

ACBS2023 Scientific Program (231023 Tentative)

Opening ceremony 9:50-10:00

Oral presentation 10:00-12:30, 14:30-17:00

Session OA Gasification

Chair: Kiyoshi DOWAKI (Tokyo University of Science, Japan)

- 10:00 OA-1 Enhancing Hydrogen Rich Syngas Production in the Co-Gasification of GMO Rice Straw and *Giant Miscanthus*
Aghietyas Choirun Az ZAHARA, Hirozumi OKURA, Viridi CHAERUSANI, Dong-Jin KANG, Abuliti ABUDULA, Guoqing GUAN*
(Hirosaki University, Japan)
- 10:15 OA-2 Enhancing syngas production from the pyrolysis of cedarwood using biochar catalyst
Ramadan ELJAMAL, Ryosuke HANADA, Takashi NOMURA, Eiji MINAMI, Haruo KAWAMOTO*
(Department of Socio-Environmental Energy Science, Graduate School of Energy Science, Kyoto University, Japan)
- 10:30 OA-3 Dynamic evaluation and design considering the environmental impact of H₂S adsorption performance by using mining waste and LaNi₅ in combination
Mayu HAMAZAKI, Kiyoshi DOWAKI
(Tokyo University of Science, Japan)
- 10:45 OA-4 Effect of heating rate on cellulose behavior in hot compressed water
Yuki MAKI ^a, Yuki KOSHIISHI ^b, Yukihiko MATSUMURA * ^a
(^a Hiroshima University, Japan
^b Nara Machinery Co., Ltd., Japan)
- 11:00 OA-5 Effect of activated carbon catalysts on supercritical gasification of glucose
Kosuke YAMADA, Yukihiko MATSUMURA*
(Hiroshima University, Japan)
- 11:15 OA-6 Enhancing glucose gasification efficiency with Ru/CNT catalyst in supercritical Water
Mizuki KODAMA, Mohammed Ahmed Mohammed ALI, Takashi NOGUCHI, Shuhei INOUE, Mengli ZHANG*, Yukihiko MATSUMURA
(Hiroshima University, Japan)

(Break 11:30-11:40)

Key note lecture

Chair: Kazuhiro MOCHIDZUKI (Hiroshima University, Japan)

- 11:40 PL1 Radiation technology as a perspective method to process agricultural by-products/wastes for plant growth stimulants and protection materials
Phan Dinh Tuan
(Hochiminh City University of Natural Resources and Environment, Viet Nam)
- 12:20 Taking entire group photos

(Lunch 12:30-13:30)

(Poster presentation 13:30-14:30)

Session OB Catalytic reaction

Chair: Kenji KOIDO (Forestry and Forest Products Research Institute, Japan)

- 14:30 OB-1 Catalytic upgrading of bio-oil from fast pyrolysis of biomass over copper impregnated hollow HZSM-5
Viridi CHAERUSANI, Aghietyas Choirun Az ZAHRA, Yusrin RAMLI, Abuliti ABUDULA, Guoqing GUAN*
(Hirosaki University, Japan)
- 14:45 OB-2 Electrocatalytic oxidation of 5-(hydroxymethyl)furfural to 2, 5-furandicarboxylic acid
Yusrin RAMLI, Ziyuan YANG, Viridi CHAERUSANI, Abuliti ABUDULA, Guoqing GUAN*
(Graduate School of Science and Technology, Hirosaki University, Japan)
- 15:00 OB-3 Catalytic activity of Pd supported on mesoporous silica for plant oil deoxygenation operated under hydrothermal condition
Monique Joice Abrau AUGUIS, Yusuke NISHIDA, Kohei OHSHIMA, Shinya YAMANAKA, Masato KOUZU
(Tokyo City University, Japan)
- 15:15 OB-4 Effects of hydrogen source on aqueous phase reforming in the presence of cresol as an acceptor of the produced hydrogen
Chihana NAKASHIMA, Yoshihiro HISHIDA, Kotoshi YAGAWA, Yuki NIIMI, Masato KOUZU
(Tokyo City University, Japan)
- 15:30 OB-5 ZnO catalyst supported on carbon nanotube for biodiesel production
Ken FURUTA, Chin Seng LIEW, Yukihiko MATSUMURA*
(Hiroshima University, Japan)

(Break 15:45-16:00)

Session OC Analysis and application of woody biomass

Chair: Guoqing GUAN (Hirosaki University, Japan)

- 16:00 OC-1 Thermal reactivity of hemicellulose and cellulose in the cell walls of softwood and hardwood species
Yu WANG, Takashi NOMURA, Eiji MINAMI, Haruo KAWAMOTO
(Kyoto University, Japan)
- 16:15 OC-2 Revolutionizing Bioethanol Production: Sustainable and Efficient Conversion of Industrial Waste to Fuel
Harifara RABEMANOLONTSOA, Eka TRIWAHYUNI, Haruo KAWAMOTO
(Kyoto University, Japan)
- 16:30 OC-3 Effects of physical and chemical properties of slow pyrolysis char and irrigation rate on water retention properties of wood gasification CHP residue for agricultural use
Aoi KUBOTA ^a, Shunki KONDO ^a, Kenji KOIDO ^b, Kiyoshi DOWAKI ^a
(^aTokyo University of Science, Japan
^b Forestry and Forest Products Research Institute)
- 16:45 OC-4 Production of aromatic monomers from lignins in Japanese beech and Japanese cedar by pyrolysis-assisted catalytic hydrogenolysis in aromatic solvents
Alex Ikeda FRANCISCO, Jiaqi WANG, Eiji MINAMI, Haruo KAWAMOTO*
(Graduate School of Energy Science, Kyoto University, Japan)
- 17:00 OC-5 Influences of cell wall and saccharide-derived products on the pyrolysis-assisted catalytic hydrogenolysis of lignin
Jiaqi WANG, Alex Ikeda FRANCISCO, Eiji MINAMI, Haruo KAWAMOTO
(Graduate School of Energy Science, Kyoto University, Japan)
- 17:15 OC-6 Mechanical strength of extrusion molding wood sheet after thermal crosslinking treatment
Xiangyu TAO, Yuki TOKUNAGA, Hiroshi NONAKA
(Mie University, Japan)

(Break 17:30-17:40)

Closing ceremony 17:40-18:00

Poster presentation 13:30-14:30

- P-1 Combining biomass, solar & wind power: optimization analysis and assessment for off-grid rural electrification efforts in Laguna province, Philippines
Jose Mari LIT, Takaaki FURUBAYASHI
(Akita University, Japan)
- P-2 LCA of fuel cell performance considering H₂S removal using neutralized sediment
Kenta MANDAI, Mayu HAMAZAKI, Shan MIAO, Kiyoshi DOWAKI
(Tokyo University of Science, Japan)
- P-3 Japanese wood biomass potential under sustainable forest management in future
Satoko KAWARASAKI
(National Institute for Environmental Studies, Japan)
- P-4 Expansion of waste heat utilization for facilities around incineration plants in Tokyo
Kazuhiro YUASA, Mayumi HAMADA, Jia REN
(Tokyo Institute of Technology, Japan)
- P-5 Properties and applications of cellulose nanofibers from Japanese orange peels
Akihiro HIDENO
(Ehime University, Japan)
- P-6 Design and operation of biocarbon gasification fuel cell system
Kazuhiro MOCHIDZUKI ^a, Koji ADACHI ^b, Hajime MATSUBARA ^b, Naoki SHIKAZONO ^c
(^a A-ESG Science and Technology Research Center, Hiroshima University, Japan
^b Meiwa Co., Ltd., Japan
^c Institute of Industrial Science, the University of Tokyo, Japan)
- P-7 Effect of concentration on hydrothermal carbonization of glucose
Koichi TAKEMOTO, Yukihiro MATSUMURA*
(Hiroshima University, Japan)
- P-8 Effect of reaction time on hydrothermal carbonization of pistachio nut shells
Miao LIU, Yukihiro MATSUMURA*
(Hiroshima University, Japan)