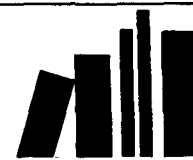


New Books



Principles of Industrial Chemistry, Chris A. Clausen III and Guy Mattson, (John Wiley & Sons, Inc., 1979, 411 p., \$18.95)

The authors designed this book to help students and recent graduates in the field of chemistry and chemical engineering to make the transition from the academic to the industrial world, and they have accomplished their purpose quite well.

In 411 pages divided into 14 well-organized chapters, they have described the workings of our chemical industry, its economic importance, and methods and studies companies go through to conceive of new products, to develop processes to manufacture, to design plants, and to secure capital to launch them in the market place.

Fundamentally the chemist or chemical engineer's job is to make money for the company, and to do a better job we should be concerned with the principles that determine the cost of the chemical as well as its utility in the market.

Many useless experiments can be avoided or the scope changed if a better understanding is known of the factors involved in arriving at the desired goal. Not only must the goal be well defined, but routes available to achieve this goal must be known to enable the chemist to make intelligent decisions.

The book goes into sufficient detail of all elements that must be considered; namely, material and energy balances, accounting, chemical transport, heat transfer, kinetics, separation processes, instrumentation, patent, financial studies, research, and in conclusion, a case history.

We recommend this book for every industrial chemist, as sooner or later it may help him answer the proverbial question: "How much will it cost?"

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Liver and Aging, Edited by Kenichi Kitani, (Elsevier/North Holland Biomedical Press, 1978, 381 p., \$52.00)

This book is a composite of the information presented at the 1978 Proceedings of the Tokyo Symposium "Liver and Aging." The book is divided into eight sections corresponding to the sessions held at this meeting. The first section deals with the morphometric and pathological aspects of liver as affected by age. Age-related alterations in liver ultrastructure and functionality were discussed. Data obtained from various species including man were presented in the three extremely well written papers in this section.

Section 2 deals with the alterations in liver enzymes as influenced by senescence. After examining various enzymes it appears that alterations in liver enzymes in aging are not constant and may be post-translational, when occurring.

The third session deals with nuclear proteins. Many agree that DNA surely must play a central role in the aging process. However, the three papers within this section are far from completely describing the involvement. One of the investigators examined a fluorescence labeling technique to describe DNA-protein interactions in rat liver cells. Another examined polyploidization of hepatocytes. These studies clearly showed that alterations in nuclear function do occur with age; however, the factor(s) responsible for this change are not well understood.

Physiology and clinical medicine aspects of liver aging are discussed in the 4th section. This section discusses the kinetics of exogenous dyes as well as elimination and metabolism during aging.

The 5th session contained four papers dealing with cholesterol and bile salt metabolism. Alterations in cholesterol and bile salt metabolism were presented. However, the elucidation of the mechanism(s) responsible for these changes may well be extremely complex. The elucidation of such mechanisms may not only have an extremely important role in explaining the aging phenomena but probably diseased states as well. Time will surely be required to more clearly define the involvement of altered steroid metabolism in the aging process.

The 6th session dealt with enzymes and enzyme regulation. Alterations in lysosomes in Kupffer cells as well as other enzymes with the liver were examined as a function of age. One paper discussed the changes in the regulation of corticosterone, thyrotropin, and insulin with age.

Sessions 7 and 8 reviewed various aspects of the pharmacokinetics of liver as effected by age. Studies on the inducibility of drug metabolizing enzymes in various species were reviewed. Drug disposition and elimination were among the topics discussed in this section.

This book certainly presents a diversity of studies into the area of liver and aging. It is extremely surprising how little is known regarding the functions of this key organ with aging. Clinical pharmacological studies have spurred interest in the area. The time and tremendous cost required for such studies certainly have curtailed many investigators from pursuing this area of research. This book clearly serves as a valuable reference to this extremely important area. It is unfortunate that a summary of the papers compiled into each session of this book was not included. Each paper is followed by numerous references that certainly would be of value for anyone interested in this area. For the quantity and quality of data presented, a \$52 investment would not seem exorbitant.

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Emulsions, Latices and Dispersions, Edited by P. Becher and M.N. Yudenfreund, (Marcel Dekker, Inc., New York and Basel, 1978, 344 p., \$29.50)

This book is a collection of about half of the papers presented at the "Emulsions, Latices and Dispersions in Liquids" session of the 51st Colloid and Surface Science Symposium held at Grand Island, NY, during June 1977.

"Technical Application of Colloid Science," a plenary lecture delivered at the Symposium by Professor J.Th.G. Overbeek, is included and serves as an introduction of the book. With divergent examples the broad applications of colloid science are discussed.

A total of 15 papers are collected: 8 on latices and 7 on emulsions and dispersions. Papers on latices comprise two-thirds of the book with the majority on the characterization and some on the preparation and application of latices. Topics on emulsions and dispersions range from physical chemical properties and thermodynamic stability of emulsions and dispersions to microemulsions and silicone antifoam.

Discussions at the Symposium are included with some papers. Both author and subject indices are provided; however, the former covers only the referenced authors.

The book brings together the most recent findings of some of the research activities in the field. It is certainly a welcome addition to the colloid chemist's bookshelf and is recommended to all those interested in emulsions, latices and dispersions.

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Advances in Parenteral Nutrition, Edited by I.D.A. Johnston, (University Park Press, 253 E. Redwood St., Baltimore, MD 21202, 1978, 581 p., \$29.50)

This volume is the proceedings of an international symposium held in Bermuda during May 1977. The papers are grouped under ten headings: foundations of parenteral nutrition, carbohydrates, amino acids, fat emulsions, and trace elements in parenteral nutrition, pediatric nutrition, infection, biochemical aspects, clinical aspects, and an assessment of the effect of parenteral nutrition in body composition.

Basically the problem here is that fat is necessary to increase the caloric density of the parenteral preparation but is a source of considerable difficulty. Indeed, one paper is titled "The Toxicity of Lipids," and it was not possible to use fat emulsions in parenteral products for some time in this country. While significant progress has been made in this area, the level of R & D on this topic in the pharmaceutical industry appears to remain relatively high. Based on past experience, the fats and oil industry must continually be aware of the developments in clinical areas where fats always seem to end up in disrepute. This volume presents a solid, reasonable and well organized coverage of the topic.

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AOCS needs copies of LIPIDS, volume 12 (1977), January and February.

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NOVEMBER 1979

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Metabolism of Linoleic Acid in the Cat
Comparison of Lipid Composition of *Candida guilliermondii* Grown on Glucose, Ethanol and Methanol As the Sole Carbon Source
Isomerization of Double Bonds during β -Oxidation

METHODS

Extraction and Analysis of Lipids from Immature Soybeans

Call for nominations

Alton E. Bailey Award

The North Central Section of AOCS is requesting written nominations from Society members for the 1978-79 Alton E. Bailey Award. The purpose of the Bailey Award is to recognize research and/or service in the field of fats and oils. The nomination should contain at least five pertinent references or contributions in the field of oils, fats, waxes, etc. Some of the past Bailey Award winners are: V.C. Mehlenbacher (1959), R.H. Potts (1960), J.C. Cowan (1961), A.R. Baldwin (1963), T.P. Hilditch (1965), D. Swern (1966), W.O. Lundberg (1967), H.J. Dutton (1968), H.S. Olcott (1969), H.E. Carter (1970), J.F. Mead (1971), R.T. Holman, (1972), C.M. Gooding (1973), S.S. Chang (1974), W.M. Cochran (1975), Raymond Reiser (1976), L.A. Goldblatt (1977), O.S. Privett (1978), R.O. Feuge (1979).

Please send nominations to the Alton E. Bailey Award Chairman, Vern Witte, Research & Development, Kraft, Inc., 801 Waukegan Rd., Glenview, IL 60025. The deadline for nominations is December 15, 1979, and notification of the selection will appear in this journal. The presentation of the Bailey Award is scheduled for February 1980.

Deadline: December 15, 1979