Main Venue

International Conference on Bioprocess and Sustainability 2024 (ICBS 2024) August 9 - 11, 2024 Hengshan Garden Hotel, 516 Hengshan Road, Xuhui District, Shanghai, China	
Conference Program	
August 9th, 2024 (Fri.)	
Time (BJT)	Program
9:00 - 18:00	Onsite Registration Hengshan Garden Hotel, 516 Hengshan Road, Xuhui District, Shanghai, China
August 10th, 2024 (Sat.)	
Time (BJT)	Program
08:00 - 08:30	Onsite Registration Hengshan Garden Hotel, 516 Hengshan Road, Xuhui District, Shanghai, China
08:30 - 09:00	Opening Ceremony Room TBD Mr. Changming Jiang / Dr. Weiqing Lin (SAES, China) Dr. Zhenya Zhang (ISBS)
Keynote Speech Chair: Xiaoyong Qian (SAES, China)	
09:00 - 09:30	Nanaerobic digestion - a new opportunity in anaerobic digestion of high solids substrates Dr. Samir Kumar Khanal (University of Hawaii-Manoa)
09:30 - 10:00	Poultryponics: treating poultry slaughterhouse wastewater for the cultivation of hydroponic lettuce Dr. Brendan Higgins (Auburn University)
10:00 - 10:30	Inducing natural flocculation and photogranulation of wastewater Dr. Chul Park (University of Massachusetts Amherst)
10:30 - 11:00	Utilization of naturally plant species at mine sites; clarification of metal tolerance in plants via the symbiosis with root endophytes Dr. Keiko Yamaji (University of Tsukuba)
11:00 - 11:30	Mainstream anammox: Promise and challenges for sustainable nitrogen removal in saline wastewater treatment Dr. Xiaoyan Li (Tsinghua University)
11:30 - 12:00	Coffee waste to biofuels: a comparative techno-economic evaluation for hydrogen and methane production Dr. Gopalakrishnan Kumar (University of Stavanger)

12:00 - 14:00	Lunch Break
Keynote Speech Chair: Zhongfang Lei (Universtiy of Tsukuba, Japan)	
14:00 - 14:30	Valorization of biomass waste into value-added products for circular bioeconomy Caixia Ellen Wan (University of Missouri)
14:30 - 15:00	A novel biochar-augmented enzymatic process for conversion of food waste to biofertilizers: Planting trial with leafy vegetable Dr. Yu Liu & Dr. Xiaoyuan Zhang (Nankai University)
15:00 - 15:30	Green bio-hydrogen production from organic waste and renewable biomass ensuring low carbon emissions Dr. Sang-Hyoun Kim (Yonsei University)
15:30 - 16:00	Formation of Dense Granular Aggregate Dr. Yasuhisa Adachi (University of Tsukuba)
16:00 - 16:15	Short Break
Keynote Speech Chair: Hongtao Wang (Tongji University, China)	
16:15 - 16:45	Process analysis and environmental impact assessment for resource and energy production using microalgae Dr. Ryozo Noguchi (Kyoto University)
16:45 - 17:15	Roadmap for mitigating GHG emission in the MSW sector Dr. Fan Lv (Tongji University)
17:15 - 17:45	Boosting carbon utilization efficiency during anaerobic digestion of biowaste Dr. Suyun Xu (Shanghai University of Science and Technology)
August 11st, 2024 (Sun.)	
08:15 - 08:30	Onsite Registration Hengshan Garden Hotel, 516 Hengshan Road, Xuhui District, Shanghai, China
Keynote Speech Chair: Jie Li (Shanghai University, China)	
08:30 - 09:00	Enhanced nitrogen removal by dirammox-dominated membrane bioreactor with zeolite-fixed carrier Dr. Yuan Pan & Tong Gao (University of Science and Technology of China)
09:00 - 09:30	Life-cycle environmental and economic sustainability of agricultural waste valorization: Exemplified by rice straw management practices Dr. Shu-Yuan Pan (National Taiwan University)
09:30 - 10:00	The Regulation of electronic structure of biochar by heteroatom nitrogen doping process Dr. Shengjiong Yang (Xi'an University of Architecture and Technology)
10:00 - 10:30	Controllable and biocompatible 3D bioprinting technology for microorganisms: Fundamental, environmental applications and challenges Dr. Yingxin Zhao (Tianjin University)
Oral Presentation Chair: Shuhong Li (Tianjing University of Science and Technology, China)	

10:30 - 10:45	Microbial transformation, molecular characteristics, and network analysis of dissolved organic nitrogen in a single partial nitrification/anammox bioreactor Dr. Dong Wei (University of Jinan)
10:45 - 11:00	Adsorption-electrochemical mediated precipitation for phosphorus recovery from sludge filter wastewater with a lanthanum-modified cellulose sponge filter Dr. Feng Xiao (North China Electric Power University)
11:00 - 11:15	Physicochemical and leachate properties of polylactic acid in anaerobic digestion enhanced by hydrothermal pretreatment Dr. Xuezhi WANG (Anhui Agricultural University)
11:15 - 11:30	Nutrient and heavy metal removal capabilities of bacterial strains isolated from the effluents of different sources Dr. Marjangul Nuramkhaan (Mongolian Academy of Sciences)
11:30 - 11:45	Understanding the distinctive stress induced by diverse microplastics on microalgal-bacterial granular systems Dr. Qian Wang (Ocean University of China)
11:45- 12:00	Nanoplastics enhance DNA environmental persistence and boost natural transformation of environmental microbes in aquatic environments Dr. Zhengwen Li (Shanghai Academy of Environmental Sciences)
12:00 - 14:00	Lunch Break
Keynote Speech Chair: Wenli Huang (Nankai University, China)	
14:00 - 14:30	Anaerobic digestion of lactic acid at wastewater treatment plants for enhancing renewable energy utilization Dr. Taira Hidaka (Kyoto University)
14:30 - 15:00	Typical antibiotics removal in constructed wetland and its ecological security assessment treatment of swine wastewater Dr. Chaoxiang Liu (Fuzhou University)
15:00- 15:30	Resource utilization of agricultural wastewater for the production of protein-rich feed Dr. Hui Liu (Shanghai Academy of Environmental Sciences)
15:30 - 15:45	Short Break
Oral Presentation Chair: Yi Zhang (Fudan University, China)	
15:45 - 16:00	Research on the removal of heavy metals from wastewater by re-utilizing eutrophication lake algae sludge produced biochar Dr. Dirui Zhu (Honghe University)
16:00 - 16:15	Performance, stability and microbial response of algal-bacterial granular sludge for the treatment of low carbon source wastewater containing sulfamethoxazole at low temperature Dr. Qingyue Shen (Ocean University of China)
16:15 - 16:30	Effect of coexisting microalgae growth on nitrous oxide emissions from nitrifying algal-bacterial granules Dr. Jixiang Wang (Shanghai Academy of Environmental Sciences)
16:30 - 17:00	**Closing Ceremony**

Small Venue

International Conference on Bioprocess and Sustainability 2024 (ICBS 2024) August 9 - 11, 2024 Hengshan Garden Hotel, 516 Hengshan Road, Xuhui District, Shanghai, China	
Conference Program	
August 10th, 2024 (Sat.)	
Time (BJT)	Program
Oral Presentation Chair: Samir Kumar Khanal & Xiaoyan Li	
14:00 - 14:10	Electrochemical release of Fe to activate peroxyacetic acid to improve waste activated sludge dewatering performance Mr. Junsen Wang (Tongji University)
14:10 - 14:20	Production of caproate from lactate by chain elongation under electro-fermentation: dual role of exogenous ethanol electron donor Mr. Jihua zhao (University of Science and Technology of China)
14:20 - 14:30	Effects of organic loading and salinity on enrichment of salt-tolerant polyhydroxyalkanoate (PHA) producing mixed cultures Mr. Zifan Wang (Harbin Institute of Technology)
14:30 - 14:40	Response of CH_4+CO_2-nanobubble water on the anaerobic digestion of corn straw with varying particle sizes Mr. Zhiqiang Cui (Henan Agricultural University)
14:40 - 15:50	Biochar functionalization with layered double hydroxides composites for sustainable wastewater treatment: Advances of pollutant (nitrogen and phosphorus) removal and prospects Ms. Lin Zhang (Beijing University of Civil Engineering and Architecture)
14:50 - 15:00	Effect of alkaline-thermal pretreatment on biodegradable plastics degradation, microbial communities and antibiotic resistance genes in co-compost system Ms. Wenyue Wang (East China Normal University)
15:00 - 15:10	Removal of heavy metals from municipal wastewater using magnetic carbon quantum dots prepared from long-root Eichhornia crassipes Mr. Yihong Guo (East China University of Science and Technology)
15:10 - 15:20	Peracetic acid (PAA) activation mechanisms of freshwater sludge derived biochar for BPA degradation: A complete radical pathway Ms. Shanshan Liu (Tongji University)
15:20 - 15:30	Direct density measurement of algal-bacterial and bacterial aerobic granular sludge Mr. Medina Somala (University of Tsukuba)

15:30 - 15:40	Response of viable bacteria to antibiotics in aerobic granular sludge: resistance mechanisms and behaviors, bacterial communities, and driving factors Mr. Wenhao Liu (Nankai University)
15:40 - 15:50	Effects of light intensity on nitrogen assimilation and nitrous oxide emissions in algal-bacterial granular sludge systems Mr. Yuqi Liu (South China Institute of Environmental Sciences; Hubei University)
15:50 - 16:00	Enhanced phytoremediation of vanadium-containing wastewater using coffee grounds Mr. Hongliang Zhou (Beijing University of Civil Engineering and Architecture)
16:00 - 16:15	Short Break
Oral Presentation Chair: Shu-Yuan Pan & Chaoxiang Liu	
16:15 - 16:25	Comparative study of nitrous oxide production from bacterial and algal-bacterial aerobic granular sludge systems under different batch operations Mr. Yankai Zhao (University of Tsukuba)
16:25 - 16:35	Policy implementation for disaster resilient: bottom-up perspective of Lao PDR Mr. Douangsavanh Sombath (University of Tsukuba)
16:35 - 16:45	Immobilization of aerobic denitrifying bacteria with extracellular polymers: a method for improving nitrogen removal efficiency in aerobic granular sludge Systems Mr. Peng Xiang (Nankai University)
16:45 - 16:55	Molecular insight into the transformation of dissolved organic matter during dredged sediment conditioning: The impact of polyacrylamides with different charge densities Mr. Chenwei Yuan (Shanghai University)
16:55 - 17:05	Carbon and nitrogen recovery from biogas slurry via hydrothermal treatment and MEC-AD system Ms. Yan Chen (University of Shanghai for Science and Technology)
17:05 - 17:15	Unraveling the controversies: a review of conflicting perspectives on factors influencing sludge dewatering Ms. Fajiao Zou (Shanghai University)
17:15 - 17:25	Development of a sustainable hydroponic system for efficient use of by-products generated from anaerobic digestion Ms. Jing Xu (University of Tsukuba)
August 11st, 2024 (Sun.)	
Oral Presentation Chair: Caixia Ellen Wan & Huang Weiwei	
08:30 - 08:40	Linking land use function and heavy metal pollution analysis: inspirations for rural sustainable development Dr. Qing Xiang (Chengdu University of Technology)

08:40 - 08:50	A review of resource recovery and residual sludge treatment in algal-bacterial granular sludge Ms. Litian Wen (Beijing University of Civil Engineering and Architecture)
08:50 - 09:00	Unrevealing the Potential of Shock Waves Electrodialysis for Affordable Resource Recovery Ms. Yu-I Lin (National Taiwan University)
09:00 - 09:10	Research on the Leaching Law of Aluminum, Ferrum, and Calcium in High-Ferrum and High-Calcium Coal Fly Ash and the Preparation of Coagulants by Leaching Solution Ms. Xueting Bai (Tongji University)
09:10 - 09:20	Air nanobubble simultaneously enhanced hydrolysis and methane yield of sludge temperature phased-anaerobic digestion assisted by microbial electrolysis cell Ms. Ziying Xu (Lanzhou University of Technology)
09:20 - 09:30	LCA as a decision support tool for carbon emissions reduction of the operation of an organic fraction of municipal solid waste composting plant Ms. Peiyu Tian (China Agricultural University)
09:30 - 09:40	Tannic acid (TA) based co-conditioning method for sludge dewaterability improvement: Profiling from rheological characteristics and protein secondary structure Ms. Yu Wang (Shanghai University)
09:40 - 09:50	Impacts of hydraulic retention time on organic removal in treating liquor wastewater via algal-bacterial granular sludge Ms. Ziyang Zhang (Ministry of Ecology and Environment)
09:50 - 10:00	Comparative energy consumption and resource recovery potentials of bacterial and algal-bacterial aerobic granular sludge systems under different batch operations Mr. Santisouk Lathdavong (University of Tsukuba)
Keynote Speech Chair: Sang-Hyoun Kim & Suyun Xu	
10:00 - 10:10	Environmental and economic potentiality of livestock manure as biogas production across bangladesh by spatial analysis Ms. Zinat Mahal (University of Tsukuba)
10:10 - 10:20	Activated carbon and anthraquinone-2,6-disulfonate as electron shuttles to enhance carbon and nitrogen removal from a simultaneous methanogenesis, Feammox and denitrification system Ms. Qing Xia (Hainan University)
10:20 - 10:30	Efficient bamboo biorefining based on liquid hot water pretreatment: co-production of xylo-oligosaccharides and functional lignocellulose film Ms. Miaomiao Ju (Institute of Zhejiang University-Quzhou)
10:30 - 10:40	Efficient dismantling of sugarcane bagasse by formic acid combined with ethylene glycol system for the co-production of xylose, fermentable glucose and β-o-4 linkage-rich lignin Ms. Yanqing Zheng (Guangxi University)

10:40 - 10:50	A Review on strategies for rapid establishment and granulation mechanism of algal-bacterial granular sludge Ms. Siling Ren (Beijing University of Civil Engineering and Architecture)
10:50 - 11:00	Nutrients removal from slaughterhouse wastewater by using bacterial and algal-bacterial aerobic granular sludge in the context of Bangladesh Ms. Zafrin Rahman (University of Tsukuba)
11:00 - 11:10	Analysis of oil droplets in grease trap by using Particle Image Velocimetry Mr. Teng Li (Kyoto University)
11:10 - 11:20	Effect of different Light Intensities on the growth and stress responses of *Pseudanabaena foetida* strains Dr. Ji Zhang (University of Tsukuba)
11:20 - 11:30	Enhanced destruction of sewage sludge by deep eutectic solvent for simultaneous sludge dewatering and resources recovery Dr. Zhiwei Wang (Institute of Process Engineering, Chinese Academy of Sciences)
11:30 - 11:40	Enhancement effect and mechanism of biochar on microbial degradation of oxytetracycline Mr. Shudong Zhang (East China Normal University)