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Nota di contenuto	Chapter 1. Valorisation of wastewater via nutrient recovery using algae-based processes -- Chapter 2. Constructed wetland and microalgae: A revolutionary approach of bioremediation and sustainable energy production -- Chapter 3. Mitigation of Heavy Metals Utilizing Algae and its Subsequent Utilization for Sustainable fuels -- Chapter 4. Adaptive and tolerance mechanism of microalgae in removal of cadmium from wastewater -- Chapter 5. Algae as miniature waste water scavengers -- Chapter 6. Parametric modeling and optimization of phytoremediation of Cr(VI) using artificial neural network and simulated annealing -- Chapter 7. An insight on potential application of microalgae in pharmaceutical and nutraceutical production -- Chapter 8. The budding potential of algae in cosmetics -- Chapter 9. Food supplements formulated with Spirulina -- Chapter 10. Fucoxanthin Production from Diatoms: Current Advances and Challenges -- Chapter 11. Liquid Biofuels from Algae -- Chapter 12. UV-B coupled lipid induction: A strategies towards economical biofuel production through algae -- Chapter 13. Microalgae Mediated Nanomaterials Synthesis -- Chapter 14. Algae-mediated biological synthesis of metallic nanoparticles and their applications -- Chapter 15. Cyanobacterial blooms and Cyanotoxins: Occurrence and Detection -- Chapter 16. Potential of Golden Brown Algae in Forensic Analysis: A Review. .

Sommario/riassunto

This exciting book presents diverse applications of microalgal renewable resources to meet modern demands for energy and value-added products. It also comprehensively describes the role of algae in sustainable and cost-effective wastewater treatment strategies, and highlights the latest research on, advances in and biotechnological relevance of algae in the areas of bioenergy, bioremediation, pharmaceuticals, nutraceuticals and green economy. The book addresses gaps in the fields of bioenergy, waste management, health and economy by providing broad information on bioenergy production, management strategies, drug development, nutraceuticals products and biobased economy using algae at the commercial level. The book introduces researchers to key and emerging innovations in the field of algal biology research and will assist policymakers, environmentalists, scientists, students and global thinkers in defining sustainable developmental goals for the future. Accordingly, it is an extremely important read for researchers and students in the environmental sciences, life sciences and chemistry, experts in the energy sector and policymakers alike. .
