

< Back to results | 1 of 3 Next >

〒 Save to PDF 🕁 Add to List More... > 🕁 Download 🛱 Print 🖾 E-mail

Global Journal of Environmental Science and Management • Volume 7, Issue 1, Pages 33 - 46 • Winter 2021

### Document type Article Source type Journal ISSN 23833572 DOI 10.22034/gjesm.2021.01.03

View more 🗸

### Calorific and greenhouse gas emission in municipal solid waste treatment using biodrying

Zaman, B.ª; Oktiawan, W.ª; Hadiwidodo, M.ª; Sutrisno, E.ª; Purwono, P.<sup>b</sup> 🗟 Save all to author list

<sup>a</sup> Department of Environmental Engineering Faculty of Engineering Diponegoro University, Semarang, Indonesia <sup>b</sup> Center Science and Technology, IAIN Surakarta, Pandawa, Pucangan, Kartasura, Indonesia

5 71th percentile Citations in Scopus 46 Views count ⑦ ↗ View all metrics >

Full text options 🗸 Export 🗸

FWCI (?)

#### Abstract

Author keywords

Indexed keywords

Sustainable Development Goals 2022

SciVal Topics

Metrics

Funding details

#### Abstract

BACKGROUND AND OBJECTIVES: Urban intensity and activities produce a large amount of biodegradable municipal solid waste. Therefore, biodrying processing was adopted to ensure the conversion into Refuse Derived Fuel and greenhouse gases. METHODS: This study was performed at a greenhouse, using six biodrying reactors made from acrylic material, and equipped with digital temperature recording, blower, and flow meters. The variations in airflow (0, 2, 3, 4, 5, 6 L/min/kg) and the bulking agent (15%) were used to evaluate calorific value, degradation process and GHG emissions. FINDINGS: The result showed significant effect of airflow variation on cellulose content and calorific value. Furthermore, the optimum value was 6 L/min/kg, producing a 10.05% decline in cellulose content, and a 38.17% increase in calorific value. Also, the water content reduced from 69% to 40%. The CH4 concentration between control and biodrying substantially varied at 2.65 ppm and

Q

#### Cited by 5 documents

An innovative thermal composter to accelerate food waste decomposition at the household level

Zaman, B., Hardyanti, N., Purwono (2022) Bioresource Technology Reports

Pelletizing of Various Municipal Solid Waste: Effect of Hardness and Density into Caloric Value

Suryawan, I.W.K., Fauziah, E.N., Septiariva, I.Y. (2022) Ecological Engineering and Environmental Technology

Development of mathematical model and experimental Validation for batch bio-drying of municipal solid waste: Mass balances

Lawrance, A., Haridas, A., Savithri, S. (2022) Chemosphere

View all 5 citing documents

Inform me when this document is cited in Scopus:

Set citation alert >

### **Related documents**

Performance of Biodrying Process based on Temperature Profile and Cumulation

Zaman, B., Budihardjo, M.A., Yasmin, S.M.M. (2020) Journal of Physics: Conference Series

Waste to Energy: Čalorific Improvement of Municipal Solid Waste through Biodrying

Zaman, B., Samadikun, B.P., Hardyanti, N. (2021) Environmental and Climate Technologies

Conversion of municipal solid waste to refuse-derived fuel using biodrying

Zaman, B., Hardyanti, N., Samadikun, B.P. (2021) IOP Conference Series: Earth and Environmental Science

View all related documents based on references

Find more related documents in Scopus based on:

Authors > Keywords >



# Source details

	Global Journal of Environmental Science and Management			(
Scopus coverage years: from	m 2015 to 2023		0.0	
Publisher: GJESM Publicati	on			
ISSN: 2383-3572 E-ISSN:	2383-3866		SJR 2021	Ċ
Subject area: (Social Sciences: G	eneral Social Sciences		0.507	
Agricultural and E	Biological Sciences: General	Agricultural and Biological Sciences		
Environmental Sc	ience: General Environmen	ntal Science) (Environmental Science: Environmental Engineering)	SNIP 2021 <b>1 252</b>	Ċ
View all 🗸			1.000	
Source type: Journal				
View all documents > Set do CiteScore CiteScore rank	& trend Scopus	ave to source list Source Homepage		
i Improved CiteScore CiteScore 2021 counts th papers published in 2018	methodology e citations received in 20 -2021, and divides this b	018-2021 to articles, reviews, conference papers, book chapters and dat by the number of publications published in 2018-2021. Learn more <b>&gt;</b>	a	×
CiteScore 2021	~	CiteScoreTracker 2022 ①		
	2010 2021	1 279 Citations to date		
1,162 Citations	2018 - 2021			
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$	2018 - 2021	$6.5 = \frac{196}{196}$ Desuments to date		
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$	s 2018 - 2021	$6.5 = \frac{1,277 \text{ Citations to date}}{196 \text{ Documents to date}}$		
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$ Calculated on 05 May, 2022 CiteScore rank 2021 ①	s 2018 - 2021	$6.5 = \frac{1,277 \text{ Citations to date}}{196 \text{ Documents to date}}$ Last updated on 09 November, 2022 • Updated monthly		
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$ Calculated on 05 May, 2022 CiteScore rank 2021 () Category Ran	s 2018 - 2021 s 2018 - 2021 k Percentile	$6.5 = \frac{1,277 \text{ Citations to date}}{196 \text{ Documents to date}}$ Last updated on 09 November, 2022 • Updated monthly		
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$ Calculated on 05 May, 2022 CiteScore rank 2021 ① Category Ran Social Sciences General Social #18/26	s 2018 - 2021 s 2018 - 2021 k Percentile 4 93rd	$6.5 = \frac{1,277 \text{ Citations to date}}{196 \text{ Documents to date}}$ Last updated on 09 November, 2022 • Updated monthly		
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$ Calculated on 05 May, 2022 CiteScore rank 2021 ① Category Ran Social Sciences General Social Sciences H18/26	s 2018 - 2021 s 2018 - 2021 k Percentile 4 93rd	6.5 = $1,277$ Citations to date 196 Documents to date Last updated on 09 November, 2022 • Updated monthly		
$6.0 = \frac{1,162 \text{ Citations}}{195 \text{ Document}}$ Calculated on 05 May, 2022 CiteScore rank 2021 ① Category Ran Social Sciences General Social Sciences Agricultural and Biological Sciences #23/21	2018 - 2021 s 2018 - 2021 k Percentile 4 93rd	6.5 = $\frac{1,277 \text{ Citations to date}}{196 \text{ Documents to date}}$ Last updated on 09 November, 2022 • Updated monthly		

Q



1. <sub>Home</sub> 2. Aims and Scope	Quarterly Publication
Search	Q
Browse	~
GJESM Journal Best Paper Awards	
Journal Informations	$\checkmark$
Authorship	
Submit Manuscript	
Indexing and Abstracting	
Editorial Board	
Guide for Authors	~
Publication Ethics	~

**Review Page** 

Publishing Options Model

**Open Access Policy** 

Self-Archiving Policy

**Privacy Statement** 

Publisher Business Model

Contact Us

# **Aims and Scope**

### AIMS

Global Journal of Environmental Science and Management (GJESM), in publication since 2015, is a leading international, open access, peer reviewed, scholarly aiming to promote scientific and technological publishing high quality and novel information within the broad field of 'Environmental science, engineering and management'. The GJESM Journal operates a double-blind peer review policy.

#### SCOPE

A broad outline of the Global Journal of Environmental Science and Management scope includes; peer reviewed original research papers, case studies, technical reports, research reviews, short communications, notes to the editor, letters to editor and authors' response about letters to editor. GJESM Journal covers the following topics and areas:

### ENVIRONMENTAL MANAGEMENT

Environmental health and ecotoxicology

Environmental impact assessment Environmental monitoring and statement Environmental social science Hazardous and toxic substances management Human population and environment Health, safety and environment (HSE) Environmental risk assessment and management Plant and soil environment Soil pollution and remediation Sustainable agriculture management Urban and built environmental management

### ENVIRONMENTAL SCIENCE

Environmental biology and biotechnology

Environmental chemistry

Environmental microbiology

Environmental pollution (Air, soil and water)

Marine and coastal environmental pollution and management Wildlife ecology

### ENVIRONMENTAL ENGINEERING

Environmental analysis and methodology

Environmental bioremediation and measurement

Environmental modeling

Environmental nanotechnology

Environmental radiation and radioactivity

Hydrology and water resources

Industrial ecology

Noise pollution control

Solid waste management

Wastewater collection and treatment processes

Water pollution control and management

Home

About Journal

Editorial Board

Submit Manuscript

Contact Us

Glossary

Sitemap

## News

Corresponding author ORCID 2019-06-06

Cooperation with GJESM Journal 2019-06-06

The GJESM Editor in Chief is appointed as Journal Advisor ... 2016-01-05





### 1. <u>Home</u>

# Quarterly Publication

### 2. Editorial Board

Search	Q
Home	
Browse	$\checkmark$
GJESM Journal Best Paper Awards	
Journal Informations	~
Authorship	
Submit Manuscript	
Indexing and Abstracting	
Editorial Board	
Guide for Authors	$\checkmark$
Publication Ethics	$\checkmark$
Editor Page	~

 $\sim$ 

**Reviewer Page** 

Unrestricted Reuse in Compliance with BOAI

Publishing Options Model

**Open Access Policy** 

Self-Archiving Policy

**Privacy Statement** 

Publisher Business Model

Contact Us

# **Editorial Board**



## Sponser

GJESM Publisher Global Journal of Environmental Science and

Management

**Environmental Issues** 

www.gjesm.net/page\_112.html

- Sight gjesm.publication@gmail.com
- 📞 +9821- 26105110
- 🔹 h-index: Scopus: 20 🗷
- 🕂 <u>More</u>



# Founding Editor in Chief

Professor J. Nouri Tehran University of Medical Sciences,

Tehran, Iran

Environmental Science and Management

tums.ac.ir/faculties/jnouri

- 🔽 editor@gjesm.net
- 📞 +9821- 26105110

- 🝺 0000-0002-9982-3546
- 🕼 h-index: Scopus: 26 🗷
- 🕂 <u>More</u>



# **Managing Editor**

**Professor D. Sivakumar** Department of Agricultural Engineering, Kalasalingam Academy of Research and Education, Tamil Nadu, India.

**Environmental Management** 

S 13.235.237.27/school/school-of-bio-and-chemical-engineering-sbce/

- Sivakumar.gjesm@gmail.com
- 📞 +91 979 097 3774
- 🝺 <u>0000-0001-5228-0145</u>
- 🗇 h-index: Scopus: 17 🗷
- 🕂 <u>More</u>



# **Assistant Editor**

**Dr. S.M. Tehrani** Assistant Editor, Global Journal of Environmental Science and Management; Managing Editor, International Journal of Human Capital in Urban Management

**Environmental Management** 

- Etehranishohre@gmail.com
- 📞 09821-9601 6100
- 🕩 0000-0002-0072-7969
- 🖏 h-index: 6 🗹
- + <u>More</u>



# **Editorial Board**

**Professor V.K. Gupta** Department of Applied Chemistry, Faculty of Science, University of Johannesburg, Johannesburg, Gauteng, South Africa

### **Environmental Chemistry**

- S www.iitr.ac.in/departments/CY/pages/People+Faculty+vinodfcy.html
- vinodfcy@gmail.com

- • 91-01332-285801
- 🔟 <u>0000-0003-2809-2966</u>
- 🗇 h-index: Scopus:174 (Highly Cited Researcher) 🗷
- 🕂 <u>More</u>



# **Editorial Board**

**Professor A. Fauzi Ismail** Department of Energy Engineering, Faculty of Chemical and Energy Engineering, Universiti Technologi Malaysia, Malaysia

Reverse osmosis, Water treatment

Samtec.utm.my/prof-datuk-dr-ahmad-fauzi-ismail/

- 🗖 afauzi@utm.my
- 📞 +607-553 0244
- D 0000-0003-0150-625X
- 🗇 h-index: Scopus: 91 (Highly cited researcher) 🗷
- 🕂 <u>More</u>



# **Editorial Board**

**Professor A.T. Peterson** Department of Ecology and Evolutionary Biology, Biodiversity Institute, University of Kansas, Lawrence, Kansas, USA

Biodiversity and Wildlife

Stinguishedprofessors.ku.edu/professor/peterson-t

- 🗹 town@ku.edu
- \$ +1 785-864-3926
- D 0000-0003-0243-2379
- 🌑 h-index: Scopus: 85 (Highly Cited Researcher) 🗷
- **+** <u>More</u>



# **Editorial Board**

**Professor M. Sillanpää** Laboratory of Green Chemistry, Lappeenranta University of Technology, Jääkärinkatu 31, FI-50100 Mikkeli, Finland

### Green Chemistry, Environmental Chemistry

www.lut.fi/web/en/news/-/asset\_publisher/IGh4SAywhcPu/content/lut-s-chemistry-...

- 🔄 mika.sillanpaa@lut.fi
- 📞 +358 400 205 215
- 🔟 0000-0003-3247-5337
- 🗇 h-index: Scopus: 88 🗷
- 🕂 <u>More</u>



# **Editorial Board**

**Professor A. Cerda** Departament de Geografia. Universitat de València. Blasco Ibàñez, 28, 46010-Valencia. Spain

Environmental Soil erosion & degradation

© connecteur.info/wp-content/uploads/2015/05/STSM Valencia.pdf

- Sartemio.cerda@uv.es
- 📞 +34-9-63864882
- (D) 0000-0001-5326-4489
- 🗇 h-index: Scopus: 75 🗷



# **Editorial Board**

**Professor S.I. Allakhverdiev** Russian Academy of Sciences, Institute of Basic Biological Problems, Moscow, Russia

## Photosynthesis and renewable energy

S www.researchgate.net/profile/Suleyman\_Allakhverdiev2

- suleyman.allakhverdiev@gmail.com
- 📞 +79251319669
- D 0000-0003-0475-5403
- 🌑 h-index: Scopus: 62 (Highly Cited Researcher) 🗷
- 🕂 <u>More</u>



# **Editorial Board**

**Professor J-Dong Gu** School of Biological Sciences, Kadoorie Biological Sciences Building, The University of Hong Kong, Pokfulam Road, Hong Kong SAR, P. R. China

**Environmental Biology** 

www.biosch.hku.hk/ecology/jdg.htm

- 🔄 jidonggu.hku@gmail.com
- 📞 (852) 2299 0605
- 🕩 0000-0002-7082-9784
- 🕼 h-index: Scopus: 63 🗹
- **+** <u>More</u>



# **Editorial Board**

**Professor D. Wen** School of Chemical and Process Engineering, University of Leeds, Leeds, UK

**Energy Engineering** 

engineering.leeds.ac.uk/staff/318/Professor\_Dongsheng\_Wen

- 🖬 d.wen@leeds.ac.uk
- **\$** +44(0)113343 1299
- D 0000-0003-3492-7982
- 🕼 h-index: Scopus: 52 🗷
- 🕂 <u>More</u>



# **Editorial Board**

**Professor T. Yigitcanlar** Science and Engineering Faculty, Civil Engineering and The Built Environment, Property and Planning, Queensland University of Technology, 2, George Street Brisbane QLD 4001, Australia

### Urban and Regional Planning

Staff.qut.edu.au/staff/yigitcan/

- 🗠 tan.yigitcanlar@qut.edu.au
- 📞 +61 7 3138 2418
- D 0000-0001-7262-7118
- 🗇 h-index: Scopus: 49 🗗
- 🕂 <u>More</u>



# **Editorial Board**

**Professor A.Z. Aris** Department of Environmental Sciences, Faculty of Environmental Studies, Universiti Putra Malaysia 43400 UPM Serdang, Selangor, Malaysia

Hydrochemistry

env.upm.edu.my/upload/dokumen/20170608101954ARIS\_AZ\_CV.pdf

- Zaharin@upm.edu.my
- 💪 603.89466764
- D 0000-0002-4827-0750
- 🗇 h-index: Scopus: 35 🗷
- 🕂 <u>More</u>



## **Editorial Board**

**Professor K. Yetilmezsoy** Department of Environmental Engineering, Faculty of Civil Engineering, Yildiz Technical University, Davutpasa Campus, 34220, Esenler, Istanbul, Turkey

Water and wastewater treatment modeling

Savesis.yildiz.edu.tr/yetilmez

- 🗠 yetilmez@yildiz.edu.tr
- 📞 +90 212 383 5376
- D 0000-0003-1478-9957
- 🐡 h-index: Scopus: 32 🗷
- **+** <u>More</u>



# **Editorial Board**

**Professor K.E. Noll** Illinois Institute of Technology, Armour College of Engineering, 10 West 33rd Street, Perlstein Hall, Suite 224, Chicago, IL 60616, USA

Air Quality and Pollution

- Sengineering.iit.edu/faculty/kenneth-noll
- 🗠 noll@iit.edu
- 📞 +1 312.567.3536
- D 0000-0001-8544-1769
- 🗇 h-index: Scopus: 26 🗷
- 🕂 <u>More</u>



# **Editorial Board**

Professor J. Nouri Tehran University of Medical Sciences,

Tehran, Iran

Environmental Science and Management

tums.ac.ir/faculties/jnouri

- 🗖 nourijafar@gmail.com
- 📞 +9821- 26105110

- D <u>0000-0002-9982-3546</u>
- 🗇 h-index: Scopus: 26 🗷
- **+** <u>More</u>



# **Editorial Board**

**Professor D. Sivakumar** Kalasalingam School of Agriculture and Horticulture, Kalasalingam Academy of Research and Education, Anand Nagar, Krishnankoil, Tamil Nadu, India.

**Environmental Management** 

www.velhightech.com/wp-content/uploads/2019/07/BIO-SKETCH-OF-DR.D.SIVAKU...

- Sivakumar.gjesm@gmail.com
- 📞 +91 979 097 3774
- D 0000-0001-5228-0145
- 🗇 h-index: Scopus: 17 🗷
- 🕂 <u>More</u>



# **Editorial Board**

**Professor M.H. Sayadi** Department of Environmental Engineering, Faculty of Natural Resources and Environment, University of Birjand, Birjand, Iran

Environmental Bioremediation and Measurement

### Scv.birjand.ac.ir/sayyadi/en

- Senter Sayadi@birjand.ac.ir
- 📞 +5632254068
- 🕩 0000-0002-7128-9919
- 🗇 h-index: Scopus: 16 🗷
- **+** <u>More</u>



# **Editorial Advisory Board**

**Dr. R. Stone** Senior Editor; SCIENCE Science Journal,

Howard Hughes Medical Institute, 4000 Jones Bridge Rd, Chevy Chase, MD 20815 USA

### Senior Editor; SCIENCE

www.tangledbankstudios.org

- Stone@hhmi.org
- 🕜
- 🕂 <u>More</u>



# **Editorial Advisory Board**

### Professor M.A. Abdoli Graduate Faculty of Environment,

University of Tehran, Tehran, Iran

### Solid Waste Management

Sigesm.net/data/gjesm/news/Abdoli CV.pdf

- 🗹 mabdoli@ut.ac.ir
- D 0000-0002-0158-4891
- 🗇 h-index: Scopus: 20 🗷
- 🕂 <u>More</u>



**Dr. H.K. Pant** Interdisciplinary Environmental Science Program, Department of Earth, Environmental and Geospatial Sciences, Lehman College of the City University of New York, 250 Bedford Park Blvd. W., Bronx, NY 10468, USA

### **Environmental Biogeochemistry**

www.omicsonline.org/committee/Hari K\_Pant\_\_Natural\_Disasters2013/

- Sahari.pant@lehman.cuny.edu
- 📞 +1 (718) 960 5859
- 💮 h-index: Scopus: 15 🗷
- **+** <u>More</u>



**Professor F.N. Sadooni** Adviser, Vice President for Research Office, Qatar University, P.O. Box 2713, Doha, Qatar

**Environmental Geology** 

Sites.google.com/site/fadhilnsadooni/home

- 🔄 fsadooni@gmail.com
- 📞 +974 4403 3962
- 🔟 <u>0000-0001-5027-0648</u>
- 🖏 h-index: Scopus: 14 🗷
- 🕈 <u>More</u>



**Dr. M.B. Baig** Department of Agricultural Extension and Rural Society, College of Food and Agricultural Sciences, King Saud University, Riyadh 11451, Saudi Arabia

Agriculture and Environmental Sciences

- www.gjesm.net/data/gjesm/news/CV OF DR Mirza.pdf
- mbbaig@ksu.edu.sa

- 📞 00 966 1 4676980
- D 0000-0001-7879-3117
- 🖏 h-index: Scopus: 12 🗷
- **+** <u>More</u>



**Dr. M. Fois** Environmental and Applied Botany, University of Cagliari, Cagliari, Italy

### **Biodiversity Conservation**

Sunica.academia.edu/MauroFois

- **M** mfois@unica.it
- 📞 +39 070 675 3509
- 🕩 0000-0002-4178-0790
- 🗇 h-index: Scopus: 12 🗷
- 🕂 More



Dr. V. Vasileva Institute of Forage Crops-Pleven, Department of Technology and Ecology of Forage Crops, 89 General Vladimir Vazov Str., Pleven 5800, Bulgaria

### Plant Ecology



Sigesm.net/data/gjesm/news/CV.Vasileva.pdf

- viliana.vasileva@gmail.com
- 📞 35-988-606-5461
- 10 0000-0001-5602-7892
- 🐡 h-index: Scopus: 7 🗷
- **+** <u>More</u>



### Professor C.S. Wu Department of Geography, University of Wisconsin,

Milwaukee, USA

### Environmental Geography

Suwm.edu/geography/people/wu-changshan/

- 🗠 cswu@uwm.edu
- 📞 +1 414 229 4860
- 🕩 0000-0002-0207-9299
- 🗇 h-index: Scopus: 6 🗗
- 🕂 More



# **International Advisory Board**

**Dr. N. Nouri** 7 Salto, Aliso Viejo, CA 92656 USA (USA Branch Office)

### Environmental Law and Policy

- 🗠 nourinima@yahoo.com
- 📞 +1(949) 397 0003

Home About Journal Editorial Board Submit Manuscript XML for Scientific Databases Contact Us Glossary Hard Copy Subscription Sitemap

# News

Corresponding author ORCID 2019-06-06

Cooperation with GJESM Journal 2019-06-06

The GJESM Editor in Chief is appointed as Journal Advisor ... 2016-01-05

Professor J. Nouri is appointed as as the formal member ... 2016-05-15

GJESM Journal is evaluated as the first rank by the ... 2017-04-13



Global Journal of Environmental Science and Management - Editorial Board

Global Journal of Environmental Science and Management is licensed under a

"Creative Commons Attribution 4.0 International (CC-BY 4.0)"

尾 site visit counter

CLICKY ANALYTICS

# **Newsletter Subscription**

Subscribe to the journal newsletter and receive the latest news and updates

(
Entor your Email
EIILEI YUUI EIIIAII

Subscribe

fy A<sub>R</sub><sup>6</sup> S in O S

© Journal Management System. Powered by ejournalplus.

×





ome Reviewers	Quarterly Publicat	
Search	۹	
Home		
Browse	~	
GJESM Journal Best Paper Awards		
Journal Informations	~	
Authorship		
Submit Manuscript		
Indexing and Abstracting		
Editorial Board		
Guide for Authors	~	
Publication Ethics	~	
Editor Page	~	
Reviewer Page	~	

Unrestricted Reuse in Compliance with BOAI

Publishing Options Model

**Open Access Policy** 

Self-Archiving Policy

**Privacy Statement** 

Publisher Business Model

Contact Us

# Reviewers

#### REVIEWERS

Review a manuscript written by a fellow scientist is a privilege. However, it is a time-consuming responsibility. Hence, GJESM's Editorial Board, authors, and audiences appreciate your willingness to accept this responsibility and your dedication. GJESM adheres to a double-blind peer-review process that is rapid, fair, and ensures a high quality of articles published. In so doing, GJESM needs reviewers who can provide insightful and helpful comments on submitted manuscripts in the period of determined time by editor. Maintaining GJESM as a scientific journal of high quality depends on reviewers with a high level of expertise and an ability to be objective, fair, and insightful in their evaluation of manuscripts.

#### **REVIEWERS' RESPONSIBILITIES**

#### (http://publicationethics.org/files/u7140/Peer%20review%20guidelines.pdf)

If GJESM's Editor-in-Chief or Handling Editor have invited you to review a manuscript, please consider the following:

- 1. Review manuscript critically but constructively and preparing detailed comments about the manuscript to help authors improve their work
- 2. Review multiple versions of a manuscript as necessary
- $\mathbf{3.}$  Providing all required information within established deadlines
- 4. Making recommendations to the editor regarding the suitability of the manuscript for publication in the journal

- **5.** Declaring to the editor any potential conflicts of interest with respect to the authors or the content of a manuscript they are asked to review
- 6. Reporting possible research misconducts
- 7. Suggesting alternative reviewers in case they cannot review the manuscript for any reasons
- 8. Treating the manuscript as a confidential document
- 9. Not making any use of the work described in the manuscript
- 10. Not communicating directly with authors, if somehow they identify the authors
- 11. Not identifying themselves to authors
- 12. Not passing on the assigned manuscript to another reviewer
- 13. Ensuring that the manuscript is of high quality and original work
- 14. Informing the editor if he/she finds the assigned manuscript is under consideration in any other publication to his/her knowledge
- 15. Writing review report in English only
- 16. Authoring a commentary for publication related to the reviewed manuscript.

### WHAT SHOULD BE CHECKED WHILE REVIEWING A MANUSCRIPT?

- 1. Novelty
- 2. Originality
- 3. Scientific reliability
- 4. Valuable contribution to the science
- 5. Adding new aspects to the existed field of study
- 6. Ethical aspects
- 7. Structure of the article submitted and its relevance to authors' guidelines
- $\mathbf{8}$ . References provided to substantiate the content
- 9. Grammar, punctuation and spelling
- 10. Scientific misconduct.

We gratefully acknowledge the contribution of the following distinguished reviewers who reviewed papers for the Global Journal of Environmental Science and Management (GJESM):

### GJESM ASSIGNED REVIEWERS

**REVIEWERS IN 2022:** 

### **GJESM ASSIGNED REVIEWERS**

REVIEWERS IN 2021:				
Reviewer Name	Specialty	Affiliation	Review Database Member	
H. Abu- Qdais	Environmental Engineering	Jordan University of Science and Technology, Jordan	Publons	
P <mark>.</mark> Fakharian	Civil & Structural Engineering	Semnan University, Semnan, Iran	Publons	
<mark>M. Fois</mark>	Biodiversity Conservation	Environmental and applied Botany, University of Cagliari, Italy	Publons	
<mark>M. Giang</mark> Hoang	Solid Waste Management	Faculty of Environmental Engineering, National University of Civil Engineering, Vietnam	<u>Publons</u>	
<mark>R. Isaifan</mark>	Air pollution	Hamad Bin Khalifa University, Doha, Qatar.	Publons	
<mark>A.R.</mark> Karbassi	Environmental science	Faculty of Environment, University of Tehran, Iran	Publons	
<mark>M. Limon</mark>	HSE	Mariano Marcos State University, Philippines	Publons	

J. Nouri	Environmental Science & Management,	Tehran University of Medical Sciences, Tehran, Iran	<u>Publons,</u> Mendeley
<mark>S.T. Pham</mark> Phu	Solid Waste Management	The University of Danang, Vietnam	<u>Publons</u>
<mark>G.R. Puno</mark>	Environmental Risk, Water pollution	Central Mindanao University, Philippines	Publons
<mark>S.M.</mark> Richards	Environmental Risk	University of Tennessee at Chattanooga, USA	-
<mark>G. Saini</mark>	Wastewater	Sharda University, Uttar Pradesh, India	Publons
<mark>M.H. Sayadi</mark>	Bioremediation	Faculty of Natural Resources and Environment, University of Birjand, Iran	Publons, Mendeley
<mark>M.</mark> Shafiepour	Climate change & global warming	Faculty of Environment, University of Tehran, Iran	-
<mark>D.</mark> Sivakumar	Environmental Civil Engineering	Kalasalingam Academy of Research and Education, India.	Publons, Mendeley
<mark>A.R. Taheri</mark>	Environmental chemistry	Islamic Azad university, llam, Iran	Publons, Mendeley

<mark>S.M.</mark> Tehrani	Environmental Management	International Journal of Human Capital in Urban Management, Tehran, Iran	Publons, Mendeley
Z. Yang	Air pollution	University of Maryland, Baltimore County, USA	Publons
T. Yigitcanlar	Urban & Regional Planning	Oueensland University of Technology, Australia	Publons

REVIEWERS IN 2020:				
Reviewer Name	Specialty	Affiliation	Review Database Member	
A.Z. Aris	Environmental Science	Faculty of Environmental Studies, Universiti Putra Malasia	Publons	
H. Abu- Qdais	Environmental Engineering	Jordan University of Science and Technology, Jordan	Publons	
A. Cerda	Soil erosion & Degradation	Department of Geology, University of Valencia, Spain	Publons	
M. Fois	Biodiversity Conservation	Environmental and applied Botany, University of Cagliari, Italy	Publons	



**Reviewer Page** 

Unrestricted Reuse in Compliance with BOAI

Publishing Options Model

**Open Access Policy** 

Self-Archiving Policy

**Privacy Statement** 

Publisher Business Model

Contact Us





ORIGINAL RESEARCH ARTICLE Environmental Engineering

**1.** <u>Geographic information system and process-based modeling of soil erosion and</u> <u>sediment yield in agricultural watershed</u>

G.R. Puno; R.A. Marin; R.C.C. Puno; A.G. Toledo-Bruno

*Volume 7, Issue 1 , January 2021, Pages 1-14* 

http://dx.doi.org/10.22034/gjesm.2021.01.01

**Abstract** BACKGROUND AND OBJECTIVES: The study explored the capability of the geographic information system interface for the water erosion prediction project, a process-based model, to predict and visualize the specific location of soil erosion and sediment yield from the agricultural watershed of Taganibong.METHODS: ... Read More



effects of particulate matter-2.5exposure on respiratory emergency visits in six central-southern Chilean cities highly contaminated by wood smoke.METHODS: Association was assessed using both distributed ... <u>Read More</u> Global Journal of Environmental Science and Management - Articles List



ORIGINAL RESEARCH ARTICLE Environmental Management

3. Calorific and greenhouse gas emission in municipal solid waste treatment using biodrying

B. Zaman; W. Oktiawan; M. Hadiwidodo; E. Sutrisno; P. Purwono

Volume 7, Issue 1, January 2021, Pages 33-46

http://dx.doi.org/10.22034/gjesm.2021.01.03

Abstract BACKGROUND AND OBJECTIVES: Urban intensity and activities produce a large amount of biodegradable municipal solid waste. Therefore, biodrying processing was adopted to ensure the conversion into Refuse Derived Fuel and greenhouse gases.METHODS: This study was performed at a greenhouse, using six biodrying ... <u>Read More</u>



ORIGINAL RESEARCH ARTICLE Environmental Management

4. Willingness of end users to pay for e-waste recycling

H.T.T. Nguyen; C.-H. Lee; R.-J. Hung

Volume 7, Issue 1, January 2021, Pages 47-58

http://dx.doi.org/10.22034/gjesm.2021.01.04

**Abstract** BACKGROUND AND OBJECTIVES: The sheer volume of electrical and electronic waste (e-waste) has presently been generated in Vietnam, posing a growing concern regarding its impact can have on the environment and human health.

**10.** <u>Application of environmental bacteria as potential methods of azo dye degradation</u>

<u>systems</u>

G. Manjarrez Paba; R. Baldiris Ávila; D. Baena Baldiris

*Volume 7, Issue 1 , January 2021, Pages 131-154* 

http://dx.doi.org/10.22034/gjesm.2021.01.10

**Abstract** BACKGROUND AND OBJECTIVES: The objective of this study isto present a description of the main characteristics of azo dyes and the different treatment methods used to remove them from water. There is a special emphasis given to the benefits associated with biological treatment, predominantly those related ... Read More



Home

About Journal

**Editorial Board** 

Submit Manuscript

XML for Scientific Databases

Contact Us

Glossary

Hard Copy Subscription

Sitemap





Homepage: https://www.gjesm.net/

#### **ORIGINAL RESEARCH PAPER**

# Calorific and greenhouse gas emission in municipal solid waste treatment using biodrying

#### B. Zaman<sup>1</sup>, W. Oktiawan<sup>1</sup>, M. Hadiwidodo<sup>1</sup>, E. Sutrisno<sup>1</sup>, P. Purwono<sup>2,\*</sup>

<sup>1</sup>Department of Environmental Engineering Faculty of Engineering Diponegoro University, Semarang, Indonesia <sup>2</sup>Center Science and Technology, IAIN Surakarta, Pandawa, Pucangan, Kartasura, Indonesia

ARTICLE INFO	<ul> <li>ABSTRACT</li> <li>BACKGROUND AND OBJECTIVES: Urban intensity and activities produce a large amount of biodegradable municipal solid waste. Therefore, biodrying processing was adopted to ensure the conversion into Refuse Derived Fuel and greenhouse gases</li> <li>METHODS: This study was performed at a greenhouse, using six biodrying reactors made from acrylic material, and equipped with digital temperature recording, blower, and flow meters. The variations in airflow (0, 2, 3, 4, 5, 6 L/min/kg) and the bulking agent (15%) were used to evaluate calorific value, degradation process and GHG emissions.</li> <li>FINDINGS: The result showed significant effect of airflow variation on cellulose content and calorific value. Furthermore, the optimum value was 6 L/min/kg, producing a 10.05% decline in cellulose content, and a 38.17% increase in calorific value. Also, the water content reduced from 69% to 40%. The CH4 concentration between control and biodrying substantially varied at 2.65 ppm and 1.51 ppm respectively on day 0 and at peak temperature. Morever, the value of N2O in each control was about 534.69 ppb and 175.48 ppb, while the lowest level was recorded after biodrying with 2 L/min/kg airflow.</li> <li>CONCLUSION: The calorific value of MSW after biodrying (refuse derived fuel) rangess from 4,713 – 6,265 cal/g. This is further classified in the low energy coal (brown coal) category, equivalent to &lt;7,000 cal/g. Therefore, the process is proven to be a suitable alteractive to achieve BDE production and low GHG emissions.</li> </ul>		
<b>Article History:</b> Received 10 April 2020 Revised 31 July 2020 Accepted 09 August 2020			
<i>Keywords:</i> Biodrying Greenhouse gas MSW Refuse derived fuel Temperature			
DOI: 10.22034/gjesm.2021.01.03		©2021 GJESM. All rights reserved.	
P	Ċ		
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES	
43	11	2	
*Corresponding Author: Email: <i>purwono.ga@gmail.com</i> Phone: +8564 0674048			

Fax: +6271 781516



Homepage: https://www.gjesm.net/

#### **ORIGINAL RESEARCH PAPER**

# Geographic information system and process-based modeling of soil erosion and sediment yield in agricultural watershed

#### G.R. Puno<sup>1,\*</sup>, R.A. Marin<sup>1</sup>, R.C.C. Puno<sup>2</sup>, A.G. Toledo-Bruno<sup>2</sup>

<sup>1</sup>Department of Forest Resources Management, College of Forestry and Environmental Science, Central Mindanao University, Musuan, Maramag, Philippines

<sup>2</sup>Department of Environmental Science, College of Forestry and Environmental Science, Central Mindanao University, Musuan, Maramag, Philippines

ARTICLE INFO	<ul> <li>ABSTRACT</li> <li>BACKGROUND AND OBJECTIVES: The study explored the capability of the geographic information system interface for the water erosion prediction project, a process-based model, to predict and visualize the specific location of soil erosion and sediment yield from the agricultural watershed of Taganibong.</li> <li>METHODS: The method involved the preparation of the four input files corresponding to climate, slope, land management, and soil properties. Climate file processing was through the use of a breakpoint climate data generator. The team had calibrated and validated the model using the observed data from the three monitoring sites.</li> <li>FINDINGS: Model evaluation showed a statistically acceptable performance with coefficient of determination values of 0.64 (probability value = 0.042), 0.85 (probability value = 0.000), and 0.69 (probability value = 0.001) at 95% level, for monitoring sites 1, 2, and 3, respectively. A further test revealed a statistically satisfactory model performance with root mean square error-observations standard deviation ratio, Nash-Sutcliffe efficiency, and percent bias of 0.62, 0.61, and 44.30, respectively, for monitoring site 1; 0.65, 0.56, and 25.60, respectively, for monitoring site 2; and 0.60, 0.65, and 27.90, respectively, for monitoring site 3. At a watershed scale, the model predicted the erosion and sediment yield at 89 tons per hectare per year and 22 tons per hectare per year, respectively, which are far beyond the erosion tolerance of 10 tons per hectare per year. The sediment delivery ratio of 0.20 accounts for a total of 126,390 tons of sediments that accumulated downstream in a year.</li> <li>CONCLUSION: The model generated maps that visualize a site-specific hillslope, which is the source of erosion and sedimentation. The study enables the researchers to provide information helpful in the formulation of a sound policy statement for sustainable soil</li> </ul>		
Article History: Received 17 February 2020 Revised 20 May 2020 Accepted 01 June 2020			
<b>Keywords:</b> Agriculture Geospatial Sediments Soil conservation Sustainability			
DOI: 10.22034/gjesm.2021.01.01		©2021 GJESM. All rights reserved.	
R	டு	===	
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES	
50	12	4	
*Corresponding Author: Email: grpuno@cmu.edu.ph Phone: +9166918259			

Fax: +6388 356 1912



Homepage: https://www.gjesm.net/

#### **ORIGINAL RESEARCH PAPER**

# The effect of short-term of fine particles on daily respiratory emergency in cities contaminated with wood smoke

#### R. Torres<sup>1</sup>, N. Baker<sup>2,3</sup>, G. Bernal<sup>3,4</sup>, F. Peres<sup>5</sup>, A.K. Maldonado<sup>6</sup>, D.D. Caceres<sup>6,\*</sup>

<sup>1</sup>Programa de Bioestadística, Escuela de Salud Pública, Facultad de Medicina, Universidad de Chile, Santiago, CP 838046, <mark>Chile</mark> <sup>2</sup>Emory University Rollins School of Public Health, Atlanta, GA 30322, USA

<sup>3</sup>International Exchange Program for Minority Student,Icahn School of Medicine at Mount Sinai in New York City, NY 10029, USA <sup>4</sup>Departamento de Salud Ambiental, Escuela Graduada de Salud Pública, Universidad de Puerto Rico recinto de Ciencias Médicas, San Juan, CP 00921, Puerto Rico

<sup>5</sup>Centro de Estudio de Salud del Trabajador y Ecología Humana, Escuela Nacional de Salud Pública, Fio Cruz. Rio de Janeiro, CEP 21040-900, Brasil

<sup>6</sup>Programa de Salud Ambiental, Escuela de Salud Pública, Facultad de Medicina, Universidad de Chile, Santiago, CP 838046, Chile

### ARTICLE INFO ABSTRACT

#### Article History:

Received 25 February 2020 Revised 28 May 2020 Accepted 12 June 2020

#### Keywords:

Air pollution Firewood combustion Time-series study Particulate matter-2.5 (PM2.5) Respiratory emergency visits (REVs)

BACKGROUND AND OBJECTIVES: The goal of this study is to evaluate in a time-series
study the short-term effects of particulate matter-2.5 exposure on respiratory emergency
visits in six central-southern Chilean cities highly contaminated by wood smoke.
METHODS: Association was assessed using both distributed lag linear and non-linear

**METHODS:** Association was assessed using both distributed lag linear and non-linear Poisson models constrained to a 7-day lag period, adjusting for temporal trends and meteorological variables and stratifying seasonally into cold and warm periods.

**FINDINGS:** The results showed that the daily average concentrations of particulate matter-2.5 in the cold period were 3 to 6 times those recorded in the warm period, exceeding the daily norm of  $50 \ \mu\text{g/m}^3$  the 93.3% of the time *versus* 6.7%, respectively. The average daily number of respiratory emergency visits were between 30% and 64% higher in the cold period compared to the warm one. From linear models, cumulative relative risk ratios over 0-7 day lags per  $10 \ \mu\text{g/m}^3$  of fine particle increase were between 1.004 (95% confidence Interval: 0.998 - 1.010) and 1.061 (95% confidence Interval: 1.049 - 1.074); these annual effects are attributable to the cold period impact where the cumulative risk ratios were between 1.008 (95% confidence Interval: 1.004 - 1.012) and 1.036 (95% confidence Interval: 1.026 - 1.047), since significant effects of fine particles on the studied risk were not found for the warm period.

**CONCLUSION:** With non-linear models we observed strong increasing associations with the level of particles for the overall period. High levels of fine particles from firewood are associated with respiratory effects observable several days after exposure. Health effects found in this study suggest that current policies tending to mitigate woodsmoke-related emissions should continue and reinforce.

DOI: 10.22034/gjesm.2021.01.02		©2021 GJESM. All rights reserved.	
		NUMBER OF TABLES	
55	6	3	
*Corresponding Author:			
Email: dcaceres@med.uchile.cl			
Phone: +562 229786554			
Fax: +562 27355582			



Homepage: https://www.gjesm.net/

#### **REVIEW PAPER**

# Application of environmental bacteria as potential methods of azo dye degradation systems

### G. Manjarrez Paba<sup>1,2,\*</sup>, R. Baldiris Ávila<sup>1</sup>, D. Baena Baldiris<sup>1</sup>

<sup>1</sup>Clinical and Environmental Microbiology Group, University of Cartagena, Faculty of Natural and Exact Sciences, Cartagena, Colombia

<sup>2</sup>GIA Environmental Research Group, Faculty of Engineering, Fundacion Universitaria Tecnologico Comfenalco, Cartagena, Colombia

ARTICLE INFO	ABSTRACT		
Article History: Received 17 March 2020 Revised 20 June 2020 Accepted 08 July 2020	<b>BACKGROUND AND OBJECTIVES:</b> The objection of the main characteristics of azo dyes and the remove them from water. There is a special event biological treatment, predominantly thos to do with its competitive advantages over other the special of t	ve of this study is to present a description he different treatment methods used to imphasis given to the benefits associated e related to the use of bacteria, which has er microorganisms in the dye degradation	
<b>Keywords:</b> Acinetobacter Azo dyes Effluents Enterococcus Marine bacteria Water treatment	processes. <b>METHODS:</b> The topic to be addressed was first defined through workshops with the research group. The literature review was carried out following several inclusion, exclusion criteria: the year of publication, as the selection was limited to studies published between 2010 and 2020, the focus of the investigation, which had to be related to the efficiency of different techniques for the remediation of ecosystems contaminated with azo dyes and, lastly, that the studies also discussed the use of environmental bacteria in dye degradation processes. <b>FINDINGS:</b> The efficiency of bacteria to degrade azo dyes ranges from 63-100%, the most efficient being: <i>Marinobacter</i> sp, <i>Sphingobacterium</i> sp, <i>Enterococcus faecalis</i> <i>Enterococcus casseliflavus.</i> The bacteria that, reportedly, have greater efficiency fo simultaneously removing the dye-metal complex are <i>Bacillus circulans</i> and <i>Acinetobacte</i> <i>junii.</i> <b>CONCLUSION:</b> Traditional strategies for the treatment of effluents contaminated with azo dyes are limited to physical and chemical processes that have a high energy and economic cost. For these reasons, current challenges are focused on the use o		
DOI: 10.22034/giesm.2021.01.0*		©2021 GJESM. All rights reserved.	
P	Ċ		
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES	
<b>162</b>	1	9	
*Corresponding Author:			

Email: gmanjarrezp@unicartagena.edu.co

Phone: +573185604660

Fax: +57 (5) 6600380