

rived from a Hougen and Watson kinetic analysis of the rate data agreed quite well with the corresponding constants obtained directly from independent adsorption experiments. Their results generated other papers by Lapidus and Peterson (1965), Kabel (1968), and Mezaki and Kittrell (1968).

Almost 20 years after his original article Weller (1975) has written a very comprehensive analysis of the state of catalytic kinetics. It is recommended reading for those wishing an up-to-date perspective.

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ChE book reviews

SI UNITS IN CHEMICAL ENGINEERING AND TECHNOLOGY

By K. D. Chandrasekaran and D. Venkateswarlu
*Indian Institute of Technology
Madras, India. June 1974.*

Reviewed by G. R. Youngquist
Clarkson College of Technology

This paperbound four-chapter handbook presents a summary of the SI system of units, conversion factors, and tables of numerical data in SI for physical and thermal properties. The first chapter briefly but adequately introduces the SI system along with conventions for its use and

provides an extensive list of derived units which are of interest to chemical engineers. The second chapter is devoted to SI units for quantities commonly used in chemical engineering practice. Fifty-five tables listing the preferred SI unit, recommended multiples, and conversion factors for quantities such as mass transfer coefficients, heat flux, viscosity, thermal conductivity and the like are given. The third chapter consists of 88 tables of physical constants, physical properties of solids, liquids, and gases, and thermochemical and thermodynamic properties of selected substances. These are more extensive than found in a typical textbook, but quite naturally less complete than other handbook sources. The final chapter provides 20 example problems.

The background information presented is concise and should be sufficient for most users of SI. The conversion tables are convenient, and the tables of data serve a useful purpose in the absence of other sources which use SI. The book is suitable for desk reference or as a textbook supplement. An annoying feature of the book was the poor quality of the binding. Even the brief use encountered in the course of this review caused several pages to detach. □

FUEL CELLS

By Angus McDougall, Halsted Press, a division of John Wiley & Sons, New York, N.Y. 1976.

Reviewed by Robert D. Walker, University of Florida

This small book of thirteen chapters presents a reasonably adequate discussion of the major aspects of fuel cells at a quite elementary level. It will be useful, therefore, for introducing new students or casual readers to the subject without confusing them with unnecessary details. In spite of this advantage, however, it appears to this reviewer that the book suffers from a number of shortcomings. In the first place, the author includes no references to sources of the data used; indeed, there are no references to any other publications. The reader is, therefore, left with no suggestions as to more advanced literature. Secondly, the case for fuel cells as energy sources is consistently presented too optimistically; the efficiency and performance described are substantially in excess of those achieved practically. Finally, the usefulness of the book for the American reader is diminished by the author's discussion of British fuel cells alone; no American (or other) fuel cells are described. □