

a regulatory input is discussed), (2) Biochemical Aspects (in which the metabolic mechanisms and pathways are considered including interesting new strategies in biochemical studies), (3) Analytical Aspects (including the limits of detection, trace contaminants, and pitfalls in analytical studies in toxicology), and (4) Regulatory Aspects (including the now popular risk benefit analysis and human risk assessment from animal data, with interesting comments on the pesticide control and regulation in Europe, Canada, and the People's Republic of China).

The report of eight workshops, in which 10 to 75 participants informally discussed the issues at hand and attempted to suggest actions, are extremely significant and well reported by Dr. Leng. Especially significant is the influence the Conference has already exercised on the regulatory process, to the end that more science and less emotion and political compromise seems to have already infused the regulatory process. The book is recommended as an update review of the current scientific/economic/regulatory scene, and will doubtlessly be widely read and referenced. Toxicity, like sin, has few absolutes, and the considered judgments and input of outstanding scholars, scientists and regulators, once drawn together, is bound to have favorable catalytic reactions.

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Assessment of Health Effects at Chemical Disposal Sites, Proceedings of a symposium held in New York City on June 1-2, 1981 by the Life Sciences and Public Policy Program of the Rockefeller University, edited by William W. Lowrance, available from William Kaufmann, Inc., 95 First St., Los Altos, CA 94022, 1981, price \$11.50, 166 pages.

This symposium focussed on the issue of how to assess human health effects at chemical waste disposal sites. It consisted of papers on basic subjects such as geohydrological surveys at chemical disposal sites, experimental design for wastesite investigations, cytogenetic analysis: Problems and prospects, neurotoxicity assessment, selection of human reproductive effects for study, epidemiologic considerations in assessing health effects, and aspects of risk assessment strategy. In each case the speakers emphasized both the paucity of present procedural data and the lack of agreement on how to proceed when "flying blind", since it was a premise that neither the profiles of the chemicals nor of the exposed population are well understood.

The interactions of three health-sciences disciplines, namely toxicology, epidemiology, and investigative medicine, are reviewed, and it was noted that toxicological estimates from animal studies, useful for "modeling", have inherent weaknesses because people are not rodents, and comprehensive toxicological studies of the complex mixtures and sporadic exposures that might be encountered have not been performed. The epidemiological surveys can search directly for patterns of human health damage but, because of

confounding factors, it is frequently unclear whether a cause-effect relationship can actually be demonstrated. Investigative medicine is, with rare exceptions, only able to focus on health problems after they have been detected by other disciplines. The traditional doctor-patient relationship is not well adapted to screening large populations for chronic, subtle health impairment. In addition to the scientific areas outlined, the setting of priorities for public action, by making "optimal investment" of where to place both the *last*, as well as the *first* dollar, is clearly not easily prioritized by our existing scientific/political/economic system.

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High Explosives and Propellants, by S. Fordham, Second Edition 1980, Pergamon Press, Oxford, 207 pp., Price: £5.95, \$14.50.

There are not many elementary texts in English on the science and technology of explosives. Those that are available are usually military handbooks or are manuals which emphasize the products of particular manufacturers. Commonly, the books are little more than data collections on selected explosive substances or are "how to" books for pyrotechnologists or mining and demolition engineers. They present neither scientific principles nor the criteria that guide the selection of explosives for civil or military use.

High Explosives and Propellants is an exception because it starts from a few elementary principles, explains simply what factors are important in designing formulations for the different applications, and describes tests which are used to assess the relative merits of formulations. Subsequently, typical applications of the explosives are presented along with details of the accessories required to give explosives the necessary degrees of safety, timing and effectiveness. The book concludes with a short glossary of terms in common use.

It is not a "how to" book; indeed, it is prefaced with an eloquent warning against uninformed and unguided experimentation. It is intended as a text for undergraduates and technicians in the fields of industrial chemistry, mining and allied industries. The selected material emphasizes commercial (civil) high explosives and British practice, although military high explosives and propellants are discussed in a more cursory fashion.

This second edition updates the 1966 edition; virtually all the revisions address the growing interest in commercial slurry explosives and the improved fuzes for mining and blasting operations. Despite the revisions, there are few, if any, references to publications which postdate the first edition. As a consequence, several of the discussions have a somewhat out-of-date emphasis, particularly in regard to military explosives, theories of initiation, and techniques to assess explosives. In an age when the computer has found its way into almost all classrooms and technologies, the absence of any reference to programs to compute the performance of explosives and the optimal