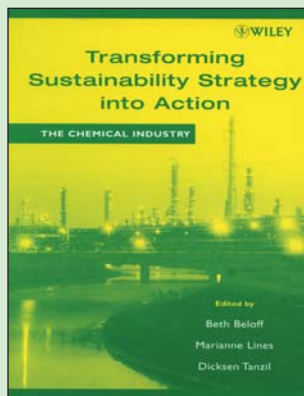


Books

Transforming Sustainability Strategy Into Action: The Chemical Industry

Beth Beloff, Marianne Lines, and Dickson Tanzil, Eds., AIChE and John Wiley & Sons (New York; Hoboken, NJ); 541 pages; \$94.95; 2005; ISBN 0-471-64445-5



This book presents a wealth of information on tools such as metrics and life cycle analysis, as well as information on what a number of companies have done and why, to come closer to a state of sustainability. Over 50 individual authors, along with three editors, combine their expertise and extensive experience in translating sustainability strategies from theory into action. They offer hands-on,

business solutions that corporate leaders need in order to prepare for tomorrow's socially and environmentally conscious marketplace. None of the companies is close to operating in a truly sustainable way. However, they have taken on different approaches that may have put them ahead in one area of sustainability, but behind or not engaged in another area of interest.

The book has been organized into several major sections within the following chapters:

- Ch. 1: Introduction;
- Ch. 2: Addressing Sustainability in the Chemical Industry
- Ch. 3: Views on Key Issues Facing the Chemical Industry

- Ch. 4: Planning for Sustainable Development
- Ch. 5: Designing for Sustainable Development
- Ch. 6: Implementing Sustainable Development: Decision-Support Approaches and Tools
- Ch. 7: Future Directions for the Chemical industry
- Ch. 8: The Business Case for Sustainable Development

The book also examines the public's perception of the industry. The number of chemicals produced and the wide range of products that contains the chemical have raised serious concerns about impacts of chemicals on human health and ecosystems, which often boil down to the public's mistrust of the industry as a whole.

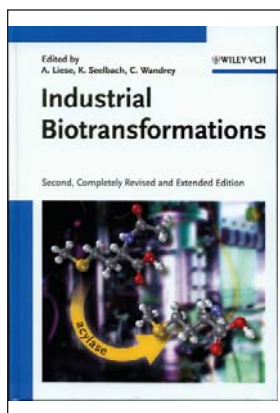
Readers will gain an understanding of the many facets of what sustainability mean to the chemical industry and how one may take on the challenge of building an integrated sustainability approach. It presents proven practical techniques to help managers in the chemical industry identify and assess options for improving the sustainability of their organizations, with a pragmatic emphasis on the operational aspects, decision support, and guidelines for measuring progress.

Professionals interested in sustainability can learn from this book, whether engaged in the process on a project basis or are beginning to think about sustainability as a long-term strategy. As this book illustrates, we have both the will and the capability to begin building a better world.

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Industrial Biotransformations, Second Edition

Edited by A. Liese, K. Seelbach; AIChE and John Wiley & Sons (New York, NY; Hoboken, NJ); 556 pages; \$149; February 2006, ISBN#: 103-527-31001-0



It has been more than five years since the first edition of *Industrial Biotransformations* was published. During this time, many examples of biotransformation have become industrially relevant, while others have lost importance. For this second edition, every chapter has been rewritten, with each process updated and over 30 new ones added.

Drawing from extensive literature and patent research, this book covers each process in a systematic way to allow for easy comparison. Its exten-

sive index is classified by substrate, enzyme, product and company. Each process is organized according to enzyme class. Every set of data is accompanied by key literature citations, supported by flow sheets, where available, that have been reduced to their significant elements.

Biotechnologists, biochemists, microbiologists, process engineers and those working in the chemical and biotechnological industries will find here all the significant parameters characterizing both the biotransformation and the process. To this end, a section is dedicated to retrosynthetic biocatalysis, which draws from classical organic chemistry, where a complex chemical structure is reduced to building blocks that might be commercially available (e.g., ketones, amines, carbohydrates). The "Optimization of Industrial Enzymes by Molecular Engineering" section thoroughly discusses various biotransformation technologies, including enzyme production using bacterial expression hosts, improvements to enzymes by molecular engineering techniques, directed evolution, random mutagenesis methods, and identification of improved enzyme variants.