

Special Issue Reprint

Water Quality Engineering and Wastewater Treatment III

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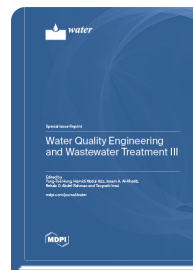
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Providing clean water is essential for life sustainability, achievable through effective prevention, control measures, and efficient wastewater technologies. Despite significant knowledge, the field still faces challenges with emerging contaminants, improving conventional technology efficiency, and advancing innovative technologies to large-scale applications. This reprint includes 13 papers (1 editorial, 8 research papers, 4 review papers) focusing on recent advances in wastewater treatment technologies, such as chemical precipitation, flocculation, biological treatment, sorption, and combined advanced oxidation processes (AOPs) with sorption. This reprint also addresses pollution source control, including sewage system corrosion mitigation, microplastic pollution reduction, permeable barriers, and leachate treatment. Primary treatment methods, including chemical precipitation for Hg removal and microbial flocculants, are discussed. Advances in secondary treatment, such as biogas production optimization, enhanced biological phosphorus removal, and moving bed biofilm reactor (MBBR) optimization, are presented. Tertiary and quaternary treatments cover the removal of methyl red dye, chromium, and emerging contaminants using biochar, clinoptilolite, and sorbents. Lastly, the Special Issue discusses controlling H₂S in sewage systems, microplastic pollution and leachate remediation.

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