



Biosurfactants: Production and Utilization- Processes, Technologies, and Economics (Surfactant Science)

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Stresses the Potential Applications of Biosurfactants in Various Industries

Environmental concerns and a demand for sustainable chemical production have become important issues in recent years. As a result, microbial biosurfactant-producing systems are gaining momentum as potential replacements for chemical surfactants. **Biosurfactants: Production and Utilization—Processes, Technologies, and Economics** explores the production, utilization, and industrial/economic use of biosurfactants in modern biotechnology. This book represents comprehensive material developed by contemporary experts in the field. Focusing on research and developments within the last 20 years, it highlights relevant changes in the industry. It provides a detailed account of the current applications of biosurfactants, considers the potential for further environmental, biological, and industrial applications, and concentrates on surfactants and organisms with possibilities for future use.

Emphasizes Process Scale-Up and Commercialization

Factoring in the industrial application of biosurfactant production based on renewable resources, the book determines how biosurfactants can enhance or replace the properties of chemically synthesized surface-active agents. It discusses moving beyond the laboratory scale of research and development and on to the industrial scale of commercial interest.

The book consists of 17 chapters and features expert authors discussing topics that include:

- Understanding the regulatory processes controlling the production of biosurfactants
- Strategies for feasible commercial biosurfactant production
- Examples of cost analysis based on published information
- The viability of industrial applications in food, cosmetics, and pharmaceuticals
- Patents for future trends

Biosurfactants: Production and Utilization—Processes, Technologies, and Economics contains special sections devoted to the overview and evaluation of specific patents relating to biosurfactants, and methods for production of biosurfactants on a laboratory and industrial/commercial scale. It also presents novel and proven applications for biosurfactants from a number of biotechnology laboratories and research facilities around the world. In addition, it introduces the reader to a variety of real-world industry techniques readily applicable for practical use.

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