

Journal of Engineering and Technological Sciences

Journal of Engineering and Technological Sciences welcomes full research articles in the area of Engineering Sciences from the following subject areas: Aerospace Engineering, Biotechnology, Chemical Engineering, Civil Engineering, Electrical Engineering, Engineering Physics, Environmental Engineering, Industrial Engineering, Information Engineering, Mechanical Engineering, Materials Science and Engineering, Manufacturing Processes, Microelectronics, Mining Engineering, Petroleum Engineering, and other application of physical, biological, chemical and mathematical sciences in engineering. 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 <http://journals.itb.ac.id/index.php/jets>, and indexed by Scopus, Web of Science (Emerging Source Citation Index)-Clarivate Analysis, Ei Compendex, Google Scholar, Index Copernicus, DOAJ, ASEAN Citation Index, The Elektronische Zeitschriftenbibliothek EZB by University Library of Regensburg, EBSCO Open Science Directory, Chemical Abstract Service (CAS), Zurich Open Repository and Archive Journal Database, Indonesian Publication Index(IPI) and Science and Technology Index (SINTA),.

Publication History

Currently known as:

Journal of Engineering and Technological Sciences

Formerly known as:

- ITB Journal of Engineering Science (2007 - 2012)
- Proceedings ITB on Engineering Science (2003 - 2006)
- Proceedings ITB (1961 - 2002)

Editorial board of Journal of Engineering and Technological Sciences

Chief Editor

Tjandra Setiadi
Faculty of Industrial
Technology, ITB,
Indonesia

Suprijanto
Faculty of Industrial
Technology, ITB, Indonesia

Suwarno
School of Electrical
Engineering and
Informatics, ITB,
Indonesia

Jeong-Guon Ih
Korea Advanced
Institute of Science and
Technology, South
Korea

Editorial Board

Aiqin Wang
Center for Eco-material
and Green Chemistry,
Lanzhou Institute of
Chemical Physics,
Chinese Academy of
Sciences , P.R. China

Heri Andreas,
Faculty of Earth Science
and Technology, ITB,
Indonesia

Tobias Nilsson
GFZ German Research
Centre for
Geosciences,
Potsdam, Germany

M Akbar Rhamdhani
Department of
Mechanical and
Product Design
Engineering, Swinburne
University of Technology,
Australia

Satria Bijaksana,
Faculty Mining and
Petroleum Engineering,
ITB, Indonesia

Judha Purbolaksono
Faculty of Industrial
Technology Universitas
Pertamina, Indonesia

Mark van Loosdrecht
Faculty of Applied
Sciences, Delft
University of
Technology, The
Netherlands

Chien Ming Wang
School of Civil
Engineering, The
University of
Queensland, Australia

Masyhur Irsyam
Faculty of Civil and
Environmental
Engineering, ITB,
Indonesia

Indah Rachmatiah S.
Salami
Faculty of Civil and
Environmental
Engineering, ITB, Indonesia

Afriyanti Sumboja
Faculty of Mechanical
and Aerospace
Engineering, ITB,
Indonesia

Shuren Wang
School of Civil
Engineering, Henan
Polytechnic University,
China

Publication assistant: Yuliah Qotimah. Address: *ITB Journal Secretariat*, LPPM ITB, Center for Research and Community Services (CRCS) Building 7th Floor, Jl. Ganesha No. 10 Bandung 40132, Indonesia, Tel. +62-22-86010080, Fax.: +62-22-86010051; e-mail: jets@lppm.itb.ac.id.

Distribution: Distributed to other universities and research institutions for exchange publications, and to regular subscribers. Subscription per issue: Rp 100.000,- (domestic) and \$50 (overseas). Order form for subscription should be sent to the editorial office.

Reg. No. 691-SIC-UPPGT-SIT-1963, Accreditation No. 30/E/KPT/2018 (Vol. 50 No.1, 2018 - Vol. 54 No.6, 2022)

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

Cover Design by Chandra Tresnadi.

Table of Contents

1. 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
2. Vitamin E Extraction from Magnesium Salts of Palm Fatty Acid Distillates 220102
Dianika Lestari, Khalisa Putri Aqilah, Salsafia Putri, Ardiyan Harimawan, Diky Mudhakhir & Muhamad Insanu
3. Integrated Magnetotelluric (MT), Gravity and Seismic Study of Lower Kutai Basin Configuration 220103
Selvi Misnia Irawati, Hidayat Hidayat, Edy Wijanarko & Hendra Grandis
4. Land Subsidence Susceptibility Projection for Palembang Slum Area by Complex MCDM-AHP Technique 220104
Siti Noratiqah Mohamad Deros, Norashidah Md Din, Syamimi Mohd Norzeli, Rohayu Che Omar, Fathoni Usman & Sumie Amariena Hamim
5. Distribution of Microplastics along Mai Khao Coastline, Phuket 220105
Pensiri Akkajit & Audomlak Khongsang
6. Evaluating Direct Pointing and Indirect Cursor Interactions with Fitts' Law in Stereoscopic Environments 220106
Dino Caesaron, Chiuhsiang Joe Lin, Ilma Mufidah & Anastasia Febiyani
7. The Implementation of Soundscape Composition to Identify the Ideal Soundscape for Various Activities 220107
Joko Sarwono, Anugrah Sabdono Sudarsono, Andini Hapsari, Helga Salim & Ranti Dwi Tassia
8. Volatile State Mathematical Models for Predicting Components in Biomass Pyrolysis Products

- Pandit Hernowo, Carolus B. Rasrendra, Yogi W. Budhi, 220108
Jenny Rizkiana, Anton Irawan, Septhian Marno,
Yana Meliana, Oki Muraza & Yazid Bindar
9. Differences in Biochar Sources for Controlled Nitrogen Loss in a
Hybrid Maize Agroforestry System with *Melaleuca cajuputi*
Dody Kastono, Priyono Suryanto, Rohlan Rogomulyo, 220109
Suci Handayani, Supriyanta, Muhammad Habib
Widyawan & Taufan Alam
10. Promising Adsorption of Sulfidic Acid Gases Using Wet Banana
Plant Adsorbent (*Musa spp.*)
Haryono Setiyo Huboyo, Badrus Zaman, Bimastyaji Surya 220110
Ramadan & Anastasia Dinda Prinaningrum
11. 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, 220111
Bakrun Bakrun, I G. P. F. Soerya Djaja, Eleonora Agustine,
Pepen Suspendi & Wahyu Srigutomo
12. Blasting Vibration Monitoring and a New Vibration Reduction
Measure
Xi Yang, Yunpeng Zhang & Jie Wang 220112
13. 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 & 220113
Muhammad Said
14. Multi-Objective Topology Optimization for Curved Arm of
Multifunctional Billet Tong Based on Characterization of Working
Conditions
Jialiang Liu, Zhaohua Wang, Dezhuang Song & 220114
Fenghe Wu