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Altri autori (Persone)	ReddyC. R. K CritchleyAlan T
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Nota di contenuto	Chapter 1 Seaweed-based proteins for vegan consumption and for animal nutrition as a substitute for soya -- Chapter 2 Strategies and major challenges in the manufacture, use and development of seaweed-based products for agriculture -- Chapter 3 Seaweed polyphenols: Challenges and future aspects of their processing and use -- Chapter4 Seaweed-Based Biomaterials for Emerging Biotechnological Applications -- Chapter5 Harnessing the Potential of Seaweeds and Their Associated Bacteria for Polyhydroxyalkanoates Biosynthesis -- Chapter6 Bioprospecting of seaweed secondary metabolites as

emerging functional ingredients -- Chapter 7 A blueprint of global seaweed industry: challenges and future perspectives -- Chapter 8 An Eco-sustainable and Circular Economy - benefits and constrains -- Chapter 9 Seaweed-based proteins and peptides: processing and development of innovative products -- Chapter 10 Molecular mechanism for utilizing macroalgal polysaccharides by the human gut commensal bacteria -- Chapter 11 Phytoremediation potential of seaweeds: exploring their environmental cleanup capabilities -- Chapter 12 Brown seaweed biomass as potential raw material for biorefinery -- Chapter 13 Unravelling the Diversity, Functions and Applications of Seaweed Pigments -- Chapter 14 Seaweed Bioprocessing: A Gateway to Functional Ingredients in Nutraceuticals, Pharmaceuticals, Cosmetics, and Edible Salts -- Chapter 15 Present scenario of seaweed cultivation, existing challenges, and the way forward for sustainable culture in Bangladesh -- Chapter 16 Bioplastics from Seaweeds: Current status and future perspectives.

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### Sommario/riassunto

This book delves into the realm of seaweed biotechnology, offering comprehensive insights into research, innovations, and emerging trends. It particularly highlights recent advancements in seaweed growth engineering, cultivation techniques, and the extraction of multiple bioproducts in a biorefinery fashion. Emphasizing the value addition of seaweed-derived bioproducts, the book also explores the translation of seaweed research into the establishment of seaweed-based startups. Major themes covered include strategies for growth engineering and year-round seaweed biomass production, technological advances in farming and land-based cultivation, biotechnological interventions for product development, and diverse applications in sectors such as food, feed, nutraceuticals, pharmaceuticals, agriculture, and cosmeceuticals. Additionally, it examines seaweed biorefinery models for commercial sustainability and their potential contributions to environmental monitoring and remediation efforts. With a focus on fundamental biology and advanced technological interventions, this book encourages readers to explore the possibilities of macroalgae for societal benefits. It caters to university-level students of phycology, academics, practitioners in applied phycology, and aspiring entrepreneurs in the seaweed industry.

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