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Soggetti	Renewable energy resources Biotechnology Natural resources Industrial engineering Production engineering Renewable and Green Energy Natural Resource and Energy Economics Industrial and Production Engineering
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Nota di contenuto	1. Introductory chapter -- 2. Microalgal production systems with highlights to energy balance -- 3. Life cycle assessment of biofuels from microalgae -- 4. The bioeconomy of microalgal biofuels -- 5. Process Integration applied to microalgal biofuels production -- 6. Process Intensification applied to microalgal biofuels production -- 7. Biofuels from microalgae -- 8. Recent patents on biofuels from microalgae.
Sommario/riassunto	This book presents an authoritative and comprehensive overview of the production and use of microalgal biomass and bioproducts for energy generation. It also offers extensive information on engineering approaches to energy production, such as process integration and process intensification in harnessing energy from microalgae. Issues related to the environment, food, chemicals and energy supply pose serious threats to nations' success and stability. The challenge to provide for a rapidly growing global population has made it imperative

to find new technological routes to increase the production of consumables while also bearing in mind the biosphere's ability to regenerate resources. Microbial biomass is a bioresource that provides effective solutions to these challenges. Divided into eight parts, the book explores microalgal production systems, life cycle assessment and the bio-economy of biofuels from microalgae, process integration and process intensification applied to microalgal biofuels production. In addition, it discusses the main fuel products obtained from microalgae, summarizing a range of useful energy products derived from algae-based systems, and outlines future developments. Given the book's breadth of coverage and extensive bibliography, it offers an essential resource for researchers and industry professionals working in renewable energy.