V. ANANTAKRISHNAN AND R. VENKATARAMAN: *The kinetics of the olefin-bromine reaction—Part I. The dark reaction in acetic acid solution—Part II. The critical increment of the reaction in acetic acid.*—The course of the reaction clearly indicates a chain mechanism. B. D. SAKSENA: *Raman spectra and hydroxyl frequencies of some fatty acids.* Formic, acetic,

dichloroacetic and trichloroacetic acids have been studied. B. D. SAKSENA: *The Raman spectra and the molecular structure of some aliphatic cyclic compounds. (Cyclohexane, cyclohexanol, cyclohexanone, dioxane and paraldehyde).*—The ring frequencies for the *trans*-model (symmetry S_{6u}) of cyclohexane have been worked out, and the polarisation and the Raman effect data of different compounds have been analysed in relation to their molecular structures. S. BHAGAVANTAM AND J. BHIMASENACHAR: *Modified reflection of x-rays by crystals: Calcite.*

September 1940. SECTION B.—KHAN A. RAHMAN: *Important insect predators of India.* B. S. CHAUHAN: *Two new species of avian trematodes.* BRAHMA SWARUP KAUSHIVA: *The arterial system of the pond-turtle, Lissemys punctata (Bonnaterre).*

Indian Association for the Cultivation of Science (*Proceedings*):

June 1940.—HARIDAS BAGCHI: *Geometrical note on van der Waal's equation.* R. L. NARASIMHAIA AND C. S. DORAISWAMI: *A new technique for determining ultra-sonic velocities in liquids.* A. K. DAS AND M. SALARUDDIN: *Measurement of cosmic rays at Agra and Kodaikanal.* A. L. SUNDARA RAO: *Raman spectra of sugar.* S. R. KHASTGIR AND C. CHOWDHURY: *On the dielectric constant of an electronic medium at medium frequency.* K. BANERJEE AND M. GANGULY: *Determination of the structure of m-dinitrobenzene by Patterson Fourier Summation.* G. N. BHATTACHARYA: *A note on the refractive index of shellac.* M. KAMESHWAR RAO: *High-frequency measurements of the amplification factor and internal resistance of a thermionic valve.*

Indian Chemical Society (Journal):

June 1940.—S. S. BHATNAGAR, A. N. KAPUR AND M. S. BHATNAGAR: Adsorptive properties of synthetic resins—Part IV. MATA PRASAD AND M. A. NAQVI: Heterogeneous reaction between chromic sulphate and manganese dioxide. SANTI RANJAN PALIT: A new method of preparing hydrosols of shellac and other natural resins and their properties. M. S. TELANG AND V. V. NADKARNY: Kinetics of the reaction between potassium persulphate and alkyl iodides—Part III.—Catalytic activity of a weak acid. HIRALAL SHRIVASTAVA: Kinetics of the saponification of esters in dilute solutions. A study of the effect of substitution on the rate-determining factors. R. K. BAHL AND MANOHAR LAL: The interaction between potassium metaperiodate and the soluble salts of metals of alkaline earths. R. K. BAHL AND SURJIT SINGH: The action of chlorine on the hydroxides of alkaline earths in the presence of iodine—Part II. K. N. GAIND, JNANENDRA NATH RAY AND JAYANT N. YAGNIK: Synthesis of local anaesthetics—Part IV. G. C. ESH AND S. S. GUHA-SIRCAR: An investigation on the soil and peat humic acids—Part II. Oxidation with hydrogen peroxide, hot alkali and chlorine dioxide solution. BHUPAL CHANDRA RAI-SIRCAR: Estimation of carotene in green vegetables by the Hilger-sector photometer. HAYAWADAN VAMANRAO DHARWARKAR AND RUPCHAND LILARAM ALIMCHANDANI: Reactivity of $\text{CHCl}_2\text{CCl}_3$ -group attached to an aromatic nucleus.

July 1940.—D. K. BANERJEE: Synthetic investigations on the degradation products of bile acids, sex hormones, etc.—Part I. A synthesis of 7-methyl-0:3:3-bicyclooctane-1-one. P. S. MACMOHAN AND BIJAN BIHARI LAL: Photochemical after-effect in the oxalate-iodine reaction. R. K. BAHL AND SURJIT SINGH: The ternary system, potassium nitrate, ammonium nitrate and water at 25°. G. V. SHIROLKAR, I. S. UPPAL AND K. VENKATARAMAN: The Sulphonation of monoethylaniline. B. K. NANDI: Chemotherapy of Malaria. 6-Methoxyquinoline-8-hydrazine and synthesis of some heterocyclic compounds from it. D. K. BANERJEE: Synthetic investigations on the degradation products of bile acids, sex hormones, etc.—Part II. A synthesis of keto-deoxyoestrone acid. SACHCHIDANANDA BANERJEE: The stability and state of ascorbic acid in urine. A. C. MAJUMDAR: Observations

on the anterior pituitary-like gonadotropic hormone from the human urine of pregnancy—Part I. HANS KRALL AND VIDYA SAGAR: The phenylthiocarbamides. A contribution to the study of the triad-N-C-S—Part IX. Thio-benzamide.

Society of Biological Chemists, India

(Bangalore Branch)

May 21.—G. NARASIMHAMURTHY: Variation of butter constants due to ageing.

June 19.—MAHDI HASSAN: Pigment-producing bacteria.

August 24.—K. C. SEN: The Live-stock industry in India.

September 28.—S. L. VENKITESWARAN: Enzymic estimation of tyrosine. P. L. N. RAO: Sulphanilamide derivatives. G. B. RAMASARMA AND B. N. BANERJEE: Some factors affecting the vitamin content of mango fruit.

Tin and Its Uses

The sixth issue of this Quarterly Review of the International Tin Research and Development Council, contains an illustrated article (page 4), describing a special tinning machine designed to produce more uniform and less porous tin coatings on tinplate. This machine embodies certain new features which are not yet employed in industrial practice, one of which is a device for securing a smooth drive for the rollers.

Another article (page 6) which is of particular interest at the present time, explains the uses of fusible alloys for the mounting of dies and punches for press-tool work, for foundry work and for bending tubes and sections.

An article (on page 11) entitled "Fluxes for Soldering" gives important information regarding the types of flux available and the uses to which each type is suited. Further details are given in this issue as to the best methods of ensuring adhesion of bearing metals to bearing shells of cast-iron and alloy steel.

Other articles give examples of technical difficulties encountered by tin consumers and of the Council's suggestions for overcoming them; this service of technical advice is available to any firm engaged on processes in which tin is involved.

ERRATUM

Vol 9, No. 9, September 1940: Supplement:

Article entitled "His Highness Maharaja Sri Jaya Chamaraja Wadiyar Bahadur," p. ii,

column 2, third line, for "reigns" read "reins".