**PROGRAMME AT A GLANCE**

***10th November 2019 (Sunday)***

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| **Arrival** |

***11th November 2019 (Monday)***

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| 14:00-18:00 | **IBI Board Member Meeting** |
| 18:00-20:00 | **Dinner** (IBI Board Member Only) |

***12th November 2019 (Tuesday)***

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| **Technical Tour 1:** Visit to KD Worldwide Biochar Production Plant  **Technical Tour 2:** Visit to biomass energy plant (Korea South East Power Co.)  **Seoul Tour 1:** Visit to Namsan Seoul tower  **Seoul Tour 2:** Visit to Korean Folk village |

***13th November 2019 (Wednesday)***

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| 08:00-09:20 | **Registration (Lobby)** | | |
| 09:20-09:30 | **Opening Ceremony (Auditorium)** | | |
| 09:30-10.00 | **Plenary Lecture (Auditorium)**  Prof. Johannes Lehmann, Cornell University, USA | | |
| 10:00-10:30 | **Plenary Lecture (Auditorium)**  Dr. Ondřej Mašek, UK Biochar Research Center, The University of Edinburgh, UK | | |
| 10:30-11:00 | **Plenary Lecture (Auditorium)**  Mr. Thomas Miles, International Biochar Initiative | | |
| 11:00-11:30 | **Plenary Lecture (Auditorium)**  Prof. Jun Meng, Shenyang Agricultural University, China | | |
| 11:30-12:00 | **Plenary Lecture (Auditorium)**  Prof. Ki-Hyun Kim, Hanyang University, Korea | | |
| 12:00-12:20 | **Plenary Lecture (Auditorium)**  Mr. HyeongSeo (William) Son, KyungDong Worldwide, Korea | | |
| 12:20-12:30 | **Introducing the Biochar Journal (Auditorium)** | | |
| 12:30:13:30 | **Lunch** | | |
| 13:30-15:30 | Session A **(Auditorium)**  (Emerging Applications) | Session B **(Room No. B120)**  (Early Career Researchers’  Presentations) | Poster  Presentations  **(Room No. B116)** |
| 15:30-15:50 | **Coffee Break (Lobby)** | | |
| 15:50-18:00 | Session A **(Auditorium)**  (Emerging Applications) | Session B **(Room No. B120)**  (Early Career Researchers’  Presentations) | Poster  Presentations  **(Room No. B116)** |
| 18:30-21:30 | **Dinner** | | |

***14th November 2019 (Thursday)***

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| 09:30-10:00 | **Prof. Nanthi Bolan (Auditorium)**  The University of Newcastle, Australia | | |
| 10:00-10.30 | **Plenary Lecture (Auditorium)**  Prof. Stephen Joseph, University of NSW, Australia | | |
| 10:30-11:00 | **Plenary Lecture (Auditorium)**  Prof. Xinde Cao, Shanghai Jiao Tong University, China | | |
| 11:00-11:30 | **Plenary Lecture (Auditorium)**  Prof. Scott Chang, University of Alberta, Canada | | |
| 11:30-12:00 | **Plenary Lecture (Auditorium)**  Prof. Hailong Wang, Foshan University, China | | |
| 12:00-13:00 | **Lunch** | | |
| 13:00-15:00 | Session C **(Auditorium)**  (Environmental  Applications) | Session D **(Room No. B120)**  (Agriculture, Climate  Change and Sustainability) | Poster  Presentations  **(Room No. B116)** |
| 15:00-15:20 | **Coffee Break (Lobby)** | | |
| 15:20-18:00 | Session C **(Auditorium)**  (Environmental  Applications) | Session D **(Room No. B120)**  (Agriculture, Climate  Change and Sustainability) | Poster  Presentations  **(Room No. B116)** |
| 18:00-18:30 | **Closing Ceremony (Auditorium)** | | |
| 19:00-22:00 | **Banquet** | | |

**ORAL AND POSTER PRESENTATION SCHEDULE**

***Oral Presentations - 13th November 2019***

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| **Time** | **Event** | **Title** | **Name of the presenter** | **Affiliation** |
| 08:00-09:20 | **Registration** |  |  |  |
| 09:20-09:30 | Opening Ceremony | Welcome Speech | Prof. Yong Sik Ok | Korea University, Seoul, Korea |
| Welcome Speech | Prof. Choonglai Cho | ASEM SMEs Eco-Innovation Center, Seoul, Korea |
| Welcome Speech | Prof. Hailong Wang | Foshan University, Foshan, China |
| 09:30-10.00 | Plenary Lecture | Biochar and crop yields: Elusive promise or are we looking at the problem the wrong way? | Prof. Johannes Lehmann | Cornell University, USA |
| 10:00-10:30 | Plenary Lecture | Biochar’s role in bioeconomy concepts | Dr. Ondřej Mašek | UK Biochar Research Center, The University of Edinburgh, UK |
| 10:30-11:00 | Plenary Lecture | Biochar markets and industry in North America | Mr. Thomas Miles | International Biochar Initiative & United States Biochar Initiative |
| 11:00-11:30 | Plenary Lecture | Progress of biochar industry in China: based on personal experience | Prof. Jun Meng | Biochar Engineering & Technology Research Center, Shenyang Agricultural University, Shenyang, China |
| 11:30-12:00 | Plenary Lecture | Insights into the adsorption performances of biochars against gaseous benzene and methyl ethyl ketone | Prof. Ki-Hyun Kim | Department of Civil and Environmental Engineering, Hanyang University, Korea |
| 12:00-12:20 | Plenary Lecture | Challenges and developments of introducing biochar in Korean market | Mr. HyeongSeo (William) Son | KyungDong Worldwide, 39, Sanmakgongdanbuk 4-gil, Yangsan-si, Gyeongsangnam-do, Republic of Korea, |
| 12:20-12:30 | Introducing the Biochar Journal | | Dr. Wushuang Li | BIOCHAR Editorial Office, Biochar Industry Technology Innovation Strategic Alliance of China, China |
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| 12:30:13:30 | **Lunch** |  |  |  |
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| **Session A** | **Session Chairs:** | Prof. Daniel C.W. Tsang, The Hong Kong Polytechnic University, Hong Kong  Prof. Hankwon Lim, Ulsan National Institute of Science and Technology, Korea | | |
| 13:30-13.50 | Keynote Speech | Ball milling-assisted, solvent-free fabrication of Sn-functionalized biochar for food waste valorization | Prof. Daniel C.W. Tsang | Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, China |
| 13:50-14.10 | Keynote Speech | Techno-economic assessment for hydrogen production by biogas reforming over biochar catalysts | Prof. Hankwon Lim | School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Ulsan, Republic of Korea |
| 14:10-14.30 | Invited Speech | Fate and transport of biochar colloids in environment | Prof. Jianying Shang | College of Resources and Environmental Sciences, China Agricultural University and Key Laboratory of Arable Land Conservation (North China), Ministry of Agriculture, Beijing, China |
| 14:30-14:50 | Invited Speech | N-enriched Biomass pyrolysis for N-contained porous solid carbon materials | Prof. Haiping Yang | State Key Laboratory of Coal Combustion, School of Power and Energy Engineering, Huazhong University of Science and Technology, Wuhan, China |
| 14:50-15:10 | Invited Speech | Biomass pyrolysis and biochar development for use in energy and electrocatalytic applications | Anjali Jayakumar | UK Biochar Research Centre, School of Geosciences, The King's Buildings, University of Edinburgh, UK |
| 15:10-15:30 | Invited Speech | Electrochemical property of biochar and its sensor applications | Yunxian Piao | Key Laboratory of Ground Water Resources and Environment of the Ministry of Education, College of New Energy and Environment, Jilin University, China |
| **15:30-15:50** | **Coffee Break** |  |  |  |
| **Session A** | **Session Chairs:** | Prof. Ki-Hyun Kim, Hanyang University, Korea  Dr. Ondřej Mašek,UK Biochar Research Center, UK | |  |
| 15:50-16:05 | S1-OP1 | Biocarbon industry promotion experience in the development of circular economy business model | Chyi-Rong Chiou | School of Resource Conservation, National Taiwan University, Taipei, Republic of China |
| 16:05-16:20 | S1-OP2 | A first-principles carbon management model: Two case studies | B.E. Layton | BioCarbon Technologies, Montana, USA |
| 16:20-16:45 | S1-OP3 | Future aspects of biochar and its valued application | Gajendra K. Gaurav | Department of College of Environment, Nanjing 210098, China |
| 16:45-17:00 | S1-OP4 | Crab shell-derived biochar for high efficiency isomerization of glucose to fructose under mild condition | Feng Shen | Agro-Environmental Protection Institute, Chinese Academy of Agricultural Sciences, No. 31, Fukang Road, Nankai District, Tianjin, China |
| 17:00-17:15 | S1-OP5 | Hierarchically porous biochar synthesized with CaCO3 template for efficient Hg0 adsorption from flue gas | Xiao Zhang | School of Energy and Environmental Engineering, Tianjin Key Laboratory of Clean Energy and Pollution Control, Hebei University of Technology, Tianjin, China |
| 17:15-17:30 | S1-OP6 | Enhancement of adsorption and energy storage capacity of biomass-based n-doped porous carbon via cyclic carbothermal reduction triggered by nitrogen dopant | Jiewen Luo | Shanghai Key Laboratory of Atmospheric Particle Pollution and Prevention (LAP3), Department of Environmental Science and Engineering, Fudan University, Shanghai 200438, China |
| 17:30-17:45 | S1-OP7 | Biochars and their magnetic derivatives as nanozymes exhibiting peroxidase-like activity | Ivo Safarik | Department of Nanobiotechnology, Biology Centre, ISB, CAS, Na Sadkach 7, Ceske Budejovice, Czech Republic |
| 17:45-18:00 | S1-OP8 | GreenCarbon – the advanced technology for premium biochar production | Faqiang Qian | Polytechnik Biomass Energy, Weissenbach, Austria |
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| **Session B – Early Career Researchers’ Presentations** | **Session Chairs:** | Prof. Nanthi Bolan, The University of Newcastle, Australia  Dr. Xiaoyun Xu, Shanghai Jiao Tong University, China | | |
| 13:30-13:40 | S2-OP1 | Biochar amendment effects on the activities of soil carbon, nitrogen, and phosphorus hydrolytic enzymes: A meta-analysis | Leiyi Zhang | School of Environmental Science and Engineering, Sun Yat-sen University, Guangzhou, China |
| 13:40-13:50 | S2-OP2 | Reduction mechanism of methane production in rice cultivation soil with single and co-application of biochar | Patikorn Sriphirom | The Joint Graduate School of Energy and Environment (JGSEE) and Center of Excellence on Energy Technology and Environment (CEE), King Mongkut’s University of Technology Thonburi (KMUTT), Bangkok, Thailand |
| 13:50-14:00 | S2-OP3 | Development of MgO modified rice straw biochar based beads for phosphorus retention and controlled release | Abhilasha Tripathi | Department of Civil Engineering, Indian Institute of Technology Kanpur, India |
| 14:00-14:10 | S2-OP4 | Spent coffee grounds-based biochar for CO2 capture | Min-Jeong Kim | Department of Chemical and Biological Engineering, Korea University, Seoul, Republic of Korea |
| 14:10-14:20 | S2-OP5 | Synthesis of MgO-biochar composite for immobilization of lead in a soil washing residue | Jingzhuo Zhang | School of Environment, Tsinghua University, Beijing, China |
| 14:20-14:30 | S2-OP6 | Effect of dopamine and humic acid on toxicity of ball-milled biochar and its mechanism | Guo Saisai | College of Environmental Science and Engineering, Nankai University, Tianjin, China; |
| 14:30-14:40 | S2-OP7 | Optimization of rice-husk derived biochar through response surface methodology for removal of fluoride from groundwater | Krishna Yadav | Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad, Jharkhand, India. |
| 14:40-14:50 | S2-OP8 | Magnetic Ball-milled FeS@biochar composite as persulfate activator for degradation of tetracycline | Juan He | College of Environmental Science and Engineering, Nankai University, 38 Tongyan Road, Jinnan District, Tianjin, China |
| 14:50-15:00 | S2-OP9 | Ball milled g-C3N4/ biochar composite for the adsorption and photocatalytic removal of enrofloxacin | Yao Xiao | Key Laboratory of Pollution Processes and Environmental Criteria (Ministry of Education), Tianjin Engineering Research Center of Environmental Diagnosis and Contamination Remediation, College of Environmental Science and Engineering, Nankai University, Tianjin, China |
| 15:00-15:10 | S2-OP10 | Removal of heavy metal cadmium fromaqueous solution by Enteromorpha (EP) biochar obtained by different modification methods | Wang Chuanbin | School of Environmental Science and Engineering, Tianjin University, Tianjin, People’s Republic of China |
| 15:10-15:20 | S2-OP11 | Effects of phosphoric acid modified nZVI@BC composites on greenhouse gas emission and soil microbial community in soil | Zhihui Liu | College of Environmental Science and Engineering, Nankai University, 38 Tongyan Road, Jinnan District, Tianjin, China. |
| 15:20-15:30 | S2-OP12 | Responses of phosphorus characteristics and transformation in brown soils to successive maize stover and biochar application: a five-year field experiment in Northeast China | Dianyun Cao | Agronomy College, Shenyang Agricultural University, Shenyang 110866, China; 2Liaoning Biochar Engineering & Technology Research Center, Shenyang, China |
| **15:30-15:50** | **Coffee Break** |  |  |  |
| **Session B - Early Career Researchers’ Presentations** | **Session Chairs:** | Prof. Brian J. Reid, University of East Anglia, UK  Prof. Toshiki Tsubota, Kyushu Institute of Technology, Japan  Prof. Yang Song, Chinese Academy of Sciences, China | | |
| 15:50-16:00 | S2-OP13 | Long term effect of maize stover and its biochar on soil structure and soil organic carbon fractions in Liaoning province, Northeast China | Qiang Sun | Agronomy College, Shenyang Agriculture University, Shenyang 110866, China |
| 16:00-16:10 | S2-OP14 | The role of biochar particle size in improving soil moisture retention | Ifeoma Edeh | UK Biochar Research Centre, School of Geosciences, University of Edinburgh, UK |
| 16:10-16:20 | S2-OP15 | Application of Mg-enriched biochar originate from Sargassum for nutrient (N, P) recovery via struvite formation | Ye-Eun Lee | Division of Environment and Plant Engineering, Korea institute of Civil Engineering and Building Technology 283, Goyang-daero, Ilsanseo-gu Goyang-si, Gyeonggi-do Republic of Korea |
| 16:20-16:30 | S2-OP16 | Effect of pyrolysis temperature on phosphate adsorption capacity of nano-MgO carbon composites | Danchen Zhu | State Key Laboratory of Coal Combustion, School of Power and Energy Engineering, Huazhong University of Science and Technology, Wuhan, China |
| 16:30-16:40 | S2-OP17 | Production and characterization of biochar from co-pyrolysis of spent growing mediums and plastic grow bags | Dilani C. Rathnayake | Department of Green Chemistry and Technology, Faculty of Bioscience Engineering, Ghent University, Coupure Links, 9000, Ghent, Belgium |
| 16:40-16:50 | S2-OP18 | Plant response to biochar soil enrichment in coffee (*Coffea arabica*) seedlings | Juan Jhong Chung | School for Environment and Sustainability, University of Michigan, Ann Arbor, Michigan, United States of America |
| 16:50-17:00 | S2-OP19 | Water-extractable and total substances in biochar and hydrochar: effects of feedstock, carbonization technique and temperature on their properties | Mingyu Hu | UK Biochar Research Centre, School of Geoscience, University of Edinburgh, Edinburgh, United Kingdom |
| 17:00-17:10 | S2-OP20 | Co-pyrolysis of sewage sludge and agriculture wastes as engineered biochar for phosphate recovery and its potential application | Xiang-Ying Chuang | Institute of Environmental Engineering, National Chiao Tung University, Hsinchu, Taiwan, ROC |
| 17:10-17:20 | S2-OP21 | Highly-Effective Removal of As (V) and As (III) by Co-pyrolysis Biochar derived from Wood Residues and Eggshell | Ho Nam Kim | Department of Civil and Environmental Engineering, Seoul National University, Korea |
| 17:20-17:30 | S2-OP22 | Sequential biochar systems | Christian Wurzer | UK Biochar Research Centre, School of Geoscience, University of Edinburgh, United Kingdom |
| 17:30-17:40 | S2-OP23 | Production of solid hydrochar from waste seaweed by hydrothermal carbonization | Sepideh Soroush | Center for Environmental and Energy Research (CEER) – Engineering of Materials via Catalysis and Characterization, Ghent University Global Campus, 119 Songdomunhwa-Ro, Yeonsu-Gu, Incheon, South Korea |
| 17:40-17:50 | S2-OP24 | Effect of banana leaves biochar on growth, yield and nutrient use efficiency of maize under calcareous soil | Hidayatullah Kakar | Department of Soil Science, Sindh Agriculture University, Tandojam, Sindh, Pakistan |
| 17:50-18:00 | S2-OP25 | Conversion of Sewage Sludge into Biochar for Agri-Enviro Applications | Abhay Raj | Environmental Microbiology Laboratory, Environmental Toxicology Group, CSIR-Indian Institute of Toxicology Research (CSIR-IITR), Vishvigyan Bhavan 31, Mahatma Gandhi Marg, Lucknow-226001, Uttar Pradesh, India. |
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| **18:30-21:30** | **Dinner** |  |  |  |
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***Oral Presentations -* 14th November 2019**

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| **Time** | **Event** | **Title** | **Name of the presenter** | **Affiliation** |
| 9:30-10:00 | Plenary Lecture | Biochar application modulates soil health and fertility | Prof. Nanthi Bolan | The University of Newcastle, Australia |
| 10:00-10.30 | Plenary Lecture | The commercialisation of biochar in Australia and New Zealand; Innovative solutions for improving soil and animal health, crop yields and quality removal of toxic chemicals | Prof. Stephen Joseph | School of Materials Science and Engineering, University of NSW, Kensington, NSW Australia |
| 10:30-11:00 | Plenary Lecture | Indispensable role of biochar-inherent mineral constituents in its environmental applications | Prof. Xinde Cao | School of Environmental Science and Engineering, Shanghai Jiao Tong University, Shanghai, China |
| 11:00-11:30 | Plenary Lecture | Biochar application in forests: Effects on soil properties and processes | Prof. Scott Chang | Department of Renewable Resources, University of Alberta, Edmonton, Alberta, Canada |
| 11:30-12:00 | Plenary Lecture | Using microscopic and spectroscopic techniques to unravel heavy metal adsorption on biochars | Prof. Hailong Wang | Biochar Engineering Technology Research Center of Guangdong Province, School of Environmental and Chemical Engineering, Foshan University, Foshan, PR China |
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| **12:00-13:00** | **Lunch** |  |  |  |
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| **Session C** | **Session Chairs:** | Prof. Amit Bhatnagar, University of Eastern Finland, Finland  Prof. Xinde Cao, Shanghai Jiao Tong University, China | | |
| 13:00-13:20 | Keynote Speech | Synthesis and characterization of modified biochars for the removal of emerging contaminants from water | Prof. Amit Bhatnagar | Department of Environmental and Biological Sciences, University of Eastern Finland, Kuopio, Finland |
| 13:20-13:40 | Keynote Speech | Effect of carbon dioxide and mixed feedstock during pyrolysis on contaminants content and toxicity of sewage sludge-derived biochar | Prof. Patryk Oleszczuk | Maria Curie-Skłodowska University, Poland. |
| 13:40-14:00 | Keynote Speech | Fabrication of iron-carbon composite via co-pyrolysis of waste materials and application into catalytic degradation of organic contaminant | Prof. Hocheol Song | Sejong University, Korea |
| 14:00-14:20 | Keynote Speech | Qualitative assessment of biochar produced from low technology pyrolysis towards non-agricultural applications | Prof. Toshiki Tsubota | Department of Applied Chemistry, Graduate school of Engineering, Kyushu Institute of Technology, 1-1 Sensuicho, Tobata-ku, Kitakyushu, Japan. |
| 14:20-14:40 | Invited Speech | Distinguishing electron donated and mediated mechanisms in the reduction of Cr (VI) by biochar | Dr. Xiaoyun Xu | School of Environmental Science and Engineering, Shanghai Jiao Tong University, Shanghai, China |
| 14:40-15:00 | Invited Speech | The performance of standard biochars for the sustainable recovery of vaporized hydrocarbons during low temperature thermal remediation of diesel contaminated soil | Prof. Yongseok Hong | Department of Environmental Engineering, Korea University Sejong Campus, Sejong City Republic of Korea |
| **15:00-15:20** | **Coffee Break** |  |  |  |
| **Session C** | **Session Chairs:** | Prof. Hailong Wang, Foshan University, China  Prof. Patryk Oleszczuk, Maria Curie-Skłodowska University, Poland | | |
| 15:20-15:40 | Invited Speech | Single-step microwave CO2 pyrolysis production of engineered biochar for treatment of carcinogenic Congo Red Dye | Prof. Su Shiung Lam | Henan Province Engineering Research Center For Biomass Value-Added Products, School Of Forestry, Henan Agricultural University, Zhengzhou, China |
| 15:40-16:00 | Invited Speech | Biochar/iron composites for soil and groundwater remediation: Syntheses, applications, and mechanisms | Prof. Jingchun Tang | College of Environmental Science and Engineering, Nankai University, Tianjin, China |
| 16:00-16:15 | S3-OP1 | New insights into the rhizodegradation of persistent organic pollutants sorbed on biochar in soil | Yang Song | Key Laboratory of Soil Environment and Pollution Remediation, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China |
| 16:15-16:30 | S3-OP2 | Combination of rhamnolipid and biochar in assisting phytoremediation of petroleum hydrocarbon contaminated soil using Spartina anglica | Qinglong Liu | College of Environmental Science and Engineering, Nankai University, Tianjin, China |
| 16:30-16:45 | S3-OP3 | Effects of ball milling on the photochemistry of biochar: Enrofloxacin degradation and possible mechanisms | Honghong Lyu | School of Energy and Environmental Engineering, Hebei University of Technology, Tianjin, China |
| 16:45-17:00 | S3-OP4 | Biochar (nano)composites for the removal of hazardous pollutants | Kristyna Pospiskova | Regional Centre of Advanced Technologies and Materials, Palacky University, Slechtitelu, Olomouc, Czech Republic |
| 17:00-17:15 | S3-OP5 | Understanding sewage sludge derived biochar through chemical activation and adsorption mechanism | Zhuqi Chen | School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan, P. R. China. |
| 17:15-17:30 | S3-OP6 | Adsorption mechanism of Cr(VI) onto biochar prepared through hydrothermal carbonization and pyrolysis | Hai Nguyen Tran | Department of Environmental Engineering, Chung Yuan Christian University, Taoyuan, Taiwan |
| 17:30-17:45 | S3-OP7 | Simultaneous recovery of phosphates and ammonium from sewage sludge ash and food wastewater with Mg-biochar | KIM, Dong-Jin | Dept. of Environmental Science and Biotechnology & Institute of Energy and Environment, Hallym University, Chuncheon, Gangwon 24252, Republic of Korea |
| 17:45-18:00 | S3-OP8 | Magnesium oxide loaded corn straw biochar dramatically enhanced the removal of cadmium in solutions | Yan Wang | College of Environmental & Resource Sciences, Zhejiang Provincial Key Laboratory of Agricultural Resources and Environment, Zhejiang University, Hangzhou, China |
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| **Session D** | **Session Chairs:** | Prof. Scott Chang, University of Alberta,Canada  Prof. Jun Meng, Shenyang Agricultural University, China | | |
| 13:00-13:20 | Keynote Speech | Quality standards and certification schemes for biochar | Dr. David Wayne | International Biochar Initiative |
| 13:20-13:40 | Keynote Speech | Hydrochar preparation from biomass waste and its application | Prof. Shicheng Zhang | Department of Environmental Science and Engineering, Fudan University, Shanghai, China |
| 13:40-14:00 | Keynote Speech | Biochar & carbon markets | Ms. Kathleen Draper | Ithaka Institute for Carbon Intelligence, USA |
| 14:00-14:20 | Invited Speech | Mechanism-based understanding on nitrification-mediated N2O emission by biochar amendment from agricultural field soil | Prof. Gayoung Yoo | Department of applied Environmental science, Kyung Hee University, Yongin, South Korea |
| 14:20-14:40 | Invited Speech | Biochar properties and lead(II) adsorption capacity depend on feedstock type, pyrolysis temperature, and steam activation | Prof. Jin-Hyeob Kwak | Department of Rural Construction Engineering, Chonbuk National University, Jeonju, South Korea |
| 14:40-14:55 | S4-OP1 | Development of an optimization framework for biochar-based carbon management networks | Beatriz A. Belmonte | Chemical Engineering Department/Research Center for the Natural and Applied Sciences, University of Santo Tomas, España Blvd., Manila, Philippines |
| **15:00-15:20** | **Coffee Break** |  |  |  |
| **Session D** | **Session Chairs:** | Prof. Stephen Joseph, University of NSW, Australia  Prof. Shicheng Zhang, Fudan University, , China | | |
| 14:55-15:10 | S4-OP2 | Some research on biochar amend the key cultivation limitations of albic soil and soybean growth | Weiming Zhang | Biochar Engineering & Technology Research Center of Liaoning Province, Rice Research Institute, Agronomy College, Shenyang Agricultural University, Shenyang, Liaoning, China. |
| 15:10-15:25 | S4-OP3 | Calcium and phosphate enrichment through authigenic mineral growth in black carbon-rich African Dark Earth | Biqing Liang | Department of Earth Sciences, National Cheng Kung University, Tainan, Taiwan |
| 15:25-15:40 | S4-OP4 | Synthesis and application of water-chestnut-shell biochar | Hong-Ping LIN | Department of Chemistry, National Cheng Kung University, Tainan, Taiwan |
| 15:40-15:55 | S4-OP5 | Field application of sugarcane bagasse biochar for increased sugarcane yields | Isabel Lima | USDA-ARS Southern Regional Research Center, New Orleans, LA, USA |
| 15:55-16:10 | S4-OP6 | Optimizing biochar application from toxicity risks to safe amendments – Investigating seed germination bioassays | Muhammad Khalid Rafiq | UK Biochar Research Centre, School of GeoSciences, University of Edinburgh, EH9 3FF, United Kingdom |
| 16:10-16:25 | S4-OP7 | Effects of biochar on the bioavailability of heavy metals and growth of maize in a multi-contaminated soil: a three-year field experiment | Zhongzhen Liu | Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences, Guangzhou 510640, China |
| 16:25-16:40 | S4-OP8 | JBA standard estimating biochar for soil carbon storage | Tadashi Kimura | Japan Biochar Association, 211, 8-13, 2-chome, Shimohozumi, Ibaraki-city, Osaka, Japan |
| 16:40-16:55 | S4-OP9 | Biomass stabilization: Phosphorus fixation and utilization | Tao Zhang | Biomass Engineering Center, Beijing Key Laboratory of Farmland Soil Pollution Prevention and Remediation, Key Laboratory of Plant-Soil Interactions of Ministry of Education, College of Resources and Environmental Sciences, China Agricultural University, Beijing, China |
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| **18:00-18:30** | **Closing Ceremony** | | | |
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| **19:00-22:00** | **Banquet** |  |  |  |
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***Poster Presentations - 13th November 2019***

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| **Poster No** | **Title** | **Name of the presenter** | **Affiliation** |
| PP-01 | Application of biochar for the development of carbon sink building materials | Alessio Malcevschi | Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Parma, Italy. |
| PP-02 | Characterisation of biochar from different feedstock for agriculture application | Alessio Malcevschi | Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Parma, Italy. |
| PP-03 | A waste hay-derived biochar for removal of cyanotoxins in water | Yong-Keun Choi | Department of Biological Engineering, Konkuk University, 120 Neungdong-ro, Gwangjin-gu, Seoul 05029, Korea |
| PP-04 | Effects of applied fertilizers and biochars (corn husk and corn cob) on the growth performance of corn (*Zea Mays*) and chemical properties of clay loam soil (*Typic Eutrudepts*) | Anne Nicole B. Lasam | Department of Soil Science, Agricultural Systems Institute, College of Agriculture and Food Science, University of the Philippines Los Baños, Los Baños, Laguna, Philippines |
| PP-05 | Effect of mixture of sewage sludge and biomass and carrying gases (CO2 or N2) during pyrolysis on the toxicity of biochar-amended soil | Paulina Godlewska | Department of Environmental Chemistry, Faculty of Chemistry, Maria Curie- Skłodowska University, Poland |
| PP-06 | Influence of the biochar application in germination tests and development of *Lactuca sativa L*. | Anthony Jeanpier Fow | Central Institute of Scientific and Technological Research, Faculty of Environmental Engineering and Natural Resources, National University of Callao, Bellavista, Callao, Lima-Peru. |
| PP-07 | Phosphorus availability from bone chars derived from different animal bones in an Ethiopian soil | Shinjiro Sato | Department of Science and Engineering for Sustainable Innovation, Soka University, Tokyo, Japan |
| PP-08 | Production and applications of biochar from agricultural and forest waste as an alternative for valorization | Paul Hermes Virú | Central Institute of Scientific and Technological Research, Faculty of Environmental Engineering and Natural Resources, National University of Callao, Bellavista, Callao, Lima-Peru |
| PP-09 | Nutrient availability from biochars derived from bamboo and livestock manures | Hiroki Ippongi | Graduate School of Engineering, Soka University, Tokyo, Japan |
| PP-10 | Nutrients availability from biochar fertilizers derived from organic wastes | Masatoshi Himeno, | Graduate School of Engineering, Soka University, Tokyo, Japan |
| PP-11 | Biochar altered native soil organic carbon by changing soil aggregate size distribution and inside SOC based on 8-year field experiment | Zhencai Sun | College of Agronomy, China Agricultural University, China |
| PP-12 | The effect of biochar amendment on alleviation of drought stress in urban roadside green spaces | You Jin Kim | Department of Applied Environmental Science, Kyung Hee University, Suwon, Republic of Korea |
| PP-13 | A class of Fe-N-C composite catalyst for oxygen reduction reaction derived from biogas residues of anaerobic fermentation | Zhangzezhen | Department of Faculty of Engineering, Northeast Agricultural University, Harbin，China |
| PP-14 | Artificial neural network-based modelling for prediction of the benefits of biochar application to arable agricultural soil | Junge Hyun | Department of applied Environmental science, Kyung Hee University, Yongin 17104, South Korea |
| PP-15 | Effects of H2O2-treated biochar application on nitrogen leaching in a sandy soil | Kazuhisa Ishida, Shinjiro Sato | Graduate School of Engineering, Soka University, Tokyo, Japan |
| PP-16 | Structural and compositional analysis of biochar produced from palm kernel and coconut shells in Ghana for removal of radioactive contaminants | Isa Samiratu Atibun | Division of Environmental Science and Engineering, Pohang University of Science and Technology, Pohang, Republic of Korea |
| PP-17 | Techno-economic analysis of catalytic biodiesel production over solid-biochar | Jae-Cheol Lee | School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Ulsan, Republic of Korea |
| PP-18 | A gasifier cookstove – biochar ecosystem in rural Bangladesh | Mahbubul Islam | Bangladesh Biochar Initiative, House La-56, Badda Post Office Road, Bangladesh Badda, Dhaka, BD |
| PP-19 | One-pot synthesis of lignin-derived Ni-containing ordered mesoporous carbon for catalytic selective hydrogenation of furfural to furfuryl alcohol | Xiaoqi Wang | Agro-Environmental Protection Institute, Chinese Academy of Agricultural Sciences, No. 31, Fukang Road, Nankai District, Tianjin, China |
| PP-20 | Extraction of organic matter from biochar and characterization | Eilhann E. Kwon | Department of Civil and Environmental Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Republic of Korea |
| PP-21 | Microwave and conventional thermal pyrolysis on the characteristics of biochar derived from the mixture of sewage sludge and waste wooden pallet | Wen-Hui Kuan | Department of Safety, Health and Environmental Engineering, Ming Chi University of Technology, New Taipei, Taiwan |
| PP-22 | Phosphorous availability from animal bone depends on thermal treatment, bone type and soil pH | Milkiyas Ahmed | Graduaten School of Engineering, Soka University, Tokyo, Japan |
| PP-23 | Using biochar pyrolysed with different temperatures for anaerobic methane production | Yun Qi Joo | Graduate School of Engineering, Soka University, Tokyo, Japan |
| PP-24 | Reduction of hexavalent chromium by conductive pyrogenic carbon-supported zero-valent iron: batch and electrochemical analyses | Shengsen Wang | College of Environmental Science and Engineering, Yangzhou University, Yangzhou, China |
| PP-25 | Adsorption recovery of phosphate from aqueous solution by CaO-biochar composites prepared from eggshell and rice straw | Xiaoning Liu | Agro-Environmental Protection Institute, Chinese Academy of Agricultural Sciences, No. 31, Fukang Road, Nankai District, Tianjin, China |
| PP-26 | Pilot introduction of pyrolytic gasification stoves and biochar in Burundi | David Bluhm | STARTER S.R.L., Padua, Italy. |
| PP-27 | Pollen-derived porous carbon by KOH activation for CO2 adsorption | Seung Wan Choi | Department of Chemical and Biological Engineering, Korea University, Seoul, Korea |
| PP-28 | Co-application of biochar and N fertilizer influences soil organic carbon fractions and lability index of a humid tropical cropland in southwest Nigeria | Segun O. Oladele | Department of Agronomy, Adekunle Ajasin University Akungba Akoko, Ondo State, Nigeria |
| PP-29 | Toluene reduction performance evaluation of paints containing inorganic binder and biochar | Jisoo Jeon | Department of Architecture and Architectural Engineering, Yonsei University, Seoul, Republic of Korea |
| PP-30 | Effect of using biochar on crop yield | Amit Patel | Indian Institute of Technology Ropar, Rupnagar, Punjab, India |

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| ***Poster Presentations - 14th November 2019*** | |  |  |
| **Poster No** | **Title** | **Name of the presenter** | **Affiliation** |
| PP-31 | Application of biochar to building material for water and thermal performance improvement | Sungwoong Yang  Sumin Kim | Department of Architecture and Architectural Engineering, Yonsei University, Seoul, Republic of Korea |
| PP-32 | Effect of biochar and nitrification inhibitor on nitrogen use efficiency and greenhouse gas emissions from cropland | Prem Pokharel | Department of Renewable Resources, University of Alberta, Edmonton, AB, Canada |
| PP-33 | Preparation of hydrochar from roadside tree and sewage sludge and effects of reaction conditions | Yu-Lim Choi | Department of Environmental Engineering, Kwangwoon university, Seoul, Korea |
| PP-34 | Comparison and mechanism analysis of adsorption of tetracycline in aqueous solution by activated carbon derived from different raw materials | Yue Yuan | National Engineering Laboratory for Clean Technology of Leather Manufacture, Sichuan University, Chengdu, P. R. China |
| PP-35 | Adsorption of benzothiazole in different experimental biochars | García Ares, M.T. | Technological Research Institute, University of Santiago de Compostela, Santiago, Spain |
| PP-36 | Effects of biochar from different biomass sources on acidic soil contaminated by heavy metals | Zhongzhen Liu | Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences, Guangzhou, China |
| PP-37 | Adsorption of NH4+ and PO43- onto pea shell-derived biochar | Seung Hwan Kim | Department of Civil & Environmental Engineering, College of Engineering, Seoul National University, 1 Gwanak-ro, Gwanakgu, Seoul, Republic of Korea |
| PP-38 | Cadmium accumulation and availability in rice with different radial oxygen loss under different water regimes | Xiuqin Mei | School of Environmental and Chemical Engineering, Foshan University, Chancheng, Foshan, Guangdong Province, PR China |
| PP-39 | Low-temperature selective catalytic reduction of NOx with NH3 over activated carbon-carbon nanotubes composite material prepared by in-situ method | Lu YAO | Department College of Architecture and Environment, Sichuan University, Chengdu, P.R. China |
| PP-40 | Carbonization of rice straw derived biogas residue to high value applications | Hsi-Yen, Wu | Department of Chemical Engineering, National Taiwan University, No. 1, Sec. 4, Roosevelt Road, Taipei, Taiwan |
| PP-41 | Pyrolysis production of biochar from cassava stem | Wangxi Peng | Henan Agricultural University, China |
| PP-42 | Production of biochar as potential solid fuel from pyrolysis of marine algae | Xiaochen Yue | Henan Province Engineering Research Center for Forest Biomass Value-added Products, School of Forestry, Henan Agricultural University, Zhengzhou 450002, China |
| PP-43 | Production of bio-char and bio-oil from pyrolysis of used disposable diapers | Cheng Li | Henan Province Engineering Research Center for Forest Biomass Value-added Products, School of Forestry, Henan Agricultural University, Zhengzhou 450002, China |
| PP-44 | Effect of biochar and manure in reducing heavy metals in paddy soil receiving polluted irrigation | Yulnafatmawita | Soil Laboratory, Agriculture Faculty Andalas University, Kampus Unand Limau Manis Padang, Indonesia |
| PP-45 | Chemical composition of nutrient-enriched biochar | Md. Zahangir Hossain | Global Centre for Environmental Remediation, University of Newcastle, Callaghan, NSW 2308, Australia |
| PP-46 | Corn cob and corn husk biochars’ influence to corn (*zea mays* l.) growth as soil amendment and carbon capture | Arsenio D. Bulfa | Agricultural Systems Institute, College of Agriculture and Food Sciences, University of the Philippines Los Baños, College, Laguna, 4031, Philippines |
| PP-47 | Biochar from biosolids microwaved pyrolysis - Characteristics and potential for use as growing media amendment | Bhawana Bhatta Kaudal | The University of Melbourne, Nalinga Road, Dookie, Victoria, 3647, Australia |
| PP-48 | Bamboo Biochar and arbuscular mycorrhizal fungi alter the prokaryotic community structure in the cacao (*Theobroma cacao* L.) rhizosphere | Angelbert D. Cortes | Institute of Biological Sciences, University of the Philippines Los Baños, Laguna, Philippines |
| PP-49 | Soil quality and response of lowland rice grown in mine-contaminated soil added with coconut husk and cattle manure biochars | Salvo O. Salvacion | Graduate School, University of the Philippines Los Baños, College, Laguna 4031 Philippines |
| PP-50 | Biochar enrichment as a multifunctional approach for management of agricultural wastes, problem soils and crop yield in the philippines | Gina Villegas-Pangga | Agricultural Systems Institute, College of Agriculture and Food Science, University of the Philippines Los Baños, College, Laguna, 4031 Philippines |
| PP-51 | Chemical properties of acidic sandy clay loam (Typic Tropudalfs) soil amended with mineral fertilizer, cattle manure biochar and coconut husk biochar | Jhon Vincent C. Caisip | College of Agriculture, Food, Environment and Natural Resources, Cavite State University, Indang Cavite, Philippines |
| PP-52 | Soil Acidity Amending Capacity of Biochar as Affected by Feedstock and Pyrolysis Temperature | Arnoldus Klau Berek | Program Studi Agroteknologi, Fakultas Pertanian, Universitas Timor, Kefamenanu, NTT, Indonesia |
| PP-53 | Role of pre and post pyrolysis magnetic modification of *Parthenium hysterophorus* L. biochar for the removal of heavy metals from synthetic wastewater | Ismat Nawaz | Department of Biotechnology, COMSATS University Islamabad, Abbottabad Campus, Abbottabad, Pakistan. |
| PP-54 | Biochar from microwave co-pyrolysis of biomass and plastic as a potential adsorbent/catalyst support | Parth Rajput | School of Infrastructure, Indian Institute of Technology Bhubaneswar, Argul, Odisha, India - 752050 |
| PP-55 | Physiological response of corn (*Zea Mays* L.) to different fertilizers and coconut coir biochar grown in low fertility acidic clay (*Orthoxic Palehumults*) and sandy loam (*Cumulic Hapludolls*) Soils. | Ailyn G. Rafer | Department of Agriculture Regional Field Office 5 Regional Soils Laboratory, del Rosario Naga City, Philippines |
| PP-56 | Nitrogen loaded biochar in combination with acidified compost improve cotton production and reduce nitrate leaching | Muhammad Baqir Hussain | Department of Soil and Environmental Sciences, Muhammad Nawaz Shareef University of Agriculture, Multan 60000, Pakistan |
| PP-57 | GreenCarbon – the advanced technology for premium biochar production | Faqiang Qian | Polytechnik Biomass Energy, Weissenbach, Austria |
| PP-58 | Inclusive management of Banana leftover: bio-fertilizer and energy production | Vivek K Morya | Centre for Energy and Environmental Sustainability, Lucknow, India |