

Recensio

ANDRÉ JULG, *Chimie Théorique*, VII + 385 p., Dunod, Paris, 1964, 16 × 25 cm, paperback 27 F, bound 39 F.

This book on theoretical chemistry is a textbook, whose origin goes back to the lectures of the author at the university of Marseille. It covers in the first half the quantum mechanical theory of the chemical bond and molecular structure with emphasis on molecular orbital theory. Nuclear magnetic and quadrupole resonance are treated in separate chapters.

The second part deals with the relations of electronic constitution to different physical and chemical properties, e.g., electronic spectra, optical rotation, ionization energy, electron affinity. However, special emphasis is placed here on chemical reactivity of mainly organic compounds in the last eight of the 29 chapters of the book. Metals, metallic compounds and also molecular complexes have hardly been touched.

In accordance with the aim of providing an introductory textbook, the mathematical treatment remains with few exceptions on an elementary level. Numerical problems will be presented in a companion volume to be published.

The author has certainly been successful in striking a happy compromise between a rigorous quantum mechanical treatment on one hand and the usual rather qualitative discussion of physical organic chemistry in so many books on the other hand. Unsolved problems and hazardous postulates and approximations are brought to the attention of the reader. Selected references to the literature will enable the student to dig deeper.

On some points one may differ of opinion with the author e.g., where he rejects so completely the value of the concept of the ionic crystal (p. 246). Some minor errors may be corrected in a later edition e.g., the van der Waals parameter b is not equal to the total volume of the molecules, but to four times this quantity (p. 181). The $[\text{Co}(\text{CN})_6]^{3-}$ -ion is not prepared by the addition of potassium cyanide to a solution of a salt of trivalent cobalt, as the latter is not stable (p. 76). The names of KEKULÉ (p. 59 and 146), KHARASH (p. 359) and HOLLEMAN (p. 311) are misspelled.

Summarizing the book can be recommended as an excellent textbook for students of chemistry and for older chemists who wish to become acquainted with the theoretical basis of chemistry.

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Erratum

Vol. 3, p. 283, lines 6 and 7: Interchange π and δ .