

Program (Oral presentations / Poster presentations)

197 oral presentations (27 in English and 170 in Japanese) and

87 poster presentations (19 in English and 68 in Japanese)

Note) Presentation ID in a box means the presentation in English.

Note) Poster sessions are held on Day 1 (Poster1) and Day 2 (Poster2).

Poster session Venue: 2nd, 3rd, and 4th floor in the 3rd Building
 Poster1: Sept 11 (Mon) 17:00 - 18:15 / Poster2: Sept 12 (Tue) 13:30 - 14:45

A1 Waste reduction/ Property analysis 【Sept 12 (Tue) 9:00–10:30 Venue#1】

Chair : Kohei Watanabe (Teikyo University) Co-chair : Yasuo Furusawa (Renewable Energy Institute)

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| | A1-1-O | (in Japanese) Understanding the Current State of Consumer Behaviours for Preventing Single-Use Plastics: Nationwide Realities and Acceptability through Awareness Campaign <i>Kyoto Prefectural University</i> ○Hajime Yamakawa | p.1 |
| | A1-2-O | (in Japanese) Research on the actual state of discharge due to differences in the collection method of product plastics <i>Toyama Prefectural University</i> ○Takashi Saeki, Yudai Morita | p.3 |
| | A1-3-O | (in Japanese) Feasibility and challenges of package-free sales of Japanese tea beverages <i>Kyoto Prefectural University</i> ○Natsumi Naba, Hajime Yamakawa | p.5 |
| | A1-4-O | (in Japanese) Effects of Unit-Based Pricing on Municipal Solid Waste in Akita-City <i>Akita University</i> ○Hiroataka Kumamaru | p.7 |
| | A1-5-O | (in Japanese) Scenario Analysis of Radioactively Contaminated Waste Management Options: Towards Final Disposal Outside Fukushima Prefecture <i>National Institute for Environmental Studies</i> ○Eriko Minari, Kasuo Yamada, Kazuto Endo, Masahiro Osako | p.9 |
| | A1-6-O | (in Japanese) Basic research on littering and scattered litter collection activities: Part 1 <i>Environmental Control Center Co., Ltd.</i> ○Ayako Kaneko, Ryo Hasegawa, Takahiro Suzuki, Pirika, Inc. Yoshikazu Miwa, Megu Tsuchimura, <i>National Institute for Environmental Studies</i> Rokuta Inaba, <i>Hokkaido University</i> Susumi Ohnuma, <i>National Institute for Environmental Studies</i> Masahiro Osako | p.11 |
| Poster1 | A1-7-P | (in Japanese) Analysis of the Relationship between the Demand for Food Delivery and Takeaway Services and the Associated Plastic Packaging Waste during the COVID-19 Pandemic <i>Kobe University</i> Mai Imuro, ○Tomohiro Tabata | p.13 |
| Poster2 | A1-8-P | (in Japanese) Implementation of COVID-19 Infection Prevention Measures in Municipal Solid Waste Collection Services <i>National Institute for Environmental Studies</i> ○Masato Yamada, Tomonori Ishigaki, Kosuke Kawai, Ryo Tajima | p.15 |
| Poster1 | A1-9-P | (in Japanese) Investigation of microplastic emissions via wastewater from a plastic recycling facility <i>Kyoto University</i> ○Miyabi Tsunematsu, Kazuyuki Oshita, Kenji Shiota, Masaki Takaoka | p.17 |
| Poster2 | A1-10-P | A survey study on Odor-Causing Substances from Livestock Waste <i>Anyang University</i> ○Hyeonjun Cho, Jinseok Yeom, Minsung Kim, Suchul Yoon | p.19 |

A2 Waste reduction/ Material flow analysis 【Sept 12 (Tue) 10:45–12:15 Venue#1】

Chair : Hirofumi Nakayama (Kyushu University) Co-chair : Yasuhiro Hirai (Kyoto University)

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| | A2-1-O | (in Japanese) A study of the economic evaluation of water refill spots for reusable bottles using conjoint analysis <i>Osaka University of Commerce</i> ○Aoto Matsumoto, <i>Doshisha University</i> Sadao Harada | p.21 |
| | A2-2-O | (in Japanese) A Study on Construction of Waste Paper Sorting Support System by Image Recognition Using Deep Learning <i>Kyushu University</i> ○Naoya Kojo, Takayuki Shimaoka, Yasuhiro Sugisaki | p.23 |
| | A2-3-O | Waste generation and characterization by tourism sectors in Jeju Island <i>Chungnam National University</i> ○Hakyun Song, Yong-Chul Jang, Kyunghoon Choi, Byeonghwan Kim, Youngsun Kwon, Chonghee Lee | p.25 |
| | A2-4-O | Waste Flow Analysis in Riverside Community: A Case Study of Kampung Melayu Subdistrict, Jakarta <i>National Institute for Environmental Studies</i> ○Aff Faiq Muhammad, Ryo Tajima | p.27 |
| | A2-5-O | (in Japanese) Consideration of Methods for Estimating Waste Plastic Flow at the Municipal Level <i>NTT Data Institute of Management Consulting, Inc.</i> The University of Kitakyushu ○Shin Okubo, The University of Kitakyushu Toru Matsumoto, Atsushi Fujiyama | p.29 |
| | A2-6-O | (in Japanese) Comparative study on survey methods for estimating the amount of plastic fishing gear discharged into the sea <i>Kyushu University</i> ○Fumiya Ishibashi, Hirofumi Nakayama, Satoko Seino, Takayuki Shimaoka | p.31 |
| Poster1 | A2-7-P | (in Japanese) Impact of awareness-raising campaigns on household waste generation <i>Gunma Prefectural Institute for Public Health and Environmental Sciences</i> ○Yoshinori Saitoh, <i>Kinki University</i> Yuichi Ishimura | p.33 |
| Poster2 | A2-8-P | (in Japanese) Basic Considerations for Establishing an Efficient Waste Sorting and Collection System in Business Facilities <i>Waseda University</i> Tianhao Cheng, ○Qinghan Liu, Daiki Kojima, Hiroshi Onoda | p.35 |

Poster1 A2-9-P (in Japanese) Estimation of Municipal Waste Plastics Flow in Hokkaido, Japan p.37
Hokkaido Research Organization ○Ken Asakura, Katsuyuki Yamaguchi, Hirohide Aga, Shinobu Niwa,
 Yoichiro Fukuda, Shinichiro Nagahora, Satoru Ono

A3 Public awareness/ Environmental education 【Sept 11 (Mon) 9:30–10:45 Venue#1】

Chair : Atsuko Hanashima (Osaka Sangyo University) Co-chair : Maiko Iwai (Hitachi Zosen)

A3-1-O (in Japanese) Examining the Impact of Others' Behavior on Individual Waste Reduction Practices p.39
Chuo University ○Mikiko Shinoki, *Yamagata University* Koji Abe

A3-2-O (in Japanese) The system of sorting recyclable waste with collaborative robots based in artificial intelligence and its environmental education p.41
Kawasaki Heavy Industry ○Miki Koyama, Yasutaka Honda, Hiroshi Nakano, Tsukasa Umemoto, Tadashi Katsuragi

A3-3-O (in Japanese) Impact of eco-mark and resource recycling information for plastic products on consumer behavior p.43
Ritsumeikan University ○Daisuke Tanaka, Sébastien M. R. Dente, Seiji Hashimoto

A3-4-O Content Analysis of Geopolymer Dissemination through Internet Video Sharing Platform p.45
Tokyo Institute of Technology ○Aura Amca Diputra, Fumitake Takahashi

A3-5-O Awareness of Athletes regarding Waste and Environmental Issues Brought about Sports p.47
Tokyo Institute of Technology ○Loren Chloe Balaoing, Naoya Abe

Poster2 A3-6-P (in Japanese) Campaing on food loss reduction by web-app for online broadcasting at food corner p.49
Okayama University ○Yasuhiro Matsui, *Okayama City* Ryota Inaba, *Daiei Kankyo Co., Ltd.* Haruna Takagawa

A4 Food loss and waste 【Sept 11 (Mon) 11:00–12:00 Venue#1】

Chair : Hajime Yamakawa (Kyoto Prefectural University) Co-chair : Yasuhiro Matsui (Okayama University)

A4-1-O Improving Food Loss Quantification in Milk Supply Chain: Case: Study in Japan and Mongolia p.51
Gakushuin University ○Erdenekhuu Unurjargal

A4-2-O (in Japanese) Research of Food Waste Reduction Using a Cloud-Based Automatic Weighing System: Effectiveness of Interventions Using Five Support Tools in Reducing Household Food Waste p.53
Kyoto Prefectural University ○Yasuko Seta, Hajime Yamakawa, *Taisho University* Tomoko Okayama,
Teikyo University Kohei Watanabe, *Tokyo University of Agriculture* Maki Nonomura

A4-3-O (in Japanese) Consumers' attitudes regarding leftovers at restaurants p.55
Taisho University Tomoko Okayama, Shu Nakamura, *Teikyo University* ○Kohei Watanabe

A4-4-O (in Japanese) Reducing Leftovers in University Cafeterias Using Nudges p.57
Taisho University ○Tomoko Okayama, Kaoru Homma

A5 Industrial waste 【Sept 11 (Mon) 13:30–15:00 Venue#1】

Chair : Shin Okubo (NTT Data Institute of Management Consulting) Co-chair : Yumi Matsuda (Takuma)

A5-1-O (in Japanese) Is the Bottom Mud of the Irrigation Pond Waste? Is it Sediment? p.59
AICO Co., Ltd. ○Minoru Tokita, *Tobishima Corporation* Masayuki Tsutsui,
AICO Co., Ltd. Takahiro Hirata, Jun-ichi Kojima,
Mud Recycling Association Shin-ichi Noguchi, Miho Nishikawa

A5-2-O (in Japanese) Study on the current status and issues of electronic manifest usage in industrial waste disposal businesses p.61
Japan Industrial Waste Information Center ○Motoki Sasaki, Hiroyoshi Fujiwara, Izumi Sasaki

A5-3-O (in Japanese) Implementation Status of Employee Training Programs on the Environment and Waste Treatment at Industrial Waste Generators p.63
Japan Industrial Waste Information Center ○Izumi Sasaki, Hiroyoshi Fujiwara, Motoki Sasaki

A5-4-O (in Japanese) Influence of Insulation Specifications on the Amount of Insulation Offcuts due to House Construction p.65
Shinshu University ○Taiju Ueno, Hideki Takamura

A5-5-O (in Japanese) Fixation of carbon dioxide from neutralization treatment of construction sludge p.67
Shibaura Institute of Technology ○Motoki Shiina, Koki Nakao, Shinya Inazumi,
Nozaki Kogyo Co. Ltd. Tetsuya Nozaki, Seiji Hayao, Hiroko Tsuchiya

A5-6-O (in Japanese) Applicability of waste glass cullet to the sand cushion of interlocking block pavement p.69
Osaka Institute of Technology ○Daiki Tateyama, Kazuaki Hioki,
Fujino Kogyo Co., Ltd. Koichi Yamamoto, Akira Nakaoka,
Kansai Geo and Environment Research Center Kenta Hattori

Poster1 A5-7-P (in Japanese) Study of the impact of end-of-life photovoltaic panels on the residual capacity of controlled-type landfill sites in Hokkaido, Japan p.71
Hokkaido Research Organization ○Yoichiro Fukuda, Ken Asakura, Katsuyuki Yamaguchi

B1 Waste management and planning (1) 【Sept 11 (Mon) 13:30–15:00 Venue#3】

Chair : Yasuo Horii (EX Research Institute) Co-chair : Hiroki Harada (Kyoto University)

B1-1-O (in Japanese) Study on incineration plant siting in urban area with a disaster prevention function 8 -Residents' consciousness survey around the Shibuya Incineration Plant adjacent to the downtown area- p.73
Nihon University ○Osamu Hashimoto, Katsuya Uozaki, Masaji Kaneshima,
Research Institute of Environmental Management, Administration and Maintenance of JAPAN Hiromi Mitsuhashi

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| B1-2-O | (in Japanese) Application of Mathematical Optimization to Waste Allocation among Waste-to-Energy Plants for Wide-Area Disposal <i>Kawasaki Heavy Industry</i> ○Yu Yamane, Kohei Hashimoto, Akihiro Kunimasa, Koya Takeda | p.75 |
| B1-3-O | (in Japanese) Pit crane altitude automatic operation system implemented with optimum route search simulation <i>Mitsubishi Heavy Industries</i> ○Shinji Matsumoto, Shun Gunji, Nobuharu Iwashita, Toshihiko Setoguchi, <i>Mitsubishi Heavy Industries Environmental & Chemical Engineering</i> Katsuhiko Takahashi, Keiichi Hayashi, Yoshinori Terasawa, Tomomichi Egusa | p.77 |
| B1-4-O | (in Japanese) Application of CO ₂ capture technology by solid sorbent to exhaust gas from refuse disposal facilities <i>Kawasaki Heavy Industry</i> ○Ryohei Numaguchi, Takeshi Okumura, Shohei Nishibe, Takahiro Yamaguchi, Norihiko Kumada, Toshifumi Nariai, Takuma Kikunaga, Munechiyo Iwamura, Koya Takeda | p.79 |
| B1-5-O | (in Japanese) Environmental performance of waste incineration plants with biogasification and methanation <i>EX Research Institute Ltd.</i> ○Tomio Nishimura, Gaku Hashimoto, Katsuhiko Yoshikawa, <i>Osaka Gas Co., Ltd.</i> Shinya Akimoto, Jun Tsubota | p.81 |
| B1-6-O | (in Japanese) Waste management systems recommended from landfill site <i>NPO Environmental Technical Support Network</i> ○Sotaro Higuchi | p.83 |
| Poster2 B1-7-P | (in Japanese) Environmental and Economic Evaluation of Waste Management Systems Focus on Infrastructure Integration <i>Waseda University</i> ○Nan Huang, Akihisa Ogawa, Hiroshi Onoda | p.85 |

B2 Waste management and planning (2) 【Sept 11 (Mon) 15:15–16:45 Venue#3】
Chair : Kazuei Ishii (Hokkaido University) Co-chair : Norikazu Nishida (Mie Prefecture)

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| B2-1-O | (in Japanese) Case Study on Sewage Treatment Cost Reduction by Completely Closed Self-Oxidation Process including Rehabilitaiton Period <i>Toyama Prefectural University</i> ○Masafumi Tateda, Ryoko Sekifuji, <i>Shouei Consultant Ltd., Co.</i> Yoshiki Takabe, Masashi Watanabe | p.87 |
| B2-2-O | (in Japanese) Study on an Optimal Matching Scheme for Plastic Waste Recycling based on Life Cycle Assessment <i>The University of Kitakyushu</i> ○Richao Cong, Atsushi Fujiyama, Toru Matsumoto | p.89 |
| B2-3-O | (in Japanese) Evaluation of the paper circulation project using social return on investment and SDGs evaluation based on this evaluation <i>The University of Kitakyushu</i> ○Atsushi Fujiyama, Miho Nagamatsu, Toru Matsumoto | p.91 |
| B2-4-O | (in Japanese) A prediction model of PET bottle and can collections by a recycling bin at public space <i>Tokyo Institute of Technology</i> ○Marina Wada, <i>KDDI Research</i> Masakuni Tsunazawa, Kouhei Sugiyama, <i>Tokyo Institute of Technology</i> Fumitake Takahashi | p.93 |
| B2-5-O | (in Japanese) Analysis of the current status on information provision measures and support systems for source separation and discharge of household waste in municipalities in Hokkaido <i>Hokkaido University</i> ○Yui Kawahara, Kazuei Ishii, Satoru Ochiai, Geun-Yong Ham, Kunihiro Kishi | p.93 |
| B2-6-O | Paddy Farmers' Perception of Solid Waste Compost as an Organic Fertilizer Supplement in Sri Lanka <i>Toyo University</i> ○Fernando Chamila Jeewanee, Aramaki Toshiya | p.97 |
| Poster1 B2-7-P | A feasibility study on the utilization of tea and coffee waste as a raw material in compost production in the Khartoum state- Sudan <i>Toyo University</i> ○Rania Elsadig, Toshiya Aramaki | p.99 |
| Poster2 B2-8-P | The Development of Urban Cleanliness Evaluation Indicators in A-City by The Analytic Hierarchy Process (AHP) <i>University of Seoul</i> ○Jeong-hyun Lee, Dong-kyu Park, Jai-young Lee | p.101 |

B3 Disaster waste management 【Sept 12 (Tue) 9:00–10:15 Venue#3】
Chair : Tomohiro Tabata (Kobe University) Co-chair : Ryo Tajima (National Institute for Environmental Studies)

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| B3-1-O | (in Japanese) Estimation of chemical emissions from business establishments including that of below-threshold in PRTR aiming chemically polluted disaster waste management plan <i>Osaka Metropolitan University</i> ○Ayumu Ikeda, Satoshi Mizutani, <i>Research Institute of Environment, Agriculture and Fisheries Osaka Prefecture</i> Satoshi Nakamura | p.103 |
| B3-2-O | (in Japanese) Inspection of near-infrared spectrum information acquisition method for waste composition estimation <i>Taisei Corporation</i> ○Kouzi Hashimoto, Ryohei Miyata, Hideya Ohkubo, <i>Pasco Corporation</i> Toshiaki Satoh, <i>Deep Sensing Initiatives, Inc.</i> Yukio Kosugi | p.105 |
| B3-3-O | (in Japanese) Issues of public-private partnership for disaster wastes disposal at temporary Storage Site - A case study on Hiroshima city - <i>fukken Co., Ltd.</i> ○Takashi Mikami, Yukie Kiruu, <i>hshigen</i> Nobuo Masatou | p.107 |
| B3-4-O | (in Japanese) Current situation of collaboration between local governments and residents for disaster waste preparedness <i>National Institute for Environmental Studies</i> ○Ryo Tajima, Junko Morishima, <i>Japan Waste Research Foundation</i> Yoshiyuki Natsume, Shohei Iida | p.109 |

- B3-5-O (in Japanese) Disaster Situation-aware Scenario for Disaster Debris Workshop with Projection Mapping System p.111
Nagoya University ○Nagahisa Hirayama, Kazuyasu Nomura, Nobuo Fukuwa

B4 Culture/ History of waste 【Sept 12 (Tue) 10:45–11:45 Venue#3】
Chair : Yasushi Matsufuji (SWAN-FUKUOKA) Co-chair : Kohei Nagaoka (Takuma)

- B4-1-O (in Japanese) Public Waste Collectors in Singapore p.113
Takushoku University ○Yasushi Yokozawa
- B4-2-O (in Japanese) The research on Self organization effects to solid waste management improvement project in foreign country and project effectiveness evaluation will do through the entropy p.115
Toyo University ○Akio Ishii
- B4-3-O (in Japanese) Seiichi Oi, professor at Kyoto Imperial University, elected to the Kyoto City Council p.117
Study group on waste culture and history ○Tatsuo Yamazaki
- B4-4-O (in Japanese) Responding to the 1991 Revision of the Waste Management and Public Cleansing Law by Local Governments -Case Study of Hachioji City- p.119
NPO Hachioji Citizen Activity Council ○Kazuo Nakagawa

B5 LCA/ Low-carbon society (1) 【Sept 11 (Mon) 9:30–10:45 Venue#3】
Chair : Rokuta Inaba (National Institute for Environmental Studies) Co-chair : Tomoko Okayama (Taisho University)

- B5-1-O (in Japanese) Creation of a logic model for plastic resource circulation p.121
National Institute for Environmental Studies ○Aya Yoshida,
Mitsubishi UFJ Research and Consulting Yamato Hosoi, Shingo Kanezawa, Masafumi Hagiwara, Toshiya Kayama
- B5-2-O (in Japanese) Greenhouse gas reduction by material replacement of plastics in household waste p.123
Kyoto University ○Junya Yano, Ebara Corporation Kazuki Hirota, Kyoto University Yasuhiro Hirai,
Advanced Science, Technology & Management Research Institute of KYOTO Shin-ichi Sakai
- B5-3-O (in Japanese) Demonstration of methanation using flue gas from waste incineration plant as feedstock p.125
Hitachi Zosen Corporation ○Naohiro Nakataya, Mariko Sakamoto, Sachiko Shigemasa, Sachiko Ohchi
- B5-4-O (in Japanese) Future scenarios on energy consumption and production related to combustible waste management in depopulation areas of Japan p.127
National Institute for Environmental Studies ○Kosuke Kawai, Ishikawa Prefectural University Takasei Kusube,
Kyoto University Kazuyuki Oshita
- B5-5-O (in Japanese) A Study on the Future of Plastic Recycling Based on Material Flow Analysis and CO₂ Emissions Calculation p.129
Mitsubishi Research Institute, Inc. ○Mei Nagase, Yumi Saito, Junichi Sakuda, Jiro Furuki
- Poster1 B5-6-P (in Japanese) Classification of trade-offs between material cycles/waste management and other fields p.131
National Institute for Environmental Studies ○Rokuta Inaba, Muhamad Afif Faiq, Haruhisa Yamamoto,
Kaoru Suzuki, Ryo Tajima, Kosuke Kawai, Aya Yoshida, Masahiro Oguchi, Tomohiro Tasaki

B6 LCA/ Low-carbon society (2) 【Sept 11 (Mon) 11:00–12:15 Venue#3】
Chair : Kosuke Kawai (National Institute for Environmental Studies) Co-chair : Geun-Yong Ham (Hokkaido University)

- B6-1-O (in Japanese) Scenarios for reducing greenhouse gas emissions from municipal solid waste incineration plants: Effect of CO₂ emission factor of electricity p.133
Ritsumeikan University ○Yichen Ge, Seiji Hashimoto
- B6-2-O (in Japanese) Study of a method for evaluating CO₂ emissions associated with the demolition and transportation of houses damaged by residential damage p.135
Nagoya University ○Hiroyasu Osugi, Nagahisa Hirayama
- B6-3-O (in Japanese) Optimal Facility Locating for Wide-Area Municipal Solid Waste Treatment: A Case Study of Kyoto Prefecture in 2050 p.137
Kyoto University ○Yasuhiro Hirai, Toi Makino, Junya Yano
- B6-4-O** A Study on greenhouse gas emissions from MSW incineration in South Korea p.139
Chungnam National University ○Chonghee Lee, Yong-Chul Jang, Kyoungheon Choi,
Choong Real Baek, Hakgyun Song
- B6-5-O** Life cycle assessment of the single use plastic bag ban in Kenya p.141
Kyoto University ○Isaac Omondi, Misuzu Asari
- Poster2 B6-6-P (in Japanese) Proposal of a Mathematical Optimization Model as a Theoretical Framework for the Introduction of CCUS Technologies into Waste Treatment Facilities p.143
Pacific Consultants Co., Ltd. ○Naoya Nagano, Hiroki Naoi, Yu Nagatomo, Madoka Yamamoto, Ryota Ii

C1 Packaging/ Plastics (1) 【Sept 11 (Mon) 15:15–16:45 Venue#4】
Chair : Jun Nakatani (The University of Tokyo) Co-chair : Teppei Nunoura (The University of Tokyo)

- C1-1-O (in Japanese) Development of Biodegradable Plastics as Alternative Materials for Shiitake Mushroom Spawning Caps p.145
Tottori University of Environmental Studies ○Hiroyuki Doyama, City of Hokota Reina Uchida,
Tottori University of Environmental Studies Sangyul Kim

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| | C1-2-O | (in Japanese) Discrimination of plastics by MT method using near-infrared spectral characteristics <i>Advanced Institute of Industrial Technology</i> ○Shigeomi Koshimizu, Kenichirou Koda | p.147 |
| | C1-3-O | (in Japanese) Resin analysis of the food container packing plastic and precaution of the distinction method <i>Tokyo Metropolitan Research Institute for Environmental Protection</i> ○Hiroyasu Koizumi, Yushi Terajima, Sukehisa Tatsuichi, Akira Hasegawa | p.149 |
| | C1-4-O | (in Japanese) Research on the collection and biogasification of biomass plastic (polylactic acid) <i>Osaka Gas Co., Ltd.</i> ○Jun Tsubota, Shinya Akimoto, Junpei Miyazaki | p.151 |
| | C1-5-O | (in Japanese) Recycle method of used diaper, addition of bag breaking function <i>Kurita Water Industries Ltd.</i> ○Mayu Umemoto, Takaaki Tokutomi | p.153 |
| | C1-6-O | (in Japanese) research on production of combustible gas from plastics using high temperature steam gasification technology <i>Nagasaki Institute of Applied Science</i> ○Takahiro Nakamichi, Kazuma Iwanaga, Ryusei Honda, Prefectural University of Kumamoto Yasuhiro Ishibashi, <i>Nagasaki Institute of Applied Science</i> Nobuaki Murakami | p.155 |
| Poster1 | C1-7-P | (in Japanese) A study of the improvement on analytical precision in various plastic analyses by near-infrared spectrophotometer <i>Tokyo Metropolitan Research Institute for Environmental Protection</i> ○Yushi Terajima, Sukehisa Tatsuichi, Akira Hasegawa, Hiroyasu Koizumi | p.157 |
| Poster2 | C1-8-P | (in Japanese) Design and experiment of vertical precipitation apparatus by waste plastics <i>Chubu University</i> Masao Yukumoto, Hisanori Hirate, ○Sera Tabata | p.159 |
| Poster1 | C1-9-P | (in Japanese) Shape Collapse of Thick-walled Polylactic Acid Mouldings with Metal Hydroxide Flame Retardants in Industrial Compost <i>Hitachi</i> ○Shunsuke Mori, <i>Hitachi Astemo</i> Toshiaki Ishii | p.161 |
| Poster2 | C1-10-P | Investigation of Marine Biodegradability and Biocompatibility of KP-PVA Eco-Friendly Packaging Materials <i>KAIST</i> ○Jaewook Myung | p.163 |

C2 Packaging/ Plastics (2) 【Sept 12 (Tue) 9:00–10:30 Venue#4】
Chair : Miwako Hata (EX Research Institute) Co-chair : Fumitake Takahashi (Tokyo Institute of Technology)

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| | C2-1-O | (in Japanese) An empirical study of plastic waste trade and international aid <i>Yamanashi Eiwa College</i> ○Kai Nomura, <i>Kinki University</i> Yuichi Ishimura | p.165 |
| | C2-2-O | (in Japanese) An Analysis of Recent Plastic Resource Circulation Policies of the United Kingdom and Japan from the Perspective of EPR <i>Waseda University</i> ○Chiaki Itabashi, Takashi Nozu | p.167 |
| | C2-3-O | (in Japanese) Plastic resin composition survey in the Chikugo area of Fukuoka (2 nd report) <i>Fukuoka University</i> ○Shinya Suzuki, Ikuyo Kikusawa, <i>The University of Kitakyushu</i> Atsushi Fujiyama, <i>Kyushu University</i> Yuriko Hayabuchi, <i>The University of Kitakyushu</i> Toru Matsumoto, <i>Kyushu University</i> Kayoko Kondo | p.169 |
| | C2-4-O | (in Japanese) Estimation of Potential Emissions of Plastic Waste and Analysis of Regional Factors in Japanese Municipalities <i>The University of Tokyo</i> ○Tomohiro Tabata, Jun Nakatani, Toru Hayashi, Tsuyoshi Fujita | p.171 |
| | C2-5-O | (in Japanese) Life cycle analysis on resource circulation system introducing PHBH food containers <i>Kyoto University</i> ○Daichi Yamada, Junya Yano, Hirotaro Sakai, Yasuhiro Hirai, <i>Advanced Science, Technology & Management Research Institute of KYOTO</i> Shin-ichi Sakai | p.173 |
| | C2-6-O | (in Japanese) Trade-off Analysis between plastic recycling and material substitution for decarbonization <i>The University of Tokyo</i> ○Kazuma Hirata, Jun Nakatani, Satoshi Ohara, Aya Misuta, Toru Hayashi, Tsuyoshi Fujita | p.175 |
| Poster1 | C2-7-P | (in Japanese) Concerns regarding the presence of chemical substances used as plastic additives in the circular use of plastics <i>National Institute for Environmental Studies</i> ○Masahiro Oguchi, Natsuko Kajiwara, Atsushi Terazono | p.177 |

C3 Packaging/ Plastics (3) 【Sept 12 (Tue) 10:45–12:00 Venue#4】
Chair : Yuko Saito (Tohoku University) Co-chair : Kazuhiro Nakaishi (EX Research Institute)

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| | C3-1-O | (in Japanese) Impact on Steel Can Recycling due to the Spread of COVID-19 <i>Dynax Urban Research Institute</i> ○Yoko Kitasaka, Shinichi Sakuma, <i>Japan Steel Can Recycling Association</i> Ryohei Nakata | p.179 |
| | C3-2-O | (in Japanese) Analysis of psychological determinants of pro-environmental behavior regarding plastic products <i>Kyoto University</i> ○Yuta Ando, Haruki Yokoi, Misuzu Asari | p.181 |
| | C3-3-O | (in Japanese) What are the potential consequences of the joint collection of plastic products, and how can we prevent them? <i>National Institute for Environmental Studies</i> ○Haruhisa Yamamoto, Rokuta Inaba, Masahiro Oguchi, Kosuke Kawai, <i>EX Research Institute Ltd.</i> Kayoko Ogawa, Yasuo Nemoto, <i>National Institute for Environmental Studies</i> Tomohiro Tasaki | p.183 |
| | C3-4-O | (in Japanese) Research on sector-specific issues in the value chain for building a plastic recovery system <i>Fukuoka University</i> ○Ikuyo Kikusawa, Shinya Suzuki | p.185 |

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| C3-5-O | (in Japanese) A Plastic Waste Separation and Recycling Project for The Floating Village on Tonle Sap Lake | Okayama University ○ Takeshi Fujiwara, Makoto Tsukiji, Habuer, Royal University of Phnom Penh Vin Spoann, Phat Chandara | p.187 |
| Poster2 C3-6-P | (in Japanese) Research on recovery methods and recyclability of waste plastics from commercial facilities | Fukuoka University ○ Ikuyo Kikusawa, Recotech Ei Nozaki, Hiroki Omura, Shinkoh Sangyo Tsuyoshi Tanaka, Fukuoka University Shigeru Yao, Shinya Suzuki | p.189 |

C4 C&D waste/ Other inorganic waste **【Sept 11 (Mon) 9:30–10:45 Venue#5】**
 Chair : Tohru Kamo (Waseda University) Co-chair : Taisuke Watanabe (EX Research Institute)

| | | | |
|----------------|--|--|-------|
| C4-1-O | (in Japanese) Nationwide survey on the shape of concrete block products reusing waste fresh concrete | Hokkaido University ○ Ryoma Kitagaki, Wakayama Ready-Mixed Concrete Industrial Association Yuki Ohmae, Mitoyo Sangyo Yumie Takeuchi | p.191 |
| C4-2-O | (in Japanese) Study on the utilization of byproducts for geopolymer synthesis | Obayashi Corp. ○ Koga Miyamoto, Toshihiko Miura, Yukinobu Kimura, Tetsunosuke Morotomi, Hiroshi Hasegawa | p.193 |
| C4-3-O | (in Japanese) A Study on Methods of Promoting the Use of Recycled Construction Sludge and Other Products | Japan Industrial Waste Management Foundation ○ Atsushi Yamawaki, Center for Environmental Science in Saitama Mikio Kawasaki, Advanced Construction Technology Center Hiroaki Niizuma | p.195 |
| C4-4-O | (in Japanese) Hexavalent chromium leaching behavior from concrete debris to seawater | National Institute for Environmental Studies Takayuki Honjo, ○ Hirofumi Sakanakura | p.197 |
| C4-5-O | (in Japanese) Potential of siding chips as a ground improvement material | Shibaura Institute of Technology ○ Haruma Kato, Shinya Inazumi, Arnest One Corporation Kousuke Kumanda, Takahisa Yoshida, Doboku-Chishitsu Co., Ltd. Ryo Hashimoto | p.199 |
| Poster1 C4-6-P | (in Japanese) Fundamental study on CO ₂ curing conditions for efficiently neutralizing alkali construction sludge treated by paper sludge ash | Yokohama National University ○ Aya Sakaguchi, Kimitoshi Hayano, Su Myat Mon, domi environmental solutions Hiromoto Yamauchi | p.201 |
| Poster2 C4-7-P | (in Japanese) Influencing factors of variation of boron elution from coal bottom ash | Miyazaki University ○ Michito Fukuda, Tomoo Sekito, Yutaka Dote | p.203 |

C5 Automobile/ Battery/ Heavy electrics **【Sept 11 (Mon) 11:00–12:00 Venue#5】**
 Chair : Atsushi Terazono (National Institute for Environmental Studies)
 Co-chair : Kiyohisa Terauchi (Japan Environmental Sanitation Center)

| | | | |
|----------------|---|---|-------|
| C5-1-O | (in Japanese) Issues in understanding the structure of international trade in used vehicles | Yamaguchi University ○ Arata Abe | p.205 |
| C5-2-O | (in Japanese) Evaluating of peak power of Photovoltaic modules using EL image | Toshiba Environmental Solutions Corporation ○ Yasuhiro Morosawa, Nobuyuki Kumakura, Mitsuharu Okada, Kouji Takizawa, Kouichi Okada | p.207 |
| C5-3-O | (in Japanese) Fluorine Recovery from Spent Small Lithium-ion Batteries | Tohoku University Yoshinori Morita, ○ Yuko Saito, Shogo Kumagai, Tomohito Kameda, Toshikazu Shiratori, Toshiaki Yoshioka | p.209 |
| C5-4-O | (in Japanese) Research on the reception performance of RFID tags in detecting lithium-ion batteries using RFID tags | Kyushu University ○ Eriko Aibara, Takayuki Shimaoka, Koji Sakakibara, Kenji Ito, Haruichi Kanaya | p.211 |
| Poster1 C5-5-P | (in Japanese) Study of sample preparation method for fluorescent X-ray analysis of recycled lithium-ion battery raw materials | Rigaku ○ Yiqun Wang, Wataru Matsuda, Hikari Takahara, Takao Moriyama | p.213 |
| Poster2 C5-6-P | (in Japanese) The importance of efficient collection system: Survey on the current situation of End-of-Life management of photovoltaic panels | National Institute for Environmental Studies ○ Haruhisa Yamamoto, Muhamad Afif Faiq, Eriko Minari, Guida Yago | p.215 |

C6 WEEEs **【Sept 12 (Tue) 9:00–10:30 Venue#5】**
 Chair : Hideki Miyakawa (Veolia Japan) Co-chair : Naohisa Yamaguchi (EX Research Institute)

| | | | |
|--------|---|---|-------|
| C6-1-O | (in Japanese) Effects of Iron on Waste Printed Circuit Boards and Analysis of the Reaction Mechanism | Tohoku University ○ Wataru Shimomura, Yuko Saito, Shogo Kumagai, Tomohito Kameda, DOWA Metals & Mining Co., Ltd. Satoshi Nakagawara, Akiyoshi Horiuchi, Hiromitsu Watanabe, Tohoku University Toshiaki Yoshioka | p.217 |
| C6-2-O | (in Japanese) Examination of Optimization Method of Sorting Conditions Considering Seasonal Fluctuation in the Plastic Input Material Composition Ratio in Electrostatic Separation | Mitsubishi Electric ○ Shinji Kuroda, Masaru Kinugawa, Yasuhiro Nakamura, Shinsuke Miki, Kazunari Tsutsui | p.219 |

- C6-3-O (in Japanese) Ignition Incidents Caused by Lithium-Ion Batteries in Waste Treatment Facilities p.221
National Institute for Environmental Studies ○Atsushi Terazono, Masahiro Oguchi,
Mizuho Research & Technologies Toru Hagiwara, Hiromitsu Tomozawa
- C6-4-O (in Japanese) Research Study on Expanding the Reuse of Used Home Appliances (PfR) p.223
 -Results of a study on PfR projects by Yamada Holdings Co., Ltd.
Kyushu University ○Xinran Guo, Kayoko Kondo, *YAMADA Holdings Co., Ltd.* Kouichi Kiyomura
- C6-5-O (in Japanese) Construction of low-environmental-impact batteries and investigation of p.225
 environmental impact assessment at the time of their disposal
NTT Device Technology Labs, NTT Corporation ○Masahiko Hayashi, Shuhei Sakamoto, Mikayo Iwata, Sho Okubo
 Masaya Nohara, Hiroaki Taguchi, Atsushi Aratake
- C6-6-O (in Japanese) Durability evaluation method of flame retardant recycled materials using p.227
 polypropylene parts collected from waste home appliances
SHARP ○Hiromichi Ueda, Tatsuya Arai, Akihide Toda

C7 Composting/ Processing to feed [Sept 11 (Mon) 9:30–10:45 Venue#6]

Chair : Mitsuhiro Koyama (Nagasaki University) Co-chair : Kazuei Ishii (Hokkaido University)

- C7-1-O Improvement of Composting Efficiency in Kaluthara Composting plant, Sri Lanka through p.229
 Introduction of a Forced Aeration System
EX Research Institute Ltd. ○Cherki Mohamed Hamza, Sato Naofumi,
Sri Lanka Waste Management Authority Nalin Mannapperruma, Palitha Udayanaga,
Peradeniya University Anurudda Karunarathna
- C7-2-O Composting Strategies Using Agricultural Waste for Recirculation of Agricultural Organic Resources p.231
Kyonggi University ○Donggyu Bang, Soonwoong Chang, Van Hong Thi Pham,
National Institute of Agricultural Science JaeHong Shim, *Kyonggi University* Woojin Chung
- C7-3-O Effect of leachates' inoculation and particle size on the composting time of the organic fraction of p.233
 municipal solid waste in Bordo Poniente, Mexico City
CIEMAD IPN ○Tovar-Galvez Luis, Rodriguez-Tapia Claudia
- C7-4-O (in Japanese) Increasing Productivity with solar cell-powered electrokinetic treatment p.235
Tokyo University of Agriculture ○Narong Touch, Kohei Ogawa, Takahiko Nakamura
- C7-5-O (in Japanese) Study on numerical modeling of ammonia deodorization by a glass foaming material p.237
Hokkaido University ○Ayano Nakashima, Satoru Ochiai, Geun-Yong Ham, Kazuei Ishii
- Poster1 C7-6-P (in Japanese) Study on the stability of compost quality based on analysis of N and P in the p.239
 anaerobic digestion facility for food waste
Hokkaido University ○Yoshiyuki Azuma, Geun-Yong Ham, Kazuei Ishii, Satoru Ochiai

C8 Conversion to biogas and fuel [Sept 11 (Mon) 11:00–12:15 Venue#6]

Chair : Hiroyuki Daimon (Toyohashi University of Technology) Co-chair : Naohisa Yashiro (Fuji Clean)

- C8-1-O (in Japanese) Fundamental Study of Inhibition Factors in Anaerobic Digestion at a Biogas p.241
 Plant for Food Waste
Pacific Consultants ○Taichi Endo, *Hokkaido University* Kazuei Ishii, Satoru Ochiai, Geun-Yong HAM
- C8-2-O (in Japanese) Landfill avoidance by carbonization of organic waste and concept of coal p.243
 replacement in steelmaking process
Nippon Steel Corporation ○Masahiro Sekiya, Kazuaki Kobayashi, Hiroyuki Yoshino
- C8-3-O (in Japanese) Ethanol fermentation and assimilation of protein using protein sources from p.245
 food wastes
Fukuoka University ○Kenma Kato, Nana Ishida, Masatoshi Todaka, Mikiji Shigematsu
- C8-4-O Catalyst efficiency evaluation study according to Ni catalyst for DRM (Dry Reforming of Methane) p.247
 application in bio facility
Kyonggi University ○Ga Young Lim, Ha Young Cho, Jeong Yoon Ahn, Woo Jin Chung, Soon Woong Chang
- C8-5-O Bioaugmentation using genetically overexpressed *Clostridium acetobutylicum* ATCC 824 for p.249
 biohydrogen production
Yonsei University ○Hwan-Hong Joo, Young-Bo Sim, Saint Moon Kim, Jisu Yang,
 Ashutosh Kumar Pandey, Jeun Ko, Youngkyu Lee, Sang-Hyouon Kim
- Poster2 C8-6-P (in Japanese) A biomethanation reactor that keeps the liquid phase in a foamy state p.251
Osaka Institute of Technology ○Hanhan Ding, Yasunori Kosaki
- Poster1 C8-7-P Anaerobic digestion evaluation to get AI (artificial intelligence) applicable data with a variable p.253
 organic loading rate (OLR) and microbial analysis
Kyonggi University ○Min Gyu Kim, Su Hwan Kim, Soon Woong Chang, Woo Jin Chung
- Poster2 C8-8-P (in Japanese) An examination on model of biogasification and methanation in waste p.255
 incineration plants
EX Research Institute Ltd. ○Gaku Hashimoto, Tomio Nishimura, Katsuhiko Yoshikawa,
Osaka Gas Co., Ltd. Shinya Akimoto, Jun Tsubota

| C9 Methane fermentation (1) | | 【Sept 11 (Mon) 13:30–15:00 Venue#6】 |
|--|---|---|
| | | Chair : Kazunori Machikawa (Fuji Clean) Co-chair : Kiyohiko Nakasaki (Soka University) |
| C9-1-O | (in Japanese) Performance of anaerobic membrane bioreactor for liquid dairy biomass treatment | p.257 |
| | | <i>Kobe University</i> ○Fumihito Ikeda, Gen Yoshida, Ikko Ihara |
| C9-2-O | (in Japanese) Mitigation of ammonia inhibition in continuous operation of anaerobic digestion by addition of biochar | p.259 |
| | | <i>Kobe University</i> ○Kazutaka Ueno, Gen Yoshida, Mohamed Farghali, Ikko Ihara, <i>Obihiro University of Agriculture and Veterinary Medicine</i> Kazutaka Umezu |
| C9-3-O | (in Japanese) Effect of zero-valent iron addition during anaerobic digestion on methane concentration and methane production | p.261 |
| | | ○Jun Takezaki, Akira Akashi |
| C9-4-O | (in Japanese) Effect of pre-pulverization treatment of energy crop <i>Miscanthus giganteus</i> on methane fermentation | p.263 |
| | | <i>Hokkaido University</i> ○Satoru Ochiai, Taiga Tanaka, Geun-Yong Ham, Kazuei Ishii |
| C9-5-O | (in Japanese) Characteristics of biochar produced by pyrolysis and loaded with ash from biomass and its effect on anaerobic digestion | p.265 |
| | | <i>National Institute for Environmental Studies</i> ○Takuro Kobayashi, Hidetoshi Kuramochi |
| C9-6-O | (in Japanese) Analysis and understanding of dynamics of bacterial flora during anaerobic fermentative decomposition of glycerol | p.267 |
| | | <i>Osaka Metropolitan University College of Technology</i> Kensuke Kurahashi, <i>Osaka Metropolitan University</i> Kenta Michishige, ○Hayato Tokumoto |
| Poster1 C9-7-P | (in Japanese) Investigation of Recycling by Separating and Concentrating Ammonia Nitrogen Contained in Methane Fermentation Digestive Fluid | p.269 |
| | | <i>Mie Prefecture Industrial Research Institute</i> ○Shinya Matsuura, Masaki Murayama, Akihiro Maegawa, <i>Daiei Kogyo Corporation</i> Takayoshi Kawaoka, Yasuyuki Kanzaki |
| Poster2 C9-8-P | (in Japanese) Scale-up verification of anaerobic fermentation process using minivials and pilot plant | p.271 |
| | | <i>Idemitsu Engineering Co., Ltd.</i> ○Katsu Miyazaki, Motohito Hayashi, Toshihisa Konishi, Riku Masuda, Satoshi Morita, <i>Osaka Metropolitan University College of Technology</i> Kensuke Kurahashi, <i>Osaka Metropolitan University</i> Kazuya Okamoto, Hayato Tokumoto |
| C10 Methane fermentation (2) | | 【Sept 11 (Mon) 15:15–16:30 Venue#6】 |
| | | Chair : Jun Takezaki (Kobelco Eco-Solutions) Co-chair : Hiroyuki Daimon (ToyoHashi University of Technology) |
| C10-1-O | (in Japanese) Operation status of the first vertical dry methane fermentation system in Japan | p.273 |
| | | <i>FUJI CLEAN Co., Ltd.</i> Kazunori Machikawa, ○Naohisa Yashiro, Hisato Kinjo, <i>ToyoHashi University of Technology</i> Hikaru Kaneko, Hiroyuki Daimon |
| C10-2-O | (in Japanese) Evaluation of nutrient leaching and algal growth characteristics by anaerobic digestate pellets for marine fertilization | p.275 |
| | | <i>Kobe University</i> ○Takuma Kawai, Gen Yoshida, Ikko Ihara, <i>Hiroshima University</i> Satoshi Asaoka |
| C10-3-O | (in Japanese) Effect of Voltage Application and Various Accelerators on Methane Production Efficiency in Anaerobic Digestion | p.277 |
| | | <i>ToyoHashi University of Technology</i> ○Mao Miyazato, Hironosuke Imai, <i>ToyoHashi Biomass Solutions</i> Yoichi Atsuta, <i>ToyoHashi University of Technology</i> Hiroyuki Daimon |
| C10-4-O | (in Japanese) Study on the change of parameters of food waste CSSTR methane fermentation system during load raising shock | p.279 |
| | | <i>Tohoku University</i> ○Xu Wang, Yuanyuan Ren, Qingkang Zeng, Yuyou Li |
| C10-5-O | Assessing the Practicality of an Artificial Neural Network (ANN) Model for Monitoring and Forecasting the Continuous Anaerobic Digestion of Waste Sludge | p.281 |
| | | <i>Yonsei University</i> ○Soyoung Park, Ashutosh Kumar Pandey, Gi-Beom Kim, Sang-Hyoun Kim |
| Poster1 C10-6-P | (in Japanese) Study on Selection of Cow Manure-derived Biogas Utilization Methods Considering Regional Conditions for Decarbonized Society | p.283 |
| | | <i>Hokkaido University</i> ○Minoru Takahashi, Kazuei Ishii, Satoru Ochiai, Geun-Yong Ham |
| Poster2 C10-7-P | (in Japanese) Study on the Feasibility of Microalgae Cultivation and Harvesting by Using dialysis bags | p.285 |
| | | <i>Hokkaido University</i> ○Keita Sawada, Jumana Al-mallahi, Kazuei Ishii, Satoru Ochiai, Geun-Yong Ham |
| C11 Sludge/ Other organic waste | | 【Sept 12 (Tue) 9:00–10:15 Venue#6】 |
| | | Chair : Satoru Ochiai (Hokkaido University) Co-chair : Nobusuke Kobayashi (Gifu University) |
| C11-1-O | Optimization of Selective Oxidation Catalyst Process for Hydrogen Sulfide Resource Recovery | p.287 |
| | | <i>Kyonggi University</i> ○Jun Oh Kim, Sung Su Kim, Soonwoong Chang |
| C11-2-O | (in Japanese) Fertilization Tests of MAP Recovered from Sewage for Germination and Growth of <i>Zostera marina</i> | p.289 |
| | | <i>Ritsumeikan University</i> ○Yuki Tanabe, Satoshi Soda |
| C11-3-O | (in Japanese) Selective removal of heavy metals from incinerated ash of sewage sludge | p.291 |
| | | <i>Fukuoka Institute of Technology</i> ○Hironori Tsuru, Takuya Yoshida, Hironari Kubo |
| C11-4-O | (in Japanese) Estimation of Drying Acceleration Mechanism | p.293 |
| | | <i>Gifu University</i> ○Ryoma Hayakawa, Nobusuke Kobayashi, <i>Gen Gen Corporation</i> Takumi Ito, Hironari Oki |

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| C11-5-O | (in Japanese) Energy recovery with non-fossil fuels in metal recycling furnace | p.295 |
| | <i>Nagoya University</i> ○Hiromitsu Watanabe, Yasuaki Ueki, Ryo Yoshiie, Ichiro Naruse, <i>DOWA Metals & Mining Co., Ltd.</i> Yusuke Oshima, Satoshi Nakagawara | |
| Poster1 | C11-6-P Carbon removal role and certification standards for biochar | p.297 |
| | <i>The University of Seoul</i> ○Soyee Park, Jai-Young Lee | |

C12 Food waste/ Garbage **[Sept 12 (Tue) 10:45–12:00 Venue#6]**
 Chair : Nobusuke Kobayashi (Gifu University) Co-chair : Yasuaki Ueki (Nagoya University)

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|----------------|---|-------|
| C12-1-O | Research on the effect of recirculation on two-phase anaerobic fermentation system of food waste and paper waste | p.299 |
| | <i>Tohoku University</i> ○Qingkang Zeng, Yuanyuan Ren, Yu-you Li | |
| C12-2-O | (in Japanese) Proposal of the structure of anode chamber of steelmaking slag and food waste-used sediment microbial fuel cell | p.301 |
| | <i>Tokyo University of Agriculture</i> ○Kota Shigetomi, Narong Touch, Takahiko Nakamura, <i>Tokyo Metropolitan University</i> Xiao Xiao | |
| C12-3-O | (in Japanese) Establishment of a new valorisation in compliance with Black Soldier Fly (<i>Hermetia illucens</i>) Japanese production guidelines. | p.303 |
| | <i>Kagawa University</i> ○Akane Hirokawa, <i>HIMEJI KOUN</i> Shigehiko Nakamura, <i>Insect Business Research and Development Platform</i> Yasuhiro Fujitani, <i>Kagawa Prefecture Eastern Regional Livestock Hygiene</i> Koichi Tanaka, Yasuhiro Izumikawa, <i>Kagawa University</i> Yoshiki Matsumoto | |
| C12-4-O | (in Japanese) Microbial community structure from an organic waste treatment facility and the effects of artificially controlled environments | p.305 |
| | <i>komham</i> ○Hajime Morimoto | |
| C12-5-O | (in Japanese) Effect of activation treatment conditions on pore structure and specific surface area of rice husk activated carbon | p.307 |
| | <i>Saitama Institute of Technology</i> Shunya Shiratori, Souhei Ooki, ○Teruhisa Hongo | |
| Poster2 | C12-6-P (in Japanese) Development of food waste collection and solid recovery system for high rise apartment in Korea (Focusing on background and process) | p.309 |
| | <i>University of Seoul</i> ○Donghoon Lee, <i>HYENA</i> Kyeongsik Kim, Doojae Lee, <i>KTL</i> Yongwoo Jeon | |
| Poster2 | C12-7-P (in Japanese) Development of food waste collection and solid recovery system for high rise apartment in Korea (2) (Focusing on the quality characteristics of recovered solid as recycling materials) | p.311 |
| | <i>University of Seoul</i> Donghoon Lee, Donha Choi, Hyo Kim, Hyunwook Kim, <i>KTL</i> ○Yongwoo Jeon, <i>HYENA</i> Kyeongsik Kim, Doojae Lee, <i>Andong National University</i> Taedong Kim | |
| Poster1 | C12-8-P (in Japanese) Study on the recovery potential of nitrogen and phosphorus and GHG Emissions from Biomass Waste Management Systems in Japan | p.313 |
| | <i>Hokkaido University</i> ○Geun-Yong Ham, Nanako Shinoda, Kazuei Ishii, Satoru Ochiai | |
| Poster1 | C12-9-P (in Japanese) Prediction of General Waste Discharge in Fukuoka City by Multiple Regression Analysis Using Retail Sales Data | p.315 |
| | <i>Kyushu University</i> ○Masaya Hamachi, Takayuki Shimaoka, Yasuhiro Sugisaki | |

C13 Recovery of valuables **[Sept 11 (Mon) 15:15–16:30 Venue#1]**
 Chair : Shogo Kumagai (Tohoku University) Co-chair : Osamu Yamamoto (EX Research Institute)

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| C13-1-O | The recovery of vanadium from VTM minerals by CaO roasting and hydrometallurgy processes | p.317 |
| | <i>Korea Institute of Geoscience and Mineral Resources</i> ○Dong Ju Shin, Yong Yeon Joo, Dongseok Lee, Shun Myung Shin | |
| C13-2-O | (Canceled) | |
| C13-3-O | Shape-Specific Recovery of Copper and Poly(vinyl chloride) from Waste Wire Harness Cables using Swelling and Subsequent Ball Milling | p.321 |
| | <i>Tohoku University</i> ○Harendra Kumar, Shogo Kumagai, Yuko Saito, Toshiaki Yoshioka | |
| C13-4-O | (in Japanese) Basic study on the preparation of high purity silica material from coal ash | p.323 |
| | <i>Mitsubishi UBE Cement Corporation</i> ○Eiji Maruya, Youichi Ueda, Tomoaki Washio, Atsushi Yamaguchi | |
| C13-5-O | (in Japanese) Recovery of heavy metals and phosphate with urine or sewage | p.325 |
| | <i>Ryukoku University</i> ○Hiromoto Koshikawa, <i>Shimadzu Access Corporation</i> Yoshio Kikukawa, <i>Nishihara Engineering Co., Ltd.</i> Yuki Taniguchi | |
| Poster2 | C13-6-P (in Japanese) Development of treatment and nickel recovery technology which using electroless plating reaction for electroless nickel plating waste solution. | p.327 |
| | <i>Kotoku Cleaner Corpration</i> ○Shotaro Yukawa, Ryo Seko, Hiroyuki Kamide | |
| Poster2 | C13-7-P Reclaim of Waste Photoresister Thinners from Semiconductor Industry by Enhanced Distillation Techniques | p.329 |
| | <i>Yeungnam University</i> ○Moonyong Lee, <i>UNIST</i> Yus Donald Chaniago | |
| Poster1 | C13-8-P Analysis of factors affecting DES absorption capacity: Observation of differences by constituent elements of DES using tetravalent ammonium salts and polyamines | p.331 |
| | <i>Chungbuk National University</i> ○Seokho Kwon, Minseok Park, Jaehan Jo, Dongyon Choi, Seonho Kim, Dongwoo Kang | |

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| Poster2 | C13-9-P | Simultaneous Treatment of Carbon Dioxide and Desalination Brine Using KOH <i>Yonsei University</i> ○Dongwook Lee, Won yong Choi, Kyumin Jang, Eunsil Kim, Jinwon Park | p.333 |
| Poster1 | C13-10-P | The recovery of zinc from EAFD wastes by hydrometallurgy process <i>Korea Institute of Geoscience and Mineral Resources</i> ○Shun Myung Shin, Yong Yeon Joo, Dong Ju Shin, Dongseok Lee | p.335 |
| Poster2 | C13-11-P | Adaptation of organic supporting electrolyte for extension of potential window and energy recovery in redox-mediated electro dialysis <i>Kongju National University</i> ○Hyunjin Kim, Gamin Kim, Minhui Kim, Choonsoo Kim | p.337 |
| Poster1 | C13-12-P | Effective Recovery of Rare Earth Elements from Coal Ash Wastes by a Modified Sequential Extraction Procedure <i>KonKuk University</i> Siyu Chen, Sang Woon Woo, ○Han.S. Kim | p.339 |

D1 Incineration **【Sept 11 (Mon) 13:30–15:00 Venue#2】**
Chair : Keisuke Edazawa (Pacific Consultants) Co-chair : Naomichi Fukuda (Nippon Steel Engineering)

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| | D1-1-O | (in Japanese) Relationship between Homogenization and Pit Crane Scatter Operation in General Waste Incineration Plant <i>Fukushima University</i> ○Yuki Hakkei, Yoshiyuki Higuchi | p.341 |
| | D1-2-O | (in Japanese) Application of AI/IoT technology in the waste incinerator facilities (III) <i>Mitsubishi Heavy Industries Environmental & Chemical Engineering</i> ○Mana Kato, Wataru Suzuki, Tomomichi Egusa, Yoshinori Terasawa, Tomohiro Harada | p.343 |
| | D1-3-O | (in Japanese) Development of a refuse pit 3D layered model with refuse attribute information <i>TAKUMA</i> ○Ryoichi Sekine, Shou Nakamoto, Kazuhiro Koga, Hiroyuki Fujikawa, <i>Okayama University</i> Takeshi Fujiwara | p.345 |
| | D1-4-O | (in Japanese) A Study on the Application of Reinforcement Learning to the Operation of Dust Feeders of Stoker-type Refuse Incinerators <i>Mitsubishi Heavy Industries</i> ○Shunya Sasaki, Takashi Ikeda, Toshihiko Setoguchi, Junji Imada | p.347 |
| | D1-5-O | (in Japanese) Realization of long-term stable operation of waste-to-energy plants with AI technology <i>Hitachi Zosen Corporation</i> ○Akifumi Ise, Hisashi Tetsutani, Chikako Nishihara, Yukio Onuki, Shinji Motoyama, Sachiko Shigemasa | p.349 |
| | D1-6-O | (in Japanese) Reduction of steam volume fluctuation on waste disposal facilities by control based on prediction using machine learning <i>Kobelco Eco-Solutions</i> ○Ayato Shibazaki, Hiroki Fukukawa, Kei Watanabe, Katsuyoshi Tanida, Nobuhiro Okuzumi | p.351 |
| Poster1 | D1-7-P | (in Japanese) Fundamental Study on Waste Combustion in the Vertical Incinerator <i>Osaka Metropolitan University College of Technology</i> ○Kunihiko Namba, <i>PLANTEC Inc.</i> Kosuke Iwanaga, Soichiro Makihara, <i>Yoshimoto Engineer Design Office</i> Takamitsu Yoshimoto | p.353 |
| Poster2 | D1-8-P | (in Japanese) Numerical simulation of rotary combustor using DEM-CFD method <i>Kobelco Eco-Solutions</i> ○Naoko Inoue, Yoshihiro Kurisu, Tpsiya Tada, Jun Fujita, Yoshio Kajihara | p.355 |
| Poster1 | D1-9-P | (in Japanese) Investigation of the combustion mechanism of a Vertical Combustor using a small experimental furnace <i>PLANTEC Inc.</i> ○Soichiro Makihara, Kosuke Iwanaga, Akihiro Takeyama, <i>Osaka Metropolitan University College of Technology</i> Kunihiko Namba, <i>Yoshimoto Engineer Design Office</i> Takamitsu Yoshimoto | p.357 |
| Poster2 | D1-10-P | (in Japanese) Characteristics of pyrolysis and combustion characteristics of solid waste under high concentration of CO ₂ atmosphere <i>Hokkaido University</i> ○Takeshi Yamauchi, In-hee Huang, Yasumasa Tojo, Takayuki Matsuo, <i>PLANTEC Inc.</i> Kengo Masuda | p.359 |
| Poster1 | D1-11-P | (in Japanese) Development of a uniformity index of waste mixing in the pit yard of incineration facility <i>Okayama University</i> ○Takeshi Fujiwara, Sou Ogawa, <i>TAKUMA</i> Ryoichi Sekine | p.361 |
| Poster2 | D1-12-P | A Study on the Combustion reaction analysis of multi-stage cyclone pre-heater and pre-calcining furnace when waste plastic auxiliary fuel is used in cement firing process <i>Kongju National University</i> ○Myeongjong Lee, Jimin Jeon, Guhoe Lee, Jaehyung Kim, San Kang, Wootae Kim, Secheon Oh | p.363 |

D2 Pyrolysis/ Gasification/ Melting **【Sept 11 (Mon) 9:30–10:45 Venue#2】**
Chair : Masahiro Tozaki (Takuma) Co-chair : Takahiro Masuda (Takuma)

| | | | |
|--|--------|---|-------|
| | D2-1-O | (in Japanese) Understanding the gasification characteristics of dried sludge using a two-stage fluidized bed reactor system <i>Hitachi Zosen Corporation</i> ○Satoshi Uehara, Satoshi Okumura, <i>National Institute of Advanced Industrial Science and Technology</i> Sharma Atul | p.365 |
| | D2-2-O | (in Japanese) Development of direct biomass fuel cells for effective use of unutilized biomass <i>Central Research Institute of Electric Power Industry</i> ○Makoto Kawase, Akifumi Ido | p.367 |
| | D2-3-O | (in Japanese) Studies on the Production of Biofuels such as SAF from Biomass and Waste Plastics <i>REVO International Inc.</i> Shoi Koshikawa, Yuki Yokoyama, Syun Tanikaga, ○Kotetsu Matsunaga | p.369 |
| | D2-4-O | (in Japanese) Combustion quality evaluation of biomass coke in shaft-type gasification and melting furnace <i>Nippon Steel Engineering</i> ○Naomichi Fukuda, Kazuki Matsui, Jun Koike, Junichi Takada, Tooru Izumiya | p.371 |

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|----------------|---|-------|
| D2-5-O | (in Japanese) Development of energy-saving technology for a melting furnace using RPF as a combustion improver | p.373 |
| | <i>Kubota Corporation</i> ○Yasumasa Hirato, Fumiki Hoshio, Shigenori Inoue, Eiichi Tsuji | |
| Poster1 D2-6-P | (in Japanese) Basic Research of Pyrolysis Characteristics of Municipal Solid Waste for Advanced Waste Utilization | p.375 |
| | <i>Kyoto University</i> ○Wenxi Zhao, Hiroki Harada, Sylwia Oleszek, Kenji Shiota, Masaki Takaoka | |
| Poster2 D2-7-P | (in Japanese) Studies on the suppression of hydrochloric acid gas generation during thermal decomposition of mixed waste plastics | p.377 |
| | <i>University of Toyama</i> ○Shintarou Hirose, Guiqing Liu, ZE Energy Inc. Hiroshi Sekiguchi, Kouji Kobayashi, Hiromichi Morii | |

D3 Pyrolysis/ Gasification/ Carbonization 【Sept 11 (Mon) 11:00–12:15 Venue#2】

Chair : Masaki Takaoka (Kyoto University) Co-chair : Kazuyuki Oshita (Kyoto University)

| | | |
|-----------------------|--|-------|
| D3-1-O | (in Japanese) Pyrolysis Behavior of Sewage Sludge toward Energy and Resource Recovery | p.379 |
| | <i>Kyoto University</i> ○Ryoka Mitsui, Hiroki Harada, Hitachi Zosen Corporation Yuya Sakurai, Kyoto University Kenji Shiota, Masaki Takaoka | |
| D3-2-O | Co-pyrolysis characteristics of vacuum residue and bio-oil | p.381 |
| | <i>Tohoku University</i> ○Miranti Budi Kusumawati, Shogo Kumagai, Yuko Saito, Toshiaki Yoshioka | |
| D3-3-O | Low-Temperature Pyrolysis Characteristics of Tire Rubber | p.383 |
| | <i>Tohoku University</i> ○Awosu Emmanuel, Yoshioka Toshiaki, Kumagai Shogo, Saito Yuko, Hirano Yuka, Bridgestone Corporation Tahara Seiichi, Homma Masahiro, Hojo Masahiro | |
| D3-4-O | (in Japanese) Carbonization behavior of nitrile butadiene rubber pyrolysis residue under inert gas atmosphere | p.385 |
| | <i>Gunma Industrial Technology Center</i> ○Koki Onda, Yosuke Watanuki, Motohiro Watanabe, Mitsumine Industry Co., Ltd. Shin-ichi Murakami | |
| D3-5-O | (in Japanese) Reduction characteristics of iron oxide by waste plastic and woody biomass | p.387 |
| | <i>Nagoya University</i> ○Kohei Kada, Yasuaki Ueki, Ryo Yoshiie, Ichiro Naruse | |
| Poster1 D3-6-P | A feasibility on Bio-coal with Hydrothermal carbonization by Organic Waste as a Solid Fuel | p.389 |
| | <i>University of Seoul</i> ○Hyewon Park, Jai-Young Lee | |

D4 Gas treatment and monitoring 【Sept 11 (Mon) 15:15–16:45 Venue#2】

Chair : Tadashi Yokoyama (JFE Engineering) Co-chair : Takashi Nagayama (Kubota)

| | | |
|----------------|---|-------|
| D4-1-O | (in Japanese) Suppression of 1,4-dioxane by environmentally friendly high reactive slaked lime | p.391 |
| | <i>Okutama Kogyo</i> ○Shoutarou Matsuno, Tetsuya Morikawa | |
| D4-2-O | (in Japanese) Development of energy-saving CO ₂ separation and capture | p.393 |
| | <i>TAKUMA</i> ○Muneharu Fujikawa, Kyouhei Kenmotsu, Kazuhiro Sato, Takahiro Masuda, Kenichi Shishida | |
| D4-3-O | (in Japanese) Development of technology to convert CO ₂ into solid carbon | p.395 |
| | <i>TAKUMA</i> ○Yo Agata, Kazuhiro Sato, Takahiro Masuda | |
| D4-4-O | (in Japanese) New type of dry flue gas treatment using layered double hydroxide | p.397 |
| | <i>Kurita Water Industries Ltd.</i> ○Koichi Mori, Ichiro Ito, Satoshi Fujita, Yoshikazu Yatsu, JFE Engineering Corporation Hiroshi Yamamoto, Toshimasa Shirai, Hajime Fukai, Tohoku University Tomohito Kameda, Toshiaki Yoshioka | |
| D4-5-O | (in Japanese) Characterization of Mg-Al layered double hydroxide intercalated with CO ₃ ²⁻ for HCl removal | p.399 |
| | <i>Tohoku University</i> ○Sayaka Nishitani, Tomohito Kameda, Shogo Kumagai, Yuko Saito, Kurita Water Industries Ltd. Koichi Mori, Ichiro Ito, Sakai Chemical Industry Masahiro Suzuki, Tohoku University Toshiaki Yoshioka | |
| D4-6-O | (in Japanese) CO ₂ adsorption and conversion to ethylene urea using Zr-doped Mg-Al layered double hydroxides | p.401 |
| | <i>Tohoku University</i> ○Yota Kunii, Tomohito Kameda, Shogo Kumagai, Yuko Saito, Toshiaki Yoshioka | |
| Poster2 D4-7-P | (in Japanese) Water vapour recovery system from waste incineration flue gas using organosilica membranes | p.403 |
| | <i>PLANTEC Inc.</i> ○Taichi Yamaotoko, Akihiro Takeyama, Hiroshima University Norihiro Moriyama, Hiroki Nagasawa, Masakoto Kanezashi, Toshinori Tsuru | |
| Poster1 D4-8-P | (in Japanese) Effect of intermittent water vapor addition on the removal efficiency of HCl and SO _x in dry scrubbing of waste incineration flue gas | p.405 |
| | <i>Hokkaido University</i> Yudai Masuda, ○In-hee Huang, Yasumasa Tojo, Takayuki Matsuo, TAKUMA Hiroshi Minoya | |

D5 Power generation/ Heat utilization 【Sept 12 (Tue) 9:00–10:30 Venue#2】

Chair : Yoshihiro Ono (Nippon Steel Engineering) Co-chair : Jun Fujita (Kobelco Eco-Solutions)

| | | |
|--------|--|-------|
| D5-1-O | (in Japanese) A Study of Optimization for Combustion Control of Municipal Waste Incineration Boiler | p.407 |
| | <i>Tokyo Denki University</i> ○Hideo Sugahara, Hiroki Sakakibara, Masakazu Kato, TAKUMA Yumi Matsuda, Kazuhiro Sato | |
| D5-2-O | (in Japanese) Development of Thermal Spray Materials for Waste to Energy Boilers | p.409 |
| | <i>Kawasaki Heavy Industry</i> ○Daichi Sampei, Hiroyuki Morita, Shohei Suzuki, TOCALO Takashi Sakoda, Satoshi Uegaki | |

| | | |
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| D5-3-O | (in Japanese) Evaluation of Corrosion of Superheater Tubes under CO ₂ -rich Environment in Waste to Energy Plant | p.411 |
| | <i>Kyoto University</i> ○Tsuayoshi Shinohara, Hiroki Harada, Masaki Takaoka, Kenji Shiota | |
| D5-4-O | (in Japanese) Investigation of low-temperature corrosive environment using ACM sensors in incineration plants | p.413 |
| | <i>Ebara Environmental Plant Co., Ltd.</i> ○Keisuke Miwa, Hiromitsu Cho, So Murasue, <i>Ebara Co.</i> Manabu Noguchi, <i>Syrinx Inc.</i> Tomoyasu Suzuki, Yasuhiko Saijo, Yu Iwanaga | |
| D5-5-O | (in Japanese) Actual WtE performances of MSW incinerators under the change in fed-waste quality over the years | p.415 |
| | ○Yasuo Shino | |
| D5-6-O | (in Japanese) Cascading Use of Waste Heat from Incineration Plants in Tokyo | p.417 |
| | <i>Tokyo Institute of Technology</i> ○Mayumi Hamada, <i>Tata Consultancy Services Japan</i> Jia Ren, <i>Tokyo Institute of Technology</i> Kazuhiro Yuasa | |
| Poster2 D5-7-P | (in Japanese) Analysis of Actual Plant Operation Data and Its Simulation | p.419 |
| | <i>Tokyo Denki University</i> ○Hiroki Sakakibara, Hideo Sugahara, Masakazu Kato, <i>TAKUMA</i> Muneharu Fujikawa, Yumi Matsuda, Kazuhiro Sato | |
| Poster1 D5-8-P | (in Japanese) Development of a Refuse Boiler Simulator with Separated Combustion Gas System and Boiler Heat Transfer System | p.421 |
| | <i>Tokyo Denki University</i> ○Yuki Sakurai, Hideo Sugahara, Masakazu Kato, <i>PLANTEC Inc.</i> Kengo Masuda, Ryoji Sameshima | |
| Poster2 D5-9-P | Numerical study on the design of incinerator for solid refuse fuel for power plant | p.423 |
| | <i>Hanbat National University</i> ○Tae-In Ohm, Byoung-Chan Sang | |

D6 Cinder and fly ash **【Sept 12 (Tue) 10:45–12:15 Venue#2】**
 Chair : Michitaka Furubayashi (Hitachi Zosen) Co-chair : Yuji Miyoshi (Kawasaki Heavy Industry)

| | | |
|--------|--|-------|
| D6-1-O | (in Japanese) Development of Pressure Wave Boiler Dust Removal System | p.425 |
| | <i>TAKUMA</i> Hiromitsu Takahashi, Keiji Tatsumi, Kyohei Hayashi, ○Shohei Yamasaki | |
| D6-2-O | (in Japanese) Research on suppression of hydrogen generation by the Reaction of Al Contained in Incinerated Ash with Water | p.427 |
| | <i>Japan Aerospace Exploration Agency</i> ○Hideyuki Onodera | |
| D6-3-O | (in Japanese) Effect on fly ash and an example of reducing the amount of heavy metal insolubilizer used when hydrated dolomite is used as acidic-gas treating agent | p.429 |
| | <i>Yoshizawa Lime Industry</i> ○Takuya Nakamura, Tatsuya Okamura, Shuichi Takahashi | |
| D6-4-O | (in Japanese) Demonstration of carbon capture and utilization for biomass APCr with accelerated carbonation treatment | p.431 |
| | <i>Kobelco Eco-Solutions</i> ○Yukihiro Goto, Hiroshi Fujiwara, Yuki Maeda, Yuta Fukutomi, Ayako Takimoto, Masahiro Ogura, Hisanori Shimakura, <i>O.C.O TECHNOLOGY Ltd.</i> Peter Gunning | |
| D6-5-O | (in Japanese) About desalination of fly ash generated the fluidized bed incinerator | p.433 |
| | <i>Tokyo Metropolitan Research Institute for Environmental Protection</i> ○Sukehisa Tatsuichi, Akira Hasegawa, Yushi Terajima, Hiroyasu Koizumi | |
| D6-6-O | (in Japanese) Ash adhesion control technology for energy recovery of industrial waste | p.435 |
| | <i>Nagoya University</i> ○Shun Mukomoto, Yasuaki Ueki, Ryo Yoshiie, Ichiro Naruse, <i>Toyota Chemical Engineering</i> Nobuharu Nagatsu | |

E1 Management/ Monitoring of landfill site **【Sept 11 (Mon) 9:30–10:45 Venue#7】**
 Chair : Kentaro Miyawaki (Meisei University) Co-chair : Yugo Isobe (Center for Environmental Science in Saitama)

| | | |
|--------|--|-------|
| E1-1-O | (in Japanese) The significance to monitor gas composition in observation wells at waste landfills | p.437 |
| | <i>Center for Environmental Science in Saitama</i> ○Masanao Nagamori, <i>Miyagi Prefectural Government Sennan Public Health Center</i> Shintaroh Hagiwara, <i>Chiba Prefectural Environmental Research Center</i> Masaaki Morisaki, <i>Environmental Sanitation Research Center of Tottori Prefecture</i> Tomohiro Naruoka, Akihiro Mori, <i>Fukuoka Institute of Health and Environmental Sciences</i> Kazuhiro Fujikawa, Tomoko Koga, <i>Okinawa Prefectural Institute of Health and Environment</i> Gou Inoue, <i>National Institute for Environmental Studies</i> Tomonori Ishigaki, Masato Yamada | |
| E1-2-O | (in Japanese) A study on the long-term monitoring of semi-aerobic landfill site by using the electric resistivity survey | p.439 |
| | <i>Center for Environmental Science in Saitama</i> ○Yugo Isobe, <i>National Institute for Environmental Studies</i> Hiroyuki Ishimori | |
| E1-3-O | (in Japanese) Assessment of the amount of microplastics released into the environment via landfills and verification of the effectiveness of policy measures | p.441 |
| | <i>National Institute for Environmental Studies</i> ○Tomonori Ishigaki, Panida Payomthip, <i>Hokkaido University</i> Geun-Yong Ham, <i>National Institute for Environmental Studies</i> Masato Yamada, Masahiro Osako | |
| E1-4-O | (in Japanese) Experiments to confirm the effectiveness of alternative soil cover materials in reducing rainwater infiltration | p.443 |
| | <i>Yoshiura Co., Ltd.</i> ○Houliang Yan, Toshiyuki Yoshiura, Sei Inoue, Hiroki Hidaka, <i>Fukuoka University</i> Kazuo Tameda, <i>NPO Environmental Technical Support Network</i> Sotaro Higuchi | |
| E1-5-O | (in Japanese) Measurement of areal temperature distribution in capping layer of waste landfill using optical fiber sensor | p.445 |
| | <i>Kyushu University</i> ○Rion Hamada, Takayuki Shiomaoka, Teppei Komiya | |

| | | | |
|---------|----------------|--|-------|
| Poster1 | E1-6-P | (in Japanese) Numerical simulation of deformation of a landfill gas extraction well in a sanitary landfill <i>Muroran Institute of Technology</i> ○Ikuya Tsuchida, Hideki Yoshida, <i>Yachiyo Engineering</i> Yuto Kumagai | p.447 |
| Poster2 | E1-7-P | (in Japanese) Modified chamber methods with monitoring well for measuring gas flux from landfill site <i>Fukuoka University</i> ○Osamu Hirata, Shinya Suzuki | p.449 |
| Poster1 | E1-8-P | (in Japanese) Ergonomic approach on optimization of work environment for waste hand-sorting processes <i>Hokkaido University</i> ○Taichi Imamura, Satoru Ochiai, Geun-Yong Ham, <i>National Institute for Environmental Studies</i> Masato Yamada, <i>Hokkaido University</i> Kazuei Ishii | p.451 |
| Poster2 | E1-9-P | (in Japanese) Landfill Gas Flow Study at a covered type landfill site Ver2 <i>Fukuoka University</i> ○Kazuo Tameda, Shoji Takakura, Lingjie Yu, Jianlei Pan, Sotaro Higuchi | p.453 |
| Poster1 | E1-10-P | Assessment of anaerobic activity in an aerobic municipal solid waste landfill <i>TerraTherm Asia, Inc.</i> ○Tomotaka Sakaue, Hatsue Braatz, <i>Fukuoka University</i> Kazuo Tameda, <i>Ecowillplus Co., Ltd.</i> Jinkyu Park, <i>Anyang University</i> Namhoon Lee | p.455 |

E2 Early stabilization of landfill site **【Sept 11 (Mon) 11:00–12:00 Venue#7】**

Chair : Masanao Nagamori (Center for Environmental Science in Saitama) Co-chair : Teppei Komiya (Kyushu University)

| | | | |
|---------|--------|---|-------|
| | E2-1-O | (in Japanese) Life Cycle Cost Assessment of Solid Waste Disposal Systems <i>Kyushu University</i> ○Yuki Komori, Hirofumi Nakayama, Teppei Komiya, Takayuki Shimaoka | p.457 |
| | E2-2-O | (in Japanese) Study on Early Stabilization of Sea Surface Landfill <i>Fukuoka University</i> ○Lingjie Yu, Kazui Tameda, Mikiji Shigematsu, Jianlei Pan, Jiaying Liu, <i>NPO Environmental Technical Support Network</i> Sotaro Higuchi | p.459 |
| | E2-3-O | (in Japanese) Experiments on dissolution of carbon dioxide in seawater and calcium leaching from cement <i>Toyo Construction Co., Ltd.</i> Keigo Fukuda, ○Kazuki Noshō, Tomohiro Yamasaki | p.461 |
| | E2-4-O | (in Japanese) Investigation of gas collection pipes buckling mechanism by compressive test using Higher performance polyethylene (HPPE) pipes <i>Obayashi Corp.</i> ○Miki Mitsuhashi, So Takezaki, Kenji Shibata, Tetsumi Higashiyama | p.463 |
| Poster2 | E2-5-P | (in Japanese) Leachate in closed landfill sites after post-closure care is finished <i>JDC Corporation</i> ○Atsushi Sakamoto, <i>Nippon Koei Co., Ltd.</i> Shigeyuki Shoji, <i>Ohmoto Gumi Co., Ltd.</i> Toshihiko Hamada, <i>Obayashi Corp.</i> Kenji Shibata, <i>Chuden Engineering Consultants Co., Ltd.</i> Syuji Watanabe, <i>Fukuda Corporation</i> Masatoshi Kobayashi, <i>Mitsuboshi Belting Ltd.</i> Michio Iba, <i>Eight-Japan Engineering Consultants Inc.</i> Takaaki Fukushima, <i>Tobishima Corporation</i> Kazuhiro Nakamura, <i>Hokkaido Research Organization</i> Hirohide Aga, <i>Yachiyo Engineering Co., Ltd.</i> Tomoyasu Kudou, <i>Environment & Biochemistry Research Institute., Ltd.</i> Michio Honda, <i>Meisei University</i> Kentaro Miyawaki, <i>Hokkaido University</i> Kazuei Ishii | p.465 |
| Poster1 | E2-6-P | (in Japanese) Behavior of high carbon dioxide dissolved solution in reclaimed layer (glass bead layer) <i>Meisei University</i> ○Ayana Matsumoto, Kentaro Miyawaki | p.467 |
| Poster2 | E2-7-P | (in Japanese) Study on neutralization of incineration ash layer using highly dissolved carbon dioxide solution (CO ₂ -UFB water) (Part 2) <i>Meisei University</i> ○Kentaro Miyawaki, Tomohiro Kishi, Ayana Matsumoto | p.469 |

E3 Leachate/ Landfill gas **【Sept 12 (Tue) 9:00–10:30 Venue#7】**

Chair : Hideki Yoshida (Muroran Institute of Technology) Co-chair : Kazuei Ishii (Hokkaido University)

| | | | |
|---------|---------------|--|-------|
| | E3-1-O | (in Japanese) The relationship of CH ₄ gas emission from the landfill site and the fluctuation of atmospheric pressure <i>Matsuyama City</i> ○Dai Koyama, Fujio Shiomi, Yosuke Yatsuzuka, <i>CTI engineering Co., Ltd.</i> Takiya Wada, Rika Makino, <i>Kyushu University</i> Takayuki Shimaoka | p.471 |
| | E3-2-O | (in Japanese) Study of Change in Leachate Stored in a Regulating Reservoir by Long-term Prediction Using the Leachate Generation Model <i>Hokkaido University</i> ○Kazuei Ishii, Mei Narita, Satoru Ochiai, Geun-Yong Ham | p.473 |
| | E3-3-O | (in Japanese) Quantitative Analysis Results of Leachate Collected at Five Municipal Waste Final Disposal Sites in Fukushima Prefecture <i>Fukushima Prefectural Centre for Environmental Creation</i> ○Kazuyuki Takase, Kazuaki Kusakabe, Kouki Kokubun | p.475 |
| | E3-4-O | (in Japanese) Study on electrical treatment of leachate <i>Fukuoka University</i> ○Jiaying Liu, Lingjie Yu, Jianlei Pan, Kazuo Tameda, <i>NPO Environmental Technical Support Network</i> Sotaro Higuchi | p.477 |
| | E3-5-O | Leachate management in landfills using capping <i>Kobelco Eco-Solution Co., Ltd.</i> ○Shiro Toyohisa, Naomi Fujiwara, <i>ERC TAKAJO Co., Ltd.</i> Ayumi Morioka, Yasuhiro Miyago, <i>Fukuoka University</i> Kenichi Sato | p.479 |
| | E3-6-O | Effect of Blue Light for Nitrite Accumulation on Shortcut Nitrogen Removal <i>Yonsei University</i> Yejin Lee, Hyunsoo Lim, ○Seunga Kim, Joonhong Park | p.481 |
| Poster1 | E3-7-P | (in Japanese) Simulation of landfill gas compositions in landfill gas extraction wells at a closed sanitary landfill <i>Muroran Institute of Technology</i> ○Ayaka Ito, Hideki Yoshida | p.483 |

- Poster2 E3-8-P (in Japanese) Adaptability of physical adsorption treatment to residual chelates and chelates derived COD and T-N p.485
Fukuoka University ○Jianlei Pan, Lingjie Yu, Kazuo Tameda, Jiaying Liu,
GE lab analysis Corporation Masanobu Uchida, *NPO Environmental Technical Support Network* Sotaro Higuchi
- Poster1 E3-9-P Detection of microplastics in municipal waste landfill leachate p.487
Mokpo National Maritime University ○Nawon Kim, Gayeong Lee, Yong-jin Kim

E4 Elution of harmful substances/ Soil pollution 【Sept 12 (Tue) 10:45–12:15 Venue#7】

Chair : Hirofumi Sakanakura (National Institute for Environmental Studies)

Co-chair : Yoshinori Yabuki (Research Institute of Environment, Agriculture and Fisheries Osaka Prefecture)

- E4-1-O (in Japanese) Insolubilization of Pb by excessively added chelating agent in chemical-stabilized fly ash p.489
Osaka City University (Hitachi Zosen Corporation) ○Keisuke Takubo,
Osaka Metropolitan University Satoshi Mizutani, Yoshinori Kanjo, Hirokazu Toshimi
- E4-2-O (in Japanese) Relationship between the age of landfills and PFAS concentrations in leachate p.491
Research Institute of Environment, Agriculture and Fisheries Osaka Prefecture ○Yoshinori Yabuki, Junko Ono,
Yuto Ido, Koji Ito, Arisa Banno,
Hyogo Prefectural Institute of Environmental Sciences Chisato Matsumura, *Osaka Metropolitan University* Satoshi Mizutani,
National Institute for Environmental Studies Hidenori Matsukami, Yuka Ogata, Kazuto Endo
- E4-3-O (in Japanese) The removal performance of organic matter and nitrogen by floating constructed wetland for landfill leachate in Japan p.493
National Institute for Environmental Studies ○Yuka Ogata, Hidenori Matsukami, Hiroyuki Ishimori
- E4-4-O Accelerated weathering of bio- and oxo-degradable plastics and their biodegradability under soil conditions p.495
Hokkaido University ○Geun-Yong Ham,
National Institute for Environmental Studies Kanami Nagamoto, Tomonori Ishigaki, Masato Yamada
- E4-5-O The impact of dissolved CO₂ on the biological treatment process p.497
Kyonggi University ○Su Young Choi, Hyeok June Kwon, Sung Chul Kim, Soon Woong Chang
- E4-6-O Development of electrochemical T-N removal and ammonia-hydrogen conversion system for Landfill-leachate Treatment p.499
Yonsei University ○Eun kyung Byun, Juwon Lee, Hyung-il Kim
- Poster2 E4-7-P (in Japanese) Effect of by-product biochar addition on oil degradation using microbial formulations p.501
Fujita ○Shota Masaki, Hiroshi Kubota, Yoichiro Murakami, Hibiki Kurasawa, Shota Fukuro
- Poster1 E4-8-P (in Japanese) Elution behavior of heavy metals in woody biomass ash that fixes CO₂ by carbonation under low liquid-solid ratio p.503
Fujita ○Kouga Shigeizumi, Hiroshi Kubota, Haruna Kochi, Shota Masaki, *Nihon University* Kazunori Nakano
- Poster2 E4-9-P (in Japanese) Development of leaching model of chloride ion from cement-solidified fly ash p.505
Miyazaki University ○Yutaka Dote, Tomoo Sekito

F1 Analysis/ Estimation of harmful substances 【Sept 11 (Mon) 9:30–10:45 Venue#4】

Chair : Satoshi Mizutani (Osaka Metropolitan University)

Co-chair : Tomohiro Naruoka (Environmental Sanitation Research Center of Tottori Prefecture)

- F1-1-O (in Japanese) Panel data analysis of atmospheric perfluoroalkyl substances (PFASs) concentrations p.507
Kyoto University ○Akihito Iwamoto, Yasuhiro Hirai, Junichiro Koshiba
- F1-2-O Toxicity Potentials of Mercury Emission and Release: A Case Study in Waste Treatment Sector in China p.509
Okayama University ○Habuer, Takeshi Fujiwara, *Kyoto University* Masaki Takaoka
- F1-3-O (in Japanese) Study of differential determination of trivalent/hexavalent chromium using a chelating resin for application to leachate from solid waste p.511
Osaka Metropolitan University ○Fumika Takaoka, Satoshi Mizutani, *Kanazawa University* Hiroshi Hasegawa,
National Environmental Research and Training Institute Eiji Fujimori
- F1-4-O (in Japanese) Detection of asbestos by staining with dyes for the building materials wasted at disaster and demolition sites p.513
Saga University ○Masaaki Harada, Mukuta Haraguchi, Mitsunori Yada, Tomoya Umehara, Hisho Furukawa
- F1-5-O (in Japanese) Development of flow monitoring system based on in-pipe noise analysis p.515
Kawasaki Heavy Industry ○Shohei Yamakawa, Hirokazu Kanda, Ryo Ogura, Koya Takeda
- Poster1 F1-6-P (in Japanese) Application of simple analytical methods in the monitoring of harmful elements on its removal processes from incinerated ash p.517
Yokkaichi University ○Masaaki Takahashi, Yukimasa Takemoto, Seiji Iwasaki,
Okamoto-doseki Kogyo Ltd. Tadaharu Kado
- Poster2 F1-7-P (in Japanese) The investigation of PFAS extraction conditions from waste activated carbon adsorbed PFAS p.519
Konoike Construction Co., Ltd. ○Toshihiro Hirao, Sho Oyama, *Mizuken* Tomoko Nakai, Takeshi Yonezawa
- Poster1 F1-8-P (in Japanese) Evaluation of Carbonate in Incineration Ash Before and After Carbonation by Step-heating Carbon Analysis p.521
Fujita ○Haruna Kochi, Hiroshi Kubota, Kouga Shigeizumi, Shota Masaki,
Horiba Techno Service Co., Ltd. Mai Sakaguchi, Satoru Tanaka

- Poster2 F1-9-P (in Japanese) Attempt to determine the amount of asbestos waste disposal based on public data p.523
National Institute for Environmental Studies ○Takashi Yamamoto, Kohji Yamada, Kyoko Takata
- Poster2 F1-10-P A Study on the Prediction and Evaluation of PRB Reactive Materials by Soil and Groundwater p.525
 Characteristics Using AI
University of Seoul ○Su-hee Kim, Minah Oh, Seungjin Oh, Jai-young Lee

F2 Behavior/ Treatment of harmful substances (1) 【Sept 11 (Mon) 11:00–12:15 Venue#4】

Chair : Takashi Yamamoto (National Institute for Environmental Studies)

Co-chair : Gou Inoue (Okinawa Prefectural Institute of Health and Environment)

- F2-1-O (in Japanese) Study on the behavior of 1,4-dioxane in industrial waste final disposal sites p.527
Fukuoka Institute of Health and Environmental Sciences ○Kazuhiro Fujikawa, Takaoki Koga, Kazuhiro Nakamura,
 Naruyasu Itagaki, Yuko Ishibashi, Daisuke Yasutake
- F2-2-O (in Japanese) Leached concentration of PFAS from incineration ash in leaching test with p.529
 different pH leachant
Osaka Metropolitan University ○Satoshi Mizutani,
Research Institute of Environment, Agriculture and Fisheries Osaka Prefecture Junko Ono, Yuto Ido, Koji Ito, Yoshinori Yabuki
- F2-3-O (in Japanese) Long-term Stability of Sulfurized and Solidified Waste Mercury using Serial p.531
 Batch Leaching Test: Part 2
Osaka Institute of Technology ○Taketoshi Kusakabe, *Kyoto University* Shoichi Egawa, Kanta Funaki, Masaki Takaoka
- F2-4-O (in Japanese) Development of technology for suppressing mercury concentration in flue gas p.533
 using feedforward control
Kobelco Eco-Solutions ○Kenichi Maeda, Koichi Shima, Jun Fujita, Yoshio Kajihara, Nobuhiro Okuzumi
- F2-5-O (in Japanese) Analysis of horizontal diffusion of metal contamination in soil focusing on the p.535
 heavy metal retention capacity of nematodes
Osaka Metropolitan University Yui Endo, Hayato Tokumoto,
Osaka Metropolitan University College of Technology ○Kensuke Kurahashi
- Poster2 F2-6-P (in Japanese) Relationship between crystalline phase compositions in municipal solid waste p.537
 incineration fly ash and elution mechanism before and after elution test
Meiji University ○Hibiki Shirata, Rina Sekino, Taiga Kaseda, *Rigaku* Atsushi Ohbuchi, Wataru Matsuda,
Meiji University Narihito Ogawa, Yuya Koike
- Poster1 F2-7-P (in Japanese) Reduction of Mercury in Exhaust Gas by Controlling the Amount of Drain Water p.539
 for Wet Scrubber
Osaka City Research Center of Environmental Science ○Akito Takakura, Junji Masuda
- Poster2 F2-8-P (in Japanese) Insolubilization treatment of heavy metals in Municipal Solid Waste Incineration p.541
 fly ash by water repellent treatment blended with fatty acids
Meiji University ○Shunsuke Hashizume, Rina Sekino, Yuka Akino, Taiga Kaseda, *Rigaku* Atsushi Ohbuchi,
Meiji University Narihito Ogawa, Yuya Koike
- Poster1 F2-9-P (in Japanese) Insolubilization of heavy metals in Municipal Solid Waste Incineration fly ash by p.543
 geopolymer solidification using akadama soil
Meiji University ○Rina Sekino, Yuuki Umezawa, *Rigaku* Wataru Matsuda, *Meiji University* Yuya Koike
- Poster1 F2-10-P Detection of Microplastics and Leaching Characteristics of Heavy Metals from Bottom Ashes of p.545
 Municipal Waste Incinerators
Mokpo National Maritime University ○Gayeong Lee, Nawon Kim, Yong-jin Kim

F3 Behavior/ Treatment of harmful substances (2) 【Sept 11 (Mon) 13:30–15:00 Venue#4】

Chair : Ryo Hasegawa (Environmental Control Center) Co-chair : Fumitake Takahashi (Tokyo Institute of Technology)

- F3-1-O (in Japanese) Softening of disinfected wild boars infected with classical swine fever at a p.547
 temporary incineration facility in Namie Town
OYO Corporation ○Kenji Nakamura, *Ministry of the Environment* Takahisa Ono,
Hitachi Zosen Corporation Kohzoh Yamada, *OYO Corporation* Taihei Kusumoto
- F3-2-O (in Japanese) Usefulness of Ion Exchange Theory in Radioactive Cs Adsorbent for High p.549
 Enrichment
National Institute for Environmental Studies ○Yuhei Tanaka, Kazuo Yamada, Kazuo Endo
- F3-3-O (in Japanese) Cognitive analysis of public perceptions and attitudes toward mercury waste p.551
 landfill - Part I: Perceived reliability to mercury immobilization technologies and prospective
 immobilization period for public attitude mitigation
Tokyo Institute of Technology ○Fumitake Takahashi
- F3-4-O (in Japanese) Development of decomposition treatment technology for PFASs adsorbed on p.553
 powdered activated carbon using high-temperature superheated steam generated by
 hydrogen combustion
Konoike Construction Co. Ltd. ○Sho Oyama, Takashi Matsuike, Takuo Nakashima, Toshihiro Hirao,
Chugai Ro Co., Ltd. Tomoya Ohkubo, Noriyuki Myoga, Tomoro Kawano, Satoshi Kojima
- F3-5-O (in Japanese) Effect of thermal dechlorination on polychlorinated naphthalenes in incineration p.555
 fly ash
Osaka Metropolitan University ○Yuichiro Kawahara, Satoshi Mizutani,
Research Institute of Environment, Agriculture and Fisheries Osaka Prefecture Koji Ito,
Osaka Metropolitan University Saki Aihara, Ryotaro Naoi,
Research Institute of Environment, Agriculture and Fisheries Osaka Prefecture Yoshinori Yabuki

| | | |
|-----------------|---|-------|
| F3-6-O | (in Japanese) Synthesis of Mg-Fe-Al layered double oxide (LDO) and its application to arsenate anion adsorption | p.557 |
| | <i>Tohoku University</i> ○Itsuki Takanashi, Tomohito Kameda, Shogo Kumagai, Yuko Saito, Kumagai Gumi Co., Ltd. Yasuyuki Nomura, Daiki Kawamura, <i>Tohoku University</i> Toshiaki Yoshioka | |
| Poster1 F3-7-P | (in Japanese) A Case Study Report of Remediation of Dioxin-PCB Contaminated Soil at the DRMO Camp Market, a Former U.S. military base in Korea | p.559 |
| | <i>TerraTherm Asia, Inc.</i> ○Hatsue Minato Braatz, Yeonho Jeon, Yutaro Shimada, Tomotaka Sakae, <i>Hyundai Engineering and Construction</i> Hong-Seok Kim, <i>Fukuoka University</i> Kazuo Tameda, <i>Anyan University</i> Namhoon Lee | |
| Poster2 F3-8-P | (in Japanese) Insolubilization of heavy metals in municipal solid waste incineration fly ash by water repellent cement solidification method | p.561 |
| | <i>Meiji University</i> ○Hidetaka Ito, Yuka Akino, Narihito Ogawa, Yuya Koike | |
| Poster1 F3-9-P | (in Japanese) FT-IR/ATR analysis of the surface state of municipal waste incineration fly ash treated with carboxylic acids | p.563 |
| | <i>Meiji University</i> ○Taiga Kaseda, Narihito Ogawa, Yuya Koike | |
| Poster2 F3-10-P | (in Japanese) Selective separation and recovery of Sr from environmental ions by lanthanide oxalate frameworks | p.565 |
| | <i>Japan Atomic Energy Agency</i> Takuya Nankawa, Yurina Sekine, <i>The University of Tokyo</i> ○Teppei Yamada | |
| Poster1 F3-11-P | (in Japanese) The Combustion Validation Test for the Proper Treatment of Waste Agricultural Chemicals containing Dicofol | p.567 |
| | <i>Kureha Ecology Management Co., Ltd.</i> Yukihiro Oooka, Youhei Kusano, ○Masatoshi Kato | |