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17 Clostridia and Process Engineering for Energy GenerationPart IV: Hydrogen, Methane and Methanol; 18 Hydrogen Generation by Microbial Cultures; 19 Engineering Photosynthesis for H<sub>2</sub> Production from H<sub>2</sub>O: Cyanobacteria as Design Organisms; 20 Production and Utilization of Methane Biogas as Renewable Fuel; 21 Methanol Production and Utilization; Part V: Perspectives; 22 Enhancing Primary Raw Materials for Biofuels; 23 Axes of Development in Chemical and Process Engineering for Converting Biomass to Energy 24 Financing Strategies for Industrial-Scale Biofuel Production and Technology Development Start-UpsIndex

### Sommario/riassunto

Focusing on the key challenges that still impede the realization of the billion-ton renewable fuels vision, this book integrates technological development and business development rationales to highlight the key technological developments that are necessary to industrialize biofuels on a global scale. Technological issues addressed in this work include fermentation and downstream processing technologies, as compared to current industrial practice and process economics. Business issues that provide the lens through which the technological review is performed span the entire biofuel value chain,