



Sustainability and Anaerobic Digestion Technologies

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Message from the Guest Editors

Anaerobic digestion (AD) is a versatile and widely applied technology for biogas production from the microbial degradation of organic waste. Globally, AD installations for biogas production and utilization have been significantly increasing to fulfill the renewable energy demand. AD technology offers numerous benefits extending from organic solid waste treatment, renewable fuel production, greenhouse gas emission control by capturing methane (CH₄), and improving rural communities' socio-economic livelihoods, especially in developing countries. However, AD also faces challenges, in particular the competitiveness of feedstock availability, digester efficiency, CH₄ loss from the process, and a lack of anaerobic process monitoring and control. Some strategies have recently been applied, ranging from feedstock pretreatment, automation, optimization of the microbial degradation process, and operational parameter optimization for AD stimulation. This Special Issue aims to invite scientific papers on anaerobic digestion optimization and the sustainability aspect of biogas production.





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Message from the Editor-in-Chief

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