

BOOKS

Bioassay Techniques and Environmental Chemistry. Gary E. Glass, Editor. xi + 499 pages. Ann Arbor Science Publishers, Inc., P.O. Box 1425, Ann Arbor, Mich. 48106. 1973. \$18, hard cover.

Describes in detail bioassay techniques for a wide variety of organisms and conditions. The book focuses upon living organisms as the "proper indicators" of pollutant stresses and effects. It is intended for those monitoring chemicals, pollutants and water-borne wastes, as a library source book, and as a support to courses at both graduate and undergraduate levels.

Residuals Management in Industry: A Case Study of Petroleum Refining. Clifford S. Russell. xv + 193 pages. Johns Hopkins Press, Baltimore, Md. 21218. 1973. \$11, hard cover.

Takes an industry view in the management of waste residuals. Book says the U.S. water law prohibiting the discharge of all pollutants into navigable waters by 1985 is too extreme. Author sets up his own model for "improvements" in cost estimations, the simultaneous consideration of air, water, and solid waste problems, and the consideration of changing patterns of input costs and output quantity and quality.

Groundwater Pollution. Edited by the Editorial Board of the Underwater Research Institute. iv + 198 pages. Underwater Research Institute, 4331 Humphrey, St. Louis, Mo. 63116. 1973. \$5.00, paper.

Consists of papers delivered at an interdisciplinary conference sponsored by the Underwater Research Institute in St. Louis, October, 1971. Book seeks to call attention to the fact that the quality and quantity of groundwater have been ignored or given only passing attention. Since groundwater represents 90% of our freshwater supply, the book points out, the problem has staggering implications.

Water Policies for the Future. National Water Commission. xxvii + 579 pages. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. 1973. \$9.30, paper.

The National Water Commission's final report to the President and the Congress. Contains the commission's conclusions and recommendations on the policies it believes the nation should adopt "for the efficient, equitable, and environmentally responsible management of its water resources." Environmental, methodolo-

gical, and financial considerations are all discussed.

Energy and the Future. Allen L. Hammond, William D. Metz and Thomas H. Maugh II. xii + 184 pages. American Association for the Advancement of Science, 1515 Massachusetts Ave., NW, Washington, D.C. 20005

Assesses the research developments that will be the basis for future energy policies. The book stresses that the United States cannot afford to be without more energy options. Authors point out that a massive R&D program to broaden the country's choices for energy, and a firm national commitment to energy conservation, both are necessary if future needs are to be met.

The Politics of Environmental Concern. Walter A. Rosenbaum. vii + 298 pages. Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003. 1973. \$9.00, hard cover. \$3.95, paper.

Considers in detail the adversaries in the struggle for a cleaner environment. Seen on one side are environmental and conservation groups with varied ideologies and concerns, and sometimes conflicting plans for effecting resource use in the public interest. On the other side range the forces of vested political and business interest.

The Federal Environmental Monitoring Directory. Council on Environmental Quality. xii + 105 pages. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. 1973. \$0.80, paper.

Lists the who, what, and where of environmental monitoring. Directory contains primarily federal sources; however, private sources are included where there was little federal activity to report, or when the source was "exceptionally complete." Underscores fact that if monitoring data are to contribute to a meaningful analysis of national environmental trends, they must cover an area larger than a municipality or a state.

Solid Waste Management: Proceedings of the Second Annual Conference, Worcester, Mass. Jan. 9-11, 1973. Theodore C. Crusberg, Francis C. Lutz, and Armand J. Silva, Editors. Worcester Polytechnic Institute, Worcester, Mass. 01609. 1973. \$15, paper.

Proceedings of the second annual conference at Worcester Polytechnic Institute on the "state of the art," regionalization and the future of solid

waste management systems. Book presents both technologies and decision-making models. Each contribution is followed by a discussion section. Presentations from 30 speakers are included in the publication.

Chemical Biology: An Introduction to Biochemistry. J. Ramsey Bronk. xix + 667 pages. Macmillan Co., 866 Third Ave., New York, N.Y. 10022. 1973. \$14.95, hard cover.

Offers a unified approach to the study of biochemistry by combining biology and chemistry. Designed as a text, the book's biochemical principles are introduced and developed in terms of their relationships to selected biological problems. Emphasis is placed upon enzyme catalytic activity as related to protein structure, the energy requirements of biochemical reactions, and the energy available in the cellular environment.

Biological Indicators of Environmental Quality: A Bibliography of Abstracts. William A. Thomas, Gerald Goldstein, William H. Wilcox. x + 254 pages. Ann Arbor Science Publishers, Inc., P.O. Box 1425, Ann Arbor, Mich. 48106. 1973. \$16.50, hard cover.

Source book on the subject of biological indicators. The selected abstracts it contains emphasize the practical aspects of interpreting the biological manifestations of deteriorated environmental conditions. They are organized so that users can focus their attention at all levels of biological organization, from the molecule to the entire community.

Timber: Problems, Prospects, Policies. William A. Duerr, Editor. xvi + 260 pages. Iowa State University Press, Ames, Iowa 50010. 1973. \$7.95, hard cover.

Examines opposing points of view as to the use of the timber stands in the United States. The book considers three main topics: where we stand at present, where we are headed, and policies and programs. The papers included in the book were offered by 22 authorities at a nationwide policy conference held in late 1970 under the sponsorship of the State University of New York.

Air Pollution. Virginia Brodine. xvi + 205 pages. Harcourt Brace Jovanovich, Inc., 757 Third Ave., New York, N.Y. 10017. 1973. \$3.95, paper.

The book attempts to marshal current scientific knowledge relevant to the social issue of air pollution. It undertakes to show how air pollution affects the earth-atmosphere system, how it affects the human body throughout its life span, and how

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these matters are related to the need for social and economic change. It is designed to be understandable to the college-level student without previous science courses.

Use of Naturally Impaired Water: A Bibliography. Water Resources Scientific Information Center. iv + 364 pages. National Technical Information Services, Springfield, Va. 22151. 1973. \$3, paper.

Bibliography on water resources put together by the Water Resources Scientific Information Center of the Office of Water Resources Research. It is among the first of a series designed to utilize the center's computer-retrieval program and information base. It consists of a descriptor index, abstracts, a comprehensive index, and an author index.

Chemistry of the Lower Atmosphere. S. I. Rasool, Editor. xii + 335 pages. Plenum Press, 227 West 17th St., N.Y. 10011. 1973. \$22.50, hard cover.

Attempts to fill the need for a comprehensive, interdisciplinary approach to the study of the lower atmosphere. The book surveys chemical processes and cycles, integrating meteorology and geophysics where pertinent. It provides discussions by authorities from several disciplines on such topics as removal processes of gaseous and particulate pollutants, the carbon dioxide cycle, and the chemical basis for climate change.

Water Science and Technology. T. H. Y. Tebbutt. xiii + 195 pages. Barnes & Noble Books, 10 East 53d St., New York, N.Y. 10022. 1973. \$7.50, hard cover.

Provides an introduction to the subject of water science and technology. The book covers such subjects as the nature and occurrence of water; water use, collection, treatment, and distribution; collection of polluted waste water and its purification; economic and legal problems; and research and future developments. Diagrams are especially clear for those coming to the subject for the first time.

Industrial Source Sampling. David L. Branchley, C. David Turley, Raymond F. Yarmac. xxii + 484 pages. Ann Arbor Science Publishers, Inc., P.O. Box 1425, Ann Arbor, Mich. 48106. 1973. \$18, hard cover.

Focuses on the practical aspects of source sampling with full attention given to particulate matter, sulfur oxides, sulfuric acid mist, and oxides of nitrogen. The book details the equipment and methods required to comply with state and federal laws. It was written as an aid to the engineer who must form a testing team, select equipment, prepare reagents, and perform the tests.

Wastewater Cleanup Equipment. 2nd ed. xi + 372 pages. Noyes Data Corp., Noyes Building, Park Ridge, N.J. 07656. 1973. \$36, hard cover.

This second edition of *Wastewater Cleanup Equipment* supplies technical data, diagrams pictures, and other information on commercial equipment useful in water sewage treatment. Technical information and specifications pertain to equipment currently available from manufacturers. A detailed index by type of equipment, as well as a company name cross reference index, is included.

Photochemical Smog and Ozone Reactions. Advances in Chemistry Series 113. xi + 285 pages. Special Issues Sales, American Chemical Society, 1155 Sixteenth St., N.W., Washington, D.C. 20036. 1972. \$14.95, hard cover.

Findings from papers at two symposia sponsored by the Division of Physical Chemistry and the Division of Industrial and Engineering Chemistry, and by the Division of Water, Air, and Waste Chemistry of the American Chemical Society. Five papers consider photochemical smog; seven others consider ozone reactions in the atmosphere.

Mercury Concentrations in Sediments of the Lake Erie Basin, Ohio. Information Circular No. 40. Compiled by David A. Stith. iii + 14 pages. Division of Geological Survey, Fountain Square, Columbus, Ohio 43224. 1973, \$1.00, paper.

Reports on results of research to determine mercury levels in several major Ohio tributaries to Lake Erie. In samples collected in 1970 and 1971, definite mercury contamination was detected in the Ashtabula, the Black, and the Grand rivers. Minor to insignificant amounts were noted in the Cuyahoga and Maumee rivers, Sandusky Bay, and Lake Erie. The report describes the laboratory methods used, and contains tables showing the mercury content of the samples collected.

Cost Analysis of Water Pollution Control: An Annotated Bibliography. Dennis P. Tihansky, Research Report of the Office of Research and Monitoring, U.S. Environmental Protection Agency. iii + 393 pages. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. 1973. \$3.95, paper.

A compilation of the literature on water pollution control costs. The bibliography contains nearly 2000 publications, unpublished papers, and theses which focus mainly on the period from 1960 to 1972. The references are chosen to satisfy the needs of the economist, the engineer, the operations research analyst, and the policymaker.