

NEW BOOKS

M. Tisler (editor)

TOPICS IN ORGANIC SULPHUR CHEMISTRY*

Reviewed by L. I. Belen'kii

The collection contains the texts of 14 plenary lectures delivered at the eighth international symposium on the chemistry of organosulfur compounds held in June 1978 in Yugoslavia.

Some of the lectures deal with theoretical problems. Thus F. Bernardi (Italy) examined the conjugative effects of $-SR$ and $\rangle S-R$ groups. Some aspects of the photoelectronic spectroscopy of organic compounds of sulfur were discussed in the lecture by R. Gleiter (West Germany). The lecture by J. Martin (USA), which is devoted to the relationship between the structure and properties of sulfurans and their derivatives, viz., compounds of "hypervalent" sulfur in which sulfur has coordination numbers 3, 4, 5, and 6, can be classified in the same group. A number of problems involving the reactivities and stereochemistry of compounds that contain sulfur and phosphorus are examined in the lecture by I. Michalski (Poland). The mechanism of the Pummerer rearrangement is discussed in detail in the lecture by S. Oae (Japan).

A number of the lectures are devoted to the synthesis and reactivities of several types of sulfur-containing compounds. K. Venier (USA) in his lecture examined α -diazo sulfoxides. W. Walter and H. Luke (West Germany) discussed the reactions of trialkylsilylthioamides. The synthesis and reactions of new sulfurating reagents, viz., di- and polysulfides, were examined in the lecture by D. Harp and K. Stelio (Canada). Several of the lectures deal with the preparation and reactions of various types of sulfones that are presently widely used in organic synthesis. One should mention the lectures by T. Darat (Canada) on epoxy sulfones, by M. Julia (France) on the use of sulfones in the syntheses of unsaturated compounds, and by K. Meiers (USA) on the reactions of carbanions that are stabilized by a sulfonyl group with tetrahalomethanes.

Three lectures are of special interest for heterocyclic chemists, H. L'Abbé (Belgium) reviewed 1,3-dipolar cycloaddition reactions with the participation as the dipolarophile of systems with two π electrons that are isolelectronic with respect to the allyl cation, thiaziridineimines and thiiraneimines, which lead to five-membered heterocycles that contain nitrogen and sulfur. The lecture by V. P. Litvinov (USSR) was devoted to the chemistry of thienothiophenes, selenopheno thiophenes, and related systems. Finally, the high-temperature reactions of hydrogen sulfide and thiols with organic compounds, including those involving the preparation and transformations of thianthrene, dibenzothiophene, thioxanthene, benzothiophene, thiophene, and sulfides and mercaptans of the thiophene series, were examined in the lecture by M. G. Voronkov and É. N. Deryagina (USSR).

On the whole, the book is of considerable interest to organic chemists working in various fields. One should note the high efficiency of Professor Tisler, which made it possible to publish this book only a short time after completion of the symposium. However, it is not at all clear how accessible and well-known this useful book will be to a large number of readers, and this brief review is designed to inform them of its existence.

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