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# Aerobic Biological Treatment Of Landfill Leachate Wit Press

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Concepts, Methodologies, Tools, and Applications  
Waste Water Treatment Technologies - Volume II  
Wastewater Treatment

Perspectives on Biological Treatment of Sanitary  
Landfill Leachate

Membrane Bioreactors for Wastewater Treatment  
Handbook of Environment and Waste  
Management

Aerobic Biotreatability Studies on Sanitary Landfill  
Leachate

Assessment and Remediation of Environmental  
Hazards

Management of Environmental Contaminants,  
Volume 5

The Anaerobic Biological Treatment of Leachate  
Strategies of Sustainable Solid Waste  
Management

Design Criteria for Aerobic Treatment of Grease  
Waste by Filamentous Microorganisms in  
Activated Sludge

Landfilling of Waste

The Aerobic Treatment of Landfill Leachate Using  
Rotating Biological Contactors

Innovative and Integrated Technologies for the

Treatment of Industrial Wastewater  
Advance Wastewater Treatment Technique  
Sludge Reduction Technologies in Wastewater  
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Sanitary Landfill Leachate  
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Systems  
A Review and Performance Assessment of  
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Waste Management: Concepts, Methodologies,  
Tools, and Applications  
Applications and Effluent Treatment

Anaerobic Digestion Processes  
Post Treatments of Anaerobically Treated  
Effluents  
New Advances and Technologies  
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**ROWE  
LYONS**

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**Concepts,  
Methodologies,  
Tools,  
and  
Applications**

Springer  
This book contains a collection of research works focused on the biodegradation of different types of pollutants, both in water and solids. The book is divided in

three major sections: A) Biodegradation of organic pollutants in solids and wastewater, B) Biodegradation of complex pollutants, and C) Novel technologies in biodegradation and bioremediation. Waste Water Treatment Technologies - Volume II Elsevier  
Constructed wetlands are proving to be

the best natural treatment system for landfill leachates. Most of the contaminants in landfill leachates are degraded in treatment wetlands. Potential for long-term sustainability and significant cost savings are attractive features of this eco-technology. Documentation of the experience in this use of

constructed wetlands has been limited. Constructed Wetlands for the Treatment of Landfill Leachates is the first compilation of the results of research from North America and Europe. Originally presented at an international symposium, this collection of papers offers the most recent research findings from the leading researchers in this new and innovative natural treatment system.

Specific issues addressed in the text include: leachate characteristics, and the potential for treatability by constructed wetlands treatment, processes and transformation use of constructed wetlands in cold climatic conditions assessment of the tolerance of wetland plants to the toxicity of leachates role of plants in the treatments of leachates integrated wetland

systems performance of different wetland treatment systems cost comparisons of wetland technology vs. traditional treatment technologies The potential for environmental contamination due to leachates from landfills is increasing, and there is an urgent need to find ways and means to treat leachates in a sustainable way Constructed Wetlands for the Treatment of Landfill

Leachates will provide an invaluable source of information on the subject for scientists, engineers, practitioners, policy makers, and regulatory officials.

*Wastewater Treatment*  
CRC Press

This title includes a number of Open Access chapters. This new book provides a multiperspective look at research into many elements of remediating environmental hazards connected to sewage and

landfill leachate. Sewage and landfill leachate treatments include various processes that are used to manage and dispose of the liquid portions of solid waste. Untreated leachate and sewage are hazards to the environment if they enter the water system. The goal of treatment is to reduce the contaminating load to the point that leachate and sewage liquids may be safely released into groundwater,

streams, lakes, and the ocean. Around the world, however, huge volumes of contaminated water from sewage and landfill leachate is still pumped directly into water systems, especially in the world's developing nations. Aside from the damage to marine environments and fisheries that this causes, it also jeopardizes the world's vulnerable water resources.

This compendium volume explores effective sewage management, which is essential for nutrient recycling and for maintaining ecosystem integrity. It looks at a range of technologies that are available for the treatment of sewage and landfill leachate. The editor, himself a respected and experienced researcher in this field, includes chapters that

cover biological treatments, reverse osmosis, and chemical-physical processes.

This volume offers important research that will help us both assess our existing treatment facilities, as well as build better, more effective ones for the future.

**Perspectives  
on Biological  
Treatment of  
Sanitary  
Landfill  
Leachate**

Springer  
Science &  
Business  
Media  
The Handbook

of Environment and Waste Management, Volume 1, Air and Water Pollution Control, is a comprehensive compilation of topics that are at the forefront of many technical advances and practices in air and water pollution control. These include air pollution control, water pollution control, water treatment, wastewater treatment, industrial waste treatment and small scale

wastewater treatment. Internationally recognized authorities in the field of environment and waste management contribute chapters in their areas of expertise. This handbook is an essential source of reference for professionals and researchers in the areas of air, water, and waste management, and as a text for advanced undergraduate and graduate courses in these fields.  
*Membrane*

*Bioreactors for Wastewater Treatment IGI Global Sludge Treatment and Disposal* is the sixth volume in the series *Biological Wastewater Treatment*. The book covers in a clear and informative way the sludge characteristics, production, treatment (thickening, dewatering, stabilisation, pathogens removal) and disposal (land application for agricultural purposes, sanitary

landfills, landfarming and other methods). Environmental and public health issues are also fully described. About the series: The series is based on a highly acclaimed set of best selling textbooks. This international version is comprised by six textbooks giving a state-of-the-art presentation of the science and technology of biological wastewater treatment. Other titles in the series are:

Volume 1: Waste Stabilisation Ponds;	component of Encyclopedia of Water Sciences,	Wastewater Treatment; Characteristic s of Effluent
Volume 2: Basic Principles of Wastewater Treatment;	Engineering and Technology Resources in the global	Organic Matter in Wastewater; Filtration Technologies
Volume 3: Waste Stabilization Ponds;	Encyclopedia of Life Support Systems (EOLSS),	in wastewater treatment; Air Stripping in Industrial Wastewater
Volume 4: Anaerobic Reactors;	which is an integrated compendium	Treatment; Dissolved air flotation in
Volume 5: Activated Sludge and Aerobic Biofilm Reactors	of twenty one Encyclopedias . The Theme on Water and Wastewater Treatment	industrial wastewater treatment; Membrane Technology
<i>Handbook of Environment and Waste Management</i> Springer	Technologies deals, in three volumes, and covers several topics, with	for Organic Removal in Wastewater; Adsorption and Biological
Water and Wastewater Treatment Technologies	several issues of great relevance to our world such	Filtration in Wastewater Treatment; Physico- chemical
theme is a	as: Urban	



processes for Organic removal from wastewater effluent; Deep Bed Filtration: Modelling Theory And Practice ; Specific options in biological wastewater treatment for reclamation and reuse ; Biological Phosphorus Removal Processes For Wastewater Treatment ; Sequencing Batch Reactors: Principles, Design/Operat ion And Case Studies ; Wastewater stabilization ponds	(WSP)for wastewater treatment; Treatment of industrial wastewater by membrane bioreactors; Stormwater treatment technologies; Sludge Treatment Technologies ; Wastewater Treatment Technology For Tanning Industry; Palm Oil And Palm Waste Potential In Indonesia ; Recirculating Aquaculture Systems - A Review ; Upflow anaerobic sludge blanket (UASB)reactor in wastewater	treatment; Applied Technologies In Municipal Solid Waste Landfill Leachate Treatment; Water Mining: Planning and Implementatio n Issues for a successful project; Assessment methodologies for water reuse scheme and technology; Nanotechnolo gy for Wastewater Treatment. These three volumes are aimed at the following five major target audiences: University and College
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students  
Educators,  
Professional  
practitioners,  
Research  
personnel and  
Policy  
analysts,  
Managers, and  
Decision  
makers and  
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*Aerobic  
Biotreatability  
Studies on  
Sanitary  
Landfill  
Leachate*  
Elsevier  
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. *Assessment and Remediation of Environmental Hazards* LAP Lambert Academic Publishing Municipal solid waste (MSW) disposal is an ever-increasing problem in many parts of the world, especially in developing

countries. To date, landfilling is still the preferred option for the disposal and management of MSW due to its low-cost operation. While this solution is advantageous from a cost perspective, it introduces a high level of potential pollutants which can be detrimental to the local environment. Control and Treatment of Landfill Leachate for Sanitary Waste Disposal presents

research-based insights and solutions for the proper management and treatment of landfill leachate. Highlighting relevant topics on emerging technologies and treatment innovations for minimizing the environmental hazards of waste disposal, this innovative publication contributes to filling in many of the gaps that exist in the current literature available on leachate treatment.

Waste authorities, solid waste management companies, landfill operators, legislators, environmentalists, graduate students, and researchers will find this publication beneficial to their professional and academic interests in the area of waste treatment and management. **Management of Environmental Contaminants, Volume 5** World Scientific  
The world is

currently experiencing increased environmental contamination with solid waste, which is one of the greatest environmental threats today. Although solid waste is harmful, proper management and profitable recycling can make it beneficial to the environment. In this regard, estimation of the true quantities of solid wastes generated annually in developed and developing countries is

important for evaluating suitable strategies for economic and sustainable procedures of waste management. This book presents an interesting review of the economics of solid waste management in various developing and developed countries. It examines several economic applications of solid waste, such as innovative methods to generate bioelectricity from organic waste using

microbial fuel cells and using solid waste as an alternative fuel in cement kilns.

The Anaerobic Biological Treatment of Leachate BoD - Books on Demand  
FROM THE PREFACE  
Sanitary landfills are the most widely utilized method of solid waste disposal around the world. With increased use and public awareness of this method of disposal, there is much concern with respect to the

pollution potential of the landfill leachate. Depending on the composition and extent of decomposition of the refuse and hydrological factors, the leachate may become highly contaminated. As leachate migrates away from a landfill, it may cause serious pollution to the groundwater aquifer as well as adjacent surface waters. There is growing concern about surface and groundwater pollution from leachate. Better understanding and prediction of leachate generation, containment, and treatment are needed. This book contains a literature review of various methodologies that have been developed for prediction, generation, characterization, containment, control, and treatment of leachate from sanitary landfills. The contents of this book are divided into nine chapters. Each chapter contains theory and definition of the important design parameters, literature review, example calculations, and references. Chapter 1 is devoted to basic facts of solid waste problems current status and future trends towards waste reduction and recycling. Chapter 2 provides a general overview of municipal solid waste generation,

collection, transport, resource recovery and reuse, and disposal options. The current status of sanitary landfill design and operation, problems associated with the landfilling, and future trends are presented in Chapter 3. Methods of enhanced stabilization, recycling landfill space, methane recovery, and above grade landfilling, and closure and post closure care of completed landfills are

also discussed in detail. Chapter 4 provides a general overview of Subtitle D regulations and its impact upon sanitary landfilling practices. Chapter 5 is devoted entirely to moisture routing and leachate generation mechanisms. Examples of calculation pr  
**Strategies of Sustainable Solid Waste Management**  
Springer Nature  
This book presents new application processes in

the context of anaerobic digestion (AD), such as phosphorus recovery, microbial fuel cells (MFCs), and seaweed digestion. In addition, it introduces a new technique for the modeling and optimization of AD processes. Chapters 1 and 2 review AD as a technique for converting a range of organic wastes into biogas, while Chapter 3 discusses the recovery of phosphorus from

<p>anaerobically digested liquor. Chapters 4 and 5 focus on new techniques for modeling and optimizing AD. Chapters 6 and 7 then describe the state of the art in AD effluent treatment. The book's final three chapters focus on more recent developments, including microbial fuel cells (MFCs) (Chapter 8), seaweed production (Chapter 9), and enzyme technologies (Chapter 10).</p>	<p><u>Design Criteria for Aerobic Treatment of Grease Waste by Filamentous Microorganisms in Activated Sludge Landfill leachate treatment - with particular reference to an aerobic biological treatment system Biological Treatment of Hazardous Waste Landfill Leachate Using an Anaerobic/aerobic Process Aerobic Biotreatability Studies on Sanitary Landfill Leachate</u></p>	<p>Aerobic Treatment of Landfill Leachate Using Rotating Biological Contactors Strategies of Sustainable Solid Waste Management Sludge Reduction Technologies in Wastewater Treatment Plants is a review of the sludge reduction techniques integrated in wastewater treatment plants with detailed chapters on the most promising and most widespread techniques.</p>
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The aim of the book is to update the international community on the current status of knowledge and techniques in the field of sludge reduction. It will provide a comprehensive understanding of the following issues in sludge reduction: \* principles of sludge reduction techniques; \* process configurations ; \* potential performance; \* advantages and

drawbacks; \* economics and energy consumption. This book will be essential reading for managers and technical staff of wastewater treatment plants as well as graduate students and post-graduate specialists. Landfilling of Waste  
Routledge  
The book covers the subject of membrane bioreactors (MBR) for wastewater treatment, dealing with municipal as well as industrial wastewaters.

The book details the 3 types of MBR available and discusses the science behind the technology, their design features, operation, applications, advantages, limitations, performance, current research activities and cost. As the demand for wastewater treatment, recycling and re-use technologies increases, it is envisaged that the membrane separation bioreactor will corner the

market.	<u>Using Rotating</u>	case studies
Contents	<u>Biological</u>	from both
Membrane	<u>Contactors</u>	developing
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Aeration and	reuse and	technological
Extractive	disposal. A	tools to meet
Bioreactors	comprehensiv	the
Commercial	e coverage of	increasingly
Membrane	all issues	stricter
Bioreactor	related to	standards for
Systems	sludge	sludge
Membrane	management	treatment and
Bioreactor	is included	disposal, the
Applications	with local	main
Case Studies	through global	attraction of
IGI Global	coverage of all	the book
new sets of	sludge	principally
advanced	management	relies on its
standards for	practices.	technical
wastewater	Conventional	content that
treatment --	to advanced	reviews all the
<u>The Aerobic</u>	technologies	points to be
<u>Treatment of</u>	for sludge	considered in
<u>Landfill</u>	management	sludge
<u>Leachate</u>	with available	management

from engineering and technological perspectives. Sludge Management can be used for planning, designing, and implementing waste sludge management projects. Moreover, this book can be used as a standard textbook in Universities for Master and Doctoral students. Also, academics, researchers, scientists, and practicing engineers working in the field of sludge management would find the

book very informative and a source of interesting case studies. **Innovative and Integrated Technologies for the Treatment of Industrial Wastewater** IWA Publishing Landfill Technology covers the selection, design, operation, and final reinstatement of landfill sites. This book is composed of seven chapters that also discuss the theory and practice of landfill

technology. After briefly dealing with the composition of municipal and industrial wastes, this book goes on examining the hydrological aspect and site selection planning of a landfill site, including the economic and environmental impact assessments. These topics are followed by a chapter focusing on the several components of site preparation works, such as plant and machinery, methods of

landfill operation, and waste disposal. Another chapter describes the involved microbiological processes, biodegradation, gas migration, and leachate production in landfill. Other chapters are devoted to the control and treatment of leachate pollution. These treatment options include aerobic and anaerobic, biological nitrification, ammonia desorption,

and leachate recycling. The concluding chapter considers a wide range of afteruse and engineering problems occurring in landfill rehabilitation. *Advance Wastewater Treatment Technique* IWA Publishing Landfilling, one of the prevailing worldwide waste management strategies, is presented together with its benefits and environmental risks. Aside from biogas, another non-

avoidable product of landfilling is landfill leachate, which usually contains a variety of potentially hazardous inorganic and organic compounds. It can be treated by different physico-chemical and biological methods and their combinations. The composition and characteristics of landfill leachate are presented from the aspect of biotreatability. The treatment

with activated sludge, mainly consisting of bacterial cultures under aerobic and anaerobic conditions in various reactor systems, is explained, including an extensive literature review. The potential of fungi and their extracellular enzymes for treatment of municipal landfill leachates is also presented, with a detailed review of the landfill leachate treatment studies. The

future perspectives of biological treatment are also discussed. *Sludge Reduction Technologies in Wastewater Treatment Plants* Butterworth-Heinemann Aerobic Granular Sludge has recently received growing attention by researchers and technology developers, worldwide. Laboratory studies and preliminary field tests led to the conclusion

that granular activated sludge can be readily established and profitably used in activated sludge plants, provided 'correct' process conditions are chosen. But what makes process conditions 'correct'? And what makes granules different from activated sludge flocs? Answers to these question are offered in *Aerobic Granular Sludge*. Major topics covered in this book include:

Reasons and mechanism of aerobic granule formation	Granular Sludge provides up-to-date information about a rapidly emerging new technology of biological treatment.	remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants.
Structure of the microbial population of aerobic granules	<i>Sanitary Landfill Leachate</i>	LAP
Role, composition and physical properties of EPS	Lambert Academic Publishing	This text details the plant-assisted remediation method, “phytoremediation”, which involves the interaction of plant roots and associated rhizospheric microorganisms for the
Diffuse limitation and microbial activity within granules		
Physio-chemical characteristics		
Operation and application of granule reactors		
Scale-up aspects of granular sludge reactors, and case studies		
Aerobic		

Management of Environmental Contaminants provides the capstone of the series.

Taken together, the five volumes provide a broad-based global synopsis of the current applications of phytoremediation using plants and the microbial communities associated with their roots to decontaminate terrestrial and aquatic ecosystems.

**Biodegradation and Bioremediation of**

**Polluted Systems** BoD

- Books on Demand  
The focus of this investigation was the determination of design and operational criteria for the aerobic biological treatment of grease waste. The aerobic biological treatment is intended to promote filamentous organisms, which are capable of degrading oil and grease. Significant amounts of grease waste are generated by different

industries.

These wastes are recovered in grease traps, oil/water separators and flotation systems. Current practice consists of the recollection of the waste and disposal in a landfill or by incineration. The collected waste has to be disposed of either placing it in a landfill or by incineration. Additionally a change in landfill legislation is anticipated that will make it necessary to treat grease-

trap waste.            develop            treating these  
Therefore it is        alternative        grease-trap  
necessary to        methods for        wastes.

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