Post Treatments of Anaerobically Treated Effluents

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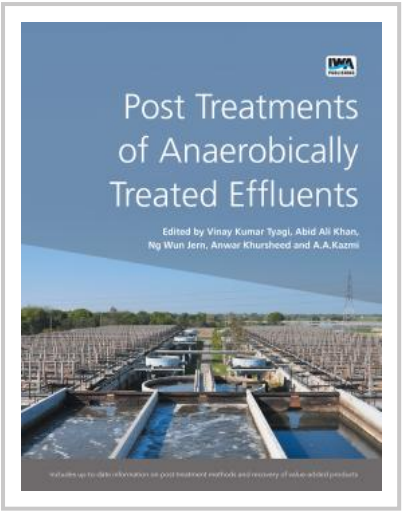

The anaerobic process is considered to be a sustainable technology for organic waste treatment mainly due to its lower energy consumption and production of residual solids coupled with the prospect of energy recovery from the biogas generated. However, the anaerobic process cannot be seen as providing the 'complete' solution as its treated effluents would typically not meet the desired discharge limits in terms of residual carbon, nutrients and pathogens. This has given impetus to subsequent post treatment in order to meet the environmental legislations and protect the receiving water bodies and environment.

This book discusses anaerobic treatment from the perspective of organic wastes and wastewaters (municipal and industrial) followed by various post-treatment options for anaerobic effluent polishing and resource recovery. Coverage will also be from the perspective of future trends and thoughts on anaerobic technologies being able to support meeting the increasingly stringent disposal standards. The resource recovery angle is particularly interesting as this can arguably help achieve the circular economy. It is intended the information can be used to identify appropriate solutions for anaerobic effluent treatment and possible alternative approaches to the commonly applied post-treatment techniques. The succeeding discussion is intended to lead on to identification of opportunities for further research and development.

This book can be used as a standard reference book and textbook in universities for Master and Doctoral students. The academic community relevant to the subject, namely faculty, researchers, scientists, and practicing engineers, will find the book both informative and as a useful source of successful case studies.

"This book offers an assembly of chapters written by various authors from across the globe and discusses the anaerobic process, properties of anaerobic effluents, and the post-treatment approaches which can be used to address these so that they can be discharged safely. However, a key direction of the book is also to challenge the notion that the anaerobic process is "only" a treatment process. This book adds to the current movement which sees the anaerobic process as an important component in the overall wastes to resources recovery management chain and hence the desirability to now see beyond treatment."

Professor Ng Wun Jern, Author

Scientific Advisor, Ministry of Environment & Water Resources

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