

BOOK REVIEW

Zeolites: Science and Technology. Edited by F. Famosa Ribeiro, Alirio E. Rodrigues, L. Deane Rollman, and Claude Naccoche. NATO ASI Series E: Volume 80. Nijhoff, The Hague, 1984. 698 pp. \$85.00.

This book contains the proceedings of the NATO Advanced Study Institute which was held in Alcibi-deche, Portugal, on May 1–12, 1983. The contributions are from leading researchers and are divided into four parts.

Part 1 is entitled History, Structure, and Synthesis, with contributions by E. M. Flanigan, R. M. Barrer, G. T. Kokotailo, L. D. Rollman, F. Roozeboom, H. Robson, and S. Chan. The papers cover zeolite technology, structure, crystallography, synthesis, and crystallization mechanisms.

Part 2 on Physical Characterization and Sorption Fundamentals contains contributions by H. Lechert, Z. Gabelica, J. Nagy, Ph. Bodart, G. Debras, E. Derouane, P. Jacobi, and R. M. Barrer. The subjects covered are characterization, NMR techniques, equilibria, and energetics along with kinetics and diffusivities.

The contributors to Part 3, on Catalysis, are J. Rabo, D. Barthomeuf, E. G. Derouane, C. Naccoche, Y. Ben, T. Taar, M. Guisnet, and G. Perot. The papers cover unifying principals in zeolite catalysis, acidity,

shape selectivity, transition metal-exchanged zeolite catalysis, and bifunctional catalysis.

Part 4 on Industrial Applications presents the contributions by A. Rodrigues, C. Costa, R. Ferreira, J. Loureiro, S. Azevedo, H. Lasa, E. Derouane, Z. Gabelica, F. R. Ribeiro, M. Guisnet, N. S. Gnep, J. D. Sherman, P. Jacobs, C. N. Kenney, and N. F. Kirkby. The articles cover design aspects of catalytic cracking, reaction mechanisms and industrial processes of methanol-to-gasoline conversion, acidic platinum zeolites for *n*-hexane hydroisomerization, zylene isomerization processes, ion-exchange separations, selective adsorption processes, and pressure swing adsorption.

The book provides the reader with both a historical perspective of zeolite research and recent advances in zeolite research. The subject areas include synthesis, sorption properties, catalytic properties, and their industrial applications. As a result, this is a book which belongs on the shelf of every worker in this important area.

WILLIAM S. MILLMAN

*University of Wisconsin–Milwaukee
Laboratory of Surface Studies
Department of Chemistry
Milwaukee, WI 53201*