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### Book review

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*Fluorine Chemistry Reviews*, Vol. 7; edited by Paul Tarrant, Marcel Dekker, Inc., New York, 1974, VIII + 243 pages, \$24.50.

Volume 7 of the continuing series of "Fluorine Chemistry Reviews" contains two review chapters, Nucleophilic Substitution in Polyfluoroaromatic Compounds by L.S. Kобрina and Preparation and Reactions of Polyfluorinated Aromatic Heterocyclic Compounds by G.G. Yakobson, T.D. Petrova and L.S. Kобрina.

The first chapter generalizes modern concepts concerning nucleophilic substitution in aromatic polyfluoro compounds. It is also a comprehensive survey of experimental results of compounds containing four and more fluorine atoms in a single benzene nucleus published through 1970. References to pertinent papers published in 1971 and 1972 are listed at the end of the chapter without discussion. The main subjects reviewed are nucleophilic substitution reactions of hexafluorobenzene, pentafluorobenzenes ( $C_6F_5X$ ), tetrafluorobenzenes, and polynuclear aromatic compounds and the effects of solvent upon orientation in nucleophilic substitution reactions. This chapter is very well organized and the data are presented in a clear, understandable manner. The only distraction is the large number of typographical errors. These, however, should not confuse the reader who has some familiarity of fluorine chemistry.

The second review chapter is concerned with a survey of the literature on the chemistry of polyfluorinated aromatic heterocyclic compounds of N, O and S through 1970. An addendum has been provided which includes references up to early 1973.

The preparation of these various heterocyclic compounds by fluorination—dehydrofluorination techniques, intramolecular nucleophilic substitution reactions and numerous other less general methods are well documented. Many, if not all, the reactions of these compounds are described. Particular emphasis on nucleophilic substitution on N-containing heterocyclic compounds, particularly pentafluoropyridine and its derivatives, are described. Orientation of nucleophilic substitution is explained in terms of the relative stability of the transition states (utilizing Wheland structures) for attack at different positions of the nucleus. Again, as in the first chapter, abundant use of equations facilitates comprehension of the text.

An extensive (15 pages) author index for both chapters is provided. The subject index (2.5 pages), however, does not do justice to the otherwise excellent quality of the two review chapters.

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