

Humanosphere Science School 2017 & 7th International Symposium for a Sustainable Humanosphere 2017

IOP Conference Series: Earth and Environmental Science
Volume 166

Bogor, Indonesia
1 - 2 November 2017

Editor:

Maya Ismayati

ISBN: 978-1-5108-6583-9
ISSN: 1755-1307

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of contents

Volume 166

Humanosphere Science School 2017 & The 7th International Symposium for a Sustainable Humanosphere

1–2 November 2017, Bogor, Indonesia

Accepted papers received: 13 June 2018

Published online: 29 June 2018

Preface

[Humanosphere Science School 2017 & The 7th International Symposium for a Sustainable Humanosphere](#)

[Peer review statement](#)

Papers

[Morphological and Structural Changes in Microcrystalline Cellulose from OPEFB by Mechanical Grinding](#)

T Herawan, F. R Panjaitan and S Yamanaka.....1

Forest science

[Characterization of Polypropylene Composite Reinforced with Wood Flour or Cellulose Fiber](#)

I Risnasari, E Herawati and E. N Sirait.....9

[Assesment of Initial Colony Founding by Swarming Reproductives of the Western Drywood Termite, *Incisitermes minor*](#)

S. K Himmi, T Yoshimura, Y Yanase, T Torigoe and S Imazu.....18

[Properties of Particleboard Made from Wood Waste with Various Size](#)

L Astari, K. W Prasetyo and L Suryanegara.....28

[Species Composition and Structure of Forests in the Muara Kendawangan Nature Reserve, West-Kalimantan, Indonesia](#)

Purwaningsih and K Kartawinata.....35

[Effect of Particle Pre-treatment on Physical and Mechanical Properties of Particleboard Made from Oil Palm Trunk](#)

R Hartono, A. H Iswanto, T Sucipto and K. M Lubis.....50

[Analysis of Forest Landscape Fragmentation in Samosir Island, North Sumatra](#)

Samsuri, A Zaitunah and J. F Manurung.....58

[Biodiversity of Termites and Fungi in Two Botanical Gardens in Batam, Riau Island Province and Kuningan, West Java Province](#)

T Kartika, S. K Himmi, B Wikantyoso, A. S Lestari, M Ismayati, D Zulfiana, N. P. R. A Krishanti, A Zulfritri, A. H Prianto and S Yusuf.....72

[Laboratory Evaluation of The Selected Entomopathogenic Fungi and Bacteria Against Larval and Pupal Stages of *Spodoptera litura* L](#)

A Zulfritri, A. S Lestari, N. P. R. A Krishanti and D Zulfiana.....78

Bioscience

[Production of Phytase, Amylase and Cellulase by *Aspergillus*, *Rhizopus* and *Neurospora* on Mixed Rice Straw Powder and Soybean Curd Residue](#)

A Kanti and I. M Sudiana.....86

[Increased Blood Glucose Level on Pelagic Fish as Response to Environmental Disturbances at East Coast Pangandaran, West Java](#)

D. M Malini, Madihah, A. F Apriliandri and S Arista.....95

[Colonization and Performance of Diazotroph Endophytic Bacteria on Palm Oil \(*Elaeis guineensis* Jacq L.\) Leaves](#)

I. N. P Aryantha and A.R.M Hidiyah.....102

[Antibacterial Activity of Bacterial Endophytes from Kupa Plant \(*Syzygium Polycephalum* Miq. \(Merr & Perry\) Against Pathogenic Bacteria](#)

I Indrawati, N Rossiana and T. R Hidayat.....114

[Diversity of Local Food in Sasak Ethnic, Lombok Island, West Nusa Tenggara](#)

M Rahayu and L. K Ibo.....122

[Antihyperlipidemic Activity of *Archidendron pauciflorum* Fruit Peel Extract in Streptozotocin-induced Diabetes Female Wistar Rats](#)

Madihah, A. R Rahim, D. M Malini and W Hermawan.....127

[Utilization of Bark Condensed Tannin as Natural Preservatives Against Subterranean Termite](#)

M Ismayati, A Nakagawa-izumi and H Ohi.....135

[Insecticidal activities of crude extract of *Metarhizium anisopliae* and conida suspension against *Crocidolomia pavonana* fabricius](#)

Melanie, M Miranti, H Kasmara, S Hazar and A Martina.....140

[Prospective Study of *Bacillus sphaericus* and *Pseudomonas aeruginosa* as The Microbial Enhanced Oil Recovery Agents](#)

N Rossiana, M Miranti and K Maspudin.....149

[Nitrile Hydrolysing Enzymes-Producing Bacterium Isolated from Gandang Dewata Mountain, West Sulawesi](#)

N Sulistinah and R Riffiani.....156

[Mapping of Tree Damage Classification in The Western Part of Medan City Green Belts Using Geographic Information System](#)

Rahmawaty, I. E. P Sembiring, R Batubara and P Patana.....166

[Diversity of Indonesian Medicinal Plant in The lowland Forest, Bodogol and Its Surrounding of Mount Gede-Pangrango National Park, West Java](#)

S Susiarti, M Rahayu and Rugayah.....174

[The Effect of Plant Growth Promoting Rhizobacteria \(PGPR\) on Germination and Seedling Growth of *Sorghum bicolor* L. Moench](#)

S Widawati and Suliasih.....187

[Coloring Properties Assessment of Dyes Produced by Mixed *Aspergillus* and *Paecilomyces*](#)

Suciatmih, Nurfianti and S. V Magfirani.....197

[The Effect of Biofertilizer Combined with Organic or Inorganic Fertilizer on Growth of *Caesalpinia pulcherrima* and Bacterial Population in Soil](#)

Suliasih and S Widawati.....206

[Influence of Light Intensity on Leaf Photosynthetic Traits and Alkaloid Content of Kiasahan \(*Tetracera scandens* L.\)](#)

T Setiawati, A Ayalla, M Nurzaman and A. Z Mutaqin.....213

[Ability of *Penicillium Griseofulvum* Inacc F 14 in Producing Cellulase Enzyme for Composting Media Plant of White Oyster Mushroom \(*Pleurotus Ostreatus* Jacq. Ex Fr.\) P. Kumm and Ear Mushrooms \(*Auricularia Auricula* J.\)](#)

Y. S Soeka and M Ilyas.....220

[Efficacy of Bacterial Biocontrol Agents and Environmental-Friendly Fine Chemicals for Suppression of *Ganoderma Boninense* Growth](#)

Yuliar and Suciatmih.....233

[Analysis of Greenbelt in Sibolga for Tsunami Mitigation](#)

A Zaitunah, Samsuri and B Slamet.....241

Earth science

[Combination of the Equatorial Atmosphere Radar – Radio Acoustic Sounding System \(EAR-RASS\) in Determining a Fine Structure of Total Precipitable Water \(TPW\) over Kototabang, West Sumatera, Indonesia](#)

E Hermawan and F. M. A Wahab.....251

[Influence of ENSO on Deviation of The Season Onset in Java Based on CCAM Downscaling Data](#)

H Satyawardhana, Trismidianto and E Yulihastin.....262

[Analysis of Rainfall Data based on GSMaP and TRMM towards Observations Data in Yogyakarta](#)

I Sofiati and L. Q Avia.....271

[Observation of Temperature Profiles of Kototabang \(Bukittinggi-West Sumatera Indonesia\) Using Radiosonde and Rain Event Identification](#)

I Juaeni, G. A Nugroho, S. A Rahayu, Safrijon and Halimurrahman.....279

[Simple Design of Transmitter Circuit and Optimization Design of Receiver Circuit for Wireless Power Transfer](#)

I Sukma, S. W Hidayat, A. R Hidayat and I Supono.....290

[Analysis of El Niño and IOD Phenomenon 2015/2016 and Their Impact on Rainfall Variability in Indonesia](#)

L. Q Avia and I Sofiati.....298

[Development of Flash Flood Hazard Map in Bima City \(NTB\) using Analytical Hierarchy Process](#)

R. P Romdani, M Tamamadin, A Susandi, A Pratama and A. R Wijaya.....309

[Land Cover and Groundwater Recharge Changes Study Using Conservation Index in the Highland Cibural Village, Bandung Regency](#)

M. H. Z Nurrachman, I Sumardi and T Lastini.....316

[Seasonal Variability Of Ozone Vertical Profiles in Indonesia Based on AQUA-AIRS Data](#)

N Komala and N Ambarsari.....322

[Vertical profile variations of ozone in lower stratosphere in Indonesia and influence to upper troposphere ozone based on satellite](#)

N Ambarsari and N Komala.....332

[Analysis of Heavy Rainfall with Hail using Reflectivity and Radial Velocity Derived from X-Band Radar in Bandung \(Study Case: March 17, 2017\)](#)

T Sinatra and G. A Nugroho.....343

[The Global Population of Mesoscale Convective Complexes \(MCCs\) over Indonesian Maritime Continent during 15 Years](#)

Trismidianto.....351

[Carbon Emission from Peat Fire in 2015](#)

W Setyawati and Suwarsono.....367

[Agricultural Production and Access to In-kind Finance from Government: A Study of Banana Farms in Cianjur District, West Java](#)

E Wulandari, Ernah and D Supyandi.....374

Community-based development and socioeconomic science

[The Supporting and Impeding Factors of Java Preanger Coffee Agribusiness on Margamulya of Pangalengan Sub District of Bandung Regency](#)

E Djuwendah, T Karyani, E Rasmikayati, S Fatimah and Deliana.....380

[ENSO and PDO Influence to Climate Variability in Monsoon Region of Indonesia](#)

E Yulihastin, N Cholianawati, G. A Nugroho, T Sinatra and H Satyawardhana.....389

[Economic Valuation of Nipa Palm \(*Nypa fruticans* Wurmb.\) Sap as Bioethanol Material](#)

Imawan Wahyu Hidayat.....400

[Agricultural Local Knowledge System: Lesson Learn from Rural Development In Mekarjaya Village, Kabupaten Purwakarta](#)

M. A Heryanto, D Supyandi and Y Sukayat.....408

[Comparison of *Value-Added* Analysis of Coffee Processing with Different Market Orientations: \(Case Study on Cooperative of Producer Coffee Margamulya\)](#)

T Karyani, E Djuwendah and E Supriyadi.....417

[Business Model for Promoting Organic Vegetables](#)

Y Deliana, D Supyandi and E Djuwendah.....424

[The Role of an Interdisciplinary Approach to Improving Farmers' Resilience to Climate Change: Its Potentials and Challenges](#)

Y. T Winarto.....433

Applied science and technology

[Phytase production by fungi based on palm oil mill effluent](#)

A Sugiharto.....442