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Sustainability and Anaerobic Digestion Technologies

Guest Editors:

Dr. Nabin Aryal

Faculty of Technology, Natural Sciences and Maritime Sciences, Department of Microsystems, University of Southeast Norway, N-3184 Borre, Norway

Dr. Wenche Hennie Bergland

Department of Process, Energy and Environmental Technology, University of South-Eastern Norway, 3918 Porsgrunn, Norway

Dr. Sunil Prasad Lohani

Department of Mechanical Engineering, School of Engineering, Kathmandu University, Dhulikhel, Kavre, Nepal

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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.

Specialsue





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Editor-in-Chief

Prof. Dr. Marc A. Rosen

Faculty of Engineering and Applied Science, University of Ontario Institute of Technology, Oshawa, ON L1G 0C5, Canada

Message from the Editor-in-Chief

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Sustainability Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/sustainability sustainability@mdpi.com X@Sus_MDPI