

APBC2021 Conference Programme

Conference Venue: Microsoft Teams, Online, Time Zone: Hong Kong Time

11 May 2021 (Tuesday)				
9:00-9:05	Welcome Speech and Special Issue Invitation: Dan Tsang , Hong Kong Polytechnic University			
9:05-9:10	Opening Speech by Head of Department of Civil and Environmental Engineering, C.S. Poon , Hong Kong Polytechnic University			
9:10-11:10	Plenary Speech, Chair: Dan Tsang			
9:10-9:40	Electrochemical property of biochar and its environmental application Xinde Cao Shanghai Jiaotong University			
9:40-10:10	Composting of Ammonium Enriched Food Waste Digestate: Role of Biochar to Mitigate Nitrogen Loss and GHG Emission Jonathan Wong Hong Kong Baptist University			
10:10-10:40	Effects of iron-engineered animal- and plant-derived biochars on immobilization of As and Pb and microbial diversity in a contaminated soil Hailong Wang Foshan University			
10:40-11:10	Biochar as sustainable bioabsorbent for the remediation of dyes containing industrial wastewater Ashok Pandey CSIR- Indian Institute of Toxicology Research, India			
11:15-12:55	Session A1	Session B1	Session C1	Session D1
	Chair: Shanta Dutta	Chair: Mingjing He	Chair: Zibo Xu	Chair: Zhonghao Wan
11:15-11:35	Biochar in circular economy, sequential biochar use cascades Ondrej Masek University of Edinburgh	Biochar application for sulfide toxicity control during anaerobic treatment of high-sulfate wastewater with sulfur recovery Samir Khanal University of Hawaii-Manoa	Biochar's electrochemistry can be used to improve irrigation water quality Jim Ippolito Colorado State University	Sustainable application of biochar for nutrient removal and recovery from wastewater Huu Hao Ngo University of Technology Sydney

11:35-11:55	Common Pitfalls of Heterogeneous Catalysis Research: A Perspective from Chemical Engineers Alex Yip University of Canterbury	Biomass as activated carbon precursor for supercapacitor Suzana Yusup Universiti Teknologi Petronas	Microbial response to mine spoils remediation efforts involving biochar Thomas Ducey United States Department of Agriculture	Hydrochar and Activated Carbon Materials from P- and N-rich Biomass Waste for Environmental Remediation and Bioenergy Application Shicheng Zhang Fudan University
11:55-12:15	Development of carbon materials from Thai agricultural wastes for elemental recovery, remediation, and catalysis. Andrew J. Hunt Khon Kaen University	Small molecule organic acid strengthens a new type of pyrite biochar composite to remove hexavalent chromium from water and its mechanism Jingchun Tang Nankai University	The reactivity of biochars and the application in organic contaminant removal Bo Pan Kunming University of Science & Technology	Preparation of thiourea modified magnetic biochars for recycling platinum group metals Shou-Heng Liu National Cheng Kung University
12:15-12:35	Microwave valorisation of Biomass and it's pilot scale Application Alice Jiajun Fan University of York	The enhancement of anaerobic digestion based on hydrochar Gang Luo Fudan University	Mineral-enriched biochar for agricultural and environmental applications Binoy Sarkar Lancaster University	Harnessing Radical Species to Metal-Organic Frameworks for Ideal Aerobic Oxidation Catalysts Liangchun Li Tongji University
12:35-12:55	Decarbonization of the Energy Systems: climate change and health perspective Meisam Tabatabaei Universiti Malaysia Terengganu	Engineered biochar based on mixed feedstock and different gasses as a solution of reduce the risk of biochar contamination by polycyclic aromatic hydrocarbons and heavy metals Patryk Oleszczuk Maria Curie-Sklodowska University in	Catalytic gasification of food waste using Ni loaded biochars Young-Kwon Park University of Seoul	Electron transfer enhancing Fe(II)/Fe(III) cycle by sulfur and biochar in magnetic FeS@biochar to active peroxy monosulfate for 2,4-dichlorophenoxyacetic acid degradation Fei Qi

		Lublin		Beijing Forestry University
Break				
14:00-16:00	Session A2	Session B2	Session C2	Session D2
	Chair: Shanta Dutta	Chair: Mingjing He	Chair: Zibo Xu	Chair: Zhonghao Wan
14:00-14:20	Simultaneous Production of Biochar and Bioethanol from Seaweed Keat Teong Lee Universiti Sains Malaysia	Gasification Biochar for Urban Agriculture and Circular Economy Chi-Hwa Wang National University of Singapore	Biochar and nanoparticles: Promise and concerns Daniel Alessi University of Alberta	The effect of nickel nitrate on the pyrolysis of organosolv lignin and the properties of biochar Changwei Hu Sichuan University
14:20-14:40	Mechanistic Study on the Depolymerization of Lignin Oligomer Catalyzed by Pd/NbOPO ₄ Zhishan Su Sichuan University	Use of magnetic carbon monolith for selective removal of oil and heavy metals from water and soil Sang Soo Lee Yonsei University	Manipulation of Selectivity of Biochar for Sustainable Recovery of Nutrients from Human Urine Containing Antibiotics Eakalak Khan University of Nevada, Las Vegas	Cementitious Biochar-Gypsum Wall Tiles for Electromagnetic Interference Shielding Harn Wei Kua National University of Singapore
14:40-15:00	Catalytic interventions for valorization of lignin and lignin bio-oil Thallada Bhaskar CSIR-IIP, Dehradun	Biochar to mitigate soil solution Cd concentration in smelter contaminated sandy soil Filip Tack Ghent University	Biochar and its potential to increase soil water retention Lukas Trakal Czech University of Life Sciences, Prague	Microbial decomposition of plant biomass regulates mineral weathering and geochemical dynamics in tailings Longbin Huang The University of Queensland
15:00-15:20	Prospects on applications of biochar for remediation of environmental pollutants Sunita J. Varjani Gujarat Pollution Control	A quantitatively accelerated ageing method for assessment of long-term stability of immobilized heavy metals in soil Zhengtao Shen	Contamination of thallium and associated metals in soils and its amendment by using biochar composite Juan Liu	Valorization of biochar as a catalyst in production of biodiesel Eilhann Kwon Sejong University

	Board	Tsinghua University	Ministry of Education & Provincial Key Laboratory of Waters	
15:20-15:40	<p>Role of homogeneous catalysis in biomass conversion</p> <p>Laszlo T. Mika Budapest University of Technology and Economics</p>	<p>Application of corncob-derived biochar for removal of fluoroquinolones from water</p> <p>Thanh Bui Xuan HCM City University of Technology</p>	<p>Transport and Enhanced Delivery of surface-modified Fe-Mn Binary Oxides in Heterogeneous Porous Media and Their Arsenic Stabilization Performance</p> <p>Xiao Yang Institute of Geographic Sciences and Natural Resources Research</p>	<p>Biomass waste valorization to generate modified biochar to recover phosphorus from animal manure wastewater</p> <p>Tao Zhang China Agricultural University</p>
15:40-16:00	<p>Anaerobic Digestion: a strategic process unit in integrated biorefineries</p> <p>Maria Loizidou National Technical University of Athens</p>	<p>Modelling antibiotics and herbicide removal from surface water in biochar amended biofilters</p> <p>David Werner Newcastle University</p>	<p>Biotreatment study of acid mine drainage with high concentrations of Fe and Mn</p> <p>Yaoyu Zhou Hunan Agricultural University</p>	<p>Isotope fractionation as a tool for identifying Cd adsorption mechanisms on organic matter</p> <p>Michael Komárek Czech University of Life Sciences, Prague</p>
16:00-17:30	Plenary Speech, Chair: Dan Tsang			
16:00-16:30	<p>The Environmental Sciences Publishing Landscape and How to Succeed in it as an Author</p> <p>Daniel Lovegrove Environmental Science & Health, Elsevier Oxford, United Kingdom</p>			
16:30-17:00	<p>Valorisation of Biomass using Green Chemical Technologies</p> <p>James Clark University of York</p>			
17:00-17:30	<p>COVID-19 impact on Circular Economy: A Chance for Biomass?</p> <p>Jiří Jaromír Klemes</p>			

Brno University of Technology				
12 May 2021 (Wednesday)				
9:00-11:40	Session A3	Session B3	Session C3	Session D3
	Chair: Shanta Dutta	Chair: Mingjing He	Chair: Zibo Xu	Chair: Zhonghao Wan
9:00-9:20	Bioremediation of hexavalent-chromium contaminated groundwater: Microcosm and pilot-scale studies Jimmy Kao National Sun Yat-Sen University	An integration of machine learning-based biochar prediction model and life cycle assessment for biochar to soil systems Siming You The University of Glasgow	Valorization of biochar prepared by biomass pyrolysis as catalysts and supercapacitors Shurong Wang Zhejiang University	Microwave Pyrolysis Conversion of Biomass Waste into Value-added Biochar Products Su Shiung Lam Universiti Malaysia Terengganu
9:20-9:40	Advances in the non-photocatalytic approaches for the removal of volatile organic compounds in air Ki-Hyun Kim Hanyang University	Cobalt-impregnated Biochar produced from CO ₂ -mediated Pyrolysis of Co/Lignin as an Enhanced Catalyst for activating Peroxymonosulfate Kun-Yi (Andrew) Lin National Chung Hsing University	Synthesis of biochar from organic solid waste for water purification and soil remediation Lin Tang Hunan University	N-doped biochar-loaded nanoscale zero-valent iron for persulfate activation to degrade lindane Hongwen Sun Nankai University
9:40-10:00	A comparative study of modified biochars for the removal of aquatic pollutants Amit Bhatnagar LUT University, Finland	N-enriched Biomass Pyrolysis for Biochar and Its High-value Utilization Haiping Yang Huazhong University of Science and Technology	Remediation of contaminated soil and groundwater by functional biochar Linling Wang Huazhong University of Science and Technology	Role of Lignin, Dissolved Organic Matters, and Aging in Interaction of Biochar and Metals in Soil Kitae Baek Chonbuk National University
10:00-10:20	3D MXene Aerogel Carbon Composite Towards Advanced Alkali-Ion Batteries	Pharmaceutical adsorption in a fixed-column using tyre-based activated char: experimental, modelling and	Catalytic performance of Ni loaded biochars on biomass pyrolysis for syngas production	Production conditions affect biochar's fuel value Scott Chang

	Qinfen Gu Australian Synchrotron	techno-economic feasibility studies Ajit Sarmah University of Auckland	Liang Huang Beijing Forestry University	University of Alberta
10:20-10:40	Biochar for sustainable remediation of contaminated soils: Current status, and future perspectives Ali El-Naggar Ain Shams University	Biochar-augmented sustainable construction materials Lei Wang Technische Universität Dresden	Biochar application in clean composting Zengqiang Zhang Northwest A&F University	Visible light photocatalytic degradation of gaseous formaldehyde by "carbonized" porous coordination polymer (ZIF-8) Jin Shang City University of Hong Kong
10:40-11:00	Effective dispersion of MgO nanostructure on biochar support for glucose isomerization Season S. Chen City University of Hong Kong	Biochar for sustainable environmental applications Preeti Chaturvedi (CSIR-Indian Institute of Toxicology Research)	Redox mediated interactions between biochar and the emerging soil contaminants Ag, Sb, Sn, Tl, and V Sabry M. Shaheen Wuppertal University	Waste management in the context of circular economy & bioeconomy Konstantinos Moustakas National Technical University of Athens
11:00-11:20	Copyrolysis of <i>Chlorella sp.</i> and Bauxite Tailings to Fabricate Metal-Biochar as Persulfate Activator Hocheol Song Sejong University	(Title to be confirmed) Yujie Feng Harbin Institute of Technology	(Title to be confirmed) Zhuqi Chen Huazhong University of Science and Technology	(Title to be confirmed) Meththika Vithanage University of Sri Jayewardenepura
11:20-11:40	(Title to be confirmed) Alex Cheung WSP HK			(Title to be confirmed) Stephen Joseph University of New South Wales

Break				
13:40-14:50	Session A4	Session B4	Session C4	Session D4
	Chair: Shanta Dutta	Chair: Mingjing He	Chair: Zibo Xu	Chair: Zhonghao Wan
13:40-13:50	An efficient, recoverable solid base catalyst of magnetic bamboo charcoal: preparation, characterization, and performance in biodiesel production Kang Liu Tsinghua University	A hybrid approach for highly efficient bio-adsorption of Malachite Green using common water hyacinth biochar (<i>Eichhornia crassipes</i>) Balendu Shekher Giri Indian Institute of Technology Guwahati	The Roles of Biochar and CO ₂ Curing in Sustainable Magnesia Cement-Based Composites Liang Chen The Hong Kong Polytechnic University	Critical impact of nitrogen vacancies in non-radical carbocatalysis on nitrogen-doped graphitic biochar Zhonghao Wan The Hong Kong Polytechnic University
13:50-14:00	Tailoring biochar from waste heavy bio-oil fraction for carbon dioxide storage Xiefei Zhu University of Science and Technology of China	The aging mechanisms of biochar and implications for soil amendment Liuwei Wang Tsinghua University	Changes in biochar gasification reactivity: effect of preparation temperatures and properties evolution Rui Diao University of Science and Technology of China	Enhanced sorption of Sb(III) by chitosan-coated biochar in aqueous solution Hanbo Chen Foshan University
14:00-14:10	Triclocarban removal from synthetic groundwater by plant-growth promoting bacterium immobilized on biochar derived from agro-industrial waste Khuanchanok Sonsuphab	Dissolved Organic Matter Leaching from Biochar during Water filtration and Formation of Known and Unknown Disinfection By-products from Chlorinated Water Atcharaporn Youngwilai Khon Kaen University	Polycyclic aromatic in biochars and human health risks of food crops grown in biochar-amended soils Jian Wang Nanjing Agricultural University	Effect of hydrochar amendment on the structure of native soil organic carbon Lanfang Han Guangdong University of Technology

	Khon Kaen university			
14:10-14:20	The Pyrolysis Characteristics and Kinetic Parameters Calculation of Tea Seed Shell with Different Particle Size Yiwei Feng Xi'an Jiaotong University	Effect of particle size on value-added products extracted from high ash municipal sludge by pyrolysis Bo Wang Xi'an Jiaotong University	Adsorption-reduction removal of aqueous Cr(VI) by sludge derived biochar Ying-heng Fei Guangzhou University	Surface modification and integration of functional materials with biochar: An ideal option for large-scale thermal energy storage applications Dimberu Geremew Atinafu Yonsei University
14:20-14:30	Insights into the mechanisms of the metal oxides modified biochar in reducing the phosphorus loss in fertile soils Yutao Peng China Agricultural University	Methane oxidation activity inhibition via high-rate biochar application in paddy soil after long-term aging Qiong Nan Zhejiang University	Air pre-oxidation induced N/P-doped biochar enhancing adsorption of sulfonamide and coexisting Cu ²⁺ / Cr (VI) Wei Tang China University of Geosciences	Optimizing the nutrient release from biochar: Co-pyrolysis of nutrient-rich feedstock and Ca-bentonite Mahmudul Islam Piash Hokkaido University
14:30-14:40	The effects of chemical and physical ageing on Cd-adsorbed biochar: insights into carbon stability and sorption performance Fanqi Jing China University of Geosciences	Biological-template assisted fabrication of hierarchical porous biochar for high-performance supercapacitors Zejun Luo University of Science and Technology of China	Bio-composite of Iron-sludge biochar immobilized with Pseudomonas Sp. in packed column for bio-adsorption of dye composites in a packed bed bioreactor: Isotherm and Kinetic Evaluation Mandavi Goswami Indian Institute of Technology Guwahati	Effects of pyrolysis temperature on lead adsorption by cotton stalk-derived biochar and related mechanisms Liang Gao Shandong University of Technology
14:40-14:50	Effects of ball milling on the photochemistry of biochar:	Adsorption of norfloxacin onto organic and inorganic nitrogen-doped		Ageing induces changes in the functionality of biochar and

	Enrofloxacin degradation and possible mechanisms Honghong Lyu Hebei University of Technology	ball milling biochar: performance and mechanisms Jingqi Wu China University of Geosciences		hydrochar for soil remediation Yuyan Liu China University of Geosciences
15:00-17:30	Plenary Speech, Chair: Dan Tsang			
15:00-15:30	Machine Learning Exploration of Biochar Amendment in the Immobilization of Soil Heavy Metals Yong Sik Ok Korea University			
15:30-16:00	Engineered Biochar: Novel Synthesis Methods & Promising Environmental Applications Bin Gao University of Florida			
16:00-16:30	Biochar produced from microwave-assisted pyrolysis and its applications in catalysis and wastewater treatment Roger Ruan University of Minnesota			
16:30-17:00	MALDI-TOFMS for investigation of micro-plastics in the environment Zongwei Cai Hong Kong Baptist University			
17:00-17:30	Biochar amendment to paddy soils designed to immobilize emerging toxic elements – benefits and drawbacks Jörg Rinklebe University of Wuppertal			