

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_2O_3 In Cement Clinker On Microstructure And Leachability Of Cement Mortar <i>S. Sinyoung, S. Asavapisit, P. Kajitvichyanukul and P. Songsririttigul</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-Forosaminylerythronolide-B (MMFE) To RRNA 23S <i>Deinococcus Radiodurans</i> And The Prediction Of Its Antibiotic Potency <i>W. Haryadi, U. A. Jenie, R. S. Sudibyo, 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
<i>R. Taneja, M. Kumar, A. K. Raghav and A. K. Mittal</i>	
The Application Of Varied Impregnation Methods On The Characters Of Non-Sulfided NiMo/USY Catalyst	167
<i>K. D. Nugrahaningtyas, W. T. Sunaryanti, Triyono, Nuryono, D. M. Widjonarko and A. Yusnani</i>	
Preparation And Characterization Of NiMo/Active Natural Zeolite Catalysts	171
<i>K. D. Nugrahaningtyas, D. M. Widjonarko, W. T. Sunaryanti and Triyono</i>	
Multi-Objective Optimization For The Design Of A River Monitoring Network	175
<i>H.-T. Ouyang, J.-S. Lai, H. Yu and C.-P. Lin</i>	
Solubility Measurements Of Ibuprofen In Supercritical CO ₂ By A Dynamic Method	180
<i>M. Mirzajanzadeh, M. Ardjmand and F. Zabihi</i>	
Correlation Of The Solubility Of Ibuprofen In Supercritical Carbon Dioxide	184
<i>M. Ardjmand and M. Mirzajanzadeh</i>	
Identification And Monitoring Of Pesticides In A Well Field In Delhi, India	188
<i>P. K. Mutiyar, A. K. Mittal and A. Pekdeger</i>	
Water Treatment Scheme For Specific Requirement Of Cooling: Case Study Of Ground Water Treatment At Delhi	192
<i>S. S. Kolte and A. K. Mittal</i>	
CFD-PBM Modeling of Vertical Bubbly Flows	197
<i>M. R. Rahimi and H. Karimi</i>	
Modeling Of Seawater Intrusion For A Small Tropical Island Aquifer In East Malaysia	202
<i>S. M. Praveena, A. Z. Aris and M. H. Abdullah</i>	
A Novel Steady-State Test Cycle For Emissions Characterisation Of A Light-Duty Diesel Engine Fuelled With Biodiesel	206
<i>J.-H. Ng, H. K. Ng, J. S. Amirmostafa, C. M. You and S. Gan</i>	

Session 5

Influence Of Temperature On The Remediation Of PAH-Contaminated Soil Using Vegetable Oil	213
<i>E. V. Lau, S. Gan and H. K. Ng</i>	
The Strength And Direction Of The Linkage Between Rural Assets And Environmental Degradation In Upland Agricultural Practices	217
<i>P. Karyanto, M. H. Mohammad and F. Hashim</i>	
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
<i>A. M. D. Noor, X. Y. Lou, H. P. S. A. Khalil and S. Suryani</i>	
A Primary Mathematical Model To Differentiate Bacterial Growth From Resuscitation Of Dormant Bacteria	226
<i>R. Sachidanandham</i>	

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. Herald, 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. Wiryatmojo, 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. Moaffporian 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. Saeezad, 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 Populus Deltoids <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