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Special Issue Reprint

Low Carbon Water Treatment and Energy Recovery

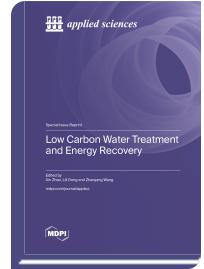
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Climate change caused by excess carbon dioxide emissions is a global challenge. For the water industry, the water treatment process is responsible for the majority of the industry's carbon emissions. The water industry exacerbates global warming, and this means that innovative wastewater treatments that emit less or no carbon dioxide are significant. Recently, carbon neutrality has become a crucial issue for the water treatment industry worldwide. To reduce carbon emissions from water treatment, technological and scientific innovation is required, such as biomass production, the use of bubble-less-gas mass-transfer bioreactors, reduced aeration with enhanced microbial processes, high-efficiency pumps and blowers, low-pressure self-cleaning free membranes, and the integration of solar power and bioelectrical systems. Considering the present technology for water and wastewater treatment, there is significant scope for improvement in these areas. In this context, this Special Issue aimed to collate the latest advancements in innovative technologies for low-carbon water treatment and energy recovery.



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