Special Issue

Advanced Separation Technology for Sludge Wastewater Treatment and Resource Utilization

Message from the Guest Editor

As an inevitable by-product in the process of sewage treatment, sludge contains pathogens, heavy metals, organic pollutants, and other toxic substances. Its effective treatment and resource utilization are crucial for environmental protection and sustainable development. The composition of sludge is complex and variable, and the extracellular polymeric substances (EPSs) within it are highly hydrophilic and compressible, rendering the dewatering process particularly challenging. Therefore, developing efficient sludge dewatering technology has become a key means for alleviating the problem of rapid growth of sludge. At present, the deep dewatering technology of sludge mainly adopts high-pressure filtration chemical pretreatment, centrifugal dewatering, electroosmotic dewatering, and other methods. Different enhanced sludge dewatering technologies are suitable for treating specific types of sludge. Therefore, it is particularly important to choose the appropriate sludge dewatering technology for specific sludge properties and treatment scenarios, which is also the core theme of this Special Issue.

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Editor-in-Chief

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