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Nota di contenuto	Chapter 1. Sustainable utilization of wastewater: an overview -- Chapter 2. Productions of Bioenergy from Wastewater -- Chapter 3. Production of Biogas from wastewater -- Chapter 4. Various treatment technology for generation of Biogas -- Chapter 5. Biohydrogen production from wastewater -- Chapter 6. Various treatment technologies for the generation of biohydrogen from sludge and wastewater -- Chapter 7. Lipid biomass to Biodiesel -- Chapter 8. Biopolymers from wastewater -- Chapter 9. Recovery of nutrients from wastewater -- Chapter 10. Recovery of various metals from wastewater -- Chapter 11. Resource recovery from wastewater -- 12. Biofertilizers from wastewater -- Chapter 13. Microbial fuel cell and wastewater treatment -- Chapter 14. Various applications of Sludge as resources -- Chapter 15. Future research on the sustainable utilization of

wastewater as resources -- Chapter 16. Aerobic treatment of high-strength ammonium wastewater-nitrogen removal via nitrate -- Chapter 17. Thermophilicaerobic biological wastewater treatment -- Chapter 18. Aerobic treatment of winery wastewater using jet-loop activated sludge reactor -- Chapter 19. Advancements in the application of aerobic granular biomass technology for sustainable treatment of wastewater.

Sommario/riassunto

The book is unique in highlighting the issue of wastewater as one of the important environmental issues. The uniqueness also lies in exploring the concepts of converting waste into resources in the form of bioenergy, biofertilizers through various biological methods. Given the international scenario, the chapters of this book are designed to include both anaerobic and aerobic methods of resource recovery from the industrial wastewater. The book is a step toward design with nature and the concept of green chemistry. Waste menace is one of the most voiced and unsolved problems in the entire world. The whole world is facing the threat of water pollution, soil pollution/ land pollution, odour pollution from the growing waste. Though we find many missions and programs at international, national, and regional level to solve the waste associated issues, this is mostly in context with the solid fraction of the waste. Very little is being done to managethe liquid part of the waste or what we call the wastewater. The conversion of wastewater has the potential to be converted to energy in the form bioenergy, bio-fertilizers, electricity, nutrient recovery, etc. The use of sludge as biofertilizers solves the problem of sludge management on the one hand and production of organic crops on the other. The biological treatment methods like sludge treatment gives the farmers the source of biofertilizers and organic manure for the plants. In the present scenario, energy crisis is also one of the issues that we are facing particularly in context with the thermal power plants which are environmentally highly polluting. Through various techniques like microbial fuel cells or biohydrogen, we get a source of cleaner energy. So, through this book, we try to produce the content and information to give the audience an understanding of the waste water as one of the environmental and health issues and mitigation strategies. Thebook gives a sufficient understanding of how waste can be turned into a resource.