1.
Record Nr.	UNINA9910832983803321
Titolo	Algal Systems for Resource Recovery from Waste and Wastewater / Piet N.L. Lens, Amitap Khandelwal
Pubbl/distr/stampa	United Kingdom : , : IWA Publishing, , 2023
Descrizione fisica	1 online resource (266 p.)
Collana	Integrated Environmental Technology Series
Soggetti	Technology & Engineering / Mining Science / Applied Sciences Science / Environmental Science Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	This book provides comprehensive insights on existing technologies and up-to-date advances in the field of waste management and treatment using algal based technologies via different approaches and systems. Coverage includes: - Process fundamentals of algae-based wastewater treatment, including metabolic modelling, algal species for resource recovery and algae/bacteria interactions. - Critical insights on the status, major challenges and modern engineering solutions in microalgae-related wastewater treatment processes. - Case studies for coculturing microalgae with methanotrophs for enhanced nutrient recovery from wastewater. - Advanced ways for valorisation of algae-based processes by integrating them with other technologies such as anaerobic digestion, biogas upgradation and bioelectrochemical systems. - Up-to-date information on modern biotechnological approaches for deriving value-added bioproducts and biopolymers from microalgae, including biofuels, pigments and nutraceuticals. This is an essential textbook for both undergraduate and graduate students pursuing degrees in environmental sciences, technologies, or engineering. Additionally, the book is equally useful for a broad audience, including researchers, engineers, and policy makers

interested in the field of algal systems for waste and wastewater management. The book is also tailored to be used as an advanced manual for practitioners and consultancies working in the field of wastewater treatment and resource recovery.