

Table of Contents

Session 1 Future Environment and Energy

- Detecting Flood Susceptible Areas Using GIS-based Analytic Hierarchy Process 1
Dano Umar Lawal, Abdul-Nasir Matori, Ahmad Mustafa Hashim, Khamaruzaman Wan Yusof and Imtiaz Ahmed Chandio
- Barriers and challenges for developing RE policy in Malaysia 6
Sumiani Yusoff and Roozbeh Kardooni
- Scenarios on Power Generation in Thailand 11
Weerin Wangjiraniran, Raksanai Nidhiritdhikrai and Bundhit Eua-Arporn
- Reuse of laundry greywater in irrigation and its effects on soil hydrologic parameters 16
A. H. M. Faisal Anwar
- Household Waste Recycling Behavior in Thailand: The Role of Responsibility 21
Achapan Ittiravivongs

Session 2 Future Environment and Energy

- Optimized Controlling System for Heliostat by Using the Configuration Factor 27
Dong Il Lee, Seung Wook Baek and Woo Jin Jeon
- GIS-based Analysis of Private Lands Expansion using High-resolution Satellite Imagery in Ulaanbaatar, Mongolia 32
Narumasa Tsutsumida, Izuru Saizen, Masayuki Matsuoka and Reiichiro Ishii
- Step By Step Analyzing, Modeling and Simulation of Single and Double Array PV system in Different Environmental Variability 37
M.S. Mahmodian, R. Rahmani, E.Taslami and S. Mekhilef
- From landscape modeling to landscape design of wind farms: an integrated approach to sustainable RES development in Parma Province, Italy. 43
Alessio Battistella, Matteo Jucker Riva and Stefano Maran
- Wind Energy Assessment for Five Locations in Saudi Arabia 48
Hassan M. Farh, Ali M. Eltamaly and Mohamed A. A. Mohamed

Session 3 Future Environment and Energy

- A Survey of Tehran Hospitals Wastewater 56
Rouhallah Mahmoudkhani, Akbar Mokhtari Azar and Mohamad Reza Khani
- Pearson System Distribution Approximation in Wind Energy Potential Analysis 61
E.A. Azrulhisham, K.P. Zakaria, A. Samizee and M.B.M. Juhari
- Hydrogenation of Aluminum by Anodic Coating for AlH₃ Hydrogen Storage Material 66
Masahiko Katagiri, Kuniko Urashima and Seiichi Kato
- Thin Film Coating on Particles and Its Application to SO₂ and NO Removal by Plasma Process 70
Hung-Cuong Pham and Kyo-Seon Kim
- Synthesis of TiO₂ Photocatalyst Nanoparticles by Thermal Plasmas 75
Nguyen Hoang Hai and Kyo-Seon Kim

Session 4 Future Environment and Energy

CFD evaluation of solid oxide fuel cell performances with different fuels <i>L Fan, PV Aravind, E Dimitriou, M.J.B.M. Pourquie and A.H.M. Verkooijen</i>	80
Preparation and Characterization of YAG:Ce ³⁺ Phosphors by Sol-solvothermal Process <i>Ran Huang, Sai Li, Shaolin Xue, Zhixing Jiang and Shuxian Wu</i>	85
Removal of Mercaptance from Diesel <i>P. K. Chaudhari</i>	90
Kinetic Parameters And Evaluation Performance for Decolorization Using Low Cost Adsorbent <i>Vikrant V.Khadake and S.K.Deshmukh</i>	95
Optimal Oil Pipeline Route Selection using GIS: Community Participation in Weight derivation and Disaster Mitigation <i>Abdul-Lateef Balogun, Abdul-Nasir Matori, Dano Umar Lawal and Imtiaz Chandio</i>	100
Session 5 Future Environment and Energy	
Use of Waste Plastic and Waste Rubber Tyres in Flexible Highway Pavements <i>Rokade S</i>	105
Determination of Vertical Axis Wind Turbines Optimal Configuration through CFD Simulations <i>Payam Sabaeifard, Haniyeh Razzaghi and Ayat Forouzandeh</i>	109
CHARACTERISTICS OF LOW LIME FLY ASH STABILISED WITH LIME AND GYPSUM <i>Kishan D, Nitin Dindorkar and Rijnish Shrivastava</i>	114
Indian Distillery Industry: Problems and Prospects of Decolourisation of Spentwash <i>Mrityunjay Singh Chauhan and Anil Kumar Dikshi</i>	119
The Role of Buildings Forms in Energy Gain in High-rise Building through Facades (Case Study: Iran, Tehran) <i>Mohammadjavad Mahdavinejad, Abdolkarim Ghaedi, Mohammadhossein Ghasempourabadi and Hojat Ghaedi</i>	124
Session 6 Future Environment and Energy	
Determination of the NDSI index and cloud mask algorithm (The Case Study: Sepidan Region, Iran) <i>Kimiya Hamidi, Fardin Boustani, Hasan Roosta and Seyed Amir Shamsnia</i>	129
Batch and Column Study on 4-cp Removal Using Calcium Alginate Immobilized <i>Arthrobacter Chlorophenolicus A6</i> <i>Sujith P. Abraham, N. K. Sahoo, K. Pakshirajan and Pranab Kumar Ghosh</i>	134
Remediation of Pb/Cd-Contaminated Forest Soils by Compost and Mycorrhizae: will it be a solution to the Forest Dieback? <i>Gunadasa HKSG, Yapa PI, Nissanka SP and Perera SP</i>	139
Optimization of Thermosyphon Solar Water Heaters Using TRNSYS. Part1: Improved Model development and Validation <i>M.J.R. Abdunnabi and D.L. Loveday</i>	145
Optimization of Thermosyphon Solar Water Heaters Using TRNSYS. Part2: Parametric Study Using a Modified TRNSYS Model <i>M.J.R. Abdunnabi and D.L. Loveday</i>	154
Session 7 Future Environment and Energy	
The Impact of the Introduction of Hydrogen Energy into the Power Sector on the Economy and Energy Sectors	161

SANG-HO LEE, CHUNG-SIL KIM and DONG-IN KIM

Furfural production from miscanthus by one step pyrolysis <i>Sung Bong Kim, Hah Young Yoo, Snag Jun Lee, Jun Seok Kim, Chulhwan Park and Seung Wook Kim</i>	166
Process Development using Co-immobilized Lipases for Biodiesel Production <i>Ja Hyun Lee, Hah-Young Yoo, Young Joon Suh, Sung Ok Han, Chulhwan Park and Seung Wook Kim</i>	171
Optimization of Sodium Hydroxide Pretreatment of Canola Agricultural Residues for Fermentable Sugar Production using Statistical Method <i>Hah-Young Yoo, Sung Bong Kim, Han Suk Choi, Keun Kim, Chulhwan Park and Seung Wook Kim</i>	175
Adsorption of Fluoride from Drinking Water on Magnesium substituted Hydroxyapatite <i>Pankaj Garg and Sanjeev Chaudhari</i>	180
Session 8 Climate Change and Humanity	
Remotely Sensed Data and Multiphase Integration to classify Wetland types, Western Thailand <i>Piyakarn Teartisup and Prapeut Kerdseub</i>	186
Assessing the Key Factors in Climate Change Studies <i>Shahram MortezaNia, Faridah Othman, Babak Kamali and Roslan Hashim</i>	195
Climate Change, Socio-economic and Production Linkages in East Malaysia Aquaculture Sector <i>Rosita Hamdan, Fatimah Kari, Azmah Othman and Siti Muliana Samsi</i>	201
Assessment of Regional Floods Using Cluster Analysis and Region of Influence (ROI) Method <i>Isameldin A. Atiem, Badreldin G. H. Hassan and Feng Ping</i>	208
The Influence of Rainfall Variability on Arable Land Use at Local Level: Realities from Nzhelele Valley, South Africa <i>Edmore Kori, Tendayi Gondo and Rudzani Madilonga</i>	218
Session 9 Climate Change and Humanity	
Reconceptualizing the Foundations of Knowledge to Enhance the Pedagogic Goals of Environmental Education with Special Reference to the Three Gorges Dam Project <i>Ronald S. Laura and Dan Zhou</i>	224
Analytes Extraction and Quantification for Organochlorine Pollutant Residues in Water and Sediments of River Elbe <i>Muhammad Jamil Khan</i>	230
Uncertainty Analysis of Climate Change Impacts on Runoff <i>Hadi Galavi and Lee Teang Shui</i>	235
Climate Science Integration and Urban Planning: A Climate Change Adaptation Exegesis <i>Tendayi Gondo and Edmore Kori</i>	240
Effect of Seed Coating Methods on Germination Speed of <i>Onobrychis sativa</i> at Different Drought Stress Levels and Sowing Depths <i>H. R. Mehrabi and M. R. Chaichi</i>	246
Climate Risk and Climate Analogies in Hungarian Viticulture <i>Károly Szenteleki, Levente Horváth and Márta Ladányi</i>	250

The Effect of Climate Change on Light Trap Capturing Data of Lepidoptera <i>László Gimesi, Réka Homoródi, Anikó Hirka, Károly Szenteleki and Levente Hufnagel</i>	255
A Climatic Utility Index for the Analysis of the Expected Changes of Cherry and Sour Cherry Production in Central Hungary, Regarding Climate Change <i>Márta Gaál, Károly Szenteleki, Zoltán Mézes, Réka Homoródi and Márta Ladányi</i>	260
Author Index	267