

Book Reviews

Quantum Theory of Chemical Reactions. Volume III. Chemisorption, Catalysis, Biochemical Reactions. Edited by R. Daudel, A. Pullman, L. Salem, and A. Veillard. Dordrecht, Holland: D. Reidel Publishing Company 1983, 178 pp., price \$00.00

This is the third volume of a treatise on the quantum theory of chemical reactions; it concerns itself with chemisorption, catalysis and biochemical reactions. The theoretical background on heterogeneous catalysis is given by J. E. Germain. It is followed by a chapter treating important applications: on CO-metal clusters by E. J. Baerends and D. Post, on transition metal clusters by F. Cyrot-Lackmann, on gas-organic solid state reactions by G. Bertholon and on the Fischer-Tropsch synthesis by I. G. Csizmadia. The second part of the book is concerned with systems of biological interest: P. Th. van Duijnen and B. T. Thole contribute a chapter on environmental effects on proton transfer; O. Tapia, C. I. Bränden, and A.-M. Armbruster on enzyme activity. Two subsequent chapters deal with schistosomicidal agents (F. Peradejordi and E. L. Da Silva). The book is completed by P. Claverie's theoretical treatment of intermolecular interactions and solvent effects.

With its two general and eight applied chapters the contents amount to a highly up to date and very informative account of a rapidly developing field. It makes good reading to the specialist; the beginner will find a wealth of information in it.

It gives the measure of present capabilities of quantum theory applied to chemical reactions in a wide variety of situations.

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