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Nota di contenuto	Chapter 1. Sewage Treatment Through Anaerobic Processes: Performance, Technologies and Future Developments -- Chapter 2. The Chemistry of Human Excreta Relevant to Biogas Production– A Review -- Chapter 3. Mathematical Modeling for Understanding and Improving the Anaerobic Digestion Process Efficiency -- Chapter 4. The Current Energy Panorama and the Production of Biogas from Sewage Sludge -- Chapter 5. Anaerobic Biodigesters for Treatment of High-strength Wastewater -- Chapter 6. Microbial Community Dynamics in Anaerobic Digester Treating Human Waste: A Review -- Chapter 7. Recent Trends in Performance Assessment of Anaerobic Biodigester for Sewage Waste Management: A critical Review -- Chapter 8. Decentralized Anaerobic Digestion Technology For Improved Management of Human Excreta in Nigeria -- Chapter 9. Performance Enhancement Strategies of Anaerobic Digestion Technology: A Critical Assessment -- Chapter 10. Sewage Sludge Pretreatment Strategies for Methane Recovery and Sanitization -- Chapter 11. Towards a Circular Economy of Sewage Sludge Anaerobic Digestion: Relevance of Pre-treatment Processes and

Micropollutants Presence for Sustainable Management -- Chapter 12. Inoculum Optimization Strategies for Improving Performance of Anaerobic Biodigester: Current Trends and Future Perspectives -- Chapter 13. Efficient Biogas Production Through Syntrophic Microbial Partnerships in the Presence of Conductive Materials in Anaerobic Digesters Treating Organic Waste Streams: A Critical Assessment -- Chapter 14. Application of Anaerobic Digestion in Decentralized Faecal Sludge Treatment Plants.

Sommario/riassunto

The edited book brings out a comprehensive synthesis of latest scientific literature covering various important aspects of anaerobic biodigesters for human waste management that ranges from latest understanding on fundamental concepts/mechanisms of anaerobic biodigestion, modern tools and techniques used in process evaluation, current strategies being recruited for the performance enhancement, and case studies/ success stories across the world on applications of biodigesters used in human waste treatment. The anaerobic biodigestion is a process of break-down of organic waste by anaerobic microorganisms in absence of the oxygen. This process has been conventionally used for treating various types of organic waste including sewage sludge. After optimizing various process parameters, researchers have developed anaerobic biodigesters that have been successfully used for human waste (nigh soil) treatment. The topic of human waste treatment assumes global significance in the wake of UN sustainable Development Goals (SDG) wherein SDG-6 specifically highlights the Sanitation for all by 2030. The anaerobic Biodigester technology has the potential to manage the human waste as well and can contribute immensely in achieving targets of UN-SDG-6. This book is of interest to researchers, academicians, scientists, policy officials and capacity builders. Also the book serves as additional reading material for undergraduate and graduate students of environmental Biotechnology. National and international biotechnologists, environmental engineers and sanitation experts also find this to be a useful read.