

Reviews of Books

The Chemistry of the Cyano Group. Ed. ZVI RAPPOPORT. (Interscience Publishers, John Wiley and Sons, London, 1970.) Pp. xv+1044. Price £16.00.

This massive volume contains sixteen chapters, of which by far the longest and most detailed (217 pp.) is on cyanocarbon and polycyano compounds. Other chapters are devoted to various aspects of the physical and chemical properties of nitriles of the more conventional variety; isonitriles are also discussed. The compilation well maintains the standard which an organic chemist has now come to expect from this valuable series.

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The Chemistry of the Nitro and Nitroso Groups. Part 2. Ed. HENRY FEUER. (Interscience Publishers, John Wiley and Sons, London, 1970.) Pp. xii+447. Price £10.50.

The six chapters in this part are concerned with the formation of aromatic nitro compounds (W. M. Weaver), the directing effect of the nitro group in aromatic substitution (T. Urbański) and its effect in aliphatic systems (H. H. Baer and L. Urbas), the biochemistry of the nitro and nitroso groups (J. Venulet and R. L. Van Etten), trinitromethyl compounds (L. A. Kaplan), and polynitroaromatic addition compounds (T. N. Hall and C. F. Poranski). As in Part 1, there is much of great interest in this volume, which very satisfactorily completes the survey of these two important functional groups

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Progress in Polymer Science, Vol. 2. Ed. A. D. JENKINS. (Pergamon Press, Oxford, 1970.) Pp. vii + 279. Price £5.50.

This volume continues the flood of review publications in the general field of polymer science, and it is pertinent to ask both whether its reviews were needed, and whether the selection is sensibly homogeneous. Of the four articles which it contains, three are critical and timely surveys of fields which might be expected to interest similar readers, and therefore satisfy on both counts.

In chapter 1, G. C. Eastmond presents a thoughtful account of the subject of solid state polymerization. This topic has not been widely studied, but offers intriguing possibilities and problems. Dr. Eastmond's article would provide a good starting point for a new worker. By contrast, there has been much debate concerning the thermodynamic and physical properties of polymer crystals formed from dilute solution, which is the subject of chapter 3. Dr. Mandelkern's review of his own and other recent work leads him to an attempted reconciliation of some of the conflicting evidence in a very clear exposition.

Chapter 4, by J. F. Johnson and R. S. Porter, contains an account of Gel Permeation Chromatography. This technique is increasingly used as a routine method of polymer evaluation, but requires care and expertise for success. The authors take an essentially practical viewpoint, but seek to relate experimental procedures to fundamental considerations.

The remaining chapter (2) is the longest in the book, and is out of character with the rest. It makes publicly available an encyclopaedic survey of the poly(azoles) prepared by J. P. Critchley for the Royal Aircraft Establishment in 1965. This is factual material, and is supplemented by a list of references to several hundred papers on the subject which have appeared subsequent to 1965. Crown copyright is reserved, and it is hard to see why this was not issued separately as a Crown publication.

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