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Sommario/riassunto

BIOREFINERY PRODUCTION OF FUELS AND PLATFORM CHEMICALS From the selection and pretreatment of raw materials to design of reactors, methods of conversion, selection of process parameters, optimization, and production of various types of biofuels to the industrial applications for the technology, this is the most up-to-date and comprehensive coverage of liquid biofuels for engineers and students. Massive use of fossil-based fuels not only create environmental pollution, but these sources are already diminishing. Waste biomass can aid in the production of biobased energy and chemicals. This book is a complete collection of chapters on biofuel and biochemical production presented in a sustainable way. Biorefineries are the need of the day, because they have the potential to produce fuels and chemicals in an environmentally sustainable way, to eventually fully displace production based on fossil resources such as petroleum, coal and natural gas. Algal cells are also a suitable fit for the production of both fuels and chemicals replacing conventional sources. In this book, several chapters summarize how algal biomass can be processed for the production of bioenergy and biochemicals. This volume is essentially a roadmap towards thermochemical, biochemicals, bioengineering and bioprocessing. Written and edited by authors from leading biotechnology research groups from across the world, this exciting new volume covers all of these technologies, including the basic concepts and the problems and solutions involved with the practical applications in the real world. Whether for the veteran engineer or scientist, the student, or a manager or other technician working in the field, this volume is a must-have for any library.