

Selected Topics from Organic Chemistry

By Dr. D. D. Karve and G. D. Advani. Pp. iv+284. (Poona: Dastane Brothers, 1945.) 8 rupees.

THIS book attempts to cover a wide field of organic chemistry in a small space, and much of the information contained in it is very condensed; the evidence for the structures of terpineol (p. 46) and carotene (p. 116), for example, is given too briefly to be of value. In a discussion of the Beckmann rearrangement the authors mention that it is used for determining the configurations of oximes and correctly show the trans-interchange, but give no reason for this, nor any comment on the fact.

In certain cases the choice of material is peculiar; a chapter on "Some Important Condensation Reactions" starts with the Pechmann condensation and continues with the Fries reaction. Dealing with the structure of benzene it is stated that the hydrocarbon can be reduced successively to C_6H_8 , C_6H_{10} and C_6H_{12} , and Kekulé's formula is 'proved' without any mention of resonance; nor, for that matter, is resonance mentioned in discussions of colour and constitution, tautomerism or free radicals.

Many misstatements of fact appear: it is stated that citral gives acetone, carbon dioxide, water and levulic acid on oxidation, and no mention is made of any oxalic acid. The following are quotations: "A compound, even though it may contain asymmetric groupings, is optically inactive if it has a plane or an axis of symmetry" (p. 7). "Due to the introduction of a new asymmetric carbon atom it is possible to account for a reactive hydrogen atom . . . [in glucose]" (p. 10).

"Claisen's condensation. Two molecules of an ester or an ester and a compound having a CH_2 group in proximity to a CO or CN group condense to form β -keto esters or β -ketones" (p. 237).

"In many cases, the crystallization of a racemic compound can be brought about in such a way that the two active modifications form separate crystals" (p. 244).

"The solution of sodium nitrite is then made up to exactly N/2 by adding the calculated amount of water or sodium nitrite" (p. 267).

Statements such as these rather tend to shake one's confidence in the accuracy of the information in general.

F. B. KIPPING

An Introduction to Electronics

By Prof. Ralph G. Hudson. Pp. x+97+37 plates. (New York: The Macmillan Company, 1946.) 15s. net.

THE spectacular results of the release of nuclear energy from the atom have certainly caused the general public, not merely the scientific workers, to ponder deeply, and, if for this reason alone, this book will be welcomed. It deals only with one phase of atomic structure, namely, the electron and its applications, though there is one useful chapter on the constitution of matter generally.

The author suggests that the science might have been called 'protonics' or 'neutronics' instead of 'electronics', but in the reviewer's opinion the correct title has been used. So much is known about the electron that it can almost be regarded as an old friend; but there is much yet to learn about the proton and the neutron, especially how these constituents of the atom will interact under all conditions.

The subject is developed in a very logical way, and the matter is expressed in terms easily under-

standable by the reader who is prepared to go slowly and concentrate. It is up to date and gives a clear knowledge of the properties and control of the electron, which is regarded as the most active ingredient of matter, and it describes and illustrates many electronic devices used in industry and elsewhere. It is well written and splendidly illustrated with a profusion of most interesting plates.

The author concludes, "Electrons are the happy and faithful slaves of every man". The general public will perhaps be relieved when this remark can apply to the whole realm of atomic energy.

Nucleonics

What Everybody should know about Atomic Physics, Pp. ii+38. (Washington, D.C.: Progress Press, 1946.) 1 dollar.

THIS little book, of anonymous authorship, deserves a better title. It goes well beyond what is likely to appeal to the non-scientific reader who is interested by the practical applications of nuclear physics, and though it is clearly not intended for the serious student, he will find it interesting and sometimes illuminating.

It consists mainly of a clearly written and well-illustrated account of some of the phenomena and instruments of nuclear physics, leading to a description of the principles of fission piles and 'atomic' bombs; a large amount of information is contained in small compass, and though the order of presentation is unconventional, the main principles are well expounded. There are misconceptions and slips that would not pass a physicist's scrutiny, and the references to people and dates are often misleading, quite apart from an understandable concentration on American developments. A piece of fiction concerning Prof. Bohr on p. 29 is better not quoted!

Considered, however, as a frankly popular work, it is of refreshingly high standard compared with the mushroom growth of cheap books that, particularly in the United States, have sought to exploit public interest in atomic energy.

A Naturalist on Lindisfarne

By Richard Perry. Pp. 248+16 plates. (London: Lindsay Drummond Ltd., 1946.) 15s.

OFF the Northumberland portion of the coast of England lies the island of Lindisfarne, also the smaller islands known as the Inner and Outer Farne, all the haunt of sea-birds, much frequented by winter visitors and a halting-place for passing migrants. So St. Cuthbert found when he was appointed prior in 673, his special care being the eider ducks, which to this day are known as St. Cuthbert's ducks. Mr. Perry, wending his way some 1200 or more years later over the sands that separate Lindisfarne from the mainland, to take up his residence on the Holy Island, found himself in what was little short of an ornithological paradise. In this book he tells us of the island and its life, of the changing seasons, of the comings and goings of the bird population, with many observations on details of behaviour, including a chapter on the fulmar petrel with special reference to the homing of this species, which he records as visiting its nesting ledges in December. His appendix of the chronological history of the colonization of Holy Island by the fulmar embodies useful data, and another appendix is a painstaking list of the birds of Holy Island.

FRANCES PITT