

Atlas of Zeolite Structure Types

W. M. Meier, and D. H. Olson, 2nd rev. ed., Butterworth, 1987

The second revised edition is a significantly expanded and updated version of the 1978 edition, including some 64 topologically distinct framework structures, compared to the 38 entries in the prior compilation. The new edition includes structure drawings and related information for new types of zeolite-like materials, including aluminophosphate molecular sieves and interrupted frameworks. In addition to the stereo drawings of the frameworks, the new *Atlas* also includes an expanded compilation of ore drawings, and an excellent index that correlates the many names used to identify these materials with their corresponding structure types. Meier and Olson's revised *Atlas* is the most valuable compendium of zeolite framework structure information available and is a useful reference for engineers interested in relating structural characteristics to various process applications.

James R. Katzer
Mobil Research & Development

Handbook of Reactive Chemical Hazards

3rd ed., L. Bretherick, Butterworths, London, 1985, 1852 pp., \$99.95

Hazardous Chemicals Desk Reference

N. I. Sax, and R. J. Lewis, Sr., Van Nostrand Reinhold, New York, 1987, 1084 pp., \$69.95

These are complementary books. As the title indicates, the focus of Bretherick is on reactive hazards. As such, it is one of the very few books, (perhaps) worldwide, that covers this topic competently. For practical use, an updated loose-leaf version should be preferred. Sax and Lewis is extracted from the lengthier *Dangerous Properties of Industrial Materials*.

Book reviews in AICHE Journal will be limited to books that are of potential interest to the research community. Basic textbooks will not be reviewed. The Journal sometimes receives conference proceedings for review. Our general policy will be to decline to review proceedings, since they are usually of uneven quality and/or of such broad scope that critical review is impossible. This is the first of an occasional column of brief Book Notes on books considered by the Editor or a Consulting Editor to be worthy of notice, but not appropriate for detailed review. Unsigned notes are by the Editor.

Mainly, it contains information about the direct hazards; i.e., flammability, toxicity, and explosion, for nearly 5,000 chemicals. A set of books like Bretherick and Sax, or their analogues, should be present in every laboratory and every chemical plant. Although voluminous, chemists will find Sax and Lewis very useful. Industrial safety practitioners might want to supplement it, or replace it, with a more action-oriented information source.

J. Mewis
K. U. Leuven

Safety of Reactive Chemicals

T. Yoshida, Elsevier, Amsterdam, 1987, 404 pp., \$102.25

Originally published in Japan in 1982, this translation is an excellent compilation of the resources needed to evaluate hazardous chemical reactivity. It covers thermodynamic calculations, national safety organizations, and offers a complete list of the screening and standard tests available in 1982. Methods from the U.S., Europe, and Japan are well represented, and each test is well described. Evaluation methodology is also discussed. This book will be most useful for someone familiar with the area. A beginner would find it difficult to sort through the many tests and strategies presented to find the best combination. It is an excellent reference volume, but should be supplemented

with detailed schemes for applying the information from the calculations and tests to the design and operation of chemical processes.

H. T. Kohlbrand
Dow Chemical USA

Opportunities for Academic Research in a Low-Gravity Environment

Progress in Astronautics and Aeronautics, Vol. 108, based on papers presented at a workshop sponsored by the National Science Foundation in Washington, D.C., July 10-11, 1985. Ed., G. A. Hazelrigg, and J. M. Reynolds, American Institute of Astronautics and Aeronautics, New York, 1986, 340 pp., \$79.50

Materials Science in Space

L. Regel, Halsted Press, New York, 1987, 244 pp., \$34.95

This topic is one that is starting to receive attention at national AICHE meetings, and a number of the contributors in the first volume are well known in the chemical engineering community. The status of research problems (as of mid-1985) covered critical phenomena, gravitation, crystal growth, metals and alloys, containerless processing, combustion, and fluid dynamics. The survey chapters are followed by "comments," making this particularly interesting reading. The second volume is a translation of a Russian text which provides a nice over-