

The results indicate strongly that the trapped radicals formed in the radiolysis of solid hydrocarbons other than methane are not produced by elimination of thermal H atoms.

When isobutene was present during photolysis of HI in 3MP- d_{14} , the yield of t -C₄H₉ radicals was less than the reduction in yield of trapped H, and the yield of radicals

formed by hot abstraction processes was reduced. These effects, which may be due to complexing of HI by iB, are under further investigation.

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Book Reviews

Polyhedral Boranes. By EARL L. MUETTERTIES and WALTER H. KNOTH, Central Research Department, Experimental Station, E. I. du Pont de Nemours and Co., Wilmington, Del. Marcel Dekker, Inc., 95 Madison Ave., New York, N. Y. 1968. vii + 197 pp. 15.5 × 23 cm. \$13.50.

This monograph gives a lucid appraisal of the present state of the bonding theory and chemistry of polyhedral boranes. In the preface the authors express the hope that this book will stimulate further research activity in the field. I believe the book will achieve this end but mainly among the present specialists of the art, not the neophytes. Chapter two starts off by considering some of the most complex boron hydride structures known (*e.g.*, B₂₀H₁₈, B₂₀H₁₆ (ligand)₂, and B₂₀H₁₆²⁻). This most likely will frighten rather than interest the lay reader. It would have been more helpful to suggest that the reader obtain a few stick models to aid in understanding the symmetry and polyhedral transformations of these cage compounds. Inexpensive models can be purchased from Geodestix, P.O. Box 5179, Spokane, Washington. Jargon occurs in several places in the text, and this reduces communication with the lay reader [*e.g.*, (B_{9,10,11}C⁻) on page 23, line 20]. The book is written in a very condensed form. This is best illustrated by the 21 equations which appear on page 96. Fine points and interrelationships are easily lost in this taxonomic approach.

There are over a dozen references to unpublished work from the Delaware group cited in the text. Most of these are rather minor points, but a few are significant new results. One item of interest is the reported synthesis of B₁₀H₇ [S(CH₃)₂]₃⁺, a rare positive boron hydride ion. Another is the apparent formation of B₁₀H₁₀CH⁻ base⁻ species. This type of result should be initially presented in a critical journal article and not briefly mentioned in a review without experimental detail.

The text appears to have only a few typographical errors (as on pp 2, 42, 75, 123, and 143). Thus I believe this book will be a useful addition to chemistry libraries. But due to the cost and style of presentation, it will be found most frequently in the personal libraries of specialists in the field.

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