
Received: 1 December 2001

Focusing on the biotechnology of ethanol, this book highlights its industrial relevance as one of the most important products of primary metabolism. The text covers the most advanced developments among classical methods as well as more unconventional techniques, before going on to outline various aspects of new applications and the increasing importance of ethanol as a renewable resource. Topics covered in this unique volume include alternative raw materials, such as municipal waste and waste paper or particular crops, innovative methods of production using genetically engineered microorganisms, and the role of ethanol as both a source of energy and a valuable commodity.

The book is a valuable reference in that it combines biotechnological and economic aspects, while also providing an overview of the state of the art in the production and use of ethanol. Throughout, special emphasis has been placed on a balanced presentation between developments in Europe as well as in North and South America.


Table Of Contents:
Introduction (M. Roehr).
PART I.
CLASSICAL METHODS (T. Senn & H. Pieper).
Starch Containing Raw Materials.
Technical Amylolyisis.
Starch Degradation by Autoamylolysis.
Mashing Processes.
Processing Potatoes.
Processing Grain.
Processing Tropical Raw Materials.
Mashing Processes Using Autoamylolitical Activities.
Yeast Mash Treatment.
Fermentation.
Distillation.
Stillage.
Analytical Methods.
Energy Consumption and Energy Balance in Classical Processes.
References.

PART II.
POTENTIAL SOURCE OF ENERGY AND CHEMICAL PRODUCTS (N. Kosaric & F. Vardar-Sukan).
Introduction.
Microbiology and Biochemistry of Ethanol Formation.
Immobilized Cell Systems.
Substrates for Industrial Alcohol Production.
Fermentation Modes of Industrial Interest.
Industrial Processes.
By-Products of Ethanol Fermentation.
Economic and Energy Aspects of Ethanol Fermentation.
Ethanol as a Liquid Fuel.
Present and Potential Markets for Ethanol.
Future Trends and Research.
References.
Subject Index.

*Editor's Note: The brief summary and the contents of the books are reported as provided by the author or the publishers. Authors and publishers are encouraged to send review copies of their recent books of potential interest to readers of *Molecules* to the Editor-in-Chief (Dr. Shu-Kun Lin, MDPI, Saengergasse 25, CH-4054 Basel, Switzerland. Tel. +41 79 322 3379, Fax +41 61 302 8918, E-mail: molinfo@mdpi.org). Some books will be offered to the scholarly community for the purpose of preparing full-length reviews.