

Special Issue

Sustainable Biological Removal and Separation Processes in Wastewater Treatment

Message from the Guest Editors

In the context of energy crisis and climate warming, global wastewater treatment facilities are facing unprecedented challenges. It is of utmost importance to develop novel and sustainable wastewater treatment technologies. For organic and nutrient removal, innovative bio-processes, such as aerobic granular sludge (AGS), membrane-aerated biofilm reactors (MABRs), moving bed biofilm reactors (MBBRs), and autotrophic nitrogen removal (e.g., anammox and sulfur-autotrophic denitrification), have received great attention. Separation-based technologies including Membrane Bio-reactors (MBRs) have also been widely applied in wastewater purification. Moreover, efficient removal for trace-level emerging pollutants (such as microplastics and PFAS) and the control for direct carbon emission (CH₄ and N₂O) have become major concerns for future wastewater treatment plants. These aspects are subjects of interest in this Special Issue, titled 'Sustainable Biological Removal and Separation Processes in Wastewater Treatment'.

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