
Book reviews

Mizrahi, A.; Wezel, A. L., van (eds): Advances in Biotechnological Processes, vol. I. New York: Alan R. Liss 1983. 354 pp. + XV, several figs. and tabs. Hard bound £ 44.-.

This first volume of the series presents ten chapters dealing with various aspects of biotechnological processes, but with a strong emphasis on process technology and possible products.

Bioreactors for submerged cultures and airlift fermentors are treated in separate chapters in terms of reactor concepts, design and construction, of sterilization and fermentation control, and of process characteristics. The authors rely on the experience as fermentor designers and technologists.

An industrial group of scientists presents an extensive review on their experience in the application of immobilized cells in the production of fine chemicals and in another chapter examples of large-scale affinity chromatography are given together with the principles and limitation of the application to industrial processes.

Product formation and processing is exemplified in a chapter which reviews the production of new β -lactam antibiotics.

Microbial extraction and concentration of metals are dealt with as aspects of industrial processing of minerals by microorganisms. An overview is given of microbial leaching of mineral sulfides, the accumulation of metals by microorganisms and the role of microorganisms in the formation of ferromanganese nodules and metal sulfides.

Biotransformation of biomass into fuel ethanol, and of agricultural residues into methane are currently regarded as very important anaerobic digestions of renewable resources. The raw materials and microbes involved in ethanol production are discussed together with the technology and economics of the process. Methane production is reviewed both at a farm-scale and at an industrial scale.

A chapter dealing with the production of useful metabolites from methanol describes at one hand the metabolism of methylotrophic organisms, and at the other hand the production of amino acids, vitamins, coenzymes, enzymes and other products from methanol.

The microorganisms themselves are the product in single-cell protein production. The last chapter gives a review of alternatives in the production of single-cell protein from synthetic raw materials.

Part of the contributions are written by scientists from commercial or industrial groups. The distribution of their experience and that of the other contributors among a large group of students, technicians and scientists will constitute the importance of these series.

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