

indicated that the iodine which was present in the decomposition products from ethyl iodide⁴ was responsible for a large part of the promoting effect.

In the present investigation, we have found that small amounts of pure iodine actually do accelerate the decomposition of acetone in the neighborhood of 500°. The apparatus for this work is of the usual type and includes a Bodenstein valve and a click gage.

Temp., °C.	P ₀ , mm.	% I ₂	($\Delta P/P_0$) % 20-0 min.
506	168	0.00	7.5
506	178	3.60	57.6
493	215	0.00	3.3
493	207	1.55	29.5

(4) Ogg, THIS JOURNAL, 56, 526 (1934).

From the Table it can be seen that addition of 2-3% of iodine causes the pressure change for the first twenty minutes of the reaction to increase by a factor of eight. The temperature at which Bairstow and Hinshelwood attempted the catalysis of acetone was not given, so that their failure to observe any catalysis may have been due to the fact that they were working in a different temperature range.

We are actively engaged in completing this investigation of acetone and intend to study other ketones such as diethyl and ethyl methyl ketones.

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NEW BOOKS

May's Chemistry of Synthetic Drugs. By PERCY MAY, D.Sc. (Lond.), F.I.C., Consulting Chemist and Chartered Patent Agent, and G. MALCOLM DYSON, Ph.D., F.I.C., A.M.I. Chem.E., Chief Chemist, Genatosan Ltd. Fourth Edition, revised and rewritten. Longmans, Green and Company, Inc., 114 Fifth Avenue, New York, N. Y., 1939. xii + 370 pp. Illustrated. 14 × 22.5 cm. Price, \$6.00.

During the past two decades there has been a steadily increasing demand for books which would adequately set forth in clear and concise fashion the salient facts dealing with the relations between the chemical constitution and physiological action of medicinal products and related substances. Despite this evident need there have been surprisingly few ventures into this field of scholarly activity.

May's "Chemistry of Synthetic Drugs," published some thirty years ago (the third edition appeared seventeen years ago), has deservedly had wide popularity. It has given readers an insight into the fundamental concepts of the field, without being handbook in nature. Indeed it was apparently never designed to serve in the role of a monograph which would point the way to new fields of research for the specialist. Rather it has been useful to young chemists who have desired a broad viewpoint of the field of medicinal products, without being compelled to delve into a maze of technical chemical and physiological information.

This, the fourth edition, has arisen from the joint efforts of Percy May and G. Malcolm Dyson. The general plan of the older editions has been followed, but a large amount of new material has been added. It has also been modernized by the inclusion of information on such subjects as

hormones, vitamins, steroids, cardiac glucosides, and anthelmintics. Among the sections which have been enlarged are those dealing with hypnotics, mercurials, anti-septics, local anesthetics, analgesics, and alkaloids.

American readers, specialists in the field, will doubtless find cause for real criticism in the rather British and Continental flavor of the book, for it passes over lightly, or not at all, some of the fine developments which have come from the academic and industrial laboratories of this country. Nevertheless the authors have made a real contribution, and the book will unquestionably continue to play the important role which it has played since it was first written by Dr. May.

ARTHUR J. HILL

Plant Viruses and Virus Diseases. By F. C. BAWDEN, M. A., Virus Physiologist, Rothamsted Experimental Station. Chronica Botanica Company, P. O. Box 8, Leiden, Holland, and G. E. Stechert and Company, 31 East 10th Street, New York, N. Y., 1939. 272 pp. 37 figs. 16.5 × 25 cm. Price, Dutch guilders 7, or about \$4.00.

Chemists have never been over-modest in their ideas as to the role of chemistry in the scheme of things. Bancroft, for example, has argued eloquently that all the natural sciences are mere provinces of the Chemical Empire. The developments of science in the past few years have certainly favored this *Wellanschauung*. Nevertheless, until very recently even chemists might have hesitated to designate as chemical a book on viruses, *i. e.*, living organisms defined as "obligate parasitic pathogens with at least one dimension less than 200 μ ."

Today even this hesitation is unnecessary. Stanley's isolation in 1935 of the virus of the mosaic disease of tobacco as a crystalline protein established this virus as a definite though complicated chemical substance. This certainly makes a review of a book on viruses entirely appropriate for a journal of chemistry.

The contents of the present book justify this chemical allocation. After an introductory survey and chapters on the symptomatology of viruses, their transmission, strains and serological reactions, there follow chapters on their purification, size, optical properties, chemical nature, origin and multiplication. The occurrence of these viruses and the economic importance of the diseases which they produce are also set forth.

It appears from the careful and discriminating discussion in this book that the conclusions of Stanley as to the virus of the mosaic disease of tobacco have been confirmed by subsequent workers, although it has been shown not to be a globulin but a nucleoprotein. The viruses of several other similar diseases also have been isolated in crystalline form and their distinguishing properties ascertained.

The great question which interests every reader, as to whether these apparently inanimate crystalline proteins are alive or capable of living in a suitable environment, is not given a categorical answer. It is shown, however, that the uncertainty is not so much as to whether these viruses are proteins, but rather as to whether viruses are indeed alive. On the one hand, they are certainly small, discrete bodies which resemble bacteria in their behavior, are able to multiply with extreme rapidity in a favorable environment and retain their characteristics tenaciously throughout this multiplication. On the other hand, they have not as yet been successfully cultivated in the absence of living cells, and it may be that this is a decisive distinction which demonstrates them really to be inanimate. However, to the innocent bystander with the history of our knowledge of the enzymes in mind, this seems a somewhat frail barrier to serve as a last defence of vitalism.

ARTHUR B. LAMB

BOOKS RECEIVED

February 10, 1940, to March 10, 1940

- JOSEPH A. BABOR AND ALEXANDER LEHRMAN. "General College Chemistry." Second edition. Thomas Y. Crowell Co., 432 Fourth Avenue, New York, N. Y. 659 pp. \$3.75.
- ADOLF BECK. "Magnesium und seine Legierungen." Verlag von Julius Springer, Linkstrasse 22-24, Berlin W 9, Germany. 520 pp. RM. 54, bound RM. 56.70.
- L. CAGNIARD. "Réflexion et Réfraction des Ondes Sismiques Progressives." Gauthier-Villars, Libraire du Bureau des Longitudes, de l'École Polytechnique, 55 Quai des Grand-Augustins 55, Paris, France. 255 pp. 120 fr.
- N. ERNEST DORSEY. "Properties of Ordinary Water-Substance." American Chemical Society Monograph Series No. 81. Reinhold Publishing Corporation, 330 West 42d St., New York, N. Y. 673 pp. \$15.00.
- WENDELL M. LATIMER AND JOEL H. HILDEBRAND. "Reference Book of Inorganic Chemistry." Revised edition. The Macmillan Company, 60 Fifth Avenue, New York, N. Y. 563 pp. \$4.00.
- JOSEF MIKA. "Die exakten Methoden der Mikromassanalyse." Band XLII of "Die Chemische Analyse." Edited by WILHELM BÖTTGER. Ferdinand Enke Verlag, Hasenbergsteige 3, Stuttgart, Germany. 180 pp. RM. 18, bound RM. 19.60.
- GEORGE PERAZICH AND PHILIP M. FIELD. "Industrial Research and Changing Technology." Work Projects Administration, National Research Project, Philadelphia, Pennsylvania. 81 pp.
- THE SVEDBERG AND KAI O. PEDERSEN. "The Ultracentrifuge." Oxford University Press, 114 Fifth Avenue, New York, N. Y. 478 pp. \$12.50.
- "Gmelins Handbuch der anorganischen Chemie." System-Nummer 67. "Iridium." Verlag Chemie, G. m. b. H., Berlin W 35, Germany. 196 pp. RM. 25.25.
- "Gmelins Handbuch der anorganischen Chemie." System-Nummer 59. "Eisen." Teil A, Lieferung 9. "Die Systeme Fe-Mg bis Fe-Pr." Verlag Chemie, G. m. b. H., Berlin W 35, Germany. 128 pp. RM. 43.50.
- "Gmelins Handbuch der anorganischen Chemie." System-Nummer 59. "Eisen." Teil F 1, Lieferung 1. "Probenahme. Gase. Rückstandanalyse." Verlag Chemie, G. m. b. H., Berlin W 35, Germany. 164 pp. RM. 19.50.
- "Gmelins Handbuch der anorganische Chemie." System-Nummer 38. "Thallium." Lieferung 1. "Geschichtliches. Vorkommen. Das Element." Verlag Chemie, G. m. b. H., Berlin W 35, Germany. 186 pp. RM. 21.75.
- "Proceedings of the Seventh Summer Conference on Spectroscopy and its Applications." Held at the Massachusetts Institute of Technology, Cambridge, Mass. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y. 154 pp. \$2.75.