Journal of Engineering and Technological Sciences • *Open Access* • Volume 54, Issue 1 • 28 January 2022 • Article number 220110

Document type
Article • *Gold Open Access*

Source type
Journal

ISSN
23375779

DOI
10.5614/j.eng.technol.sci.2022.54.1.10

View more

Promising Adsorption of Sulfidic Acid Gases Using Wet Banana Plant Adsorbent (Musa spp.)

Huboyo, Haryono S. ; Zaman, Badrus; Ramadan, Bimastyaji S.; Prinaningrum, Anastasia D.
Save all to author list

[a] Environmental Engineering Department, Faculty of Engineering, Diponegoro University, Jalan Prof. H. Soedarto, SH Tembalang, Semarang, 50275, Indonesia

Abstract

Bananas have the highest production rate among fruits in Indonesia, which leads to the generation of a significant amount of banana fruit solid waste. In this study, we assessed the potential use of banana waste to remove hydrogen sulfide (H_2S) gas . In particular, the purpose of this study was to analyze the efficiency of banana waste as an adsorbent for H_2S gas . We tested the stems, leaves, and peels of banana plants as H_2S gas adsorbents with varying contact times. To obtain a microscopic view of the adsorbents before and after the experiment, we conducted measurements using scanning electron microscopy with dispersive X-ray spectroscopy. The banana leaves, stems, and peels were found to have H_2S gas absorption efficiency values of 76.52%, 51.83%, and 6.44%, respectively. Based on the

Source details

Journal of Engineering and Technological Sciences

Formerly known as: ITB Journal of Engineering Science

Scopus coverage years: from 2013 to Present

Publisher: Institut Teknologi Bandung (ITB)

ISSN: 2337-5779

Subject area: Engineering: General Engineering | Engineering: Engineering (miscellaneous) | Earth and Planetary Sciences: Earth-Surface Processes | Materials Science: Materials Science (miscellaneous)

View all

Source type: Journal

CiteScore 2022
1.7

SJR 2022
0.261

SNIP 2022
0.599

View all documents > | Set document alert | Save to source list

CiteScore | CiteScore rank & trend | Scopus content coverage

Improved CiteScore methodology

CiteScore 2022 counts the citations received in 2019-2022 to articles, reviews, conference papers, book chapters and data papers published in 2019-2022, and divides this by the number of publications published in 2019-2022. Learn more >

CiteScore 2022

$$1.7 = \frac{459 \text{ Citations } 2019 - 2022}{271 \text{ Documents } 2019 - 2022}$$

Calculated on 05 May, 2023

CiteScoreTracker 2023

$$1.7 = \frac{391 \text{ Citations to date}}{227 \text{ Documents to date}}$$

Last updated on 07 June, 2023 • Updated monthly

CiteScore rank 2022

Category	Rank	Percentile
Engineering — General Engineering	#170/302	43rd
Engineering — Engineering (miscellaneous)	#86/151	43rd
Earth and Planetary		

View CiteScore methodology > | CiteScore FAQ > | Add CiteScore to your site

About Scopus

What is Scopus

Content coverage

Scopus blog

Scopus API

Privacy matters

Language

日本語版を表示する

查看简体中文版本

查看繁體中文版本

Просмотр версии на русском языке

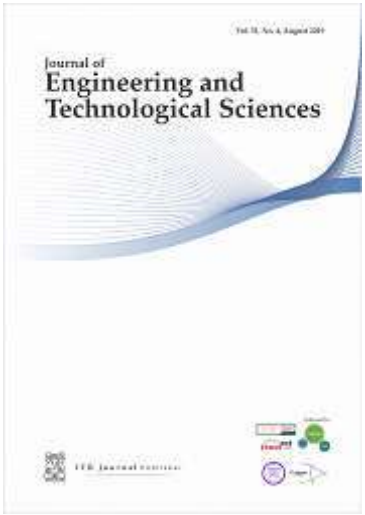
Customer Service

Help

Tutorials

Contact us

About the Journal



Journal of Engineering and Technological Sciences welcomes full research articles in the area of Engineering Sciences from the following subject areas: Mechanical Engineering, Civil and Structural Engineering, Chemical Engineering, Electrical Engineering, Geotechnical Engineering, Engineering Science, Environmental Science, Materials Science, and Earth-Surface Processes. Authors are invited to submit articles that have not been published previously and are not under consideration elsewhere.

Starting from Vol. 35, No. 1, 2003, full articles published are available online at https://journal.itb.ac.id, and indexed by Scopus (2022:Q3), Index Copernicus, Google Scholar, DOAJ, The Elektronische Zeitschriftenbibliothek EZB by University Library of Regensburg, EBSCO Open Science Directory, Ei Compendex, Chemical Abstract Service (CAS), Zurich Open Repository and Archive Journal Database, Emerging Sources Citation Index and Indonesian Publication Index.

The journal has been also accredited for five years based on The Decree of Directorate General of Research and Development Strengthening, Ministry of Research, Technology and Higher Education of the Republic of Indonesia No. 30/E/KPT/2018, for Volume 50 No.1, 2018 until Volume 54 No. 6, 2022.

ISSN: 2337-5779, E-ISSN: 2338-5502

Published by the Institute for Research and Community Services, Institut Teknologi Bandung, in collaboration with Indonesian Engineering Association (*Persatuan Insinyur Indonesia-PII*).

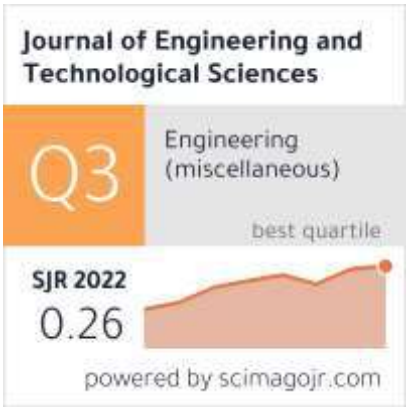
Publication History

Formerly known as:

- ITB Journal of Engineering Science (2007 - 2012)
- Proceedings ITB on Engineering Science (2003 - 2007)
- Proceedings ITB (1961 - 2002)

Back issues can be read online at: http://journal.itb.ac.id

Scimago Journal Ranking



Current Issue

Vol. 55 No. 2 (2023): In Progress

DOI: https://doi.org/10.5614/j.eng.technol.sci.2023.55.2

Published: 2023-05-12

Articles

Development of Non-Intrusive Load Monitoring of Electricity Load Classification with Low-Frequency Sampling Based on Support Vector Machine

Edi Leksono, Auditio Mandhany, Irsyad Nashirul Haq, Justin Pradipta, Putu Handre Kertha Utama, Reza Fauzi Iskandar, Rezky Mahesa Nanda

109-119

PDF Abstract views: 258 times | Downloaded: 250 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.1

Modal Transformation based Fault Location in Radial Distribution Network

Thant Sin Aung, Wunna Swe

120-130

PDF Abstract views: 172 times | Downloaded: 170 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.2

A Review on Zeolite Application for Aromatic Production from Non-Petroleum Carbon-Based Resources

I. G. B. N. Makertihartha, Noerma Juli Azhari, Grandprix T.M. Kadja

131-142

PDF Abstract views: 121 times | Downloaded: 188 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.3

Effect of Temperature, Holding Time, and Addition of Sn on Density on Metal Injection Molding Sintering Process

Wardatul Jannah, Danang Yudistiro, Mochamad Asrofi, Mahros Darsin, Ahmad Rendi Maulana

143-152

PDF Abstract views: 108 times | Downloaded: 127 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.4

3D Modeling of Leachate Distribution Around Zone E of Batu Layang Landfill, Pontianak, West Kalimantan, Indonesia Using the Geoelectrical Method

Stefanus Barlian Soeryamassoeka, Fitriana Meilasari, Hendri Sutrisno, Erni Yuniarti, Zulfian Zulfian

153-166

PDF Abstract views: 47 times | Downloaded: 40 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.5

Assessment of Small-Scale Microplastics Abundance and Characterization in Urban River: A Case Study in Metro River, Indonesia

Riyanto Haribowo, Prasetyo Rubiantoro, Arriel Fadhilah, Zefanya Alovy Petra Denindya, Yunike Ayu Kristanti, Wahyu Rismiati, Muhammad Aulia Arsal

167-176

PDF Abstract views: 134 times | Downloaded: 52 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.6

Emerging Technologies in the Development of Metallic and Bimetallic Nanoparticles in the Last Decade: A Scientometric Analysis

Maria Mercedes Cely-Bautista, Grey Castellar-Ortega, Javier Jaramillo-Colpas

177-188

PDF Abstract views: 21 times | Downloaded: 16 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2023.55.2.7

View All Issues >

Most Cited (Last 3 Years)

Surfactant-Polymer Coreflood Simulation and Uncertainty Analysis Derived from Laboratory Study

Farizal Hakiki, Dara Ayuda Maharsi, Taufan Marhaendrajana

PDF https://doi.org/10.5614/j.eng.technol.sci.2015.47.6.9

Brine Effluents: Characteristics, Environmental Impacts, and Their Handling

Danu Ariono, Mubiar Purwasasmita, I Gede Wenten

PDF https://doi.org/10.5614/j.eng.technol.sci.2016.48.4.1

Non Dispersive Chemical Deacidification of Crude Palm Oil in Hollow Fiber Membrane Contactor

Mubiar Purwasasmita, Eryk Bone Pratama Nabu, Khoiruddin, I Gede Wenten

PDF https://doi.org/10.5614/j.eng.technol.sci.2015.47.4.6

The Influence of PEG400 and Acetone on Polysulfone Membrane Morphology and Fouling Behaviour

P.T.P. Aryanti, Shelli R. Joscarita, Anita K. Wardani, S. Subagjo, Danu Ariono, I Gede Wenten

PDF https://doi.org/10.5614/j.eng.technol.sci.2016.48.2.1

Feasibility of Recovering Energy from Municipal Solid Waste to Generate Electricity

Khoiruddin Khoiruddin, I Gede Wenten

PDF https://doi.org/10.5614/j.eng.technol.sci.2016.48.1.1

Most Downloaded

Rapid Flood Mapping Using Statistical Sampling Threshold Based on Sentinel-1 Imagery in the Barito Watershed, South Kalimantan Province, Indonesia

Muhammad Priyatno, Muhammad Rokhis Khomarudin, Sastra Kusuma Wijaya, Fajar Yulianto, Gatot Nugroho, Pingkan Mayestika Afgatiani, Anisa Rorosati, Muhammad Arfin Hussein

PDF https://doi.org/10.5614/j.eng.technol.sci.2023.55.1.10

Physical and Chemical Properties of Indonesian Coffee Beans for Different Postharvest Processing Methods

Elin Yusibani, Peter Lloyd Woodfield, Adi Rahwanto, Muhammad Syukri Surbakti, Rojibussalim Rojibussalim, Rahmi Rahmi

PDF https://doi.org/10.5614/j.eng.technol.sci.2023.55.1.1

Structure Simulation on Portable Commuter Bike Considering Frame Design and Materials Alternatives

Bambang Iskandriawan

PDF https://doi.org/10.5614/j.eng.technol.sci.2023.55.1.2

Just Accepted

Development of Non-Intrusive Load Monitoring of Electricity Loads Classification with Low-Frequency Sampling Based on Support Vector Machine

Edi Leksono, Auditio Mandhany, Irsyad Nashirul Haq, Justin Pradipta, Putu Handre Kertha Utama, Reza Fauzi Iskandar & Rezky Mahesa Nanda

A Review on the Zeolite Application for Aromatic Production from Non-Petroleum Carbon-Based Resource

I. G. B. N. Makertihartha, Noerma J. Azhari, & Grandprix T. M. Kadja

Effect of Temperature, Holding Time, and Addition of Sn on Density on Metal Injection Molding Sintering Process

Wardatul Jannah, Danang Yudistiro, Mochamad Asrofi, Mahros Darsin & Ahmad Rendi Maulana

Information

For Readers

For Authors

For Librarians

Journal Visitors

View My Stats

Indexed by:

Institute for Research and Community Services - ITB
Center for Research and Community Services (CRCS) Building Floor 6th
Jl. Ganesha No. 10 Bandung 40132, Indonesia
Telp. +62-22-86010080 Fax. +62-22-86010051
E-mail: jets@lppm.itb.ac.id
ISSN: 2337-5779 E-ISSN: 2338-5502

Editorial Boards

Editor-in-Chief

Editor

The Republic of Korea
Email: J.G.Ih@kaist.ac.uk
Scopus

Yusaku Ohta, Ph.D.
Research Center for Prediction of Earthquakes and Volcanic Eruptions
Graduate School of Science
Tohoku University, Sendai, Japan
Email: yusaku.ohta.d2@tohoku.ac.jp
Scopus | ORCID

Prof. M. Akbar Rhamdhani
Fluid and Process Dynamics (FPD) Group
Department of Mechanical and Product Design Engineering
Swinburne University of Technology, Australia
Email: arhamdhani@swin.edu.au
Google Scholar | Scopus | ORCID

Prof.Dr.Ir. Tatacipta Dirgantara
Lightweight Structures Research Group
Faculty of Mechanical and Aerospace Engineering
Institut Teknologi Bandung, Indonesia
Email: tdirgantara@ftmd.itb.ac.id
Google Scholar | Scopus | ORCID | Sinta

Prof.Dr.Ir. Masyhur Irsyam
Geotechnical Engineering Research Group
Faculty of Civil and Environmental Engineering
Institut Teknologi Bandung, Indonesia
Email: masyhur.irsyam78@gmail.com
Google Scholar | Scopus | Sinta

Dr. Massoud Sofi
Department of Infrastructure Engineering
The University of Melbourne, Australia
Email: massoud@unimelb.edu.au
Google Scholar | Scopus

Email: supri@tf.itb.ac.id
Google Scholar | Scopus | Sinta

Dr. Heri Andreas
Geodesy Research Group
Faculty of Earth Science and Technology
Institut Teknologi Bandung, Indonesia
Email: heriandreas49@gmail.com
Google Scholar | Scopus | ORCID | Sinta

Prof. Ramaraj Boopathy
Department of Biological Sciences,
Nicholls State University, United States
Email: ramaraj.boopathy@nicholls.edu
Google Scholar | Scopus

Prof. Dr. Ir. Walter Timo de Vries
Department of Aerospace and Geodesy
School of Engineering and Design
Technical University of Munich, Germany
Email: wt.de-vries@tum.de
Scopus | ORCID

Prof.Dr.Ir. Marinus Cornelis Maria (Mark) van Loosdrecht
Department of Biochemical Engineering
Delft University of Technology, Netherlands
Email: M.C.M.vanLoosdrecht@tudelft.nl
Google Scholar | Scopus | ORCID

Prof. Prakash Thamburaja
Department of Mechanical & Manufacturing Engineering
Universiti Kebangsaan Malaysia, Malaysia
Email: prakash.thamburaja@gmail.com
Google Scholar | Scopus

Journal Visitors

View My Stats

Indexed by:

Institute for Research and Community Services - ITB
Center for Research and Community Services (CRCS) Building Floor 6th
Jl. Ganesha No. 10 Bandung 40132, Indonesia
Telp. +62-22-86010080 Fax. +62-22-86010051
E-mail: jets@lppm.itb.ac.id
ISSN: 2337-5779 E-ISSN: 2338-5502

Vol. 54 No. 1 (2022)

DOI: https://doi.org/10.5614/j.eng.technol.sci.2022.54.1

Published: 2022-01-28

Articles

Assessing Log Reduction Values of Conventional Water Treatment Plants with Microbially Highly Polluted Raw Water Sources

Arief Sudradjat, Made Sandhyana Angga, Kevin Barlian, Anindrya Nastiti

220101

PDF Abstract views: 535 times | Downloaded: 457 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.1

Vitamin E Extraction from Magnesium Salts of Palm Fatty Acid Distillates

Dianika Lestari, Khalisa Putri Aqilah, Salsafia Putri, Ardiyan Harimawan, Diky Mudhakir, Muhamad Insanu

220102

PDF Abstract views: 418 times | Downloaded: 479 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.2

Integrated Magnetotelluric (MT), Gravity and Seismic Study of Lower Kutai Basin Configuration

Selvi Misnia Irawati, Hidayat Hidayat, Edy Wijanarko, Hendra Grandis

220103

PDF Abstract views: 367 times | Downloaded: 475 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.3

Land Subsidence Susceptibility Projection for Palembang Slum Area by Complex MCDM-AHP Technique

Siti Noratiqah Mohamad Deros, Norashidah Md Din, Syamimi Mohd Norzeli, Rohayu Che Omar, Fathoni Usman, Sumie Amariena Hamim

220104

Journal of Engineering and Technological Sciences
Institut Teknologi Bandung

List of Reviewers 2021

1. Mohamed Abdelrahem (Institute for Electrical Drive Systems and Power Electronics, Technical University of Munich, Germany)
2. Nur Azam Abdullah (Department of Mechanical Engineering, International Islamic University Malaysia, Malaysia)
3. Nilankush Acharya (Department of Mathematics, Jadavpur University, India)
4. Lawal Lanre Adebayo (Fundamental and Applied Science Department, Universiti Teknologi PETRONAS, , Malaysia)
5. Vincentius Surya Kurnia Adi (Chemical Engineering Department, National Chung Hsing University, Taiwan)
6. Fauzan Adziman (Department of Materials, University of Oxford, 21 Banbury Rd, Oxford, United Kingdom)
7. Hamdy Mohy El Din Afefy (Construction Engineering and Management Dept., Faculty of Engineering, Pharos University, Alexandria, On leave from Tanta University, Egypt)
8. Cahyono Agus (Faculty of Forestry, Universitas Gadjah Mada, Indonesia)
9. Iftikhar A. Ahmad (Department of CS and IT, Mirpur University of Science and Technology (MUST), Mirpur, AJK, Pakistan)
10. Razi Ahmad (Fakulty of Civil Engineering Technology, Universiti Malaysia Perlis, Malaysia)
11. Akmal Akmaluddin (Civil Engineering Department, Mataram University, Indonesia)
12. Muhammad Nadeem Akram (Department of Microsystems, University of South-Eastern Norway, Norway)
13. Taufan Alam (Department of Agronomy, Faculty of Agriculture, Universitas Gadjah Mada, Indonesia)
14. Ayman M. Alaskari (Department of Manufacturing Engineering Technology, College of Technological Studies, Kuwait)
15. Mubarak al-Alawi (Department of Civil and Architectural Engineering, Sultan Qaboos University, Oman)
16. Musa Alaydrus (Department of Applied Physics, Graduate School of Engineering, Osaka University, Japan)
17. Muhammad Idrus Alhamid (Refrigeration and Air-Conditioning Laboratory, Mechanical Engineering Department - Faculty of Engineering, Universitas Indonesia, Indonesia)
18. Musab Alhawat (School of Engineering and informatics, University of Bradford, United Kingdom)
19. Sofia W. Alisjahbana (Civil Engineering, Engineering and Computer Science Faculty, Bakrie University, Indonesia)
20. Saeed Hamood Alsamhi (Software Research Institute, Athlone Institute of Technology, Athlone, Ireland)
21. Hany Rizk Ammar (Mechanical Engineering Department, College of Engineering, Qassim University, Saudi Arabia)
22. Aqsha (Department of Bioenergy Engineering and Chemurgy, Faculty of Industrial Technology, Institut Teknologi Bandung, Indonesia)

23. Ali Awaludin (Structural Engineering Laboratory, Department of Civil and Environmental Engineering, Faculty of Engineering, Universitas Gadjah Mada, Indonesia)
24. Shuokr Qarani Aziz (Department of Civil Engineering, College of Engineering, Salahaddin University, Iraq)
25. Mohd Azmi (School of Mechanical Engineering, Engineering Campus, Universiti Sains Malaysia, Malaysia)
26. Osama Al Azzawi (School of Civil Engineering and Mechanics, Huazhong University of Sciences and Technology, China)
27. Srijit Bandyopadhyay (Reactor Safety Division, Bhabha Atomic Research Center, Mumbai, India)
28. Galih Bangga (Institute of Aerodynamics and Gas Dynamics (IAG), University of Stuttgart, Germany)
29. Luigi La Barbera (Laboratory of Biological Structure Mechanics, Department of Chemistry, Materials and Chemical Engineering “G. Natta”, Politecnico Di Milano, Italy)
30. Mohammed J.K. Bashir (Department of Environmental Engineering, Faculty of Engineering and Green Technology (FEGT), University Tunku Abdul Rahman, Malaysia)
31. Seyfettin Bayraktar (Department of Naval Architecture and Marine Engineering, Yildiz Technical University, Istanbul, Turkey)
32. Davide Settembre Blundo (Gruppo Ceramiche Gresmalt, Via Mosca 4, Sassuolo, Italy)
33. Matteo Bonomo (Department of Chemistry, Università degli Studi di Torino, Via Pietro Giuria 7, Turin, Italy)
34. Ramaraj Boopathy (Department of Biological Sciences, Nicholls State University, United States)
35. S. Brischetto (Department of Mechanical and Aerospace Engineering, Politecnico di Torino, Torino, Italy)
36. Tatas Brotosudarmo (Ma Chung Research Center for Photosynthetic Pigments (MRCPP) and Department of Chemistry, Universitas Ma Chung, Taiwan)
37. Muhammad Arif Budiyanto (Departement of Mechanical Engineering, Universitas Indonesia, Indonesia)
38. Wahyu Tri Cahyanto (Department of Physics, Universitas Jenderal Soedirman, Indonesia)
39. Changyong Cao (NOAA/NESDIS/Center for Satellite Applications and Research, United States)
40. Alessio Cascardi (ITC-CNR, Construction Technologies Institute - Italian National Research Council, Italy)
41. Chun Kiat Chang (River Engineering and Urban Drainage Research Centre (REDAC), Universiti Sains Malaysia, Malaysia)
42. Saroj K. Chapagain (United Nations University, Institute for the Advanced Study of Sustainability, Japan)
43. Taqi Ahmad Cheema (Faculty of Mechanical Engineering, GIK Institute of Engineering Sciences and Technology, Pakistan)
44. Zhengwei Chen (Key Laboratory of Traffic Safety on Track of Ministry of Education, School of Traffic & Transportation Engineering, Central South University, China)
45. Edwin Lenin Chica (Grupo de Investigación Energía Alternativa (GEA), Universidad de Antioquia, Medellín, 050010, Colombia)
46. Chart Chiemchaisri (Department of Environmental Engineering, Faculty of Engineering, Kasetsart University,Thailand)
47. Zakarya Chiremsel (IHSI-LRPI, University of Batna 2, Algeria)
48. Pierfranco Costabile (Lampit (Laboratorio di Modellistica numerica per la Protezione Idraulica del Territorio), Department of Environmental Engineering, University of Calabria, Italy)
49. Sandeep Dahiya (Department of Electronics and Communication Engineering, BPSMV, Sonipat, Khanpur-Kalan, India)
50. Sujan Kumar Das (Department of Physics, Jahangirnagar University, Savar, Dhaka, Bangladesh)

51. Nilesh Tejram Deotale (Department of Computer Engineering TSEC, University of Mumbai, India)
52. Hary Devianto (Department of Chemical Engineering, Faculty of Industrial Technology, Institut Teknologi Bandung, Indonesia)
53. Ridha Djebali (Department of Computer Sciences, ISLAI Beja, University of Jendouba, Environment Boulevard, Tunisia)
54. Muhammad Cholid Djunaidi (Analytical Chemistry Laboratory, Department of Chemistry, Faculty of Science and Mathematics, Diponegoro University, Indonesia)
55. Jingtao Du (College of Power and Energy Engineering, Harbin Engineering University, China)
56. Regan Kyle Dunne (Department of Mechanical and Automation Engineering, Faculty of Engineering and the Built Environment, Tshwane University of Technology, South Africa)
57. Ryuichi Egashira (Department of International Development Engineering, Graduate School of Science and Engineering, Tokyo Institute of Technology, Japan)
58. Abang Annuar Ehsan (Institute of Microengineering and Nanoelectronics (IMEN), Universiti Kebangsaan Malaysia, Malaysia)
59. Birol Elevli (Department of Industrial Engineering, Ondokuz Mayıs University, Turkey)
60. Alireza Entezami (Department of Civil and Environmental Engineering, Politecnico di Milano, Italy)
61. Alireza Eydi (Determent of Industrial Engineering, K.N. Toosi University of Technology, Iran)
62. Pasquale Marcello Falcone (Department of Business and Economics - University of Naples Parthenope, Italy)
63. Yi Fang (Department of Mechanical and Aerospace Engineering, Hong Kong University of Science and Technology, Hong Kong)
64. N. Fatchurrohman (Faculty of Manufacturing Engineering, University Malaysia Pahang, Malaysia)
65. Fatkhan (Exploration and Engineering Seismology Research Group, Institut Teknologi Bandung, Indonesia)
66. E.R. Imam Fauzi (Manufacturing Engineering Group, School of Mechanical Engineering, Universiti Sains Malaysia (USM), Malaysia)
67. Elyes Feki (UR-17-ES11 Laboratory of Application Energy Efficiency and Renewable Energy (LAPER), University of Sciences of Tunis, Tunisia)
68. Tiago Fazeres-Ferradosa (CIIMAR - Interdisciplinary Centre of Marine and Environmental Research of the University of Porto, Portugal)
69. Cristiano Fragassa (University of Bologna, Department of Industrial Engineering, Italy)
70. Bibhu Prasad Ganthia (School of Electrical Engineering, KIIT Deemed to be University, , India)
71. S.H. Gawande (Industrial Tribology Laboratory, Department of Mechanical Engineering, M. E. S. College of Engineering, S. P. Pune University, India)
72. Abdülkadir Güleç (Technical Sciences, Department of Construction, Kahramanmaraş Sütçü İmam University, Turkey)
73. A. Habib (Dept. of Civil Engineering, Eastern Mediterranean University, Turkey)
74. Muhammad Hazwan Hamzah (Department of Biological and Agricultural Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia)
75. Markus Hartono (Department of Industrial Engineering, University of Surabaya, Indonesia)
76. Agus Haryanto (Agricultural Engineering Department, University of Lampung, Indonesia)
77. Noor Zafira Noor Hasnan (Department of Process and Food Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia)
78. Syed Shatir Asghrar Syed Hassan (Faculty of Chemical Engineering, Universiti Teknologi MARA, Malaysia)
79. Weipeng He (Department of Water Engineering and Science, College of Civil Engineering, Hunan University, China)
80. Zuchra Helwani (Departement of Chemical Engineering, Riau University, Indonesia)
81. Luky Hendraningrat (Petronas Research Sdn. Bhd, Malaysia)

82. Joni Hermana (Department of Environmental Engineering, Faculty of Civil, Environmental, and Geo Engineering, Institut Teknologi Sepuluh Nopember, Indonesia)
83. Risanuri Hidayat (Gadjah Mada University, Electrical and Information Technology Engineering Departement, Indonesia)
84. Anh Tuan Hoang (Institute of Engineering, Ho Chi Minh city University of Technology (HUTECH), Viet Nam)
85. Chuah Cheng Hock (Departments of Chemistry, Faculty of Science, University of Malaya, Malaysia)
86. Md Sanwar Hossain (Department of Electrical and Electronic Engineering, Bangladesh University of Business and Technology (BUBT), Bangladesh)
87. Seyed Saeid Hosseini (Membrane Science and Technology Research Group, Department of Chemical Engineering, Tarbiat Modares University, Iran)
88. Hooshyar Hossini (Department of Environmental Health Engineering, Faculty of Health, Kermanshah University of Medical Sciences, Iran)
89. Nanang Husin (Computer Science Faculty, University of Indonesia, Indonesia)
90. Sadiq Hussain (Dibrugarh University, India)
91. Aniza Ibrahim (Department of Civil Engineering, Universiti Pertahanan Nasional Malaysia, Kuala Lumpur, Malaysia)
92. Iswandi Imran (Institut Teknologi Bandung, Bandung, Indonesia)
93. Çağatay Iris (School of Management, University of Liverpool, United Kingdom)
94. Noorain Mohd Isa (Department of Environment, Faculty of Forestry and Environment, Universiti Putra Malaysia, Malaysia)
95. Baharuddin Ismail (Centre of Excellence for Renewable Energy (CERE), School of Electrical System Engineering, University Malaysia Perlis, Malaysia)
96. Ismiyarto (Organic Laboratory, Departement of Chemistry, Faculty of Science and Mathematics, Diponegoro University, Indonesia)
97. Jijo James (SSN College of Engineering, Rajiv Gandhi Salai, India)
98. Md Ashadi Johari (Department of Electronic Engineering,Faculty of Electrical and Electronic Engineering Technology, University Technical Malaysia Melaka, Malaysia)
99. Sparsh Johari (Dept. of Civil Engineering, Indian Institute of Technology Delhi, India)
100. Jesse V. Jokerst (Department of NanoEngineering, University of California, United States)
101. Helen Julian (Department of Chemical Engineering, Institut Teknologi Bandung, Indonesia)
102. Sokhee Philemon Jung (Department of Environmental and Energy Engineering, Chonnam National University, South Korea)
103. Annisa Jusuf (Lightweight Structure Research Group, Faculty of Mechanical and Aerospace Engineering, Insitut Teknologi Bandung, Indonesia)
104. Shah Kabir (University of Houston, United States)
105. K.A. Kapasakalis (Institute of Structural Analysis, Antiseismic Reasearch School of Civil Engineering, National Technical University of Athens Zografou Campus, Athens, Greece)
106. H.Kasban (Engineering Department, Nuclear Research Center, Atomic Energy Authority, Egypt)
107. Ali Kayabaşı (Department of Geological Engineering, Eskisehir Osmangazi University, Turkey)
108. Muhammad Yasir Khalid (Department of Mechanical Engineering, University of Management & Technology Lahore, Pakistan)
109. Mohammed Rajik Khan (Department of Industrial Design, National Institute of Technology, India)
110. Asif Hussain Khoja (Fossil Fuel Laboratory, Department of Thermal Energy Engineering, U.S-Pakistan Centre for Advanced Studies in Energy (USPCASE), National University of Sciences & Technology (NUST), Pakistan)
111. Mohammad Sadegh Keikhosravi Kiany (Faculty of Geographical Sciences and Planning, University of Isfahan, Iran)
112. Masaru Kitahara (Leibniz Universität Hannover, Institute for Risk and Reliability, Germany)

113. Motoyoshi Kobayashi (Faculty of Life and Environmental Sciences, University of Tsukuba, Japan)
114. J. Kok (Department of Biomedical Engineering, Lund University, Sweden)
115. Pooran Koli (Department of Chemistry, Jai Narain Vyas University, India)
116. Serdar Korkmaz (Department of Civil Engineering, Uludag University, Turkey)
117. Sugeng Krisnanto (Geotechnical Engineering Research Group, Faculty of Civil & Environmental Engineering, Institut Teknologi Bandung, Indonesia)
118. Fatih Kulahci (Nuclear Physics Division, Physics Department, Science Faculty, Firat University, Turkey)
119. Ivan Kurnia (Petroleum Recovery Research Center, New Mexico Institute of Mining & Technology, 801 Leroy Place, Socorro, United States)
120. Jundika Candra Kurnia (Department of Mechanical Engineering, Universiti Teknologi Petronas, Malaysia)
121. Ari Kusyanti (Department of Computer Science, Universitas Brawijaya, Indonesia)
122. Kun-sang Lee (Department of Earth Resources and Environmental Engineering, Hanyang University, South Korea)
123. Min Lee Lee (Faculty of Engineering, The University of Nottingham Malaysia Campus, Malaysia)
124. Djoko Legono (Department of Civil and Environmental Engineering, Faculty of Enginering, Universitas Gadjah Mada, Indonesia)
125. Hua Liang (Science and Technology on Plasma Dynamics Laboratory, Air Force Engineering University, China)
126. Shiyong Liao (College of Traffic & Transportation, Chongqing Jiaotong University, China)
127. Han Ay Lie (Department of Civil Engineering, Diponegoro University, Indonesia)
128. Blaž Likozar (Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry, Slovenia)
129. Luiz Eduardo Melo Lima (Federal University of Technology–Paraná, Brazil)
130. Shuang Liu (Hubei Subsurface Multi-scale Imaging Key Laboratory, Institute of Geophysics and Geomatics, China University of Geosciences, China)
131. Yunquan Liu (College of Energy, iChEM, Xiamen University, China)
132. Valentina Lombardi (Dept. of Engineering, Università Roma Tre, Italy)
133. Rossy Armyn Machfudiyanto (Department Civil Engineering, Faculty of Engineering, University of Indonesia, Indonesia)
134. Rani Maharani (Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Indonesia)
135. Wayan Firdaus Mahmudy (Faculty of Computer Science, Brawijaya University, Indonesia)
136. B. Benjula Anbu Malar (School of Information Technology and Engineering, Vellore Institute of Technology, India)
137. Sholeh Ma'mun (Department of Chemical Engineering, Universitas Islam Indonesia, Indonesia)
138. Mahmoud Mani (Aerospace Department, Amirkabir University of Technology (Tehran Polytechnic), Iran)
139. Tariq Al-Mansoori (College of Engineering, University of Al-Muthanna, Samawah, Iraq)
140. Lisendra Marbelia (Department of Chemical Engineering Faculty of Engineering, Universitas Gadjah Mada, Indonesia)
141. Taufan Marhaendrajana (Department of Petroleum Engineering, Faculty of Mining and Petroleum Engineering, Institut Teknologi Bandung, Indonesia)
142. Khairul Nizam Abdul Maulud (Smart and Sustainable Township Research Centre (SUTRA), Faculty of Engineering & Built Environment, Universiti Kebangsaan Malaysia, Malaysia)
143. Sally E. Maynard (Transport Safety Research Centre, School of Design and Creative Arts, Loughborough University, United Kingdom)

144. Mohamed Mehana (Computational Earth Science Group, Los Alamos National Laboratory, United States)
145. Nandkumar Mishra (Department of Mechanical Engineering, Sardar Patel College of Engineering, India)
146. Mochammad Agoes Moelyadi (Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Indonesia)
147. Masoud Mohebbi (School of Railway Engineering, Iran University of Science and Technology, Iran)
148. Deboraj Muchahary (Department of ECE, SR University, India)
149. Prasantha R. Mudimela (Lovely Professional University, India)
150. Andi Haris Muhammad (Department of Marine Engineering, Faculty of Engineering, Hasanuddin University, Indonesia)
151. Muhammad Mukhlisin (Department of Civil Engineering, Politeknik Negeri Semarang, Indonesia)
152. Gurusamy Kutralam-Muniasamy (Department of Biotechnology and Bioengineering, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico)
153. Muhammad Junaid Munir (School of Engineering, RMIT University, Australia)
154. João Valente Nabais (Comprehensive Health Research Center (CHRC), Departamento de Química, Escola de Ciências e Tecnologia, Universidade de Évora, Portugal)
155. Abhimanyu Nain (Guru Jambheshwar University of Science and Technology, India)
156. Gustavo Henrique Nalon (Department of Civil Engineering, Federal University of Viçosa, Brazil)
157. Paisarn Naphon (Thermo-Fluids and Heat Transfer Enhancement Lab. (TFHT), Department of Mechanical Engineering, Faculty of Engineering, Srinakharinwirot University, Thailand)
158. Roberto Nascimbene (Construction and Infrastructure, EUCENTRE, European Centre for Training and Research in Earthquake Engineering, Italy)
159. M.Z. Naser (Glenn Department of Civil Engineering, Clemson University, United States)
160. Ramli Nazir (Department of Geotechnic and Transportation, Faculty of Civil Engineering, Universiti Teknologi Malaysia, Malaysia)
161. Ngoc Thang Nguyen (School of Textile - Leather and Fashion, Hanoi University of Science and Technology, Viet Nam)
162. Jan Nisar (National Centre of Excellence in Physical Chemistry, University of Peshawar, Pakistan)
163. Mohd Zuhair Mohd Nor (Department of Process and Food Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia)
164. Ignatius Pulung Nurprasetio (Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Indonesia)
165. K.V.R. Padalu (Earthquake Engineering Research Centre, International Institute of Information Technology Hyderabad, India)
166. Debajyoti Pal (IP Communications Laboratory, School of Information Technology, King Mongkut's University of Technology Thonburi, Thailand)
167. Sadanand Pandey (Department of Chemistry, College of Natural Sciences, Yeungnam University, Republic of Korea)
168. Ngoc Bao Pham (Institute for Global Environmental Strategies (IGES), Japan)
169. Hang Ping (State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology, China)
170. Henrique J.O. Pinho (Ci2—Smart Cities Research Center, Instituto Politécnico de Tomar, Estrada da Serra, Portugal)
171. Sahar Hadi Pour (School of Civil Engineering, Faculty of Engineering, Universiti Teknologi Malaysia (UTM), Malaysia)
172. Manikanda Prabu (Department of Mechanical Engineering, Presidency University, India)
173. Chaiwat Prapainainar (Department of Chemical Engineering, King Mongkut's University of Technology North Bangkok, Thailand)

174. Arun S.S.V. Prasad (Department of Civil Engineering, Indian Institute of Technology (BHU), India)
175. Durga Prasad (Mechanical Engineering Department, Meerut Institute of Engineering and Technology, India)
176. Catalin I. Pruncu (Design, Manufacturing & Engineering Management, University of Strathclyde, United Kingdom)
177. Eko Pujiyanto (Industrial Engineering Department, Faculty of Engineering, Sebelas Maret University, Indonesia)
178. Julwan Hendry Purba (Center for Nuclear Reactor Technology and Safety, National Nuclear Energy Agency of Indonesia (BATAN), Indonesia)
179. Heriansyah Putra (Department of Civil and Environmental Engineering, IPB University, Indonesia)
180. Ryan Anugrah Putra (Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Institute of Fluid Dynamics, Germany)
181. Dinar Dwi Anugerah Putranto (Fakultas Teknik Universitas Sriwijaya, Indonesia)
182. Youzheng Qi (Key Laboratory of Electromagnetic Radiation and Sensing Technology, Chinese Academy of Sciences, China)
183. T. R. Vijaybabu (Department of Mechanical Engineering, Amrita School of Engineering, Amrita Vishwa Vidyapeetham, India)
184. Muhammad Rafiq (Beijing Key Laboratory of High Voltage and EMC, School of Electric and Electronic Engineering, North China Electric Power University, China)
185. T. Raghavendra (Department of Civil Engineering, R. V. College of Engineering, VTU, India)
186. Omeid Rahmani (Department of Natural Resources Engineering and Management, School of Science and Engineering, University of Kurdistan Hewlêr (UKH), Iraq)
187. Manickam Ramesh (Department of Mechanical Engineering, KIT-Kalaignarkarunanidhi Institute of Technology, India)
188. Mohammad M. Rasheed (College of Engineering, University of Information Technology and Communications, Ministry of Higher Education and Scientific Research, Iraq)
189. Ali Murtaza Rasool (National Engineering Services Pakistan (NESPAK), Pakistan)
190. Hanz Richter (Department of Mechanical Engineering, Cleveland State University, United States)
191. D.D. Risanti (Departmentof Engineering Physics, Institut Teknologi Sepuluh Nopember, Indonesia)
192. Michele Rocca (Department of Energy, Systems, Territory and Constructions Engineering (DESTeC), Italy)
193. Dedi Rohendi (Department of Chemical Engineering, Universitas Sriwijaya, Indonesia)
194. Hynek Roubík (epartment of Sustainable Technologies, Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague, Switzerland)
195. Indrajit G. Roy (Spaceage Geoconsulting, Australia)
196. Riries Rulaningtyas (Biomedical Engineering, Physics Department, Faculty of Science and Technology, Universitas Airlangga, Surabaya, Indonesia)
197. Gaurav Saini (Department of Civil Engineering, Sharda University, India)
198. Abdul Salam (Department of Plant Sciences, Quaid-I-Azam University Islamabad, 45320, Pakistan)
199. Samaila Saleh (School of Civil Engineering, Universiti Teknologi Malaysia, Malaysia)
200. M.S. Salleh (Fakulti Kejuruteraan Pembuatan, Universiti Teknikal Malaysia Melaka, Malaysia)
201. Priyaranjan Samal (School of Mechanical Sciences, Indian Institute of Technology Bhubaneswar, India)
202. Nonni Soraya Sambudi (Department of Chemical Engineering, Universiti Teknologi Petronas, Malaysia)
203. S.M. Sapuan (Department of Mechanical and Manufacturing Engineering, Universiti Putra Malaysia, Malaysia)

204. Allah Bux Sargano (School of Computing and Communications Infolab21, Lancaster University, United Kingdom)
205. Fitri Nur Indah Sari (Department of Materials Science and Engineering, National Cheng Kung University, Taiwan)
206. Sugeng Joko Sarwono (Laboratory of building Physics and Acoustics, Engineering Physics, Institut Teknologi Bandung, Indonesia)
207. N. J. Schifferstein (Department of Human-Centered Design, Delft University of Technology, Netherlands)
208. K. Selvaraj (PSNA College of Engineering and Technology, India)
209. Payam Shafigh (Department of Architecture, Faculty of Built Environment, University of Malaya, Malaysia)
210. Junlong Shang (Nanyang Center for Underground Space, School of Civil and Environmental Engineering, Nanyang Technological University, Singapore)
211. V.N. Sivakumar (Department of Civil Engineering, National Institute of Technology Warangal, India)
212. Mochamad Solikin (Civil Engineering Department, Universitas Muhammadiyah Surakarta Indonesia, Indonesia)
213. B.M. Sopha (Industrial Engineering Program, Department of Mechanical and Industrial Engineering, Universitas Gadjah Mada, Indonesia)
214. Riaan Stopforth (Mechatronics and Robotics Research Group Bio-Engineering Unit, Stopforth Mechatronics, Robotics and Research Lab, University of KwaZulu-Natal, South Africa)
215. Maciej Sułowicz (Institute on Electromechanical Energy Conversion, Cracow University of Technology, Poland)
216. Bhakti Yudho Suprapto (Dept. of Electrical Engineering, Universitas Sriwijaya, Indonesia)
217. Benny Suryanto (School of Energy, Geoscience, Infrastructure and Society, Institute for Infrastructure and Environment, Heriot-Watt University, United Kingdom)
218. Bambang Suryoatmono (Departmentof Civil Engineering, Parahyangan Catholic University, Indonesia)
219. Herri Susanto (Department of Chemical Engineering, Institut Teknologi Bandung, Indonesia)
220. Susilawati (School of Engineering, Monash University Malaysia, Malaysia)
221. R. Talebitooti (School of Mechanical Engineering, Iran University of Science and Technology, Iran)
222. Jafril Tanjung (Civil Engineering Department, Universitas Andalas, Indonesia)
223. Bassam A. Tayeh (Civil Engineering Department, Faculty of Engineering, Islamic University of Gaza, Palestine)
224. Hamid Tebyaniyan (Islamic Azad University, Science and Research Branch, Iran)
225. B.X. Thanh (Ho Chi Minh City University of Technology (HCMUT), Vietnam)
226. Hong Tian (Faculty of Engineering, China University of Geosciences, China)
227. Hing Yan Tong (College of Professional and Continuing Education, The Hong Kong Polytechnic University, Hong Kong)
228. Francesco Tornabene (Department of Innovation Engineering, University of Salento, Italy)
229. Janusz Torzewski (Institute of Robots and Machines Design, Faculty of Mechanical Engineering, The Military University of Technology, Poland)
230. Tomasz Trzepieciński (Department of Manufacturing and Production Engineering, Faculty of Mechanical Engineering and Aeronautics, Rzeszow University of Technology, Poland)
231. Mert Sinan Turgut (Mechanical Engineering Department, Faculty of Engineering, Ege University, Turkey)
232. Tariq Umar (Dept. of Civil Engineering, Surveying, and Construction Management, Kingston Univ, United Kingdom)
233. Florin Emilian Ţurcanu (Department of Building Services, Faculty of Civil Engineering and Building Services, Gheorghe Asachi Technical University of Iasi, Romania)

234. Tubon Usca (Faculty of Sciences and Mechanical Engineering, Escuela Superior Politécnica de Chimborazo, Ecuador)
235. Sümeyye Üstüntağ (Faculty of Engineering, Deparment of Textile Engineering, Turkey)
236. Songkot Utara (Polymer and Material Research Groups, Faculty of Science, Udon Thani Rajabhat University, Thailand)
237. Germán Giácoman-Vallejos (Facultad de Ingeniería, Universidad Autónoma de Yucatán, Avenida Industrias No Contaminantes por Anillo Periférico Norte Apdo.Postal 150 Cordemex, Mexico)
238. Chetankumar S. Vegad (Department of Aerospace Engineering, and National Centre for Combustion Research Development, Indian Institute of Technology Madras, India)
239. Hao Wang (Key Laboratory of C and PC Structures of Ministry of Education, Southeast University, China)
240. Xiushan Wang (College of Mechanical and Electrical Engineering, Henan Agricultural University, China)
241. Mick Van Der Wegen (Department of Water Science and Engineering, IHE Delft, Netherlands)
242. Gede Wibawa (Department of Chemical Engineering, Faculty of Industrial Technology, Sepuluh Nopember Institute of Technology (ITS), Indonesia)
243. Yusuf Wibisono (Bioprocess Engineering, Brawijaya University, Indonesia)
244. Pramujo Widiatmoko (Department of Chemical Engineering, Institut Teknologi Bandung, Indonesia)
245. Martin Wijaya (Department of Civil Engineering, Faculty of Engineering, Parahyangan Catholic University, Indonesia)
246. I Ketut Gede Wirawan (Department of Mechanical Engineering, Udayana University, Indonesia)
247. Riza Wirawan (Materials Engineering, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Indonesia)
248. Jian Wu (Center for Rubber Composite Materials and Structures, Harbin Institute of Technology, China)
249. Shofarul Wustoni (Organic Bioelectronics Laboratory, Biological Science and Engineering Division (BESE), King Abdullah University of Science and Engineering (KAUST), Saudi Arabia)
250. Yang Xiao (State Key Laboratory of Coal Mine Disaster Dynamics and Control, Chongqing University, China)
251. Yegui Xiao (Prefectural University of Hiroshima, Dept. of Management and Information System, Japan)
252. Fatemeh Yousefian (Department of Environmental Health Engineering, Tehran University of Medical Sciences, Iran)
253. Nur Izzi Md Yusoff (Dept. of Civil Engineering, Universiti Kebangsaan Malaysia, Malaysia)
254. Yonik Meilawati Yustiani (Department of Environmental Engineering, Universitas Pasundan, Indonesia)
255. Mohammad Zabetian (Faculty of Mechanical Engineering, Tarbiat Modares University, Iran)
256. Ishtiaque A. Zahed (School of Science, Engineering, and Technology East Delta University, Bangladesh)
257. Fujun Zhang (Shandong University of Science and Technology, China)
258. Yufen Zhang (School of Civil and Transportation Engineering, Hebei University of Technology, China)
259. Li Zhou (State Key Laboratory of Hydraulics and Mountain River Engineering, College of Water Resource & Hydropower, Sichuan University, China)

Journal of Engineering and Technological Sciences

Institut Teknologi Bandung

Vol. 54 No. 1 (2022)

DOI: https://doi.org/10.5614/j.eng.technol.sci.2022.54.1

Published: 2022-01-28

Articles

PDF Abstract views: 220 times | Downloaded: 162 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.4

Distribution of Microplastics along Mai Khao Coastline, Phuket

Pensiri Akkajit, Audomlak Khongsang

220105

PDF Abstract views: 233 times | Downloaded: 179 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.5

Evaluating Direct Pointing and Indirect Cursor Interactions with Fitts' Law in Stereoscopic Environments

Dino Caesaron, Chiuhsiang Joe Lin, Ilma Mufidah, Anastasia Febiyani

220106

PDF Abstract views: 209 times | Downloaded: 152 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.6

The Implementation of Soundscape Composition to Identify the Ideal Soundscape for Various Activities

Joko Sarwono, Anugrah Sabdono Sudarsono, Andini Hapsari, Helga Salim, Ranti Dwi Tassia

220107

PDF Abstract views: 217 times | Downloaded: 170 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.7

Volatile State Mathematical Models for Predicting Components in Biomass Pyrolysis Products

Pandit Hernowo, Carolus B. Rasrendra, Yogi W. Budhi, Jenny Rizkiana, Anton Irawan, Septhian Marno, Yana Meliana, Oki Muraza, Yazid Bindar

220108

PDF Abstract views: 218 times | Downloaded: 166 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.8

Differences in Biochar Sources for Controlled Nitrogen Loss in a Hybrid Maize Agroforestry System with Melaleuca cajuputi

Dody Kastono, Priyono Suryanto, Rohlan Rogomulyo, Suci Handayani, Supriyanta Supriyanta, Muhammad Habib Widyawan, Taufan Alam

220109

PDF Abstract views: 165 times | Downloaded: 145 times

PDF Abstract views: 357 times | Downloaded: 370 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.4

Distribution of Microplastics along Mai Khao Coastline, Phuket

Pensiri Akkajit, Audomlak Khongsang

220105

PDF Abstract views: 402 times | Downloaded: 337 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.5

Evaluating Direct Pointing and Indirect Cursor Interactions with Fitts' Law in Stereoscopic Environments

Dino Caesaron, Chiuhsiang Joe Lin, Ilma Mufidah, Anastasia Febiyani

220106

PDF Abstract views: 295 times | Downloaded: 364 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.6

The Implementation of Soundscape Composition to Identify the Ideal Soundscape for Various Activities

Joko Sarwono, Anugrah Sabdono Sudarsono, Andini Hapsari, Helga Salim, Ranti Dwi Tassia

220107

PDF Abstract views: 378 times | Downloaded: 349 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.7

Volatile State Mathematical Models for Predicting Components in Biomass Pyrolysis Products

Pandit Hernowo, Carolus B. Rasrendra, Yogi W. Budhi, Jenny Rizkiana, Anton Irawan, Septhian Marno, Yana Meliana, Oki Muraza, Yazid Bindar

220108

PDF Abstract views: 375 times | Downloaded: 358 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.8

Differences in Biochar Sources for Controlled Nitrogen Loss in a Hybrid Maize Agroforestry System with Melaleuca cajuputi

Dody Kastono, Priyono Suryanto, Rohlan Rogomulyo, Suci Handayani, Supriyanta Supriyanta, Muhammad Habib Widyawan, Taufan Alam

220109

PDF Abstract views: 277 times | Downloaded: 279 times

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.9

Promising Adsorption of Sulfidic Acid Gases Using Wet Banana Plant Adsorbent (Musa spp.)

Haryono Setiyo Huboyo, Badrus Zaman, Bimastyaji Surya Ramadan, Anastasia Dinda Prinaningrum

220110

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.10

Curie Point Depth Analysis of Lesugolo Area, East Nusa Tenggara, Indonesia Based on Ground Magnetic Data

Alamta Singarimbun, Umar Said, Dini Andriani, R. B. Astro, Bakrun Bakrun, I G. P. F. Soerya Djaja, Eleonora Agustine, Pepen Supendi, Wahyu Srigutomo

220111

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.11

Blasting Vibration Monitoring and a New Vibration Reduction Measure

Xi Yang, Yunpeng Zhang, Jie Wang

220112

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.12

Powdered Activated Carbon (PAC)-Ceramic Composite Adsorbent for Iron and Aluminum Cations Removal from Acid Mine Drainage

Tine Aprianti, Tuti Indah Sari, Fitri Hadiah, Yadi Utama, Muhammad Said

220113

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.13

Multi-Objective Topology Optimization for Curved Arm of Multifunctional Billet Tong Based on Characterization of Working Conditions

Jialiang Liu, Zhaohua Wang, Dezhuang Song, Fenghe Wu

220114

DOI : https://doi.org/10.5614/j.eng.technol.sci.2022.54.1.14

Editorial Section

Cover Vol. 54 No. 1, 2022

Journal of Engineering and Technological Sciences

PDF

Front Matter

Journal of Engineering and Technological Sciences

PDF

Back Matter

Journal of Engineering and Technological Sciences

PDF

Indexed by:

Institute for Research and Community Services - ITB
Center for Research and Community Services (CRCS) Building Floor 6th
Jl. Ganesha No. 10 Bandung 40132, Indonesia
Telp. +62-22-86010080 Fax. +62-22-86010051
E-mail: jets@lppm.itb.ac.id
ISSN: 2337-5779 E-ISSN: 2338-5502

J. Eng. Technol. Sci., Vol. 54, No. 1, 2022, 220110

Promising Adsorption of Sulfidic Acid Gases Using Wet Banana Plant Adsorbent (Musa spp.)

Haryono S. Huboyo*, Badrus Zaman, Bimastyaji S Ramadan & Anastasia D Prinaningrum

Environmental Engineering Department, Faculty of Engineering,
Diponegoro University, Jalan Prof. H. Soedarto, SH Tembalang Semarang 50275
Indonesia
*E-mail: haryono.setiyo.huboyo@ft.undip.ac.id

Highlights:

- Banana plant waste can be used as gas adsorbent.
- The leaves of the banana plant are the most effective in removing pollutants.
- Removal of gaseous pollutants occurs in less than 15 minutes.

Abstract. Bananas have the highest production rate among fruits in Indonesia, which leads to the generation of a significant amount of banana fruit solid waste. In this study, we assessed the potential use of banana waste to remove hydrogen sulfide (H_2S) gas. In particular, the purpose of this study was to analyze the efficiency of banana waste as an adsorbent for H_2S gas. We tested the stems, leaves, and peels of banana plants as H_2S gas adsorbents with varying contact times. To obtain a microscopic view of the adsorbents before and after the experiment, we conducted measurements using scanning electron microscopy with dispersive X-ray spectroscopy. The banana leaves, stems, and peels were found to have H_2S gas absorption efficiency values of 76.52%, 51.83%, and 6.44%, respectively. Based on the experiment, the leaves of the banana plant appear to be the best adsorbents, with an adsorption capacity of 1.67 mg/g. The results also revealed that there was a change in the fiber and stomata appearance of the banana leaves after the adsorption process. Overall, this research indicates that banana leaves have the potential to be used as effective H_2S adsorbents.

Keywords: *adsorption; air pollution; gas; odor; plant.*

1 Introduction

In 2018, bananas were ranked as the largest contributor to fruit production in Indonesia, with a total production figure of 7.26 million tons, which is above the production figures for mangoes, oranges, pineapples, and durian [1]. Banana production has since increased by 1.42% (101,698 tons) and still ranks first among the fruit production contributors. East Java is the largest banana-producing province, with a total production of 2.06 million tons annually,

Received January 25th, 2021, Revised August 9th, 2021, Accepted for publication September 29th, 2021.
 ISSN: 2337-5779,
DOI: 10.5614/j.eng.technol.sci.2022.54.1.10

J. Eng. Technol. Sci., Vol. 54, No. 1, 2022, 220104

Land Subsidence Susceptibility Projection for Palembang Slum Area by Complex MCDM-AHP Technique

Siti Noratiqah Mohamad Deros[1,*], Norashidah Md Din[1], Syamimi Mohd Norzeli[1], Rohayu Che Omar[1], Fathoni Usman[1] & Sumie Amariena Hamim[2]

[1]Institute of energy Infrastructure, Universiti Tenaga Nasional (UNITEN), 43000, Kajang, Selangor, Malaysia
[2]Survey and Mapping Department, Universitas Indo Global Mandiri (UIGM), Palembang, Indonesia
*E-mail: siti.noratiqah@uniten.edu.my

Highlights:

- Groundwater withdrawal is the major cause of land subsidence and usually occurs in rapidly developed and highly populated areas.
- Land slope, sediment type, lithology, wetlands, river networks, and land gradient have a direct influence on subsidence susceptibility.
- The high correlation between predicted land subsidence susceptibility and slum areas shows that the occurrence of land subsidence has a high relationship with residential activities and land surface properties.

Abstract. Land subsidence is a geomorphological event that affects Earth's structure and physiognomy. This phenomenon occurs when the groundwater volume changes and results in the movement and sinking of sediment. Several studies have been conducted to identify major causes or factors that may lead to land subsidence. It was found that land subsidence intensity is influenced by several factors, i.e. terrain slope and aspect, land use, soil moisture content, and distance to a river. Population density contributes to continuous changes in land use. Deep investigations of factors that contribute to land subsidence such as population density are important. This study investigated the relationship between land subsidence and population density contributing to continuous land-use changes. The study area was a highly populated slum area along the Musi River in Palembang, Indonesia. Factors that have high contributions to land subsidence were considered in developing a land subsidence susceptibility map. Susceptibility analysis was done using the Analytical Hierarchy Process (AHP) method. Land subsidence features were associated with slum features and the result revealed a significantly high correlation (r = 0.844) between actual land subsidence areas and the developed susceptibility map.

Keywords: *Analytical Hierarchy Process (AHP); land subsidence; land use; Multi-Criteria Decision Making (MCDM); slum.*

Received August 27th, 2020, Revised April 21st, 2021, Accepted for publication August 16th, 2021.
 ISSN: 2337-5779,
DOI: 10.5614/j.eng.technol.sci.2022.54.1.4

J. Eng. Technol. Sci., Vol. 54, No. 1, 2022, 220106

Evaluating Direct Pointing and Indirect Cursor Interactions with Fitts' Law in Stereoscopic Environments

Dino Caesaron[1], Chiuhsiang Joe Lin[2], Ilma Mufidah[1] & Anastasia Febiyani[3]

[1]Department of Industrial Engineering, School of Industrial Engineering, Telkom University, Bandung, 40257, Indonesia
[2]Department of Industrial Management, National Taiwan University of Science and Technology, No. 43, Sec. 4, Keelung Rd., Da'an Dist., Taipei City 10607, Taiwan
[3]Department of Industrial Engineering, Institut Teknologi Telkom Purwokerto, 53147, Indonesia
*E-mail: dinocaesaron@telkomuniversity.ac.id

Highlights:

- Movement time and throughput were analyzed for two modes of interaction (direct pointing and indirect cursor).
- Distance of target and difficulty level were considered.
- Direct pointing may be the best option for interacting with a stereoscopic target.
- The results contribute to the understanding and designing of effective user interactions in stereoscopic environments.

Abstract. The development of virtual environment research has reached the stage of human interaction with three-dimensional (3D) objects. In this study, Fitts' method was used for such interaction in a virtual environment, and the applicability of Fitts' law in 3D virtual environments was also considered. An experiment was using two modes of interaction (direct interaction and indirect interaction) that utilize different techniques depending on how users interact with a 3D object. Both interaction techniques were applied with three indexes of difficulty and three egocentric target distances (distance from the user to the target). Movement time and throughput were measured for each interaction technique. The results showed that the direct pointing technique is more efficient for interaction with targets close to the user, while the indirect cursor technique may be a viable option for targets further away from the user. The throughput was found to be significantly higher for the direct pointing technique compared to the indirect cursor technique. The results of mean movement time were highly correlated with the targets' index of difficulty for all interaction techniques, which is supporting evidence that Fitts' law can be applied to interactions in 3D virtual environments. Based on the results, developers of VE applications may relate to these findings in designing proper user interactions.

Keywords: *direct pointing; Fitts' law; human interaction; indirect cursor; movement time; throughput; virtual environment.*

Received April 27th, 2020, 1st Revision December 15th, 2020, 2nd Revision August 17th, 2021, Accepted for publication September 30th, 2021.

DOI: 10.5614/j.eng.technol.sci.2022.54.1.6

J. Eng. Technol. Sci., Vol. 54, No. 1, 2022, 220105

Distribution of Microplastics along Mai Khao Coastline, Phuket

Pensiri Akkajit[1,2*] & Audomlak Khongsang[1]

[1]Faculty of Technology and Environment, Prince of Songkla University, Phuket Campus, Phuket, Thailand
[2]Andaman Environment and Natural Disaster Research Center, Prince of Songkla University, Phuket Campus, Phuket, Thailand
*E-mail: pensiri.a@phuket.psu.ac.th

Highlights:

- Microplastics were found in beach sediments with an average abundance of 154.7 ± 44 items kg^{-1}.
- White color (44.94%) and fiber shape (95%) were dominant characteristics.
- Polyethylene terephthalate (94.7%) was the most abundant plastic type.

Abstract. The distribution of microplastics at Mai Khao beach, Phuket, Thailand was studied. A total of 12 samples from four sample sites with 0.5 m x 0.5 m quadrats were taken at the intertidal zone during March and July, 2020, and sorted into two size classes (>300 µm and 20 to 300 µm). The mean abundance of microplastics at Mai Khao beach ranged from 44.08 to 68.7 items kg^{-1} d.w. for >300 µm and from 90.6 to 106.1 items kg^{-1} d.w. for the 20 to 300 µm range. White (44.94%) and blue (23.60%) colors, and fiber shape (94.5%) were dominant in particle counts; and based on µFTIR analysis the dominant polymer type was polyethylene terephthalate (94.7% by number count), with considerable fractions of cotton and cellophane. The microplastic characteristics suggest anthropogenic activities as possible sources. Notably, the abundance of microplastic found in the study area was definitely higher than at other sites investigated along the west coast or Phuket. Significant differences in the abundances of the two microplastic size classes were observed ($p < 0.05$), indicating that the microplastics in Mai Khao beach can accumulate in the marine food chain and transfer up along the trophic levels. Therefore, urgent attention should be given to the contamination problem, with a proper management system and a public awareness campaign, to reduce the effects of microplastic on organisms and ecosystems.

Keywords: *beach sediment; Mai Khao; microplastics; plastic waste; Phuket.*

1 Introduction

Plastics are purposefully manufactured for various target applications, such as personal care products, electronics, or food and beverage packaging, etc. The contamination of the marine environment by plastic is a major environmental concern and has recently been the subject of an increasing number of studies [1-

Received July 3rd, 2021, Revised August 31st, 2021, Accepted for publication September 29th, 2021.
 ISSN: 2337-5779,
DOI: 10.5614/j.eng.technol.sci.2022.54.1.5