

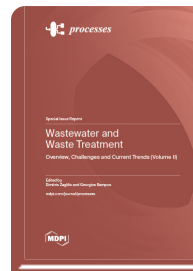
Special Issue Reprint

Wastewater and Waste Treatment: Overview, Challenges and Current Trends (Volume II)

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This Special Issue highlights the urgent need for sustainable solutions in wastewater and waste treatment, showcasing 17 innovative contributions spanning life cycle assessments, biological remediation, circular economy models, and advanced purification technologies. Articles explore technoeconomic evaluations of gasification and PEM electrolysis, novel uses of biochar and nanocatalysts, and industrial recovery of bioplastics and antioxidants. With a focus on real-world applicability, this issue demonstrates how new biological, chemical, and hybrid approaches can enable the transition to resource-efficient, circular waste management. Key themes include pollutant degradation, energy recovery, and environmental impact reduction, all within the broader context of achieving a more sustainable future. This editorial underlines the importance of cross-sector collaboration to scale up these technologies and emphasizes the potential of digital tools, synthetic biology, and integrated treatments in driving innovation forward.

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