

CONTENTS

Conference and Program Committee Chairs	v
Preface	vii
Session 1	
The Future Of Biopharmaceutics' Production <i>B. Bakhshandeh and Z. Shahrzad</i>	3
Density Segregation Of Binary Granular Mixtures In Bumpy Vibrated Beds <i>E. C. L. Wee</i>	8
Study On Pyrolysis Characteristics Of Electronic Waste <i>J. Sun, W. Wang, C. Ma and Y. Dong</i>	13
Microwave Assisted Activated Carbon Production Based On Biodiesel Solid Residue (Raphanus Sativus Press Cake) <i>A. S. Franca and D. L. Nunes</i>	17
Alternative Uses For Coffee Husks — A Solid Waste From Green Coffee Production <i>A. S. Franca and L. S. Oliveira</i>	21
Use Of <i>Crambe Abyssinica</i> Press Cake As A Biosorbent For Wastewater Treatment <i>L. S. Oliveira, A. S. Franca, V. F. Oliveira and A. Salles</i>	25
Design And Operation Of A Mobile Biodiesel Production Unit <i>L. S. Oliveira, A. N. Brasil and D. L. Nunes</i>	29
Characterization And Separation Of Oil-in-Water Emulsion <i>A. Mandal, P. Kumar, R. Choudhary and S. K. Maity</i>	33
Synthesis And Rheology Of An Eco-Friendly Hydrofracturing Fluid <i>K. Ojha, P. Bajpai and J. P. Singh</i>	38
The Environmental Effects Caused By Constructing Mamlu Reservoir Dam In East Tehran <i>S. Boudaghpour</i>	43
Session 2	
Treatment Of Distillery Spentwash By Anaerobic Baffled Reactors <i>A. K. Dikshit, M. S. Chauhan and S. S. Singh</i>	51
Bacterial And Fungal Bioreactors For Colour Removal From Distillery Spentwash <i>S. S. Singh and A. K. Dikshit</i>	55
Application Of Noise Mapping On Environmental Management <i>K.-T. Tsai, M.-D. Lin, Y.-H. Chen and Y.-H. Lin</i>	59
Investigation On Season Effects On Efficiency Of Individual Selection System And Performance Response In Silkworm <i>A. Seidavi, S. Z. Mirhosseini, M. Mavvajpour, A. Bizhannia and M. Ghanipoor</i>	64
Stabilization Of Heavy Metals In Sewage Sludge Using Sorel Cement <i>J. Ma, J. Wang, Y. Zhao, T. Liu and L. Wang</i>	69
Modeling Of Substrate Degradation And Microorganism Growth In An UASB Reactor <i>R. Rodriguez and L. Moreno</i>	76
Effects Of Chemical Fertilizers On The Cr(VI) Adsorption On Paddy Soil <i>J. Liu, Z. Jin, Q. Zhang and S. You</i>	81

A Study On The Effect Of Fractional Composition Of Nano Size Particles In Coatings Of CaCO ₃ On Release Rates Of Active Constituents From Fertilizer Pellets <i>W. J. N. Fernando, A. L. Ahmad and N. M. Soon</i>	86
A Case Study Of Regional Municipal Solid Waste Management Program In Taiwan <i>Y.-J. Chang, M.-D. Lin and S.-F. Yeh</i>	91
An Experimental Study On The Effect Of Engine Speed Variation On Premixed Ratio, Equivalence Ratio And Emissions Of Dual Fuel HCCI Engine <i>M. R. Kalateh and M. Ghazikhani</i>	95
Analysis Of A Single Biomolecule Transiting With Nanopore <i>G. Cheng and J. Wang</i>	102
Characteristics And Transport Properties Of Two Modified Zero Valent Iron <i>Y.-H. Lin, M.-D. Lin and C. Liang</i>	107
 Session 3	
Synthesis Of Visible Light Active N-Doped Titania Photocatalyst <i>C. Kusumawardani, I. Kartini and Narsito</i>	115
Synthesis And Activity Test Of Two Asymmetric Dibenzalacetones As Potential Sunscreen Material <i>S. Handayani</i>	119
Calcium Carbide Residue-Ground Fly Ash Mixture As A New Material To Encapsulate Zinc <i>K. Somna, C. Jaturapitakkul and P. Kajitvichyanukul</i>	123
Effect Of Cr ₂ O ₃ In Cement Clinker On Microstructure And Leachability Of Cement Mortar <i>S. Sinyoung, S. Asavapisit, P. Kajitvichyanukul and P. Songsriririttigul</i>	128
Preparation Of Zirconium Dispersed In Aluminium Pillared Montmorillonite And Its Activity In Phenol Hydroxylation <i>I. Fatimah, Narsito and K. Wijaya</i>	133
Copper (II) Exchanged TiO ₂ -Pillared Clay Preparation From Indonesian Montmorillonite: Effect Of Titania Precursor <i>I. Fatimah, Y. Rohyami, B. Wiyantoko and T. Alawiyah</i>	138
Phosphate And Nitrate Removal In A Laboratory-Scale Batch Reactor By Selected Wastewater Protozoa <i>A. Ob and M. Mnb</i>	144
Dissolved Air Flotation (DAF) Process For Colour And Chemical Oxygen Demand (COD) Removal In Landfill Leachate Treatment <i>P. Palaniandy, M. N. Adlan and H. A. Aziz</i>	149
Molecular Docking Of 3-O-Micarocylmicaminocyl-5-O-Forosaminylerthronolide-B (MMFE) To RRNA 23S Deinococcus Radiodurans And The Prediction Of Its Antibiotic Potency <i>W. Haryadi, U. A. Jenie, R. S. Sudiby, H. D. Pranowo and F. R. Wibowo</i>	153
Treatment Of Dimethyl-Sulfoxide-Containing Optoelectronics Wastewater Using Airlift Bioreactor With PVA-Immobilized Cell Beads <i>S.-Y. He, J. S.-C. Hwang, Y.-H. Lin and K.-Y. Hou</i>	156

Session 4

- On Site Integrated Landfill Leachate Treatment: Recirculation And Upflow Anaerobic Sludge Blanket Reactor (UASBR) 163
R. Taneja, M. Kumar, A. K. Raghav and A. K. Mittal
- The Application Of Varied Impregnation Methods On The Characters Of Non-Sulfided NiMo/USY Catalyst 167
K. D. Nugrahaningtyas, W. T. Sunaryanti, Triyono, Nuryono, D. M. Widjonarko and A. Yusnani
- Preparation And Characterization Of NiMo/Active Natural Zeolite Catalysts 171
K. D. Nugrahaningtyas, D. M. Widjonarko, W. T. Sunaryanti and Triyono
- Multi-Objective Optimization For The Design Of A River Monitoring Network 175
H.-T. Ouyang, J.-S. Lai, H. Yu and C.-P. Lin
- Solubility Measurements Of Ibuprofen In Supercritical CO₂ By A Dynamic Method 180
M. Mirzajanzadeh, M. Ardjmand and F. Zabihi
- Correlation Of The Solubility Of Ibuprofen In Supercritical Carbon Dioxide 184
M. Ardjmand and M. Mirzajanzadeh
- Identification And Monitoring Of Pesticides In A Well Field In Delhi, India 188
P. K. Mutiyar, A. K. Mittal and A. Pekdeger
- Water Treatment Scheme For Specific Requirement Of Cooling: Case Study Of Ground Water Treatment At Delhi 192
S. S. Kolte and A. K. Mittal
- CFD-PBM Modeling of Vertical Bubbly Flows 197
M. R. Rahimi and H. Karimi
- Modeling Of Seawater Intrusion For A Small Tropical Island Aquifer In East Malaysia 202
S. M. Praveena, A. Z. Aris and M. H. Abdullah
- A Novel Steady-State Test Cycle For Emissions Characterisation Of A Light-Duty Diesel Engine Fuelled With Biodiesel 206
J.-H. Ng, H. K. Ng, J. S. Amirmostafa, C. M. You and S. Gan

Session 5

- Influence Of Temperature On The Remediation Of PAH-Contaminated Soil Using Vegetable Oil 213
E. V. Lau, S. Gan and H. K. Ng
- The Strength And Direction Of The Linkage Between Rural Assets And Environmental Degradation In Upland Agricultural Practices 217
P. Karyanto, M. H. Mohammad and F. Hashim
- Performance Of The Continuous Flow Of Unvegetated Constructed Wetland With Different Filter Media For Removal Of Chemical Oxygen Demand And Iron In Landfill Leachate Treatment 220
A. M. D. Noor, X. Y. Lou, H. P. S. A. Khalil and S. Suryani
- A Primary Mathematical Model To Differentiate Bacterial Growth From Resuscitation Of Dormant Bacteria 226
R. Sachidanandham

Enhancement Of Cu(II) Adsorption Capacity By Surface-Ionic Imprinted Biosorbent <i>A. Shofiyani, Narsito, S. J. Santosa and S. Noegrohati</i>	231
On The Efficiency Of Discrete Particle Modeling Of Gas-Solid Fluidized Bed Reactor <i>C. L. Wu, A. S. Berrouk and K. Nandakumar</i>	235
Impact Factors Of Community Health And Welfare: Application Of FAHP <i>K.-Y. Wu and H.-D. Huang</i>	241
Hydrotalcite-Like Synthesis Using Magnesium From Brine Water <i>E. Heraldly, Triyono, S. J. Santosa, K. Wijaya, D. Prasasti, G. Savitri, D. Hermawan, R. Iwa and E. H. Suryo</i>	246
Development Of Polysulfone-Carbon Molecular Sieves Mixed Matrix Membranes For CO ₂ Removal From Natural Gas <i>A. S. Wiryoatmojo, H. Mukhtar and Z. Man</i>	249
Life Cycle Assessment Of Waste Co-Processing In Chinese Cement Production <i>M. E. Boesch and S. Hellweg</i>	254
Session 6	
Optimal Sizing, Economic Study And Reliability Of Different Configurations Of Photovoltaic Systems <i>A. A. Hassan, F. H. Fahmy, A. El-Shafy A. Nafeh and M. A. El-Sayed</i>	261
Environmental Assessment Of Wastewater Pollution In Al-Qassim Industrial City <i>T. I. Sabry, S. M. Elkholy and I. S. Al-Salamah</i>	267
Cement/Activated-Carbon Solidification/Stabilization Treatment Of Nitrobenzene <i>Z. Su, J. Liu, Y. Jin and Y. Nie</i>	275
Microstate Segmentation Of Non-Musician Brain In Simultaneously Audio-Visual Perception <i>W. Sittiprapaporn</i>	280
An Experimental Study On The Effects Of EGR And Equivalence Ratio On CO And Soot Emissions Of Dual Fuel HCCI Engine <i>M. R. Kalateh and M. Ghazikhani</i>	284
Biodegradation Of Pharmaceutical Organic Pollutants By Photosynthetic Bacteria <i>E. I. Madukasi and C. He</i>	291
Wheat Response To Nitrogen And Post-Anthesis Water Deficit <i>A. Bahrani, H. H. S. Abad, Z. T. Sarvestani, G. H. Moafporian and A. Ayenehband</i>	296
Biosorption Of Lead (II) And Cadmium (II) From Aqueous Solutions By Pre-Treated Nonliving Alga <i>Padina Pavonia</i> <i>M. Nikazar, Majdian and F. Vahabzadeh</i>	302
Sonocatalytic Degradation Of Various Dyes In Wastewater Over Heat-Treated TiO ₂ Catalysts And Assisted By Hydrogen Peroxide <i>A. Z. Abdullah and Y. L. Pang</i>	306
Transportation Of Dangerous Substances: A Decisional Support System For Risk Analysis <i>V. Torretta</i>	310
Sulfation Of Castor Oil With Development Of Emulsifiers <i>A. B. M. Elgellal and I. H. Al-Wahaib</i>	315

Session 7

Investigation Of Fish Species Biodiversity In Haraz River <i>I. Piri, I. H. Nezhad and P. Amirian</i>	323
Investigation Of Hazardous Waste, A Case Study Of Fars Province In Iran <i>I. H. Nezhad, P. Amirian and I. Piri</i>	328
Nano-Tungsten Carbide Prepared From Palm Kernel Shell For Catalytic Decomposition Of Hydrazine <i>A. R. Yacob, S. Z. Hanapi, V. Inderan and R. S. D. Dasril</i>	334
Methane Reforming In A Small Channel Reactor <i>M. Al Nakoua and M. El-Naas</i>	339
Palm Date Seeds And Its Application As Activated Carbon — A Review <i>Aniyankunju. Cm and S. Feroz</i>	344
The Use Of Low Grade Diatomite To Recover Repeatingly Used Palm Oil <i>L. Meesuk, P. Watthanakul and C. Attha-Aroon</i>	350
Investigation Of Grazing Effects On Composition And Vegetation Diversity <i>S. A. Javadi and E. Z. Esfehan</i>	354
Chemical Activation Of Mango Seed Coat (<i>Mangifera Indica L</i>) — Preparation And Characterization <i>B. G. P. Kumar, B. B. Gulyani, B. Vijaikumar and L. R. Miranda</i>	357
Effect Of Process Variables On Microwave, Convective, Microwave-Convective And Sun Drying Of Plaster Of Paris <i>M. Ganesapillai and L. R. Miranda</i>	362
Response Surface Methodology Study On Removal Of Humic Acid From Aqueous Solutions Using Anionic Clay Hydrotalcite <i>Y. Yasin, S. M. Sumari and A. H. A. Malek</i>	367

Session 8

Moisture Dependent Geometrical Properties Of Sunflower Seed, Azargol Variety As A Case Study <i>R. Khodabakhshian, B. Emadi, M. H. A. Fard and M. H. Saiedirad</i>	375
Studies On The Extracellular Tannase From Newly Isolated <i>Bacillus Thurangiencis</i> BN2 <i>P. D. Belur, G. Mugeraya and S. Subbalaxmi</i>	379
Biophysical Properties Of Some Persian Honeys <i>H. Tavakolipour and A. K. Ashtari</i>	385
Risk Assessment Of Fluoride In Indian Context <i>V. Chaudhary and M. Kumar</i>	388
Studies On Fluidization Characteristics For Bio-Chemical Processes <i>K. S. K. R. Patnaik, P. V. Kumar and K. Sriharsha</i>	391
Toxicity Evaluation Of Different Urban Solid Waste Compost On Germination And Growth Parameters Of <i>Lepidium Sativum L</i> <i>A. R. Astaraei</i>	396
Preparation Of Pt-Sn/Al ₂ O ₃ Catalyst: Modeling Of Platinum And Tin Precursor Adsorption Onto Alumina <i>M. Saeedizad, S. Sahebdehfar, E. Samei and M. Zaman</i>	400

Influence Of Blade Absence On Performance Of DC Type Low-NO _x Burner For Pulverized-Coal Fired Boiler <i>Z. Wang, Y. Dong and S. Sun</i>	404
Carbon Cycle In The Drainage Area Of Yalong River <i>H. Kuang and M. S. Kuang</i>	409
Synthesis Of Mesoporous Nanocrystalline TiO ₂ With Potato Starch As Pore Template And Its Photocatalytic Activity <i>C. S. Budhi and I. Kartini</i>	411
Session 9	
Surface Water Characterization At Semenyih Dam <i>N. Kantasamy and S. M. Sumari</i>	419
Benchmarking Heavy Metal Contamination For Brownfield In Malaysia <i>A. H. Lee, H. Nikraz and T. H. Yung</i>	424
Assessment Of Heavy Metals In Soil, Sediment, Water And Sugarcane Plant Around Ewekoro Cement Factory In Ogun State, Nigeria <i>O. O. Olujimi and I. Oluwadare</i>	429
Knoevenagel Condensation: An Efficient Green Approach <i>B. Shyam, P. Yogesh, S. Atul, N. Pramod and M. Dhananjay</i>	436
Onto-Biology: Clarifying Also The Standard Clock For Pre-Biotic Process, Stem-Cell, Organs, Brain, And Societies <i>K. Naitoh</i>	440
Synthesis And Photocatalytic Performance Of Ce/SiO ₂ /TiO ₂ With Novel Microspherical-Like Faveolate Structure <i>Y. Miao, L. Min, Z. Zhai and J. Wang</i>	446
Light Transmission In Fluidized Bed <i>E. Shahbazali, A. A. Safekordi and N. Afrasiabi</i>	451
Rhizoremediation of Polyaromatic Hydrocarbons by <i>Arthrobacter</i> SP., A Rhizospheric Isolate from <i>Populus Deltoids</i> <i>S. Bisht, A. Sood, P. Pandey, S. Sharma and N. S. Bisht</i>	457
Formulation Of An Effective Rhizobium Bioinoculant Using Green Fluorescent Protein Reporter System <i>P. Pandey, S. Arora, A. Sood, S. Bisht and D. K. Maheshwar</i>	462
Impact Of Temperature And Applied Chlorine Dose On Inactivatin And Regrowth Of HPC Bacteria <i>B. Mahto and S. Goel</i>	467
Session 10	
Determination Of Physical Properties Of Pomegranate During Bulk Drying In An Inert Medium Fluidized Bed Dryer Assisted Infrared Heat Source <i>B. Honarvar, R. Keshavarz and A. Fazlali</i>	475
The Characteristics Of Heat Transfer At Spirally Shaped Chemical Reactor Through A Numerical Analysis <i>J.-G. Lee, Y.-G. Jung, J.-H. Lee and T.-B. Seo</i>	480

Prospects Of Flexible Design Strategies For Easy Change And Adaptation <i>N. Sadafi, M. F. Mzain and M. Jamil</i>	485
Iron Doped Microporous Activated Carbon (Phenolic Resin) As An Adsorbent For Arsenic Removal <i>Aj. Sharma, As. Sharma, N. Verma and N. Sankararamkrishnan</i>	491
Effect Of Treated Oil Well Effluent On Soil Exchange Capacity <i>N. Emanuel and G. Kumar</i>	494
Utilisation of Recycled Paper Mill Sludge Using Circulation Fluidised Bed Boiler <i>S. Mandavgane, A. Tulsyan, B. Jha, P. Patil, S. Paul and S. Bhattacharjee</i>	501
Orange Juice Pasteurization Using Ozone <i>F. E. Soetaredjo, N. Indraswati, A. E. Angkawijaya and O. M. Sjoufron</i>	504
Conservation Of Bird Life In An Urban Wetland: Problems And Concerns — A Case Study <i>J. R. Louis, C. Mahendran, V. R. Peter and P. Pramod</i>	508
Some Observations On Vertical Transmission Of The Microsporidian Parasite From The Teak Defoliator, <i>Hyblaea Puera</i> Cramer <i>J. Bhattacharya, O. K. Remadevi and T. O. Sasidharan</i>	513
A High Standard Isolated Insolated Photovoltaic Egyptian Safari Rest Red Sea Area <i>F. H. Fahmy</i>	516
Drying Of Mushroom Using A Solar Tunnel Dryer <i>M. A. Basunia, Y. Hikida and M. A. Rabbani</i>	521
Synthesis And Photocatalytic Performance Of TiO ₂ With Novel Shape <i>L. Min, Y. Miao, Z. Zhai and J. Wang</i>	525