

SCIENTIFIC

PROGRAM

Monday, 4th July 2022

0830-0900h	Opening Session Welcome- Prof Sang Jun Sim, Korea University About the conference- Dr Siming You, Glasgow University Address by Prof Kwang Young Lee, Vice-President, KU Address by Prof Ashok Pandey, Conference Chair	
0900-0945h	Session I: Keynote talk Chair: Ashok Pandey	
	KL 1- Jin-Suk Lee South Korea	Recent developments and key Barriers on advanced biofuels
0945-1000h	TEA/COFFEE	
1000-1100h	Session II: Plenary talks Chair: Sang Jun Sim	
1000-1030h	PL 1- Sang-Hyoun Kim South Korea	Current status and perspectives of continuous biohydrogen production from organic waste using dark fermentation
1030-1100h	PL 2- Q Zhang China	Research process and sustainable development of biohydrogen production by photo-fermentation from agricultural wastes
1100-1200h	Session III: Invited talks Chair: Samir Kumar Khanal	
1100-1120h	IL 1- S Venkata Mohan India	Enabling Low Carbon Hydrogen Production Through a Biorefinery Approach
1120-1140h	IL 11- You-Kwan Oh South Korea	Energy-saving cell-wall disruption and lipid/astaxanthin extraction for microalgal biorefinery: nanomaterial and microfluidic approaches
1140-1200h	IL 3- Gopalkrishnan Kumar, Norway	Green hydrogen production from biomass/waste: waste management and economical perspective via circular economy

1200-1300h	LUNCH	
1300-1500h	Session IV: Plenary & Contributory talks Chair: Sang Hyoun Kim	
1300-1330h	PL 3- Roger Ruan USA	Catalytic microwave-assisted pyrolysis/gasification of biomass and waste plastics for hydrogen production
1330-1400h	PL 4- Samir Kumar Khanal, USA	Machine Learning Application in Anaerobic Digestion Process: Some Perspectives
1400-1415h	SO 1- Si Jae Park South Korea	Production of bio-based nylon monomers from agro-industrial wastes by metabolically engineered microorganisms
1415-1430h	SO 2- Jirat Mankasem UK	Carbon dioxide steam gasification with wood pellets using two-stage gasifier to produce hydrogen-rich syngas: A Study of Operational Factors
1430-1445h	SO 3- Weitao Wang UK	Hydrogen production using a tandem biomass pyrolysis and plasma reforming process
1445-1500h	SO 4- Yiwen Liu China	Periodate-based pretreatment enhances short chain fatty acids (SCFAs) from waste activated sludge: Performance and mechanism
1500-1545h	TEA/COFFEE / POSTER SESSION	
1545-1805	Session V: Invited talks Chair: Byoung-In Sang	
1545-1605h	IL 4- Kaustubha Mohanty, India	Microalgal Biorefinery: A Sustainable Way to Produce Bioenergy while Integrating Wastewater Treatment
1605-1625h	IL 5- Ranjna Sirohi South Korea	Carbon dioxide mitigation and value addition through microalgae for environmental sustainability
1625-1645h	IL 6- Young Joon Sung South Korea	Promotion of biological mitigation of flue gas CO₂ by high-throughput screening of microalgae random mutant libraries
1645-1815h	Session VI: PANEL DISCUSSION Theme- Waste to Hydrogen Utilization and Betterment	

	<p>Moderators:</p> <ul style="list-style-type: none"> • Prof Ashok Pandey, Centre for Innovation and Translational Research, India • Mrs Jade Lui, University of Glasgow, UK <p>Panelists:</p> <ul style="list-style-type: none"> • Dr Siming You, University of Glasgow, UK • Dr Hana Kim, Korea Advanced Institute of Science and Technology, Republic of Korea • Prof Quanguo Zhang, (Henan Agricultural University, China • Prof Roger Ruan, University of Minnesota, USA • Prof Samir Kumar Khanal, University of Hawaii-Manoa, USA • Prof Sang-Hyoun Kim, Yonsei University, Republic of Korea • Prof Sang Jung Sim, Korea University, Republic of Korea • Dr Sam Cooper, University of Bath, UK • Dr P Binod, CSIR-National Institute for Interdisciplinary Science and Technology, India
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Tuesday, 5th July 2022

0830-1030h	Session VI: Plenary talks Chair: Kaustubha Mohanty	
0830-0900h	PL 5- Mohammad Taherzadeh, Sweden	Boosting biogas plants to biorefineries
0900-0930h	PL 6- Siming You UK	Sustainable Waste Management: Insights from case studies
0930-1000h	PL 7- Sang Jun Sim South Korea	A novel approach to develop economical bioprocess that maximizes waste CO₂ removal rate via microalgae cultivation
1000-1030h	PL 8- Sunghoon Park South Korea	Iterative metabolic engineering of <i>Escherichia coli</i> W3110 for efficient production of homoserine from glucose
1030-1045h	TEA/COFFEE	
1045-1300h	Session VII: Invited and contributor talks Chair: S Venkata Mohan	
1045-1105h	IL 7- Byoung-In Sang South Korea	Syncretic bio-jet fuel and bio-naphtha production with bio- and electrochemical process

1105-1125h	IL 8- Changsoo Lee South Korea	Anaerobic sulfide oxidation to elemental sulfur electrically coupled to CO₂-reducing methanogenesis
1125-1145h	IL 9- Yoon-E Choi South Korea	Potential energy recovery using cyanobacterial biomass either from harmful algal bloom or newly isolated cyanobacterial strain in Korea
1145-1205h	IL 10- Eilhann Kwon South Korea	Strategic conversion of biofuel through the thermochemical process of microalgal biomass using CO₂ as reaction medium
1205-1225h	IL 11- Young-Kwon Park, South Korea	Enhanced hydrogen production from catalytic biowaste gasification over Ni based bimetallic catalysts
1225-1245h	IL 12- Hana Kim South Korea	How should bioenergy policies accelerate 2050 Carbon Neutrality? -The case of South Korea
1245-1300h	SO 5- Jade Lui UK	Techno-economic feasibility of distributed waste- to-hydrogen systems to support green transport in Glasgow
1300-1315h	CLOSING SESSION	
1315-1400h	LUNCH	

Monday, 4th July 2022

Poster Session (1500-1545h)		
Poster No.	Title	Presenter's name
PP-01	Effects of particle size of zero-valent iron on photo fermentative biohydrogen production from high loading corn stover	Shengnan Zhu
PP-02	Iron-based additive strategies for enhanced anaerobic digestion for bioenergy	Jingxin Zhang
PP-03	Valorization of glycerol for Poly(3-hydroxybutyrate) production by isolated <i>Lysinibacillus</i> sp. RGS: Exploring the effects of supplementation of VFAs and coffee waste	Ganesh Dattatray Saratale

PP-04	Role of machine learning in the acidogenesis to forecast the reactor performance for economical feasibility	Ashutosh Kumar Pandey
PP-05	Generation of glycerol from food waste with two-step oriented differentiation in enzymolysis and microaerobic fermentation : Efficiency and mechanism	Sinuo Li
PP-06	Photobiological optimization, aeration, agitation and two-phase culture system of <i>Chlamydomonas hedleyi</i> for the improvement of biomass and lipids	Clovis Awah Che
PP-07	Sodium percarbonate (SPC)-based technique effectively promote the bio-transformation of sewage sludge to short-chain carboxylic acid (SCCA)	Yufen Wang
PP-08	Development of a cost-effective industrial medium by replacing yeast extract with sludge filtrate in syngas fermentation	Mungyu L
PP-09	Selective production of medium chain carboxylic acids by <i>Megasphaera hexanoica</i> from lactate as a major electron donor along with metabolomic analysis	Seongcheol Kang
PP-10	Caproic acid production by <i>Caproiciproducens galacitolivorans</i> from the co-utilization of glucose and glycerol	Hyeon Jeong Lee
PP-11	Production of fatty acid methyl esters and fatty acid amides from <i>Nannochloropsis oceanica</i> using heterogeneous catalysts	Ji-Yeon Park
PP-12	Catalytic dehydration of fatty alcohol derived from microalgae on $W/\gamma-Al_2O_3$ catalyst for selective production of bio-linear alpha olefin	Il-Ho Choi
PP-13	Efficient lipid production from agricultural waste by HMF/furfural-tolerant oleaginous yeast generated by adaptive laboratory evolution	Kyoungseon Min
PP-14	Extractive fermentation of <i>Clostridium carboxidivorans</i> P7 for enhancing hexanol production from syngas	Hyun Ju Oh
PP-15	Production of bioplastic from black liquor	Raj Morya
PP-16	Collision-mediated Cell Disruption of <i>Haematococcus pluvialis</i> for algal biorefinery	You-Kwan Oh
PP-17	Sustainable production of shinorine from lignocellulosic biomass by metabolically engineered <i>Saccharomyces cerevisiae</i>	So-Rim Kim
PP-18	One-pot production of 3-hydroxypropanal from methanol and ethanol using deoxyribose-5-phosphate aldolase from <i>Thermotoga maritima</i> and methanol	Min-Ju Seo

	dehydrogenase from <i>Lysinibacillus xylanilyticus</i>	
PP-19	Discovery of polystyrene eating bacteria from the soil and its application for the polystyrene biodegradation	Min-Ju Seo
PP-20	Direct interspecies electron transfer (DIET) mechanism via conductive materials in the laboratory-scale continuous anaerobic bioreactor	Hyun-Jin Kang
PP-21	Production of gamma-aminobutyrate (GABA) from biomass-derived sugars in recombinant <i>Corynebacterium glutamicum</i> strains	Jina Son
PP-22	Production of 5-hydroxyvaleric acid from glucose using recombinant <i>Corynebacterium glutamicum</i>	Yu Jung Sohn
PP-23	Development of Metabolically Engineered Microorganisms for the Biosynthesis of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from glucose	Hye Min Song
PP-24	Metabolic engineering of yeast for fermentation of L-rhamnose	Deokyeol Jeong
PP-25	Microalgae as a Novel Bioprocessing Platform for Biopharmaceutical Production	Ji Soo Kim
PP-26	Dynamic analysis of gas-liquid mass transfer in anaerobic fermenter for biological methanation by difference baffle types	Young Wook Go
PP-27	Improving Biodegradation of High Crystallinity Polylactic Acid by Thermophilic Anaerobic Digestion	Gyeongseok Yoon
PP-28	Microbial Production of Gallic Acid from Lignin-derived Monomers in a Metabolically Engineered <i>Pseudomonas putida</i>	Siseon Lee
PP-29	A repeated sequential auto-and heterotrophy in <i>Chlorella protothecoides</i> for enhancing biomass production	Jaemin Joun
PP-30	Enzymatic Quorum Quenching for Enhanced Production of Microalgae Biomass in Membrane-based Floating Photobioreactor	Youngho Wee