

# New Books

L.A. Witting, Book Review Editor



*Conservation of Resources, A Symposium Held at the University of Glasgow, April 1976*, Special Publication No. 27 (The Chemical Society, Burlington House, London, W1V OBN, 1977, 245 p., \$12).

In the spring of 1976, the Chemical Society conducted a Symposium on Conservation of Resources and this book is the proceedings of that conference. The papers presented with authors are listed below.

Preface, F.A. Robinson; Society's Future Energy Needs, Sir Samuel Curran; Energy Resources: Problems and Opportunities, J.K. Hambling; Energy - Transmission, Storage and Management, I. Fells; Energy - Efficient Processes for the Chemical Industry, H.L. Roberts; A Chemical Challenge in Nuclear Energy, J.S. Broadley; Human Energy Levels, Limits and Needs, L.E. Reece and R.M. Kenedi; Can Human Energy Needs Be Met?, C.R.W. Spedding; Possible Effects of Human Activity on World Climate, J.S. Sawyer; Crops and Fertilizers: Overall Energy Budgets, J.A. Tatchell; Energy Conservation in Biology, R.J.P. Williams; Ideas and Ideals for the Education of Chemists at Universities, C. Kemball; Nature's Assets - An Elementary View, P.F. Corbett; Fresh Air, J.E. Lovelock; Mineral Recycling: A Down-to-Earth Approach, A.K. Barbour; Fire, Flames, and Energy, G.R. Bainbridge; and The Thirst for Water, R.S. Silver.

Each presentation is concerned with a particular resource and the usage data usually refer to the United Kingdom; however, the ideas presented are pertinent worldwide. The papers are written in a scholarly fashion and are much more concerned with the long term rather than with immediate or even short term problems. Hence, the book may not be very helpful to the industrial chemist or engineer concerned with the more mundane; however, it can provide a philosophical background for his endeavors.

In some of the papers, terms and abbreviations, probably familiar to British readers, are used, but this made perusal difficult for this reviewer. A glossary of these would be very helpful to the American reader.

C.E. VISCIONE  
Colgate-Palmolive Co.  
Jersey City, NJ

LLOYD A. WITTING  
Supelco, Inc.  
Bellefonte, PA 16823

*Nutrition and Cancer*, Vol. 6 of "Current Concepts in Nutrition," by Ed. M. Winick (Wiley-Interscience, New York, 1977, 184 p., \$18).

Previous volumes in this series include: "Nutrition and Development"; "Nutrition and Fetal Development"; "Childhood Obesity"; "Nutrition and Aging"; and "Nutritional Disorders of American Women." The current volume contains 12 chapters: Nutrition and the Cancer Problem, An Overview, P.A. Marks; Nutrition and Experimental Carcinogenesis, D.B. Clayton; Dietary Factors in Hormone-Dependent Cancers, K.K. Carroll; Dietary Fiber and Cancer, D. Kritchevsky and J.A. Story; Diet and Cancer of the Colon, E.L. Wynder and B.S. Reddy; Cancer Cachexia, A. Theologides; Specific Vitamin Deficiencies and Their Significance in Patients with Cancer and Receiving Chemotherapy, J.W.T. Dickerson and T.K. Basu; Protein-Losing Enteropathy in Malignancy, T.A. Waldman, S. Broder, and W. Strober; Vitamin A and Its Analogs in Cancer Prevention, M.B. Sporn; Taste and Feeding Behavior in Patients

with Cancer, W. DeWys; Effect of Nutrition as Related to Radiation and Chemotherapy, S.S. Donaldson; and Nutrition in the Treatment of Cancer, M.E. Shils.

A number of salient points emerge from the various chapters. The statement by G.B. Gori that it is estimated that over one-half of all female cancer deaths and 30% of all male cancer deaths may be related to nutritional factors establishes the seriousness of the topic. As was the case with atherosclerosis a quarter century ago, vague epidemiological comparisons are the starting point. In this case, however, there is a considerable body of sound experimental evidence that nutrition, particularly dietary protein level, has a profound effect on the action of a large number of chemical carcinogens. Lipids, as usual, are great dietary evils. Cholesterol via bile acid formation is of course one of the chief evils. Correlation of cancer death rates with fat intake is, as is well known, essentially equivalent to correlation with caloric intake. Over 30 years ago Tannenbaum showed the beneficial effects of caloric restriction in reducing tumor incidence in rats and mice. The cynical reader may take particular delight in the suggestions that unsaturated fats promote cancer and saturated fats retard or diminish tumor formation. It is in the area of prevention and therapy that this book should be perused carefully by those in the food and oil and fat industries. Massive radical dietary changes are not being rashly recommended at this time. Kritchevsky continues to trumpet the reasonable merits of dietary fiber. Anorexia, loss of appetite, and the resulting cachexia may provide the stimulus for further research in taste and satiety. Total parenteral nutrition is on the upswing after a period of total disaster. Lactose intolerance is noted as a problem in tube feeding milk-based formulas.

The various chapters present brief reviews of topics of current interest and indicate possible future directions. Past experience has clearly documented the need for members of the fat and oil industry to maintain an awareness of directions being proposed in the area of nutrition by medical researchers.

*Strategy of Pollution Control*, by P. MacBerthouex and Dale F. Rudd, (John Wiley & Sons, New York, 1977, 579 p., \$18.95).

This book is presented as an introductory course in the concept of pollution control for students of diverse backgrounds. Generally, it seems to achieve this goal. The authors have presented a very conceptualized approach to the problem of pollution control which is appropriate to the audience they are trying to reach.

The examples and problems throughout the book definitely require a grounding in basic mathematics and chemistry but are sufficiently simple that they should be understood by a general audience.

The authors have succeeded in underlining the tradeoffs that are present in pollution control. Understanding that solutions to various air and water pollution problems create new problems in solid or liquid waste disposal is basic to finding optimum solutions. Another worthwhile aspect of the text is the manner in which energy use and resource

recovery are represented as interrelated factors to be considered when selecting control techniques.

The only criticism that can be made is that the fields of air pollution and solid waste disposal do not receive the coverage that is devoted to water treatment. This seems to be a common aspect of general pollution control works and is no worse than usual in this text.

The material is presented in a very readable manner, and the liberal use of examples and interesting case histories holds the reader's interest very well. The reader with an engineering background can find interesting and useful information throughout the book despite the generalist approach. It appears that readers with different backgrounds would also find sections that appeal to them.

J.F. FINN  
Armak Company  
McCook, IL 60525

*Treatment of Industrial Effluents*, Edited by A.G. Callely, C.F. Forster, and D.A. Stafford (John Wiley & Sons, New York, 1976, 378 p., \$17.50).

This book, which is presented as a combination textbook for students of waste treatment and reference for those practicing in the field of water quality management, is an excellent text which covers the broad range of water treatment technology.

As a textbook, it would best be used in conjunction with a problem workbook to allow students to become familiar with the practical as well as the general theory of water treatment. The book also serves well as a reference giving detailed references for those interested in specific areas of treatment technology.

Almost anyone interested in water treatment should

benefit from the text, but complete understanding requires a background in chemistry and biology, particularly the sections dealing with analytical methods and microbiological treatment of effluents.

The sections on legal aspects is applicable only to the British legal system, although there are parallels in the American system.

The chapters dealing with the characteristics of specific industrial effluents is good general background on treatment methods employed in industry. Again, the references are numerous and should provide a good starting point for investigation of a specific problem.

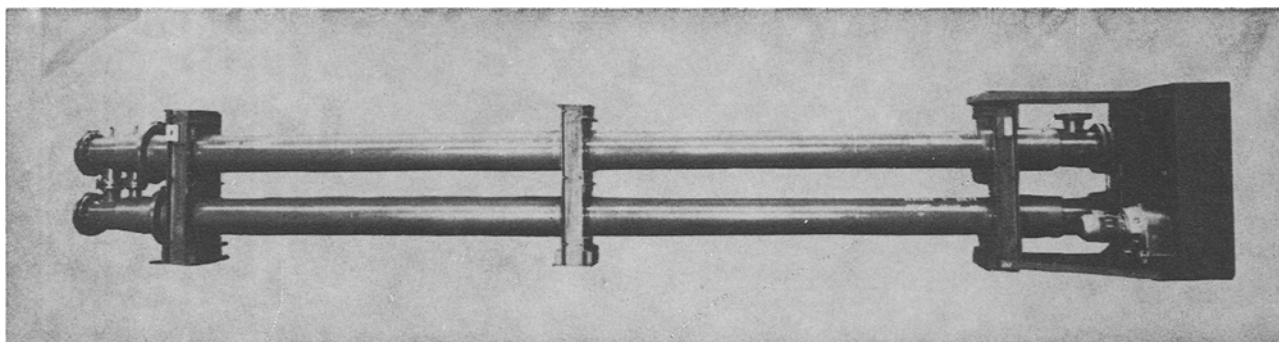
Overall, the book presents a detailed, comprehensive review of wastewater treatment and its importance in modern industrialized society.

J.F. FINN  
Armak Company  
McCook, IL 60525

## New Publications

*Southern Regional Research Center's Publications and Patents* (With Abstracts) July - December 1977; 36 p., free; Southern Regional Research Center, USDA SEA, PO Box 19687, New Orleans, LA 70179.

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