
Table of Contents

Chapter 1

Alcoholic Fuels: An Overview	1
<i>Shelley D. Minteer</i>	

SECTION I Production of Alcohol Fuels**Chapter 2**

Production of Methanol from Biomass	7
<i>Carlo N. Hamelinck and André P.C. Faaij</i>	

Chapter 3

Landfill Gas to Methanol	51
<i>William H. Wisbrock</i>	

Chapter 4

The Corn Ethanol Industry	59
<i>Nancy N. Nichols, Bruce S. Dien, Rodney J. Bothast, and Michael A. Cotta</i>	

Chapter 5

Development of Alfalfa (<i>Medicago sativa</i> L.) as a Feedstock for Production of Ethanol and Other Bioproducts	79
<i>Deborah A. Samac, Hans-Joachim G. Jung, and JoAnn F.S. Lamb</i>	

Chapter 6

Production of Butanol from Corn	99
<i>Thaddeus C. Ezeji, Nasib Qureshi, Patrick Karcher, and Hans P. Blaschek</i>	

SECTION II *Blended Fuels*

Chapter 7

Ethanol Blends: E10 and E-Diesel 125

Shelley D. Minter

Chapter 8

Using E85 in Vehicles..... 137

Gregory W. Davis, Ph.D., P.E.

SECTION III *Applications of Alcoholic Fuels*

Chapter 9

Current Status of Direct Methanol Fuel-Cell Technology 155

Drew C. Dunwoody, Hachull Chung, Luke Haverhals, and

Johna Leddy

Chapter 10

Direct Ethanol Fuel Cells 191

Shelley D. Minter

Chapter 11

Solid-Oxide Fuel Cells Operating with Direct-Alcohol and

Hydrocarbon Fuels 203

Fatih Dogan

Chapter 12

Alcohol-Based Biofuel Cells 215

Sabina Topcagic, Becky L. Treu, and Shelley D. Minter

Chapter 13

Ethanol Reformation to Hydrogen 233

Pilar Ramírez de la Piscina and Narcís Homs

Chapter 14

Ethanol from Bakery Waste: The Great Provider for Aquaponics? 249

Robert Haber

Chapter 15	
Conclusion.....	265
<i>Nick L. Akers</i>	
Index.....	271