ICPPCT

2023

3rd International Conference on Pollution Prevention and Clean Technologies

13-15 September 2023

Vysoká škola technická a ekonomická v Českých Budějovicích
České Budějovice, Czech Republic

https://icppct.com/

Welcome Message

3rd International Conference on Pollution Prevention and Clean Technologies and **"Taiwan-India Workshop on Emerging Environment and Energy Challenges of Technology Exchange"**. The event is scheduled for the 13-15th, 2023, in České Budějovice, Czech Republic. The event will bring together renowned researchers, scholars, delegates, and key speakers, who will discuss more about using tech on minimizing the impact of economic activities on the planet and environment.

The International Conference on Pollution Prevention and Clean Technologies will also offer a platform for unpublished papers focused on new and innovative clean technologies. The event will be chaired and co-chaired by **Various insightful researchers around the world.**

"VSTE is extremely proud of being associated with the 3rd International Conference on Pollution Prevention and Clean Technologies. While economic development activities are necessary, this event will bring a **platform to discuss innovative clean technologies that can mitigate the waste and risks** related to such activities. From discussing the shift to sustainable resources to improving energy efficiency and designing sustainable manufacturing systems, the event will allow a perfect international platform for discussing possible solutions. We also hope that the event will offer an insight on how **global carbon footprint** can be minimized strategically".

ICPPCT would be the first event of its kind that would rely on tech & innovations to create solutions that would address serious environmental concerns. Key speakers and researchers will also offer insight into how innovative clean technologies can be expanded across manufacturing, industrial, and other sectors to reduce the impact on climate and the planet while considering various aspects of pollution prevention technologies. Scholars and researchers can also interact directly with one another on key pointers like the production of carbon-neutral products and finding new pioneering financial models to support new visions.

"At a time when we are discussing aspects like climate change and increasing pollution levels, ICPPCT would be a great opportunity for the world to explore new ideas and innovations. The event will also offer room to discuss **Sustainable Environmental Management System (SEMS)** designs and environmental economics, along with waste management and multi-criterion decision-making models for sustainability. We hope ICPPCT will pave the path for determining innovative environmental policies for the world". We hope you enjoy the event, and the scientific discussions will bring new insights to make the environment sustainable and Greener in Future.

Sincerely,

ICPPCT-team

Committee Members

Honorary Chairs

Prof. Dr. Ashok Pandey, CSIR-Indian Institute of Toxicology Research, India
Prof. Dr. Jan Taler, Cracow University of Technology, Poland
Prof. Dr. Chin-Tsan Wang, Taipei Economic and Cultural Center in India Counsellor & Director
Prof. Dr. Weerapon Thongma, President of MJU, Thailand

ICPPCT General Chair

Assoc. Prof. Dr. Gopalakrishnan Kumar, University of Stavanger, Norway

ICPPCT 2022 Chairs

Dr. Grzegorz Piechota, GPCHEM, Poland
Anna Marouskova, Institute of Technology and Business in České Budějovice, Czech Republic
Prof. Josef Marousek, Institute of Technology and Business in České Budějovice, Czech Republic

Co-chairs

Prof. Dr. Chyi-How Lay, Feng Chia University, Taiwan
Prof. Dr. Sang-Hyoun Kim, Yonsei University, Republic of Korea
Prof. Pawel Oclon, Cracow University of Technology, Poland
Assoc. Prof. Wojciech Czekala, Poznan University of Life Sciences, Poland
Prof. Pawel Oclon, University of Tsukuba, Japan
Prof. Dr. Wenshan Guo, University of Technology Sydney, Australia
Assoc. Prof. Monika Zubrowska-Sudol, Warsaw University of Technology, Poland
Dr. Ticiano Costa Jordao, Czech Technical University, Prague

ICPPCT 2022 International Scientific Committee

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Dr. Katarzyna Miszta-Kruk, Warsaw University of Technology, Poland
Prof. Moonyong Lee, PSDC-Lab Head, School of Chemical Engin., Yeungnam University, South Korea
Dr. Péter Bakonyi, University of Pannonia, Hungary
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Asst. Prof. Dr. Ganesh Dattatraya Saratale, Donggukk University, Republic of Korea
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Dr. Tunc Durmaz, Yildiz Technical University, Turkey
Dr. Nikolas I. Tsongidis, CERTH, Greece
Erika Sinisgalli, CRPA Soc. Cons.- Italy
Charikleia Poravou, CERTH, Greece
I-Hsiang Tseng, Feng Chia University, Taiwan
Prof. S.Kanmani, Anna University, India
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Karen Trchounian, Yerevan State University (YSU), Armenia

Technical Committee

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Assoc. Prof. Dr. Vinoth Kumar Ponnusamy, Kaohsiung Medical University, Taiwan
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Assoc. Prof. Dr. Rajesh Banu, Central University of Tamilnadu
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Prof. Dr. An-Ya Lo, National Chin-Yi University of Technology, Taiwan
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Prof. Ir. Ts. Dr. Pau Loke Show, Khalifa University, UAE
Dr. Pratima Jeetah, University of Mauritius, Mauritius
Dr. Shashi Bhatia, Konkuk University, South Korea
Prof. Dr. Rameshprabhu Ramaraj, Assistant Dean, School of Renewable Energy, MJU, Thailand

Outreach Committee

Anna Marouskova, Institute of Technology and Business in České Budějovice, Czech Republic
Dr. Eldon R Rene, UN-IHE, Delft, The Netherlands

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Program

Day 1: Wednesday, September 13, 2023		
08:30-09:30	**Registration**	**Committee**
09:30-09:45	**Welcome Speech**	**Chair: Dr. Josef Marousek**
Carbon Neutrality		**Session Chair: Dr. Grzegorz Piechota**
09:45-10:00	Plenary Talk	Dr. Babak Minofar
10:00-10:15	Demand-driven versus traditional biogas plants: energetic and exploitation aspects	Prof. Jacek Dach
10:15-10:30	Reducing greenhouse gas emissions as a key to survival of small family dairy farms	Dr. Jakub Mazurkiewicz
10:30-10:55	Coffee Break	
Resource Recovery		**Session Chair: Dr. Gopalakrishnan Kumar**
10:55-11:10	Recovery of dissolved methane from anaerobic bioreactor effluents using hollow-fibre PDMS membrane contactor	Dr. Peter Bakonyi
11:10-11:25	Production of compost with reduced pH for forest nurseries	Dr. Wiktor Bojarski
11:25-11:40	Pyrolytic conversion of agro-industrial waste to biofuels and advanced materials: effect of feedstock on product yields and characteristics	P. Mele
11:40-12:30	Lunch (Poster Session)	
Cleaner Production		**Session Chair: Dr. Eldon R Rene**
12:30-12:45	Sustainable mixotrophic algae refinery of astaxanthin and lipid from *Chlorella zofingiensis*	Vaibhav Sunil Tambat
12:45-13:00	Diesel Pollution Bioremediation by a Novel Integrated Processes of Photocatalysis and Microbial Fuel Cell	Prof. Chyi How Lay
13:00-13:15	Two-phase disintegration of microalgae biomass for cost-effective biomethane production: Energy and cost assessment	Dr. Yukesh Kannah Ravi
13:15-13:30	Spent coffee Grounds Biorefinery towards Circular Economy in Norway	Dr. Gopalakrishnan KUMAR
13:30-13:45	Mesophilic vs. thermophilic anaerobic digestion of vegetable and fruit food waste as bioconversion methods	Dr. Wojciech Czekała
13:45-14:00	Analysis of factors determining the quality of rainwater runoff from a green roof in terms of its further use	Joanna Bąk
14:00-14:30	Coffee Break	

Green Social Environment		**Session Chair: Dr. Chyi-How Lay**
14:30-14:45	On the way to carbon neutrality and energy safety: energy front of the Ukrainian war	Dr. Iryna Vaskina
14:45-15:00	Sustainability problems related to the management of agro-food industry waste for energy purposes.	Dr. Soja Jakub
15:00-15:15	Research on the biodegradation of disposable baby diapers in the composting process	Dr. Damian Janczak
15:15-15:30	Constructed wetlands for the removal of pesticides, metabolites, adjuvants, and nitrates: the effect water saturation level and amendments	Dr. Priyanka Kumari
15:30-15:45	Kitchen waste treatment for biohydrogen and value-added volatile fatty acids production via dark fermentation	Dr. Tamás Rózsenberszki
15:45-16:00	Research on biological drying of plastics from mechanical unpacking of food waste process	Dr. Nowak Mateusz
16:00-16:15	Urea Stabilization and Phosphorous Recovery by Electrochemically and Bioelectrochemically Induced pH Modulation	Dr. László Koók
16:30-17:30	Brewery Visit	
17:30-20:00	Walk through the old town	

Day 2: Thursday, September 14, 2023		
Sustainable Environment and Alternative Fuels		**Session Chair: Dr. Laszlo Kook**
08:30-08:45	Sustainable hydrogen production from expired rice wine through combined microbial electrolysis and anaerobic digestion	Yunjeong Choi
08:45-09:00	Application of polyethyleneimine and bacteria-based algicidal material to development of adsorbent for effective and environmental harmful cyanobacteria control in aqueous phases	Sok Kim
09:00-09:15	Methane potential of high-rate contact stabilization process and application of isolated klebsiella sp.	Minsu Song
09:15-09:30	Cryopreservation Strategies for Hydrogen Producing Granules	Jeun Ko
09:30-09:45	LACTATE-DRIVEN DARK FERMENTATION AS A NOVEL VALORIZATION PLATFORM FOR THE ORGANIC FRACTION OF MUNICIPAL SOLID WASTE	Cristina Martínez
09:45-10:00	Valorization of second crops and agro industrial by-products: a focus on the Italian Biogasdoneright ®model.	Dr. Erika Sinisga
10:00-10:15	Economics incentives and policy frameworks: Elucidating household choices in Renewable Energy	Prof. Tunc Durmaz
10:15-10:30	Self-mineralization of poly-lactic acid film by lipase enzyme: development of clean and sustainable ecosystem	Fezile Bethusile Mkhontfo
10:30-10:45	Synergistic Syngas Production: Needleless Electrospinning Synthesis of Co/CeO_2–La_2O_3 Catalyst for Efficient Dry Reforming of Methane	Prof. Sumaiya Zainal Abidin
10:45-11:00	Coffee Break	
Clean Technologies-I		**Session Chair: Dr. Péter Bakonyi**
11:00-11:15	A Novel Approach for Generating 5-hydroxymethylfurfural from Raw Lignocellulosic Biomass in a Biphasic Reaction System	Yu-Wen Huang
11:15-11:30	Utilization of Agricultural Wastes for The Production of 2,5-Furandicarboxylic Acid via A One-Pot, Two-Step Catalytic Process	Quang Tam Huynh
11:30-11:45	Effect of pretreatment methods on the efficiency of Anaerobic membrane bioreactor for seafood processing wastewater treatment	Luu Le Tran
11:45-12:00	Toward Sustainable Use of Algal Biochar for Sustainable Water Treatment	Prof. Cheng Di Dong
12:00-13:00	Lunch (Poster Session)	
Clean Technologies-II		**Session Chair: Prof. Josef Marousek**

13:00-13:15	Molecular hydrogen production by E. coli using coffee silver skin as a substrate	Prof. Karen Trchounian
13:15-13:30	Modification of polymer membrane applied in Anaerobic Membrane Bioreactors (AnMBRs) for biofouling prevention in wastewater treatment: a holistic review	Luu Le Tran
13:30-13:45	Hydrogen peroxide mediated biological pretreatment on waste activated sludge for biomethane production	Dr. Gunasekaran M
13:45-14:00	Analysing the Lean Burn Combustion Stability by Hydrogen Induction in Gasoline Direct Injection Engine	Jerome Stanley M
14:00-14:15	Effect Of Hydrogen Induction On Performance And Emission Characteristics Of Waste Plastic Oil Fueled Compression Ignition Engine Using Dual Fuel Mode of Operation	Kiran Suresh
14:15-14:30	Effect of heavy metals on phenol degradation and lipid production in Rhodosporidiumtoruloides	Kasturi Dutta
14:30-14:45	Coffee Break (Poster Session)	
Resource recovery and Environmental Remediation	**Session Chair: Dr. Chyi-How Lay, Dr. Eldon R Rene, Dr. Grzegorz Piechota**	
14:45-15:00	Biowaste to resources for sustainable development and circular economy	Prof. Ashok Pandey
15:00-15:15	Assessment of renewable hydrogen and aggregated value biocompounds production routes from Amazon periphery residual biomass	Dr. Alana Moura
15:15-15:30	Porous sodium alginate/hydrochar spherical beads from hydrothermal carbonization of cashew bagasse as resource recovery adsorbent	Prof. Senthil Kumar
15:30-15:45	Catalytic steam conversion of sewage sludge to biohydrogen using novel monolith catalysts	Prof. Young-Kwon Park
15:45-16:00	Biohydrogen production from fruit and vegetable waste via dark fermentation: From batch to continuous lab-scale operation	Martínez-Mendoza Leonardo
16:00-16:15	Valorization of Pine Needles as Biochar for Development of Proton Exchange Membrane for Microbial Fuel Cell	Prof. Achlesh Daverey
16:15-16:30	Membrane-based Ammonia Extraction to Enhance the Anaerobic Digestion Process of Poultry Manure	Rivera Fanny
16:30-16:45	Innovative two-stage lactate-driven dark fermentation process for the fermentative hydrogen production from food waste	Lois Regueira Marcos
16:45-17:00	(TBA)	Mónica Salamanca

17:00-17:15	Biohydrogen and methane production from brewer's spent grain	Pérez-Barragán Jacobo
17:15-17:30	The influence of hydrolysis process pH on biogas efficiency of maize silage in two-phase anaerobic digestion	Dr. Andrzej Lewicki
17:30-17:45	Green biomass pretreatment technologies for sustainable biorefinery developments	Dr. Tirath Raj
17:45-18:00	Solar CO_2 Conversion into Fuel via Ferrite Driven Thermochemical Redox Reaction	Dr. Rahul Bhosale
19:00-21:00	Gala Dinner	

Day 3: Friday, September 15, 2023		
Energy and Green Technologies		**Session Chair: Dr. Chyi-How Lay, Ing. Anna Marouskova**
08:30-08:45	Nutrient Removal and Recovery from Liquid Fraction of Food Waste Anaerobic Digestate: A Case Study in Taiwan	Diana-Victoria Arellano Yasaca
08:45-09:00	Dark Fermentative Hydrogen and Methane Productions from high-strength food waste hydrolysate in a Loofah Packed Support Bioreactor	Prakaidao Pomdaeng
09:00-09:15	Coupling electrochemical nutrient recovery from urine with biogas upgrading	Hanwoong Kim
09:15-09:30	Industrial symbiosis and eco-industrial transformation opportunities: A case study from the Sharada Industrial Park, Nigeria	Abubakar M. Bilyaminu
09:30-09:45	Application of a compact trickle-bed bioreactors for odor and VOCs removal in various industries and the municipal sector	Anita Parzentna-Gabor
09:45-10:00	Biological liquefaction of sago waste biomass for cost and energy-effective biofuel generation	Prof. Rajeshbanu
10:00-10:15	Unveiling the Inefficiency of Surfactants in liquefaction of Protein-Rich weeds	Dr. Poornachander. G
10:15-10:30	Phosphorus regeneration reduces the use of agrochemicals	Prof. Josef Marouesk
10:30-11:00	Coffee Break	
Circular Economy		**Session Chair: Dr. Gopalakrishnan Kumar**
11:00-11:20	Bio-hydrogen production from waste and renewable biomass	Prof Sang-Hyoun Kim
11:20-11:40	Cleaner Production/ Pollution Prevention Practices in Indian Textile Industries towards Circular Economy	Prof S. Kanmani
11:40-12:40	**Meet Editors and Discuss (Dr. Eldon R Rene, Dr. Gopalakrishnan KUMAR, Dr. Josef Marouesk, Dr. Gergorz Piechota, Dr. Peter Bakonyi) & Closing Ceremony**	

Day 4: Saturday, September 16, 2023	
09:00-11:30	**ICPPCT-Committee meeting (only invited participants)**

Poster Session:

No.	Topic	Authors
1	Fate&Transport of Polyfluoroalkyl Substances (PFAS) and Representative Persistent Organic Pollutants (PoPs) in Different Units of A Food Waste Anaerobic Digestion Facility	Jiang Wu, Hidenori Matsukami, Takuro Kobayashi, Hidetoshi Kuramochi
2	Synthesis of Monocrystalline and Flower Like Ni/NiO Bounded N-doped Mesoporous Carbon Derived from Covalent Organic Framework for Supercapacitor Application	E. Narayanamoorthi, N.S.K. Gowthaman, S. Abraham John, K.P. Elango, Vinoth Kumar Ponnusamy
3	Nitrogen Doped Mesoporous Carbon Tube Decorated with Co/CoO Derived from Covalent Organic Framework for Energy Storage Application	E. Narayanamoorthi, N.S.K. Gowthaman, S. Abraham John, K.P. Elango, Vinoth Kumar Ponnusamy
4	Facile Synthesis of Flower-like NiCo/NiO-CoO Fenced by N-doped Mesoporous Carbon Derived from Covalent Organic Framework for Aqueous Asymmetric Supercapacitors	E. Narayanamoorthi, N.S.K. Gowthaman, S. Abraham John, K.P. Elango, Vinoth Kumar Ponnusamy
5	Development of Pt-multiwalled Carbon Nanotubes Supported NiO Nanoparticles for Non-Enzymatic Electrochemical Monitoring of Choline from Human Sweat	R. Vinoth, and Vinoth Kumar Ponnusamy
6	Development of Enzyme-Less Electrochemical Sensor Based on Ni-Co Oxide Nanostructure for Direct Oxidation of Uric Acid from Human Urine	R. Vinoth, and Vinoth Kumar Ponnusamy
7	Electropolymerized Melamine on Molten Salt Etching Niobium Carbide MXene: A Promising Electrocatalyst for Diphenylamine in Food Samples	Muthukumar Govindaraj, Arockia Selvi J and Vinoth Kumar Ponnusamy
8	Emerging Frontiers: BCN and Borophene-derived Materials for Advanced Electrochemical Sensing, Supercapacitor Fabrication, and Pollutant Degradation	Uday Shashikumar, Nagesh Khadri M J, Kunal Roy, Shaukath Ara Khanum, Dinesh Rangappa, Vinoth Kumar Ponnusamy
9	Algal Biomass Based Bio-refineries: Concurrent Pre-treatment Strategies and Perspectives for Sustainable Feedstock	Uday Shashikumar, Ankit Sharma, Naina V, Shelly Biswas, Kumar Rakesh Ranjan, Vinoth Kumar Ponnusamy
10	Trajectory in Biological Metal-Organic Frameworks: Biosensing and Sustainable Strategies-Perspectives and Challenges	Uday Shashikumar, Meera Suresh, Somi Joshi, Kandkuri Dhana Sai Shree, Asmita Singh, Shashi Chawla, Vinoth Kumar Ponnusamy
11	Innovative Technologies on the Fabrication of Additively Manufactured 3D/4D Smart Hydrogels and its Applications in the Biomedical Arena	Uday Shashikumar, Aditya Sarawat, Shashi Chawla, Vinoth Kumar Ponnusamy

12	Multiferroic Perovskite Materials for Sustainable and Eco-friendly Energy Storage Applications –Strategies, Workflow, Perspectives and Developments	Uday Shashikumar, M.J. Nagesh Khadri, Kumar Rakesh Ranjan, Vinoth Kumar Ponnusamy
13	Nitrosamine Impurities: Maiden Insights into Fetal and Infant Developmental Consequences and Pharmaceutical Safety	Uday Shashikumar, Hem Nikhilesh Naik, Jayashree Erappanakoppalu Veerabhadra, Smita Jauhari, Vinoth Kumar Ponnusamy
14	Environmental impacts of Post-Consumer Plastic Wastes: Treatment Technologies Towards Eco-Sustainability and Circular Economy	Uday Shashikumar, Basil Sajan Varghese, Chitra A, Shashi Chawla, Vinoth Kumar Ponnusamy
15	Sustainable Development Paradigms: Green Synthesis Strategies for Eco-Compatible Nanoparticles and Nanofillers	Uday Shashikumar, Shashi Chawla, Vinoth Kumar Ponnusamy
16	Photocatalytic Degradation of Environmentally Hazardous PFAs And Pharmaceutical Contaminants Using Ternary Photocatalysts	Uday Shashikumar, Himanshi Goel, Ishika Rana, Kumar Rakesh Ranjan, Vinoth Kumar Ponnusamy
17	Effect of Light Emitting Diodes (LEDs) on Phycocyanin Production of *Spirulina*	Obaid Bhat, Yuwalee Unpaprom, Rameshprabu Ramaraj
18	Enhanced Light Harvesting and Charge Separation in DSSCs: Synergistic Approach Using Natural Dye Co-sensitization	Maria Onyemowo, Yuwalee Unpaprom, Rameshprabu Ramaraj
19	Optimizing Dye-Sensitized Solar Cells via TiO2 Quantum Dot Photoanodes and Novel Natural Dye Sensitization	Maria Onyemowo, Yuwalee Unpaprom, Rameshprabu Ramaraj
20	Exploring Split Gill Mushroom for the Development of Functional Food Product	Nuttapong Saetang, Rameshprabu Ramaraj, Yuwalee Unpaprom
21	Enhanced Bioethanol Production from Elephant Ear Plant through Alkaline Pretreatment and Subsequent Fermentation for Sustainable Energy Generation	Rapeephon Suppalee, Rameshprabu Ramaraj, Yuwalee Unpaprom
22	Integrated Thermal-Alkaline and Pretreatment Techniques for Enhancing Bioethanol Yield from Low Grade Konjac Powder	Warichsa Kongchan, Yuwalee Unpaprom, Rameshprabu Ramaraj
23	Evaluating the Impact of Fish to Vegetable Ratios in Aquaponics on Bioremediation Performance and Economic Viability	Udomluk Sompong, Tipsukhon Pimpimol, Chatchawan Chaichana, Yuwalee Unpaprom, Rameshprabu Ramaraj and Niwooti Whangchai
24	Influence of Feed Evolution on Growth, Digestive Enzyme Activity, Feed Utilization and Chitin Structure in Cultured Flathead Lobster *Thenus orientalis*	Rungkan Klahan, Kritsana Krajabthong and Krit Chaiwong
25	Impact of Environmental Conditions and Organic Matter on the Cultivation and Productivity of Medicinal Hemp Varieties	Patthamaporn Wangnai, Phopgao Puttharak

26	Reducing Energy Consumption and GHG Emissions in Biodiesel Production with Solar Hot Water Heating: A Process Design and Analysis	Sirinuch Chindaruksa, Pornnapa Pech-umpai, Buntoon Wiengmoon, Chanakarn Puemchalad
27	Analysis of Opportunities to Reduce CO2 Emissions for Household Cleaning Work	Maciej Neugebauer, Piotr Sołowiej, Jacek Dach
28	Innovations and Bio-Refinery Value of Polyhydroxyalkanoates (PHAs) - A Review	Ju-Hyeong Jung
29	Advance Pretreatment and Efficient Disposal Technologies for Food Wastes into Value Added Products: A Review	Ju-Hyeong Jung
30	Optimization of Micro-Aeration Technology for Hydrogen Sulfide (H2S) Removal from Biogas	Yura Jo, Jungsu park, Sang-Hyoun Kim
31	Removal of MP-ARGs within Biofilm from Wastewater Treatment Plant's Effluent	Yeongmi Park, Hong-Mok Cho, Si-Kyung Cho
32	Effect of Co-60 Gamma Ray Pretreatment on Anaerobic Digestion and Dewaterability	Gi-Beom Kim, Soyoung Park, Chul Hee Min, Tae Kwon Lee, Sang-Hyoun Kim
33	The Distribution and Correlation between Microplastics and Antibiotic Resistance Genes (ARGs) in A Water Source of The Metropolitan Area in South Korea	Hongmok Jo, Sun Ku Park, Hyoyoung Lee, Yejin Choi, Si-Kyung Cho
34	Synergistic Effect of Pretreatment Methods for Hydrolysing Sago Biomass for Biofuel Production	P V Rinsha, J.Rajesh Banu
35	Screening of Biofilm Inhibiting Active Ingredients in Citrus Peel Extract from Jeju Island	Do-Hyung Kim, HeeHoLee, So-Young Ham, Hwa-Soo Ryoo, Han-Shin Kim, Jeong-Hoon Park
36	Influence of Wastewater Type on The Distribution of Microbial Community Compositions including Pathogenic Bacteria within Wastewater Treatment Processes	Bokjin Lee, Sang-Hoon Lee, Na-Kyung Kim, Ilho Kim, Saerom Park, SeogkuKim, So-Young Ham, Hee-Deung Park, Han-Shin Kim, Jaiyeop Lee
37	Effects of Particle Size on The Pretreatment and Subsequent Biogas Potential of Polylactic Acid (PLA)	Ali Ashraf Joolaei, Mohammad Ali Mohit, Masoud Makian, Om Prakash, Dong-Hoon Kim
38	Monitoring Microbial Population and Abundance for High-Rate Biohydrogen Production in DMBR Varying Hydraulic Retention Time	Youngkyu Lee, Hwan-Hong Joo, Gi-beom Kim, Sang-Hyoun Kim
39	Dark fermentative Hydrogen Production using Environmentally Adapted Microorganisms Isolated from Organic Waste Treatment Plant	Do-Hyung Kim, Jin-Ju Lee, and Jeong-Hoon Park
40	Dynamics of Functional Gene Alterations Associated with	Sang-Hoon Lee, Na-Kyung Kim,

	Biohydrogen Production in Food Wastewater Treatment Plants	Do-Hyung Kim, Hee-Deung Park, and Jeong-Hoon Park
41	Application of Activated Granular Carbon to Improve Methane Production under Unfavorable Conditions	Do-Hyung Kim, Han-Shin Kim, Jeong-Hoon Park
42	Continuous Ammonia Fermentation of Organic Solid Wastes	Masoud Makian, Om Prakash, Seongwon Im, Jimin Kim, Dong-Hoon Kim
43	Importance of Keeping Freshness of Cattle Manure for The Enhanced Anerobic Digestion	Seongwon Im, Prakash Om, Dong-Hoon Kim
44	Applicability of Various Organic Acids on Food Waste Biochar for Indirect Carbonation via Alkali and Alkaline Earth Metal Elution.	Ye-Eun Lee, Yoonah Jeong, Kwang-Ho Ahn, Jinhong Jung, and I-Tae Kim
45	Recent Trends in The Application of CFD and ANN on The Production of Biohydrogen from Bioreactors- A Review	Hongmok Jo, Min-Sang Kim, Yeongmi Park, Uijeong Han, Jae-Hoon Kwon, Tae-Hawn Lee Si-Kyung Cho*
46	Critical Factors Influencing Biohythane Production: A Way Forward Towards Commercialization	Min-Sang Kim, Hongmok Jo, Yeongmi Park, Uijeong Han, Jae-Hoon Kwon, Tae-Hawn Lee Si-Kyung Cho*
47	Influence of Physical and Chemical Parameters on Methane Yield during Mesophilic and Thermophilic Anaerobic Digestion of Maize Silage	Patrycja POCHWATKA, Alina KOWALCZYK-JUŚKO, Andrzej MAZUR, Damian JANCZAK, Wiktor BOJARSKI, Mateusz NOWAK, Jacek DACH
48	Quantifying the Invisible Threat: Carbon Emissions from India's Eutrophic Lake	Amit Singh, Sanjeevkumar Prajpati
49	Algae-Integrated Floating Constructed Wetland for Nutrient Removal and Recovery to Promote Sustainable Development	Akanksha Chauhan, Sanjeevkumar Prajpati
50	Microalgal-Bacterial Symbiosis for Economic Biomass Harvesting	Harshit Tiwari, Sanjeevkumar Prajpati
51	Integrated Polyhydroxybutyrate and Biogas Generation through Sonication Mediated Thermo Fenton Disintegration on Paper Mill Sludge	Preethi, Rajesh Banu J, Gopalakrishnan kumar, Gunasekaran M
52	Effect of Hydrogen Induction on Performance and Emission Characteristics of Waste Plastic Oil Fueled Compression Ignition Engine Using Dual Fuel Mode of Operation	S. Kiran, Edwin Geo Varuvel and M. Leenus Jesu Martin
53	Analysing the Lean Burn Cobustion Stability by Hydorgen Induction in Gasoline Direct Injection Engine	Jerome Stanley M, Leenus Jesu Martin M, Edwin Geo V
54	Catalytic conversion of plastic pyrolysis byproducts to valuable materials	Jamin Hong, Hoesuk Yim, Young-Kwon Park

55	Low-temperature and CO2-assisted gasification of petroleum sludge for hydrogen generation using activated carbon catalysts	Jimin Sim, Behzad Valizadeh, Young-Kwon Park
56	Integrated polyhydroxybutyrate and biogas generation through sonication mediated thermo fenton disintegration on paper mill sludge	Preethi M, Gunasekaran M, Gopalakrishnan KUMAR, Rajesh banu J
	Response Surface Methodology Approach to Investigate the Effect of Hydrogen Enrichment on Thermodynamic, Performance, Combustion and Exhaust Emission Characteristics of an CI engine Fuelled with Jatropha and Camphor oil Blend with DEE Additive	Manikandaraja Gurusamy , Malarmannan Subramaniyan, Balaji Subramaniyan
57	A Novel Attempt to Estimate the HHO gas Production Through Machine Learning Algorithms	Naveen Venkatesh S, Sugumaran V, Manikandaraja Gurusamy, Vinoth Kumar Ponnusamy , Balaji subramaniyan
58	Highly efficient photocatalytic layer-structured BiOCl/BiOBr/Bi 2 O 3 nanocomposite for the degradation of organic contaminants under visible light exposure	Van Quang Nguyen , Manjiri A. Mahadadalkar, Jae-Jin Shim, Sungsu Kim, SW Chang , D.Duc Nguyen
59	Effect of benzenecarbonyl chloride on natural fibers characteristics of Butea parviflora	Grzegorz Piechota, Ju-Hyeong Kim, Dipak A. Jadhav, Kyu-Jung Chae, Gopalakrishnan KUMAR
60	Recent advances and Bio–conversion of Lignocellulosic biomass to Bio–butanol: A review	Bartłomiej Igliński, Mohammed Hussein, Dipak A. Jadhav, Giang T. H. Le, Ju-Hyeong Kim Kyu-Jung Chae, Gopalakrishnan KUMAR
61	Characterization studies on New Natural Cellulosic Fiber of Heteropogon contortus Plant	Sutha Shobana, Mohammed Hussein, Jin-Hyeok Jang, Sung-Gwan Park, Kyu-Jung Chae, Chyi-How Lay, Gopalakrishnan KUMAR
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