Bookreview

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METAL POLLUTION IN THE AQUATIC ENVIRONMENT

Springer Verlag, Berlin, Heidelberg et New York, 2nd revised edition, 486 pp., 102 Figs., 94 Tabs., Price US \$ 46.70.

The second edition of the successful although highly specialized book by FÖRSTNER and WITTMANN appears only two years after the first issue. This proves the urgent need for extensive investigations into the problems of aquatic pollution.

The book is divided into eight chapters, including the description, classification and functioning of toxic metals in aquatic ecosystems, both freshwater and marine, on different sources of metal pollution and on concentrations of heavy metals in the river, lake and ocean waters in different world areas. The extensive chapter D deals with numerous methods of sediment analysis in different habitats and countries; Chapter E describes the transfer of metals between the solid and aqueous phases, their sorption on different anorganic and organic substances and their leaching following different pathways in the aqueous phase. Most interesting to biologists is chapter F, elaborated by F. P. PROSR, on heavy metals in aquatic organisms both autotrophic and heterotrophic, stressing the role of aquatic animals, their trophic chains and enrichment processes, leading to human health hazard. The last chapter, G, discusses the problem of trace metals in water purification processes and purifying devices, the land application of sewage sludges and their disposal to the sea. The concluding chapter H confronts the disposal versus the reuse of metal wastes from specialized plants and the possibilities of metal recovery with a corresponding input of energy. The authors have added in the second edition many recent developments such as the model of the pathways of metal pollutants released into the atmospheric, terrestrial and aquatic systems, a wealth of new data has been included on the review literature and the dose-response relationships of toxic metals, on the flux calculations in aquatic sediments to determine anthropogenic influence over larger regions, on the problems of estuarine interactions and disposal of dredged material, on the use of sewage sludges. — Two extensive tables indicating the ranges of concentration of heavy metals in freshwaters (8 pages) and in organisms (24 pages) as well as 75 pages of references highly enrich this most useful volume and give an overview of particular problems of human health hazard due to toxic metal pollution of the aquatic environment.

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