

2011 International Conference on Green Technology and Environmental Conservation

(GTEC 2011)

**Chennai, India
15-17 December 2011**



**IEEE Catalog Number: CFP1172R-PRT
ISBN: 978-1-4673-0179-4**

CONTENTS

S. NO.	TITLE	PAGE NO.
I. GREEN CHEMISTRY AND GREEN BUILDINGS		
I-1	Effect of ClO ₂ , O ₂ and H ₂ O ₂ Bleaching Stages on the Formation of Chlorophenolic compounds in Jute Cady Pulp - <i>Divya Prakash, S. Kumar & N. J. Rao</i>	1
I-2	TiO ₂ Supported Ru and Pt Nano Catalysts for Selective Hydrogenation of Citral - <i>S.A. Ananthan & V. Narayanan</i>	5
I-3	An Invitro Dissolution Release Estimation Of Sodium Fusidate From Its Osteomyelitis Formulation - <i>SP.Karuppiah</i>	12
I-4	Energy-Efficient Materials: Route To Sustainability In Green Buildings - <i>D.Sandanasamy & T.Sundararajan</i>	17
II. WASTE MANAGEMENT - I		
II-1	Solid Waste Management of Thoubal Municipality, Manipur- A Case Study - <i>Ch. Raghmani Singh & Mithra Dey</i>	21
II-2	Evolutionary Multi Objective Optimization to Optimize Waste to Energy Network - <i>A.T.D. Perera, D. N. S. Kuruppumullage, N.A.I.D. Nissanka & A.A.P.de Alwis</i>	31
II-3	Studies On A-Amylase And Ethanol Production From Spoiled Starch Rich Vegetables Using Two Stage Fermentation Process And Multi Objective Optimization By Particle Swarm Optimization And Genetic Algorithm - <i>Satish Babu Rajulapati & Lakshmi Narasu.M</i>	37
II-4	Screening Of Four Species Of Earthworms For Sustainable Vermicomposting Of Ipomoea Carnea - <i>Manoj Makhija, S. Gajalakshmi & S. A. Abbasi</i>	42
III. HAZARDOUS WASTE MANAGEMENT & SUSTAINABLE DEVELOPMENT		
III-1	Development Of Ecofriendly Thermoplastics For Automotive Components - <i>S. Jeyanthi, M.Purushothaman, J. Janci Rani</i>	47

S. NO.	TITLE	PAGE NO.
III-2	Phytotoxicity Of Nanoparticles In Agricultural Crops - <i>T. Parthasarathi</i>	51
III-3	A Study On Environmental Standards In Spinning Industries For Sustainable Development - <i>K.T.Anand & A.John Rajan</i>	61
IV. ALTERNATE FUELS		
IV-1	Development of a software tool for in silico biodiesel production from Rapeseed oil - <i>Saurajyoti Kar, Prodyut Dhar, Abhishek Dutta & Ingmar Nopens</i>	68
IV-2	Investigation On 4S Ceramic Heater Surface Ignition C.I. Engine Using Ethanol- Diesel Blends With Amyl Nitrate Additive - <i>R.Rama udaya Marthandan, B Durga Prasad</i>	75
IV-3	Comparative Exhaust Emission Study Of Diesel And Cng Fuel Buses Of Karnataka State Road Transport Corporation - <i>Shivaji Bhandarkar</i>	89
IV-4	An Experimental and comparative approach of thermal and emission behaviour of engine fuelled with diesel and Bio-Diesel blends - <i>R.Murali Manohar, M.Prabhakar, S.Sendil Velan & G.Antony Casmir jayaseelan</i>	94
IV-5	Reduction in Pollution Levels by the use of Clean Fuel CNG in Bangalore Municipal Transport Corporation Buses - <i>Shivaji Bhandarkar</i>	100
IV-6	Performance and emission characteristics of a diesel engine fuelled by biodiesels - <i>Dilip Kumar Bora</i>	105
V. BIOTECHNOLOGY IN WASTE MANAGEMENT - I		
V-1	Production Of Cellulase By An Endophytic Aspergillus Sp, Using Cauliflower Stalk As Substrate - <i>D Prabavathy, C Valli Nachiyar</i>	108
V-2	In vitro Enzyme Catalytic Biotransformation of Carbon Dioxide into Useful Chemicals – A Short Review - <i>Kavita Lanjekar & Nikhil Gharat</i>	112

S. NO.	TITLE	PAGE NO.
V-3	Biosorption of heavy metals using fresh water algae - <i>Velan.M & Kayalvizhi.K</i>	118
V-4	Gainful utilization of a highly pernicious and worthless weed <i>Mimosa pudica</i> for the green synthesis of silver nanoparticles - <i>S.Pirathiba, Tasneem Abbasi & S.A.Abbasi</i>	124
V-5	Investigating the performance of inverse fluidized bed biofilm reactor for phenol biodegradation using <i>Pseudomonas fluorescens</i> - <i>S.Sabarunisha Begum & K.V.Radha</i>	130
VI. WASTE MANAGEMENT – II		
VI-1	Kinetics of Anaerobic Digestion of Water Hyacinth Using Primary Sludge as Inoculum - <i>Upasna Rai, Yogashree Bharath, Vinay Shetty, Jagadish H Patil & M A Lourdu Antony Raj</i>	137
VI-2	Integration of Lean and Green supply chain impact on manufacturing firms in improving environmental efficiencies - <i>C Mallika Parveen, A R Pradeep Kumar & T. V. V. L. Narasimha Rao</i>	143
VI-3	A Characteristic Analysis Of Compost And Rhizospheric Microorganisms To Enhance Plant Growth - <i>Jelin Ilayaraja J & Dhanarajan. M.S</i>	148
VI-4	Solid Waste Management in Airports: A case study of Bangalore International Airport - <i>Hari Kumar Parameshwar</i>	152
VI-5	Conventional Solid Waste Management Technique for Eradication of Solid Waste and its Impact Assessment - <i>Sathish.S & Prabhakaran.M</i>	159
VI-6	Screening and Isolation of Effective Microbes from Organic Wastes for Faster and Effective Degradation of Bio-Degradable Municipal Solid Waste - <i>Kalaivani.S, Amiya Kumar Sahu & Shanthi.K</i>	162
VII. ENVIRONMENTAL CONSERVATION		
VII-1	Biodegradation of Anthracene: Influence of Selected Physicochemical Parameters and Metabolism - <i>Brinda Lakshmi. M & Velan. M</i>	167

S. NO.	TITLE	PAGE NO.
VII-2	Assessment of Environmental Impacts for Textile Dyeing Industries in Bangladesh - <i>Md Montasir Islam, Kashif Mahmud, Omer Faruk & Solaiman Billah</i>	173
VII-3	A novel eco-friendly bath for electroless copper deposition - <i>S.Rekha & KN.Srinivasan</i>	182
VII-4	Measurement and Analysis of Ambient SO ₂ and Ground Level Ozone in an Urban Air of Chennai, India in the year 2010 - <i>Geetha. G & Samuel Selvaraj. R</i>	185
VII-5	Conservation of Wild Bananas (<i>Musa spp</i>) through Seeds and improved regeneration through seed treatments - <i>Dayarani M,Dhanarajan M.S,Uma S & Gomathi M.</i>	188
VII-6	Biomarker Responses in fish Exposed to Industrial Effluent - <i>P.B.Reddy & Renu Kumari Singh</i>	191
VII-7	Synthesis of Silver Nanoparticles using <i>Cynodon dactylon</i> Plant Extract and Evaluation of their Antimicrobial Activities and Cytotoxicity - <i>S. Lokina, Stephen & V. Narayanan</i>	205
VIII. BIOTECHNOLOGY IN WASTE MANAGEMENT – II		
VIII-1	Optimization and characterization of Polyhydroxyalkanoate produced by <i>Bacillus cereus</i> - <i>A Brinda Devi & C Valli Nachiyar</i>	212
VIII-2	Facile ‘phyto’ fabrication of silver nanoparticles of diverse geometries with concomitant utilization of a pernicious terrestrial weed - <i>J. Anuradha,Tasneem Abbasi & S. A. Abbasi</i>	216
VIII-3	Antifungal Efficacy Of Pyocyanin Produced From Bioindicators Of Nosocomial Hazards - <i>T. Sudhakar & S. Karpagam</i>	224

S. NO.	TITLE	PAGE NO.
VIII-4	Atmospheric Microfungal Biopollution In City Houses Of Hosur, A Industrial City Of Tamilnadu, India - <i>Anima Nanda & Raghavan M</i>	230
VIII-5	Adsorption efficacy of chitosan nanoparticles from <i>Cunninghamella elegans</i> on RBB dye - <i>A.Shajahan, S.Shankar, V.Kaviyarasan & V.Narayanan</i>	238
VIII-6	Studies on decolorisation of Textile azo dye, Mordant black 17 using <i>Pseudomonas aeruginosa</i> SBU7, isolated from textile effluent - <i>Karunya.A, C.Rose & C.Valli Nachiyar</i>	244
VIII-7	Biotreatment of simulated atrazine wastewater using hybrid upflow anaerobic sludge blanket(HUASB) reactor - <i>P.Mullai, M. K. Yogeswari, K. Sridevi & N. Saritha</i>	248
IX. GREEN TECHNOLOGY – I		
IX-1	Studies On Antagonistic Effect Of <i>Streptomyces</i> Species Collected From Polluted And Non Polluted Environment - <i>Anima Nanda & Zarina. A</i>	254
IX-2	Effects of meteorological parameters on antimicrobial activity of <i>penicillium</i> species in hospital environment - <i>Anima Nanda & Akila S</i>	259
IX-3	Effect of the seaweed <i>Hypnea musciformis</i> (Wulf.) Lamouroux on the growth and productivity of <i>solanum melongena l.</i> - <i>S.Revathi & Nirmala C. Alexander</i>	266
X. GREEN TECHNOLOGY - II		
X-1	Potentials for Thermal Comfort through Energy Efficient Passive Design Techniques in Educational Institutions in the Hot Humid Climatic Region of Madurai. - <i>S.Subhashini & S.Nagan</i>	272
X-2	A Hybrid Alternative Energy System with Photovoltaic and Fuel Cell - <i>R.Goutham Govind Raju, N.Kamalakannan, M.Vinothkumar & N.P.Subramaniam</i>	278
X-3	The Eco-friendly Management of Hotel Industry - <i>Kannan Subbiah & Suriyaprabha Kannan</i>	285

S. NO.	TITLE	PAGE NO.
XI. SUSTAINABLE DEVELOPMENT		
XI-1	Effluent Treatment Analysis using Solar distiller - <i>M.Gowtham,S.Kamalakannan & L.Karthick</i>	291
XI-2	Enhanced Distillate Yield of Acrylic Pyramid Top Cover Solar Still With and Without Tar Coated Blue Metal - <i>B Selva kumar,S.Kalaivani,B.Kalidasan & S. Rugmini Radhakrishnan</i>	296
XI-3	Achieving Sustainability in the Indian Plastic Industry: Issues and Challenges - <i>Santanu Mandal</i>	306
XI-4	Application of Multi stage Fuzzy Logic Control in Load Frequency Control of an isolated wind diesel Hybrid power system - <i>R.Dhanalakshmi &S.Palaniswami</i>	309
XI-5	Yield damage functions for tea sector in Sri Lanka and India: an empirical estimation - <i>Prasad Dharmasena & M.S.Bhat</i>	316
XI-6	An Experimental Performance Analysis of a Concentrated Solar Distiller - <i>Gowtham.M & M.Sharath Chander</i>	321
XII. WASTE WATER TREATMENT		
XII-1	Adsorption of Reactive blue 2 dye from aqueous solution by Cocoa (Theobroma cacao) Shell: An agro solid waste - <i>C. Theivarasu & S.Mylsamy</i>	325
XII-2	Regression Model with Artificial Neural Network for Anaerobic Digestion of Wastewater Treatment - <i>Rangasamy Parthiban & Latha Parthiban</i>	332
XII-3	Sustainable storm water management – An Evaluation of Depression Storage effect on Peak Flow - <i>Zameer Ahmed, D. Ram Mohan Rao & Dr K. Ram Mohan Reddy</i>	336

S. NO.	TITLE	PAGE NO.
XII-4	Green Techniques Between Birth And Death - <i>S.Vijaykumar & K.S.Rajkarthick,P.Karthik</i>	341
XII-5	Fixed Bed Column Study For The Removal Of Reactive Red 120(Rr120) Dye From Aquatic Environment By Low Cost Adsorbents - <i>U.Ashadevia , T.Usharani & V.Prince Immanuel</i>	347
XII-6	Treatment Of Highly Polluted Paper Mill Waste Water By Solar Photocatalytic Oxidation With Synthesized Nano TiO ₂ - <i>J.Manassah</i>	356
XII-7	Antibacterial Activity Of The Streptomycetes Isolated From Marine Soil Sample - <i>S. Usha Nandhini and M. Masilamani Selvam</i>	362
XII-8	Characterization Of Cytotoxic Compound From Marine Sediment Derived New Actinomycete <i>Streptomyces coelicolor</i> Strain SU5 - <i>Sudha. S, Masilamani Selvam . M</i>	366