

*Substances naturelles de synthèse.* Collection publiée sous la direction de L. Velluz, Vol. I par J. MATHIEU, A. PETIT, P. POIRIER ET L. VELLUZ. Ed. Masson, Paris 1951, pp. 134, relié 1500 frs.

Plusieurs ouvrages se sont déjà donnés comme tâche la description de la préparation de nombreux corps de la Chimie organique. Les Organic Syntheses et les Biochemical Preparations, sont justement célèbres à ce point de vue. Mais jusqu'ici, la synthèse chimique de substances intéressantes au point de vue biochimique, et dont la découverte et l'obtention première avaient été faites par extraction directe de la matière vivante, n'avait fait encore l'objet d'aucune monographie.

Le présent volume constitue le premier d'une série d'ouvrages destinés à combler cette lacune. La première partie est consacrée à la synthèse de l'acide ascorbique, de l'adénine et en particulier de l'adénine contenant de l'azote ou du carbone marqués, de l'adénosine, du chloramphénicol, de l'esculoside, de l'histidine et du tryptophane; la deuxième partie donne une bibliographie raisonnée d'une série de méthodes basées sur la cyclisation coumarique, la cyclisation pyrimidique, etc. Enfin, la troisième partie est constituée par diverses notes concernant l'obtention de solvants purs et diverses autres indications pratiques.

L'ouvrage est très bien présenté, et renferme quelques microphotographies de cristaux; il se termine par une table analytique des matières, une table alphabétique des matières et une table des auteurs. La qualité de ce premier volume permet donc d'augurer que la série annoncée rendra les plus grands services aux chimistes organiciens comme aux biochimistes.

C. FROMAGEOT (Paris)

*Advances in Radiochemistry and in the Methods of Producing Radioelements by Neutron Irradiation*, by E. BRODA. Cambridge University Press, 1950, 152 pp., Price 15s

Radioactivity and chemistry interact in three different fields. Radioactive bodies have chemical properties and the study of these properties is the subject of radiochemistry. Moreover, radioactive substances can be applied as indicators in chemical research and, finally, ionizing radiation produces a great variety of chemical changes the study of which is the subject of radiation chemistry. We need not consider the production of artificial radioactive bodies under the action of ionizing radiation as a branch of radiation chemistry if radiation chemistry is defined—as may be advisable—as dealing with extra-nuclear chemical changes produced by ionizing radiation.

BRODA's book contains a presentation of the differences in the chemical properties of isotopes and their significance for radiochemistry, of the distribution of tracer quantities between solids and liquids, the behaviour of tracer quantities in the gaseous state, the electrochemistry of radioelements, the production of radioelements by nuclear synthesis, the chemical aspects of nuclear fission, new radioelements of special interest, new developments in the technique of radiochemical measurements, and the chemical excitation due to nuclear reactions. An abundant material is presented critically on only 152 pages. While such a condensed presentation of a vast material can hardly be profitable reading for a beginner, it is very useful to the chemist or physicist with some beforehand knowledge of radioactivity, who may find here both novel observations and a condensed and critical recapitulation of facts already known to him. The book contains a great number of references which the reader likewise will find very useful. In the second edition of this volume, references should include RUTHERFORD's *Radioactive Substances and Their Radiation* the second edition of which was published in 1912. RUTHERFORD, CHADWICK AND ELLIS' book which BRODA repeatedly quotes was written to replace a new edition of the first mentioned. In view of the very rapid development of radioactivity after 1912, the book of RUTHERFORD, CHADWICK AND ELLIS had to be restricted mainly to the discussion of the properties of radioactive radiations, and many statements from RUTHERFORD's above mentioned volume were omitted. However, numerous of these statements are of great general and historical interest especially for those concerned with the chemical aspects of radioactivity. It was from this book, and also from RUTHERFORD's Silliman Lectures and CURIE's *Radioactivité*, that the former generation learned radioactivity, and it will always remain the most inspiring volume in this field. BRODA's *Advances in Radiochemistry* is a very good book which can be warmly recommended to all interested in radioactivity.

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