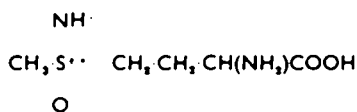


BOOK REVIEW

F. CHALLENGER: *Aspects of the Organic Chemistry of Sulphur*. Butterworth's Scientific Publications, London, 1959. vii + 253 pp., £2, \$7.50.

PROFESSOR CHALLENGER is well qualified to write a book on the organic chemistry of sulphur, for this has been his primary interest throughout a long chemical career. Six very different topics are dealt with in separate chapters.

Chapter 1 deals with simple organic compounds containing sulphur and gives the general reader a broad picture of properties, preparations and the biological significance of a wide range of substances. The next chapter gives useful information on natural sulphonium compounds, sulphides, sulphoxides, mercaptans and sulphido-amino acids. For example, an account is given of the toxic principle produced in flour which has been treated with traces of nitrogen chloride vapour in order to improve the baking properties. The toxic factor arises from the action of the nitrogen trichloride (agene) on the protein gluten contained in the wheaten flour. The treated protein on hydrolysis gives the previously unknown methionine sulphoximine



Among other topics discussed are the sulphur compounds of asparagus which are alleged to be responsible for the odour of urine after the ingestion of asparagus.

The third chapter deals adequately with the sulphur compounds of petroleum and other mineral oils and various aspects of desulphurization processes are considered.

A useful chapter is devoted to oil of mustard and an account is given of early work dating back to 1608.

The fifth chapter concerns biological methylation with particular reference to compounds of sulphur. Here we learn a great deal about the author's own contributions to the subject and these have been extensive since 1931. The part played by methionine in transmethylation is explained and the work of du Vigneaud in this connexion is given prominence. This chapter closes with speculations on the mechanisms of the antitubercular effect of ethanethiol in animals.

As might be guessed, no book on organic sulphur compounds would be complete with outsome account of Co-enzyme A, its acetyl derivative and related compounds. Accordingly the last chapter is devoted to these topics.

This book is very readable and Professor Challenger has done good service by bringing together in one quite small volume a number of topics concerning the organic chemistry of sulphur which might otherwise appear unconnected. He has been successful in getting the right balance: he does not overload his reader with detail, but stimulates him sufficiently to be anxious to look up some of the many references given at the end of each chapter.

B. C. SAUNDERS