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# Book Review

**The Stereochemistry of Macromolecules,** Volumes 1 and 2. Edited by A. D. Ketley. Marcel Dekker, Inc., New York, 1967. Vol. 1, xii + 412 pp., price $19.50. Vol. 2, xiii + 383 pp., price $18.75.

This series of volumes supplies a critical summary of the tremendous amount of recent research in the field of macromolecular stereochemistry. There are over 2000 literature citations in the two volumes being reviewed. Although this number includes some duplications, it omits many references (including several articles by this reviewer) that might well have been included. Also, it may be noted that the results of a large amount of research in this area are not published, but are kept secret by the companies paying for the work.

The authors are all authorities in the fields about which they write. Six are from Italy, which has been the source of so much excellent work on stereospecific polymerizations and stereoregular polymers; four are from the United States; and six other countries are represented by one author each. The series is truly international.

As those in this field of research well know, most of the research effort has been motivated by a desire for commercial profit, rather than a search for scientific knowledge. A large proportion of the knowledge that has been accumulated has been obtained empirically. Quoting D. O. Jordan, ". . . there still exist a considerable number of gaps in our knowledge," especially about the details of catalyst structures and the mechanisms by which catalysts act. There are "reasonable" theories about these matters, including that admirably described here by P. Cossee and others (including one by the reviewer) that are not mentioned. All these theories, however, have many doubtful points. In my opinion, the unsolved fundamental questions would have been answered long ago, if one-tenth of the effort that has been been applied had been devoted to this purpose.

I am sure that many scientists working on catalytic problems not involving macromolecules would find much of interest and of use to them in these books. Likewise, I am sure that many scientists studying catalytic polymerizations could profit from better knowledge of recent and current research on nonpolymeric catalysis.

The two volumes under review deal with biological macromolecules in only one chapter, by J. N. Baptist, concerned primarily with starch, glycogen and cellulose. The Editor promises, however, that Volume 3 will include "some discussion of the effects of stereochemistry in processes involving biological macromolecules," in addition to discussion of "the ways in which the steric structure of polymers may be determined, together with the way such structural features influence the physical, mechanical, and chemical properties of polymers." I eagerly await the publication of this volume.

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