1. Record Nr. UNINA9910155136803321

Autore	Goldstein Walter E.
Titolo	The science of ethanol / / Walter E. Goldstein
Pubbl/distr/stampa	Boca Raton : , : CRC Press, , [2017] ©2017
ISBN	1-315-30739-1 1-315-30738-3 1-315-30737-5
Descrizione fisica	1 online resource (283 pages) : illustrations
Disciplina	662.6692
Soggetti	Ethanol as fuel Ethanol
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Yeast biology and bulk manufacture of ethanol -- Chapter 3. Optimization of ethanol use as a fuel -- Chapter 4. Computer-based optimization of the ethanol process -- Chapter 5. Raw materials resources to produce ethanol -- Chapter 6. Biocatalyst systems for ethanol manufacture -- Chapter 7. Cost analysis for optimal ethanol manufacture -- Chapter 8. Considerations for minimization of pollution -- Chapter 9. Ethanol coproducts and derived products -- Chapter 10. Petrochemicals as a source of ethanol -- Chapter 11. Conclusions, recommendations, research, and business directions.
Sommario/riassunto	This book covers all facets involving the production and use of ethanol. Topics include the optimization of raw materials, energy, capital, process model-based computer control, and human resources to produce ethanol. It compares and contrasts processes to prepare ethanol using biotechnology processes to prepare ethanol from chemical synthesis. Matters of optimization of ethanol use as fuel/fuel components are addressed based on thermodynamics, kinetics, and usage. It also discusses pollutants produced from ethanol and mixtures containing ethanol, the status of ways to control these pollutants, and what can be done to minimize the harm to the earth's ecosystems due

to ethanol and gasoline reactions.