The **14th Asian Biohydrogen, Biorefinery and Bioprocess Symposium (ABBS 2019)**

"Innovation and technology towards a sustainable Bioeconomy".

ABBS2019 PROGRAM

Venue: Ta Quang Buu Library, Hanoi University of Science and Technology
Hanoi, November 13rd-15th 2019

13rd November 2019 **16:00-17:30**	**STEERING COMMITTEE MEETING (invited only)** **Room 201A, C4 Building**
14th November 2019	**CONFERENCE DAY**
	RECEPTION AND OPENING, Conference Hall, 10th Floor
7:30-8:30	Reception
8:30-9:00	Opening remark and welcome speech
	Prof. Dinh Van Phong, Vice president, HUST
	Prof. Shu-Yii WU, President IAHE Biohydrogen Division; *Chimica Verde Bionet* Asia Pacific Association
	Group Photo
9:00-12:00	**PLENARY SESSION, Conference Hall, 10th Floor**
9:00-9:30	Green Synergy Solution for Future Prof. Shu-Yii WU, *President IAHE Biohydrogen Division; Chimica Verde Bionet Asia Pacific Association*
9:30-10:00	Biorefinery: the Thai experience *Prof. Klanarong Sriroth, Director of Mitr Phol Group, Thailand*
10:00-10:30	**COFFEE BREAK**
10:30-11:00	Application of Deep Learning for Bio-Energy (tbc) *Professor Jun Miyake, Osaka University, Japan*
11:00-11:30	A Path from Zero to Hero: Biohythane Production Technology and its Applications in Self-Sustained Community *Assoc. Prof. Andrew, Chen-Yeon CHU, Fengchia University, Taiwan*
11:30-12:00	Challenges in downstream processing of bio-products; energetic and economic aspects *Prof. Wolfgang M. Samhaber, Johannes Kepler University Linz, Austria*
12:00-12:30	Energy transition and development prospects for renewable energy in Vietnam *Assoc. Prof. Pham Hoang Luong, HUST,* *Vice Chairman, Key State Science and Technology Program on Energy of Vietnam (KC.05/16-20)*
12:30-13:30	**LUNCH, Ta Quang Buu Library, 10th Floor**

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13:30-17:15	**SCIENTIFIC SESSIONS** **Room 923: Session 01: Biomass resources, Biohydrogen, Biogas and biofuel** **Room 901: Session 02: Fermentation and BioProcess** **Room 902: Session 03: Biomass process and refinery for energy and bioproducts**
15:00-15:30	**COFFEE BREAK AND POSTER SESSION**
13:30-17:30	**WORKSHOP: ADDING VALUES TO SUGAR INDUSTRY IN VIETNAM** **Room 702 (invited only)**
18:00-20:30	**GALA DINER**
15th November 2019	**SCIENTIFIC SESSION**
8:45-11:30	**Room 923: Session 01: Biomass resources, Biohydrogen, Biogas and biofuel (cont.)** **Room 902: Session 04: Bioenergy sustainability and bioeconomy-LCA**
10:00-10:30	**COFFEE BREAK AND POSTER SESSION**
11:45-13:00	**LUNCH, 10th Floor**
13:00-18:00	**TECHNICAL TOUR: Habeco Brewery (registered only)**
18:00	**Return to the Hotel**

SCIENTIFIC SESSION

DAY 1 : 14th November 2019

13:30-17:15	**Session 01: Biomass resources, Biohydrogen, Biogas and biofuel** **Room 923** **Chair: Prof. Alissara Reungsang** **Assoc. Prof. Nguyen Lan Huong**	**Session 02: Fermentation and BioProcess** **Room 901** **Chair: Prof. Qiang Liao** **Dr. Nguyen Tien Thanh**	**Session 03: Biomass process and refinery for energy and bioproducts** **Room 902** **Chair: Dr. Peer Mohamed** **Assoc. Prof. Tran Lien Ha**
13:30-13:45	**BE-01:** Influence of silicone immobilized cell on biohydrogen production in *Rhodobacter sphaeroides*	**BP-02:** The Effects of Alcohols on Pore Diameter of Biocellulose during the Membrane Formed Process	**BR-04:** Direct bio-butanol production from cellulosic material by the co-cultivation of white rot fungus and bacterium
13:45-14:00	**BE-16:** Smart usage of salt: reduction of methane emission during the storage and enhancement of biogas production during anaerobic digestion of pig slurry	**BP-03:** Enhancing microalgae harvesting of cationic starch flocculation by electrolysis flotation	**BR-05:** Bioaugmentation application in cattle slaughterhouse wastewater treatment for biomass production
14:00-14:15	**BE-17:** Substrates Substitutions of Photosynthetic and Other Bacteria for Hydrogen Economic Purposes Using Batch Culture System with Photo- or Dark-Fermentation Processes	**BP-04:** Iron (II) phthalocyanine supported on heavy oil soot as the catalysts for microbial fuel cells	**BR-06:** Ethanol production from cassava pulp by pre-hydrolysis and simultaneous saccharification and fermentation using immobilized enzymes and cells
14:15-14:30	**BE-04:** Efficiency and Economic Benefit Evaluation of Dark- and Photo Fermentative Biohydrogen Production by Fancy Production Efficiency Methods and Computable General Equilibrium Model Integrated Methodology in Major Circular Economies	**BP-05:** Effect of anode proton transport on cyclic voltammetry test in microbial fuel cell	**BR-07:** Simultaneous production of hydrogen and ethanol from co-digestion of glycerol waste with algal biomass
14:30-14:45	**BE-05:** Furfural tolerant biohydrogen producing bacteria: Isolation and characterization	**BP-14:** Submerged fermentation of *Trametes versicolor* (YunZhi mushroom) polysaccharopeptide	**BR-12:** The electro coagulation system with modified electrodes for the removal of cadmium and chromium III in wastewater
14:45-15:00	**Q&A**	**Q&A**	**Q&A**
15:00-15:30	**COFFEE BREAK AND POSTER SESSION**		

	Chair: Dr Ao Xia Dr. **Dr. Dwi Susilaningsih**	**Chair: Prof. Am JANG** **Assoc. Prof. Le Thanh Ha**	**Chair: Assoc. Prof. Apilak Salakkam** **Dr. Pham Tuan Anh**
15:30-15:45	**BE-07:** Stimulating direct interspecies electron transfer via foamed nickel supplement to enhance anaerobic digestion	**BP-06:** In situ visualization of biofilm formation in a microchannel for a microfluidic microbial fuel cell anode	**BR-03:** Enzymatic destructuration of different types of lignocellulose matrix: rheolometry, granulometry and hydrolysis kinetic
15:45-16:00	**BE-08:** Continuous anaerobic co-digestion between alcoholic fermentation wastewater and glycerol waste to produce gaseous biofuel	**BP-07:** Proton Exchange Membrane Water Electrolysis System–Effect of Pretreatment Before Electro-Coated for Ti Anode Support	**BR-08:** Isolation of thermo-tolerant fresh water green microalgae as potential feedstocks for biofuel production in the tropical and subtropical area
16:00-16:15	**BE-10:** Improvement of Biogas Production by Sulfate removal in Skim Latex Serum (SLS) Using Rubber Wood Ash	**BP-09:** Anti-oxidative and anti-tyrosinase activities of collagen peptides derived from vietnamese commercial catfish (pangasius hypophthalmus) gelatin	**BR-09:** Dual stage peroxide oxidation process in cellulose extraction from oil palm empty fruit bunch: Effect of cellulose fiber composition and structure on thermal properties analysis
16:15:16:30	**BE-11:** Enhancing bio-hydrogen and methane production by co-digestion of *Chlorella* sp. with cassava pulp	**BP-11:** Characterization and Identification of Lipid Producing Microalgae Isolated from Belitung Island, Indonesia	**BR-10:** Cellulose regeneration using ionic liquid from direct dissolution of lignocellulosic biomass
16:30-16:45	**BE-12:** Multi-enzyme pretreatment of *Chlorella* sp. biomass for biohydrogen production	**BP-12:** Mining enzymes from *Geobacillus* sp. pk12 for bioethanol synthesis under consolidated bioprocessing.	**BR-11:** Production and application of the magnetic cellulose from pineapple peel
16:45-17:00	**BE-13:** Co-digestion of biogas effluent and filter cake for methane production: optimization of substrate proportions.	**BP-13:** Optimization of cultivation medium for CMCase production from *Bacillus subtilis* G4	**BR-15**: Study on organic calcium production from crustaceans harvested in Quang Ninh Province by using organic acids
17:00-17:15	**BE-15:** Life cycle assessment of two-stage biohydrogen and biomethane production from palm oil mill effluent	**SB-08:** Diversity of oleaginous yeast newly isolated and their intracellular lipid accumulation ability	**BP-08:** Effect of torrefaction, hydrothermal carbonization and degradative solvent extraction on moisture adsorption and spontaneous combustion characteristics of biomass
17:15-17:30	**Q&A**	**Q&A**	**Q&A**

DAY 2: 15th November 2019

8:45-11:30	**Session 01** **Biomass resources, Biohydrogen, Biogas and biofuel** **Room 702** **Chair: Prof. Alex Chang** **Prof. Seoktae Kang**	**Session 04** **Bioenergy sustainability and bioeconomy-LCA** **Room 902** **Chair: Prof. Chen-Yeon Chu** **Assoc. Prof. Nguyen Thi Anh Tuyet**
8:45-9:00	**BE-14:** Pre-treatment of palm oil mill effluent for biohydrogen production and bacterial community analysis via next gene sequencing	**SB-01:** Evaluate energy efficiency in road transportation activities of Vietnam
9:00-9:15	**BR-13:** Semi–continuous from solid-state anaerobic co-digestion empty fruit bunches with palm oil mill effluent: A case study on the effect of hydraulic retention time	**SB-02:** Economic feasibility of biomass power plant based on short rotation acacia on post mining land in Halong city
9:15-9:30	**SP-01:** Enhanced acidogenesis by using Multi-walled carbon nanotubes (MWNT) in anaerobic digester	**SB-04:** Life cycle evaluation of GHG bio-energy
9:30-9:45	**SB-03:** Enhanced methane conversion efficiency using conductive permeable electrode in microbial electrosynthesis system	**SB-06:** The Environmental Impact of Symbiosis Energy System to the Community
9:45-10:00	**Q&A**	**Q&A**
10:00-10:30	**COFFEE BREAK AND POSTER SESSION**	
	Chair: Prof. Jamaliah Md Jahim **Dr. Prawit KONGJAN**	**Chair: Prof. Dong-Hoon Kim** **Assoc. Prof. Van Dinh Son Tho**
10:30-10:45	**BE-03**: Multi-walled carbon nanotubes (MWNTs) enhanced the conversion of organic sulfur compounds to gaseous sulfur	**SB-07:** The utilization of coconut husk for synthesis gas production and industrial wastewater treatment
10:45-11:00	**BE-18:** Hydrogen Sulfide Removal from Biogas by using Recycled Water Absorption for Concentration Latex Factory	**SP-05:** A self-assembly 3D macroporous (GO)/Fe3O4 biocathode enhance the performance of CO_2 reduction to CH_4
11:00-11:15	**BE-19:** Biomass and Polyurethane Co-Gasification for Syn-gas Production	**BP-10**: Enhanced Anaerobic Digestion of Phenol via Electrical Energy Input
11:15-11:30	**BE-21:** Biogas upgrading from hydrogen gas in dark fermentation by two-stage anaerobic digestion process	**BE-09:** Patent analysis of technology development in water electrolysis by renewable energy based on TRIZ method
11:30-11:45	**Q&A**	**Q&A**

POSTER PRESENTATION

DAY 1 : 14th November 2019, 15:00-15:30
DAY 2: 15th November 2019, 10:00-10:30

ID	Title
P-01	Effect of Ethanol on Biogas Production from Beverage Wastewater
P-02	Effect of Acidification Time on Anaerobic Methane Production from Chicken Manure
P-03	Integration of CO2 electrocatalysis for efficient syngas production in biological conversion to ethanol
P-04	Cultivation and use of *Chlorella* sp. biomass as feedstock for hydrogen and methane production
P-05	Screening of oleaginous yeast from Vietnamese environment
P-06	Color Control from Soybean Fermentation Wastewater by Carbon-based Adsorbents
P-07	One-step synthesis of fluorescent carbon dots from lemon juice for adsorption of methylene blue
P-08	Research, designing and manufacturing the equipment of pyrolysis for producing charcoal with the raw material from waste wood and renewable – planted wood.
P-09	Characterization of complete genome sequence and rubber degradation genes of *Actinoplanes* sp. strain OR16
P-10	Identification of microbial communities associated with coal in the red river basin, Vietnam
P-11	Influence of electrostatic field on the bioelectrochemical conversion of coal to methane
P-12	Ab initio simulation of hcl leaching during catalytic hydrolysis over cellulase-mimetic solid acid catalyst using density functional theory
P-13	Effect of pre-treatment methods on solubilization and anaerobic biodegradability of co-substrate of piggery wastewater and kitchen waste
P-14	Effect of organic loading rate on the hydrogen production in microbial electrolysis cells
P-15	Performance of UASB reactor for natural rubber processing wastewater treatment using cultivated polyvinyl alcohol gel beads
P-16	Two-stage biogas production from swine manure in Commercial field
P-17	The effect of reactor volume ratio of the dark and photo-fermentation on the bio-hydrogen production

P-18 Producing Bioethanol and organic manure from cashew apple

P-21 Beta-Carotene fermentation using *Rhodotorula* sp. on food industrial byproduct

P-22 Thermophilic anaerobic co-digestion of *Chlorella* sp. with empty fruit bunch for biohythane production

P-23 Inoculum acclimation improves food waste utilization for high methane production

P-24 Study on cellulase biosynthesis by thermophilic streptomyces *Thermoviolaceus* CX9 and the enzyme properties

P-25 Enhanced anaerobic digestion of long chain fatty acid by adding magnetite and carbon nanotube materials

P-26 Enhancement of lignocellulose enzymatic hydrolysis using a novel bionic flexible reactor

P-27 Polyhydroxybutyrate (PHB) production by co-culture of *Acinetobactor junii* BP25 and *Aeromonas hydrophila* using wastewater derived from Bio-hydrogen production

P-28 Biogas upgrading with trickling pall ring filter

P-29 Effects of auxiliary bio-electrochemical reactor on methane production and electrochemical impact in anaerobic digestion reactor

P-30 Bio-electrochemical activation of methanogenesis through SMA test and ANOVA

P-31 Immobilization of *Chlorella sorokiniana* in polyvinyl alcohol for nutrient removal and biomass collection

P-32 Application of forward osmosis process to concentrate volatile fatty acids from anaerobic digestion

P-34 Pretreated micoalgal waste as the source for bio-hydrogen production

P-35 Two-stage thermophilic biohythane production from palm oil mill effluent by two-ring reactor

P-36 Enhancement of hydrogen production through a mixed culture from anaerobic bacteria