Publications

Book Reviews

Encyclopedia of Surfactants, Vols. I, II and III, compiled by Michael and Irene Ash (Chemical Publishing Co. Inc., 155 W. 19th St., New York, NY 10011. Vol. I, A-F, 1980, 468 pp.; Vol. II, G-O, 1981, 437 pp.; Vol. III, P-Z, 469 pp. Each $75).

At about 7 entries per page, this 3-volume compendium offers in one place an alphabetical listing of more than 9,000 commercial surfactants. Entries for each surfactant include chemical constitution, applications, physical form and properties, activity (concentration), pH and, frequently, information about toxicity and shipping containers. Both U.S. and European products are included.

This encyclopedia is an ideal reference for locating information about individual commercial surfactants when only the commercial designation is at hand. As it does not group surfactants by type or structure, it cannot be used for, say, locating alternate sources for a given surfactant or for locating analogs of a specific structure. In this respect, the encyclopedia is less useful than the publications by McCutcheon, although entries on individual surfactants are in general more detailed. Because it does not provide structural formulae, it is less complete than the entry under Surfactants in the Kirk-Othmer *Encyclopedia of Chemical Technology.*

The need for identifying the chemical behind a trade name arises often enough. Information that can be conveniently extracted from the *Encyclopedia of Surfactants* in response to this need makes it a useful complement to the reference works cited earlier. The time saved by the individual researcher may well justify the relatively steep price of the 3-volume set.

Arno Cahn

The Production and Application of Fluorescent Brightening Agents, by Milos Zahradnik (John Wiley & Sons Inc., 605 Third Ave., New York, NY 10156, 1983, 147 pp., $29.95).

This slender volume is, for the most part, devoted to the production of fluorescent whitening agents (FWA) describing the synthetic procedures for all of the major types. What is particularly useful to the practicing organic chemist interested in FWA and their manufacture is that the author has gone beyond generic structures and has provided information on the formulae and syntheses of commercial FWAs.

Given that the main emphasis is on production, treatment of the theory, toxicology and environmental problems is understandably cursory. The latter, in particular, have been well discussed in Supplement Volume IV of EQS Environmental Quality and Safety, Coulston and Korte, editors.

The accepted terminology of FWA is not employed in this text which is somewhat unforunate, at least for American readers. Indeed, in a number of places, the fact that the book is a translation is evident. Print quality is below normal U.S. standards. These negatives notwithstanding, the book is a useful reference for the chemistry of commercial FWA.

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Foam Flotation: Theory and Applications, Chemical Industries, Vol. 11, by Ann N. Clarke and David J. Wilson (Marcel Dekker Inc., 270 Madison Ave., New York, NY 10016, 1983, 418 pp., $65).

Foam Flotation is Volume 11 of the Chemical Industries Series of reference and textbooks published by Marcel Dekker Inc. The authors list as objectives of this volume to provide newcomers to the field with a comprehensive guide to the literature, to list some of the applications and potentials of foam-flotation techniques, to present a detailed review of precipitate and adsorbing colloid flotation techniques, which are promising for resource recovery and industrial wastewater treatment, and to provide mathematical analyses of a number of physical models used to gain insight into foam flotation phenomena.

This book is divided into 7 chapters, followed by an appendix: overview of adsorptive bubble separation techniques with general references; precipitate and adsorbing colloid-flotation, a review of laboratory scale experiments; some fluid mechanical aspects of particle flotation; theoretical aspects of particulate flotation; column design consideration; solvent sublation; the future. The appendix covers a general review of the literature and studies relevant to wastewater treatment and other large-scale applications. The book concludes with a rather meager 4-page subject index.

This book excels in comprehensive and up-to-date citations of the pertinent literature, including standard textbooks, e.g., 285 references are listed in Chapter 2 and 295 references are listed in Appendix A. This book should serve as a valuable guide, particularly to the newcomer in the field of foam flotation in mineral processing and in wastewater treatment. On the other hand, process design considerations and detailed mathematical analysis of foam flotation will be welcomed by the advanced research worker in resource recovery, waste treatment and the treatment of metal-containing wastewaters with recovery of valuable metals. The latter may also be helpful to chemical engineers in process design.

In line with the theme of the Chemical Industries Series, this book meets the objective of a treatise, which is both useful as a reference work as well as a textbook for readers interested in the application of surfactants in industry.

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