on the methods of preparation, physical and chemical properties, derivatives, references to Beilstein, and the complete literature on the compounds which has been brought up to 1947 as far as possible. The literature on the chemical reactions characteristic of the individual organic chlorine compounds is not only a record of known facts, but indicates in some cases the possibilities for future developments.

Considering the price of the book ($27·50) it must be regarded as one for reference libraries rather than for personal possession. When judged as a reference book the value of the book is limited in view of the incompleteness of the compilation. Some omissions which were noticed are 1 : 4 : 5 : 8-tetrachloroanthraquinone, the chlorohydroxy-anthraquinones (including 3-chloroalizarin) and the chlorobenzanthrones. D.D.T. is mentioned by this name, but not Gammexane. The author has, however, made it clear that the book is not to be regarded as a substitute for Beilstein, and that the compounds have been selected on the basis of their importance—a heavy responsibility to undertake, since the importance of a compound must depend on one's personal interests. 1 : 4 : 5 : 8-Tetrachloroanthraquinone for instance is a very important dyestuff intermediate.

Classification of organic compounds on the basis of physical properties such as the m.p. or the b.p., as followed in this book, is of doubtful advantage; and leads to considerable repetition of information regarding compounds which are on the borderline between solids and liquids. It is not often that an organic chemist starts wading through literature for compounds with a given m.p. or b.p., although such a search may prove fruitful in some cases. If the organic chlorine compounds had been classified in the manner of Beilstein, based on rational chemical relationships, the trouble of compiling several indexes, in order to facilitate the location of individual compounds in the book, might have been saved. While the formula, chemical type and alphabetical indexes are valuable, the indexes of empirical formulæ according to percentage chlorine and to M.W. are less useful.

Since chlorine and the other halogens do not form part of ring systems, chlorine containing compounds can only be considered as derived from fundamental hydrocarbons or heterocyclic systems. If a separate classification is made, one which includes all the halogens would have been of more value than the compilation of chlorine containing organic compounds alone. While the basis of the arrangement of the organic chlorine compounds is open to criticism, the information on the chlorine compounds included in the book is very exhaustive and of immense assistance to research workers.

K. VENKATARAMAN.

SCIENCE NOTES AND NEWS

Draft Indian Standards for Refractories

The Engineering Division Council of the ISI has brought out three Draft Indian Standards on Fireclay Refractories. They are concerned with Moderate Heat Duty Fireclay Refractories, Group 'A'; Moderate Heat Duty Fireclay Refractories, Group 'B'; and High Heat Duty Fireclay Refractories. These have been prepared by an expert Sectional Committee composed of representatives of manufacturers and consumers of refractories in India. The Committee is headed by Dr. H. K. Mitra of the Tata Iron & Steel Co. Ltd., Jamshedpur.

The drafts on refractories consist of standard specifications for different types of refractories produced in India and the methods for chemical analysis, the determination of pyrometric cone equivalent; under load for ful size bricks as well as for sections of bricks, the porosity, and the determination of resistance to spalling.

The object of the specifications and tests is to provide an agreed method of evaluation of the three different types of refractories.

In accordance with the procedure of the Indian Standards Institution, every draft specification or code prepared by a Sectional Committee or Sub-Committee, after its approval by the Sectional Committee, is to be issued in proof form for a period to be determined by the Committee but not less that three months and widely circulated amongse those likely to be interested, for the purposn of securing critical review and suggestions for improvement. Comments received from all quarters shall be given due consideration by the Section 1 Committee; and the revised final draft will then be put up to the Engineering Division Council for endorsement. Before being finally accepted as an Indian Standard it must be approved by the Executive Committee and the General Council of the Institution.

These drafts on Fireclay refractories have been widely circulated to industrialists and technologists in the field. Comments will be received till 29 February 1949, by the Director, Indian Standards Institution, 'P' Block, Raisina Road, New Delhi.

Unified Screw Thread System

An important step towards the standardisation of mechanical products made by Britain, Canada and the U.S.A. is an agreement which has just been reached between these three countries to standardise screw thread.

This means that machine parts of British or American manufacture will be interchangeable, an impossibility for many years because hitherto the angle of threads of screws, bolts and nuts differed by five degrees.

The common standard agreed to now will be known as the Unified Screw Thread system and the agreement as completed will establish several classes of screw threads with compromise dimensions.

The pact will greatly facilitate the sale and maintenance of mechanical products among the three countries since the replacement of parts for imported motor-cars, washing machines and hundreds of other items can be made in the buyer's own country.

German Publications

Anyone wishing to purchase books published in Germany may do so by placing his order through any bookseller, who may then apply directly to the publisher in Germany. The transaction is administered through the Joint Export and Import Agency of Military Government and payment can be made in the currency of the country in which the original order is placed. The delay in obtaining the book may be a matter of some weeks, or, of course, considerably longer if the publisher has not previously obtained a licence for export from the Joint Export and Import Agency. However, many publishers who foresee a demand outside Germany for a particular book will have obtained the required licence soon after the appearance of the book in Germany. *(By courtesy of the Principal Scientific Officer, Unesco, Delhi.)*

Indian Institute of Chemical Engineers

The First Annual General Meeting of the Indian Institute of Chemical Engineers was held on 1st and 2nd January, 1949 under the auspices of the Indian Science Congress at Allahabad.

Technical papers on six different chemical engineering problems were read by leading chemical engineers from Bombay, Calcutta, Madras, Delhi, Dhanbad and Waltair. The meeting also conducted a symposium on Chemical Engineering education.

Indian Phytopathological Society

At the second Annual General Meeting of the Society held on January 2, 1949 at Allahabad, the following office-bearers of the Society were elected: President: Dr. S. R. Bose, Vice-President Dr. R. S. Vasudeva. Councillors: Northern Zone—Dr. R. Prasada, Mid-Eastern Zone—Dr. K. C. Mehta Eastern Zone—Mr. S. Y. Padmanabhan, Central Zone (general)—Dr. M. J. Thirumalachar, Western Zone—Dr. M. K. Patel, Southern Zone—Mr. K. M. Thomos. Dr. B. B. Mundkur continues as the Secretary-Treasurer.

Lady Tata Memorial Trust

The Trustees of the Lady Tata Memorial Trust are offering six scholarships of Rs. 250/- each per month for the year 1949-50 commencing from 1st July 1949. Applicants must be of Indian nationality and Graduates in Medicine or Science of a recognised University. The scholarships are tenable in India only and the holders must undertake to work whole-time under the direction of the head of a recognised research Institute or Laboratory on a subject of scientific investigation that must have a bearing either directly or indirectly on the alleviation of human suffering from disease. Candidates can obtain these instructions and other information they desire from the Secretary of the above Trust, Bombay House, Bruce Street, Fort, Bombay 1.

Elliott Prize for Scientific Research

In accordance with the Government of Bengal Notification No. 112T Edn., dated 5-5-1917, the Elliott Prize for 1949 for Scientific Research in chemistry will be awarded to the author of the best paper giving the results of original research carried out by the candidate in Chemistry and published during the years 1945-48 inclusive.

Any native of Bengal, Bihar or Orissa or any Anglo-Indian or domiciled European, residing in Bengal, Bihar or Orissa, may compete for the prize.

The reprints of papers (and not manuscripts) must reach the President of the Royal Asiatic Society of Bengal, 1, Park Street, Calcutta, by the end of June, 1949. The prize will be awarded publicly at the the Annual General Meeting of the Royal Asiatic Society of Bengal in February, 1950. Preference will be given to researches leading to discoveries likely to develop the industrial resources of Bengal, Bihar or Orissa.

The prize may be in cash or partly in the form of a gold medal and partly in cash. In the event of no essay being deemed of sufficient merit, no prize will be awarded.

The prizes for the next four years will be offered as follows:—

(*i*) 1950 — Physics — papers to be submitted by the end of June, 1950.

(*ii*) 1951 — Geology and Biology (including Pathology and Physiology) — by the end of June, 1951.

(*iii*) 1952 — Mathematics — by the end of June, 1952.

(*iv*) 1953 — Chemistry — by the end of June, 1953.

All papers for competition must have been published during the four calendar years immediately preceding the year for which the prize is awarded.

Unesco Fellowship

Professor D. D. Kosambi of the Tata Institute of Fundamental Research of Bombay, has been given a UNESCO fellowship to work on the new types of electronic calculating machines, for setting up a modern calculating laboratoy in Asia.

Kosambi has been invited as a visiting Professor by Chicago University. He will also visit the Institute for Advanced Study at Princeton and serve on a committee of mathematicians to select the recipients of Field Medals which will be awarded at the forthcoming International Congress of Mathematicians (Massachusetts).

[illegible] 19th February 1949. All arrangements in connection with the visit are being made by the Department of Scientific Research.

[illegible] Dr. S. Krishna, C.I.E., Ph.D., D.Sc., F.I.C., F.N.I., Director, Forest Products Research, [illegible] Research Institute, Dehra Dun. [illegible]

[illegible] Lt.-Col. M. L. Ahuja, M.B., Ch.B., M.D., [illegible] Director, Central Research Station, [illegible] Mandi.

[illegible] Dr. B. P. Pal, M.Sc., Ph.D., F.L.S., F.N.I., [illegible] Indian Agricultural Research [illegible] New Delhi (Member).

[illegible] Dr. K. P. Sandal, M.Sc., F.G.S., F.N.I., [illegible] Geological Survey of India, [illegible]

[illegible] Dr. K. N. [illegible] D.Sc., F.N.I., Assistant [illegible] Physical Laboratory, New [illegible]

[illegible] will tour Australia and [illegible] research organisations and [illegible] are of particular [illegible] of them. The visit of our [illegible] Australia will lead to the exchange of valuable scientific information and [illegible] the already existing ties of [illegible] between India and Australia.

Prof. Chapman at Ahmedabad

Professor Sydney Chapman, F.R.S., Professor of Mathematics in the University of Oxford, [illegible] geophysicist, and President of the Association of Terrestrial Magnetism of the International Union of Geodesy and Geophysics, has kindly agreed to deliver a course of [illegible] lectures in the Physical Research Laboratory, Ahmedabad, on "Geomagnetism and Related Phenomena". The lectures will [illegible] and are expected to commence on the 24th January 1949.

Royal Institute of Science, Bombay

Sir C. V. Raman will deliver a series of six lectures on the Scattering of Light in Liquids and Solids beginning from January 31st, under the auspices of the Royal Institute of Science, Bombay.

[illegible] Australia

[illegible]

Trombicula deliensis, Vector of Typhus

The Director, Institute of Hygiene, Calcutta, has sent us a telegraphic announcement under date 31st December 1948 that:

Drs. K. V. Krishnan and R. O. A. Smith after developing a technique for breeding *Trombicula deliensis* in the laboratory over several generations, have used these mites in transmission experiments with white mouse as the test animal and obtained proof that *T. deliensis* larvae are the Vectors of Typhus in Bengal. This work was carried out at the All-India Institute of Hygiene and Public Health, Calcutta under a grant from the Indian Research Fund Association.

[illegible] B.A., F.I.S., F.R.S.,
[illegible] Superintendent and Published by
[illegible] The Current Science Association, Bangalore.