3RINCs2016 Academic Program

Keynote lectures and special sessions

Room A&B: Ballroom-1&2

March 9th 9:30-10:05 Opening

Plenary (March 9th)

Chair: Prof. Shinichi Sakai (Kyoto University)

10:10-10:40 K-1 **Implementation of integrated waste management and 3R measures for Green Growth in Vietnam**

Dr. Nguyen Van Tai
(Director General, Vietnam Environment Administration (VEA), Viet Nam)

Dr. Nguyen Van Tai was born in Ha Tinh Province, Viet Nam in 1966. He got PhD degree at Plovdiv Technological University in Bulgaria in 1994, and enhanced his analytical skills through Masters' degrees study of Public Management and Economics in Solvay Brussels School of Economics and Management from 2008 to 2011. He has served as a public servant of MONRE since 1996 and assumed numerous positions, including Director of Policy and Legislation Division - National Environmental Agency; Deputy Director General of Department of Environment – MONRE; Operational Focal Point in Viet Nam of Global Environment Facility (GEF) and Director General of Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE) - MONRE. He has assumed position of Director General of VEA - MONRE since July 2015. He has made use of his expertise in environmental policy and legislation, environmental economics and management. He has engaged in development of a number of environment laws in Viet Nam relating to biodiversity, natural resource management and land management.

10:40-11:10 K-2 **Current Perspectives on 3Rs Related Activities on E-waste Management in Asia Pacific Region**

Dr. Sunil Herat
(Senior Lecturer of Griffith University, Australia)

Dr Herat has active research interest in solid and hazardous waste management especially related to developing countries. He is an adviser to the United Nations on issues related to managing electronic waste (E-waste) in developing countries with special focus on policy development and regulatory aspects. He is also researching on issues related to implementing 3R (Reduce, Reuse, Recycle) activities in developing countries. Dr Herat is an expert on training programs in municipal solid waste management, hazardous waste management and cleaner production and eco-efficiency. He is the program coordinator of the Master of Environmental Engineering On-line program offered by Griffith University. He has experience in training waste management professionals within Australia and around the world. Dr Herat has conducted number of workshops and training programs around the world, the latest being the waste management training in Fiji for Pacific Island countries. Dr Herat is a member of the Expert Subsidiary Group of Regional 3R Forum of Asia managed by the United Nations Centre for Regional Development.

11:10-11:40 K-3 **Resource and Waste Management perspectives and challenges globally**

Mr. Hermann Koller
(Managing Director of International Solid Waste Association (ISWA), Austria)

Thematic Area: Integrated Waste Management, Producer Responsibility, Waste & Climate Change, Financing of Waste Management, Green economy
Professional Experience: Hermann Koller has been engaged in the waste management sector for 25 years, including both private and public sector positions. Currently he serves as Managing Director for ISWA, he has been a CEO for a waste operation company and a Vice President of the Austrian compliance scheme for packaging waste.

Plenary (March 10th)

Chair: Prof. Shinichi Sakai (Kyoto University)

9:00-9:30 K-4 **The tendency of waste to energy, resources and waste management in Korea**

Prof. & Dr. Jinwon Park
Yonsei University
(President of NIER (National Institute of Environment Research)& KSWM, Korea)

-President of KSWM (korea society of waste management)
-President of NIER(national institute of environmental research)
-Professor of Dept. Chem.Eng. Yonsei University

9:30-10:00 K-5 **The role of 3R action visible through the experiment of disaster waste treatment**

Prof. & Dr. Toshiaki YOSHIOKA
(Dean, Graduate School of Environmental Studies, Tohoku University, Japan)

1988 Graduation from Department of Applied Chemistry, Faculty of Engineering, Tohoku University
1990 Graduation from Department of Applied Chemistry, Graduate School of Engineering, Tohoku University
1992 Research Associate of Faculty of Engineering, Tohoku University
1996 Ph.D from Tohoku University
1997 Lecture of Graduate School of Engineering, Tohoku University
2000 Technical University of Eindhoven (Netherland) as a NEDO researcher
2000 Associate Professor of Graduate School of Engineering, Tohoku University
2001 Hamburg University (Germany) as Guest professor
2002 Environmental Conservation Center, Tohoku University
2005 Professor of Graduate School of Environment Studies, Tohoku University
2012 Board of Graduate School of Environment Studies, Tohoku University
2014 Dean of Graduate School of Environment Studies, Tohoku University

10:00-10:30 K-6 **Key Trends in Resource Efficiency and Related OECD Activities**

Mr. Peter Borkey
(Principal Administrator of OECD Environment Directorate)

Peter Börkey has been working on international and local environmental policy issues for more than 20 years. For the past 15 years he has worked for the OECD, primarily on issues relating to water, business and environment, as well as infrastructure finance. He is now leading OECD work on waste management and resource productivity, with a strong focus on sustainable materials management, nanowaste and economic instruments for waste management.
Prior to this, Mr Börkey has been leading OECD's cooperation with countries in Eastern Europe, Central Asia and the Caucasus in the area of water management, as well as leading work in the framework of the OECD Horizontal Water Programme focusing on the financing of water supply and sanitation in developing countries.
Before joining the OECD, Mr Börkey worked as a consultant, specialized in environmental economics. Mr Börkey holds degrees in Economics and Engineering from the Technical University of Berlin and University of Grenoble in France.

Room A: Ballroom-1 / 9th 13:50-15:40

Special session-1 3R Policy & Science Cooperation Session by UNCRD & 3RINCs

Chair: Mr. CRC Mohanty (UNCRD)

Prof. Shinichi Sakai (Kyoto University)

13:50-14:20	SP1-1	**Keynote Lecture** **3R and Resource Efficiency in the Context of 2030 Agenda for Sustainable Development** Mr. CRC Mohanty (Environment Programme Coordinator, UNCRD)
14:20-14:35	SP1-2	**Status of Science and Technology for 3R in India: What do they imply for Swachha Bharat (Clean India) Mission?** Dr Thallada Bhaskar (Principal Scientist & Head, Thermo-Catalytic Processes Area (TPA), Bio-Fuels Division (BFD),CSIR-Indian Institute of Petroleum (IIP), India)
14:35-14:50	SP1-3	**Material Flow Analysis as a Base for Benchmarking in Waste Management** Dr. Astrid Allesch (Vienna University of Technology, Austria)
14:50-15:05	SP1-4	**Science based Policy Initiatives towards a Sound Material Cycle Society in Japan** Mr. Yoshinori Suga (Deputy Director, Office of Sound Material-Cycle Society, Waste Management and Recycling Department, Ministry of the Environment, Japan)
15:05-15:20	SP1-5	**Science-Policy-Business Interface towards Economic Utilization of e-Waste – Opportunities for Developing Countries** Dr. Sunil Herat (Senior Lecturer in Waste Management, Griffith University) Dr. Prasad Modak (President, EMC-India)
15:20-15:35		Discussion and dialogue
15:35-15:40		Remarks from Mr. Masaaki Kobayashi - Vice Minister of MOEJ (Ministry of Environment Japan)

Background and Purpose:

The objective of the UNCRD-3RINCs Special Session is to create a science-policy interface to strengthen technical and scientific input to policy consultations at the intergovernmental Regional 3R Forum in Asia and the Pacific, which has been convened since 2009 through the joint effort of UNCRD and the Ministry of the Environment of Japan. At the same time, the Special Session aims at promoting a partnership between the Regional 3R Forum in Asia and the Pacific and 3RINCs to enable the research community for further discussions on policy recommendations and various issues emerged from the Forums. The 6th Regional 3R Forum in Asia-Pacific held in Maldives in 2015 underscored the importance of giving special attention to new emerging waste streams such as industrial waste, e-waste, plastics in coastal and marine environments, construction and demolition waste, hazardous waste and chemicals which are serious threat to sustainability. While these issues have reached a stage which is beyond the capacity of developing cities and municipalities to manage within the often limited means available to city governments, integrated 3R and resource efficiency are important driver of economic success in a world where resources are scare and finite. As a consequence, progress towards sustainable waste management can have significant benefits for the overall environment, development and the quality of life.

The 6th Regional 3R Forum in Asia-Pacific also recommended, among other, the following – (a) need to facilitate a public conversation and foster debate about the need to align environment and development outcomes and to highlight that, in fact, especially in the medium and long term, there is no contradiction between sustainable natural resource management, waste minimization, climate mitigation and economic growth; (b) need to promote regional transformative policies such as creation of regional cap and trade system for carbon emissions or efforts towards a more comprehensive ecological budget; (c) the governments should consider establishing a regional advisory panel of eminent scientists and community leaders to support the policy community by providing evidence-based trusted advice for policymakers on how to improve economic prosperity and human well-being in the region through resource efficiency, waste minimization and sustainable natural resource management. A network of regional innovation centres for resource efficiency, waste and emission minimization could be established to drive the innovation culture in economies in Asia and the Pacific and provide practical examples and technologies that help countries to achieve their policy objectives in the domain of decoupling wealth from resource use and waste; and (d) countries should take into account the contribution of 3Rs in achieving the sustainable development goals (SDGs) in the post-2015 development agenda – “Transforming Our World: The 2030 Agenda for Sustainable Development”.

The special session will aim to discuss environmental policies and the present status and perspective of the future network of the environmental, 3R, and resource efficiency related research and developments in Asia-pacific region -

Room A: Ballroom-1 / 9th 15:50-17:30

Special session-2 Policy based on EPR in the context of emerging economies

Chair: Prof. Agamuthu Pariatamby (University of Malaya) and Yasuhiko Hotta (IGES)

15:50-16:10	SP2-1	**Updated Guidance on EPR in the context of emerging economies** Peter Borkey (OECD)
16:10-16:30	SP2-2	**Comparatives Study of Progress in EPR implementation in Asia-Pacific Region** Dr. Yasuhiko Hotta, Dr. Chen Liu, Mr. Yoshiaki Totoki, (Institute for Global Environmental Strategies, Japan)
16:30-16:50	SP2-3	**Viet Nam's Regulation on Retrieval and Disposal of Discarded Products: Background, Challenges and Future Prospective** Mr. Nguyen Thuong Hien, Mr. Nguyen Thanh Yen, Mr. Do Tien Doan (Vietnam Environment Administration, MONRE Vietnam)
16:50-17:10	SP2-4	**Current Recycling Practices of Electronic Waste by E P R in South Korea** Prof. Yong-Chul Jang (Chungnam University, Korea)
17:10-17:30		Discussion and dialogue

Objective of the session:

Emerging economies are increasingly having to cope with rising amounts of waste that is difficult to treat, the associated health, social and environmental risks, as well as rising demands for resources. Increasing number of emerging economies in the region such as China, India, Malaysia, Indonesia, Thailand, and Viet Nam have introduced or are considering EPR-based legislation for taking-back and environmentally sound treatment of end of life products. Having this trend in mind, recently, OECD are now preparing to launch Updated Guidance on Extended Producer Responsibility, including some recommendations for emerging and developing economies. This session will aim to provide better understanding on Updated Guidance on EPR by OECD especially in the context of emerging economies, sharing experience of EPR implementation in the context of different countries and recycling market, and coming up with suggestions for better implementation of EPR-based mechanism in the context of emerging economies, especially for Viet Nam.

Room A: Ballroom-1 / 10th 11:00-13:00

Special session–3 Biomass Waste Management in Asia and the Pacific and Needs for Scientific Cooperation

Chair: Prof. Agamuthu Pariatamby (University of Malaya)

Prof. Shinichi Sakai (Kyoto University)

11:00-11:30	SP3-1	**Keynote Lecture** **Biomass- an underutilized resource in Asia and Pacific nations** Prof. Agamuthu Pariatamby (University of Malaya)
11:30-11:45	SP3-2	**Impact of supply chain on Biomass Utilization and Bioenergy Recovery in India** Prof. Sadhan Kumar Ghosh (Jadavpur University, India)
11:45-12:00	SP3-3	**Life Cycle Assessment of Waste Biomass Related Systems** Dr. Junya Yano & Sakai (Kyoto University, Japan)
12:00-12:15	SP3-4	**Potency Energy of Solid-biomass Residues in Indonesia** Prof. Enri Damanhuri (Institute of Technology Bandung, Indonesia)
12:15-12:30	SP3-5	**Effect of Seasonal Variations of Organic Loading Rate and Acid Phase on Methane Yield of Food Waste Leachate in South Korea** Dr. Dongjin Lee (National Institute of Environmental Research, Korea)
12:30-13:00		Discussion and dialogue

Background and Purpose

Biomass waste has become a global common research target as a renewable energy source. According to the FAO estimation, 1.3 billion tons of biomass waste is generated every year. Effective use of biomass has now become one of the critical issues from the viewpoints of environmental conservation, greenhouse gas (GHG) emission reduction as well as utilization of renewable energy resources. The aim of the biomass special session held in the 3rd 3RINCs is to learn about overall biomass waste generation potentials in Asia Pacific regions; especially for the current state of India and Indonesia where huge amount of biomass waste is supposed to be generated. At the special session, it is also expected to discuss key topics on guidelines for bio-gasification technologies and life cycle impacts of waste biomass for GHG emission reduction in the hope of finding useful approaches for future biomass utilization.

Room A: Ballroom-1 / 10th 13:50-15:50

Special session-4 Waste-to- Energy Issues in Asia and the Pacific and Needs for Scientific Cooperation (Co-organized by JSMCWM & KSWM, and Sponsored by Korea National Institute of Environmental Research)

Chair: Prof. Yong-Chul Jang (KSWM, Chungnam National University)

Dr. Misuzu Asari (JSMCWM, Kyoto University)

13:50-14:10	SP4-1	**Keynote Lecture1** **Improvement of Energy Recovery from Municipal Solid Waste in Japan** Dr. Morihiro Osada (Nippon Steel & Sumikin Engineering Co., Ltd., Vice president of JSMCWM)
14:10-14:30	SP4-2	**Keynote Lecture2** **The Status of Solid Refuse Fuel Industries in Korea** Prof. Dr. Yeon Seok Choi (University of Science and Technology & Korea Institute of Machinery and Materials
14:30-14:45	SP4-3	**A challenge from wasted materials to energy recovery: ubiquitous salinity** Prof. Nobuhisa Watanabe (Osaka Institute of Technology, Japan)
14:45-15:00	SP4-4	**Life Cycle Assessment of Food Waste to Energy in Korea** Dr. Sora Yi (Korea Environment Institute) Jang Yong-Chul
15:00-15:15	SP4-5	**Supplementing energy demand in rural areas Vietnam by use of rice straw biomass as energy source** Dr. Le Hung Anh (Industrial University of Ho Chi Minh City) Hahn Celia, Larsen Oliver Christopher, Rotter Vera Susanne, Spahr Marcel, Fechter Leonhard
15:15-15:50		Discussion and dialogue

Background and Purpose

Amid increasing need to take greenhouse gas (GHG) emission reduction measures and to ensure renewable energy, how to develop Waste-to-Energy (WtE) technologies has become a matter of world concern. WtE is one of the effective energy-producing options, especially from the view point of renewable energy utilization. Many local communities and industries currently utilize waste heat from waste incineration for power generation and waste fuels utilization. The aim of the session is discuss important topics on total environmental load generated during the process from collection/management of waste to energy recovery, as well as life cycle assessment for WtE implementation. The session is designed by Korean Society of Waste Management (KSWM) and Japan Society of Material Cycles and Waste Management (JSMCWM). We also invite a lecturer from Vietnam so that we can extensively discuss WtE systems adopted in Asia Pacific regions.

Room D: Room 7 / 10th 11:00-12:30

Special session-5 3R and waste management in Vietnam

Chair: Ass.Prof.Dr. Nguyen The Chinh (General Director of ISPONRE, MONRE)

Ass.Prof.Dr. Nguyen Hong Tien (General Director of Technical Infrastructure Agency, MOC)

11:00-11:05		**Opening speech** Co-chairman: Ass.Prof.Dr. Nguyen The Chinh (General Director of ISPONRE)
11:05-11:15	SP5-1	**Current status and solutions on municipal solid waste management in Vietnam** Representative from Technical Infrastructure Agency, MOC
11:15-11:25	SP5-2	**Overview and solutions on hazardous waste management in Vietnam** Representative from Department of Waste management, Vietnam Environment Administration, MONRE
11:25-11:40	SP5-3	**Demolition/Construction Waste Management in Vietnam - The Necessary for Development of Recycling Policy** Prof.Dr. Nguyen Thi Kim Thai (University of Construction)
11:40-11:55	SP5-4	**Current Status and Prospects of Technology and Policy regarding Electronic Waste Recycling in Vietnam** Dr. Nguyen Duc Quang, Ass.Prof.Dr. Huynh Trung Hai (Hanoi University of Science and Technology)
11:55-12:00	SP5-5	**Experience in waste management of Ha Noi Urban Environment one member State-owne Limited Company (URENCO Hanoi)** Representative of URENCO Hanoi
12:00-12:05	SP5-6	**3Rs operation at Southern Binh Duong Waste treatment Complex (BIWASE)** Mr. Nguyen Van Thien (General Director of BIWASE)
12:05-12:10	SP5-7	**Engineering and Design of a MSW Sanitary Landfill in South Vietnam Delta Region** Mr. Kevin Moore (Director of Operation, Vietnam Waste Solutions, Da Phuoc Integrated Waste Management Facility, Ho Chi Minh City)
12:10-12:15	SP5-8	**Experience in waste treatment and recycling of Cooperative Thanh Cong** Mr. Nguyen Ngoc Viet, Vice Dean of Cooperative Thanh Cong
12:15-12:25		Discussion and dialogue
12:25-12:30		**Closing speech** Co-chairman: Ass.Prof.Dr. Nguyen Hong Tien, General Director of Technical Infrastructure Agency, MOC

Oral Program – March 9th (Wed)

Room B: Ballroom-2

S-1 GHGs emission

Chair: Prof.Tae In Ohm (Hanbat National University, Korea) and Dr. Nguyen Trung Thang (Institute of Strategy and Policy on Natural Resources and Environment, MONRE, Vietnam)

13:50-14:10	S-1-1	**Analysis of Life Cycle Carbon Emissions from Road Infrastructure Sector in China** **LiuYuanyuan (Chang'an University, China)** Wang Yuanqing, Feng Shuyin
14:10-14:30	S-1-2	**CO_2 transfer from air to water enhanced by alkaline property: comparative study using CO_2 and O_2** **Kagotani Jun-ichi (Osaka Institute of Technology, Japan)** Watanabe Nobuhisa, Naitou Ryo-hei, Nitta Yuji
14:30-14:50	S-1-3	**Greenhouse Gas Emission from Municipal Solid Waste Disposal Sites in the Target Cities in Vietnam and Potential of Emission Reduction** **LeNgocCau (Vietnam Institute of Meteorology, Hydrology and Climate Change)** Hoang Trung Thanh, Tran ThiDieu Hang, Helmut Yabar
14:50-15:10	S-1-4	**Greenhouse Gas Mitigation Potential of Municipal Solid Waste Sector in Viet Nam for Developing Nationally Appropriate Mitigation Actions** **Do Tien Anh (Viet Nam Institute of Meteorology, Hydrology and Climate Change)** Vuong Xuan Hoa, Tran Phuong
15:10-15:30	S-1-5	**Bioremediation of Landfill Methane towards Reduction in Greenhouse Gas Emission** **PeriathambyAgamuthu (University of Malaya)** MilowPozi, Shahul Hamid Fauziah
15:30-15:50	S-1-6	**Methane Emission from MBT Technology at Phitsanulok Landfill** **WangyaoKomsilp (The Joint Graduate School of Energy and Environment. King Mongkut's University of Technology Thonburi, Thailand)** SutthasilNoppharit, PayomthipPanida, SutthiprapaSakulrat, Chiemchaisri Chart, Ishigaki Tomonori, Satoru Ochiai

S-4 Biomass waste

Chair: Prof.Yong-ChilSeo (Yonsei University, Korea) and Assoc.Prof.Dr. Trinh Van Tuyen (Institute of Environmental Technology, VAST, Vietnam)

16:10-16:30	S-4-1	**Scenario Analysis of Waste Biomass Utilization in Yangon Myanmar** **Myo Min Win (Kyoto University Environment Preservation Research Center, Japan)** Yano Junya, AsariMisuzu, Sakai Shin-ichi
16:30-16:50	S-4-5	**A Case Study about the Development Barriers of Municipal Solid Waste Composting in China** **Zheng Guodi(Institute of Geographic Sciences and Natural Resources Research Chinese Academy of Sciences)** Gao Ding, Chen Tongbin, Yue Bo, Yang Jun
16:50-17:10	S-4-6	**Assessment of the potential to use biomass pellets in household scale in Vietnam** **Le Thi Hoang Oanh (NU University of Science, VN)** Hoang Duc Thang, Le Thi Lien, Vu Thi Thu Ha, Dong Kim Loan, Nguyen Thi Ha
17:10-17:30	S-4-7	**Feasibility Study on Reuse of Water Treatment Sludge and Coagulant Recovery – A Case Study in Tan Hiep Water Treatment Plant** **Nguyen Ngoc Tu (Center for environmental technology and management, Viet Nam)** Nguyen Thi Thanh Thao, Nguyen TrungBich Hanh, Vong My Hanh, Ngo ThiThuan

17:30-17:50 S-4-8 **Review on composting activities in Vietnam**
Ms.Hoang Hong Hanh (Institute of Strategy and Policy on Natural Resources and Environment, MONRE, Vietnam)

Room C: Room3

S-2 Waste to Energy (1)

Chair: Prof.Jinwon Park (Yonsei University, Korea) and Assoc.Prof.Dr. Huynh Trung Hai (Hanoi University of Science and Technology, Vietnam)

13:50-14:10 S-2-1 **Demonstration test to reduce environmental loads of fluidized bed incinerator**
Shintaro Nakahara (Kobelco Eco-Solutions, Japan)
Hiroyuki Hosoda, Hiroshi Sunada, Taminori Kinoshita

14:10-14:30 S-2-2 **Innovation of Waste-to-Energy Plants for High-Efficiency Power Generation**
Thanh Nguyen Phuc (Hitachi Zosen Corporation, Japan)
Usutani Akihiro, Kondo Mamoru, Furubayashi Machitaka

14:30-14:50 S-2-3 **The Characteristics of Air Gasification for Fluff SRF in a Bench Schale Advanced Down-draft Fixed Bed Reactor**
Sung Ho-Jin (Institute for Advanced Engineering, Korea)
Park Yeong-Su, Kim Dong-Ju, Min Jae-Hong, Gu Jae-Hoi, Lee Jang-Kun, Oh Jong-Hyeog, Song Dong-Hyun

14:50-15:10 S-2-4 **Electric Power Generation from Municipal Solid Waste in Yangon City, the Republic of the Union of Myanmar**
Shibuya Eiichi (JFE Engineering Corporation, Japan)
Hamayotsu Hirofumi

15:10-15:30 S-2-5 **Effects of torrefaction on fast pyrolysis characteristics of waste biomass**
Choi HangSeok (Yonsei university, Korea)
YooHoSeong, Lee ByeongKyu

S-5 Waste to Energy (2)

Chair: Prof. Dornack Christina (TU Dresden, Germany) and Assoc.Prof.Dr. Huynh Trung Hai (Hanoi University of Science and Technology, Vietnam)

15:50-16:10 S-5-1 **Facts study of biodiesel production processes with sewage sludge as raw material**
Zhu Fenfen (Renmin University of China)
Qi Juanjuan, Wu Xuemin

16:10-16:30 S-5-2 **Production of Ethanol from Wood Waste**
Mulligan Catherine (Concordia University, Canada)
AzitaMoghaddam

16:30-16:50 S-5-3 **Feasibility Study of Polyurethane SRF (Solid Refuse Fuel) for Combustion and Gasification: Characteristics of Flue gas and Nitrogen pollutants**
Park SeWon (Yonsei University, Korea)
Lee JangSoo, Yang WonSeok, Kang JaeJun, AlamMdTanvir, SeoYongChil

16:50-17:10 S-5-4 **Pyrolytic route for the production of hydrocarbons from lignocellulosic biomass and waste plastics**
ThalladaBhaskar (CSIR-Indian Institute of Petroleum, India)

17:10-17:30 S-5-5 **Biodry of municipal solid waste to utilize as solid recovered fuel**
PayomthipPanida (The Joint Graduate School of Energy and Environment. King Mongkut's University of Technology Thonburi, Thailand)

WangyaoKomsilp, Chiemchaisri Chart, Ishigaki Tomonori, Lee Dong-Hoon, TowprayoonSirintornthep

17:30-17:50 S-5-6 **Application of mechanical biological treatment on municipal solid waste for upraiting of heat value**
Le Anh Hung (Industrial University of Ho-Chi-Minh City, Vietnam)
Ho KhangVinh

Room D: Room7

S-3 3R policy

Chair: Prof.Jae-Hyuk Hyun (Chungnam National University, Korea) and Assoc.Prof.Dr. Nguyen The Chinh (Institute of Strategy and Policy on Natural Resources and Environment, MONRE, Vietnam)

13:50-14:10 S-3-1 **Economic Conditions for Recycling of Waste**
Baum Heinz-Georg (University of Applied Sciences Fulda, Germany)

14:10-14:30 S-3-2 **Recycling of Plastic Packaging Waste: Lessons for Indonesia from Japanese Knowledge and Practice**
Putri Anissa Ratna (Kyoto University, Japan)
Takaoka Masaki, Oshita Kazuyuki, Fujimori Takashi, KamoTohru

14:30-14:50 S-3-3 **The Effect of Trash Bin Design and Trash Bin Setting Condition on Cap Removal and Other Waste Incorporation**
IZUMI Takuya (Tokyo Institute of Technology)
JIANG Qiuhui,SUZUKI Shinya, TAKAHASHI Fumitake

14:50-15:10 S-3-4 **Organic solvents waste management priority substance and contents characteristics in S.Korea**
Hwang Dong-gun (NIER)
Hong Soo-youn, Kang Young-reul, Jeon Tae-Wan, Shin Sun-kyoung

15:10-15:30 S-3-5 **Toward a policy for promoting eco industrial park as a strategy for waste minimization in Vietnam**
Nguyen Tung Lam (Institute of Strategy Policy on Natural Resources and Environment (Institute of Strategy and Policy on Natural Resources and Environment, MONRE, Vietnam)

15:30-15:50 S-3-6 **Zero Waste Solution: Solid Waste Management in Nepal**
TIEW KIAN-GHEE (UniversitiKebangsaan Malaysia)
AHMAD BASRI NOOR EZLIN, ER AH CHOY

S-6 MSW management

Chair: Prof. Heinz-Georg Baum (University of Applied Sciences Fulda, Germany) and Prof.Dr. Nguyen Thi Kim Thai (National University of Civil Engineering, Vietnam)

16:10-16:30 S-6-1 **An investigation of household waste generation and composition in Hoi An Vietnam**
Hoang Giang Minh (Okayama University, Japan)
Fujiwara Takeshi, Pham PhuToan Song

16:30-16:50 S-6-2 **Potential for introducing organic waste diversion to municipal solid waste management in Asia**
Okayama Tomoko (Taisho University, Japan)

16:50-17:10 S-6-3 **Monitoring source separation of household organic waste in Hanoi Vietnam**
Kawai Kosuke (National Institute for Environmental Studies, Japan)
Luong Huong Thi Mai

17:10-17:30 S-6-4 **Study on the current status of methane emissions and integrated domestic waste management in the center of Thai Nguyen city**
Ha Dinh Nghiem (Thai Nguyen University of Agriculture and Forestry, Vietnam)
Nguyen Thi Hue, Nguyen Thanh Hai, Truong Thi Anh Tuyet

17:30-17:50 S-6-5 **Scenarios for Sustainable Municipal Solid Waste Management for Hanoi city: A Life Cycle**

Assessment Approach.
Luong Huong Thi Mai (Hanoi University of Civil Engineering, Vietnam)
Nguyen Thai Thi Kim, Ngo Phuong Lan

17:50-18:10 S-6-6 **Proposing Law on Recycling of waste**
Mr. Dang Trung Tu (Institute of Strategy and Policy on Natural Resources and Environment)

Oral Program – March 10th (Thu)

Room B: Ballroom-2

S-7 Industrial waste

Chair: Prof.ToshihikoMatsuto (Hokkaido University, Japan) and Assoc.Prof.Dr. Pham Van Loi (Vietnam Environment Administration, MONRE, Vietnam)

11:00-11:20 S-7-1 **Kinetics and Equilibrium Studies on the Removal of Borate and Fluoride in Aqueous Solution using Mg-Al oxide**
Kameda Tomohito (Tohoku University, Japan)
Oba Jumpei, Yoshioka Toshiaki

11:20-11:40 S-7-3 **Analysis of the factor of manual sorting efficiency for house demolition waste**
Ochiai Satoru (National Institute for Environmental Studies, Japan)
Ishigaki Tomonori, Yamada Masato

11:40-12:00 S-7-5 **Effect of functionalized sites and textural structure in the chemisorption of toxic heavy metal onto ammoniated and chlorinated adsorbentAnalysis on characteristic of ash and CaO recovery efficiency**
Lee ByeongKyu (Ulsan University, Korea)
Lee Chi-Hyeon, Tran Minh Dinh

12:00-12:20 S-7-6 **Recycling nickel from spent catalyst of Phu My fertilizer plant as precursor for exhaust gas treatment catalysts preparation**
Le Phuc Nguyen (Vietnam Petroleum Institute)
Luong Ngoc Thuy, Nguyen Sura

12:20-12:40 S-7-7 **A study of hydrometallurgy process to recover rare earths in spent FCC catalyst from Dung Quat Refinery. The influence of decoking and alkali treatment on spent catalyst characteristics and yield of the leaching process.**
Nguyen Sura (Vietnam Petroleum Institute)
Pham Vinh Le, Dang Tung Thanh, Nguyen Luong Huu, Nguyen Duc Anh, Kresschmer Klaus, Gloe Karsten, Weigand Jan J, Le Phuc Nguyen

S-9 e-Waste

Chair: Dr. Sunil Herat (Griffith University, Australia) and Dr. Nguyen Trung Thang (Institute of Strategy and Policy on Natural Resources and Environment, MONRE, Vietnam)

13:50-14:10 S-9-1 **e-waste management in Europe and China a comparison**
Salhofer Stefan (BOKU University, Germany)
Steuer Benjamin, Ramusch Roland, Beigl Peter

14:10-14:30 S-9-2 **Environmental impacts from Waste Electrical and Electronic Equipment recycling activities at craft villages in Vietnam**
Tran Chung Duc (University of Natural Resources and Life Sciences, Vienna)
Salhofer Stefan Petrus

14:30-14:50 S-9-3 **Environmental Information Needed to Manage and Recycle Waste Photovoltaic Modules**
Lim Seong-Rin (Kangwon National University, Korea)

14:50-15:10 S-9-4 **Development of ICT-base Automatic Sorting System for Recycling of MSW**
Choi WooZin (The University of Suwon, Korea)
Park EunKyu, Jung BamBit, Kim SooKyung, Oh SungKwun

15:10-15:30 S-9-5 **Preliminary Assessment of Home Electronic Waste in Vietnam using Material Flow Analysis, a case study for CRT TV**
Ass.Prof.Dr. Huynh Trung Hai (University of Technology)

15:30-15:50 S-9-6 **Recycling and Current Management Practices and Material Flow Analysis (MFA) of Batteries in Korea**
Hwang Yeonjung (Chungnam National University)
Jang Yong-Chul, Kim Hyunhee

Room C: Room3

S-8 3R technology

Chair: Prof.SeungWhee Rhee (Kyonggi University, Korea) and Assoc.Prof.Dr. Trinh Van Tuyen (Institute of Environmental Technology, VAST, Vietnam)

11:00-11:20 S-8-1 **Effect of alumina reinforcement particle in direct recycling aluminium (AA6061) by hot press forging**
LajisMohdAmri (M.A. Lajis, Malaysia)
Yusuf NurKamilah, Ahmad Azlan, CheRosZiana

11:20-11:40 S-8-2 **P/Ca Ratio Dependency of Water Holding Capacity of Soil/Sand with Apatite-synthesized Coal Fly Ash**
Lin Shenglei (Tokyo Institute of Technology, Japan)
Song Mengzhu, Takahashi Fumitake

11:40-12:00 S-8-3 **Application of submerged membrane filtration in a continuous photobioioreactor for tertiary treatment of livestock wastewater**
Lee Jae-Cheol (Chonbuk National University)
Kim Hyun-Woo

12:00-12:20 S-8-4 **Bioresource Recovery from Livestock Wastewater using Photoautotrophic Sequencing Batch Reactor (PSBR)**
YU JEONG-UNG (Chonbuk National University, Korea)
LEE JAE-CHEOL, CHANG IN-SEOP, KIM* HYUN-WOO

12:20-12:40 S-8-5 **Recovery potential of ammonium phosphate based crystal from high strength ammonium nitrogen waste stream**
Dong Dandan (Korea University)
Choi Oh kyung, Lee Kwanhyoung, Lee Jae Woo

12:40-13:00 S-8-7 **Regeneration of V_2O_5 spent catalyst for sulfuric acid manufacturing plants in Vietnam**
Vo Xuan Phuong Nguyen (PetroVietnam Research and Development Center for Petroleum Processing Vietnam Petroleum Institute)
Le Nguyen Phuc, Tran Tri Van, Tran Minh Hien Le, Mai Cung Van

S-10 Anaerobic digestion

Chair: Dr. Tomonori Ishigaki (NIES, Japan) and Assoc.Prof.Dr. Trinh Van Tuyen (Institute of Environmental Technology, VAST, Vietnam)

13:50-14:10 S-10-1 **Avoidance of inhibitions of the biological waste treatment by mass flow analysis**
DornackChristina (TU Dresden, Germany)

14:10-14:30 S-10-2 **In-situ Biomethane Production System Integrated with Thermophilic Plug Flow Reactor and**

External CO_2 Stripper
Kang Ho (Chungnam National University, Korea)
Jeong Ji-Hyun, Kim Sun-Woo, AhnHee-Kwon

14:30-14:50 S-10-3 **Available Market Potential of Biomethane for RFS policy**
Jo Ji Hye (Korea Environment Institute)

14:50-15:10 S-10-4 **Feasibility assessment of anaerobic digestion technologies for household wastes in Vietnam**
Silva Rodolfo Daniel (Technical University of Munich, Germany)
Le Hung Anh, Koch Konrad

15:10-15:30 S-10-5 **Ability of biological digesting method for domestic solid waste treatment in Vietnam.**
Nguyen Thi Thu Ha (Hanoi Architectural University, Vietnam)

15:30-15:50 S-10-6 **The potential of biogas recovery from anaerobic co-digestion of fecal sludge and mixed fruit and vegetable waste**
Hoang Le Phuong (Faculty of Civil and Environmental Engineering, Vietnam)
Nguyen Kim Thai

S-12Disaster waste

Chair: Prof.Toshiaki Yoshioka (Tohoku University, Japan) and Assoc.Prof.Dr. Pham Van Loi (Vietnam Environment Administration, MONRE, Vietnam)

16:10-16:30 S-12-1 **Analyses of a Waste Management Company Activities in the Great East Japan Earthquake**
Yoshinari Noboru (Hokkaido University, Japan)
OyanagiYukihiko, Ohuchi Azuma, Yamamoto Masahito

16:30-16:50 S-12-2 **Challenges and Potential in Disaster Waste Recycling: A Malaysian case study**
Shahul Hamid Fauziah (UNIVERSITY OF MALAYA)
AgamuthuPeriathamby, MilowPozi

16:50-17:10 S-12-3 **Collection of NaClKClRbCl and CsCl by ice-cooled copper tube in a coiled form: a laboratory study**
Kagotani Jun-ichi (Osaka Institute of Technology, Japan)
Fujimura Koichiro, IzukaYuto, Watanabe Nobuhisa

17:10-17:30 S-12-4 **Evaluation of building debris of Kathmandu Valley Nepal after Gorkha Earthquake and its potential treatment option**
POUDEL Raju (Kyoto University Environmental Preservation Research Center, Japan)
HIRAI Yasuhiro, SAKAI Shin-ichi

17:30-17:50 S-12-5 **Research on Tracking Routes of Simulated Debris Released from Coastal Areas of Tohoku Region in Japan**
Matsumura Haruo (Tottori University of Environmental Studies (TUES), Japan)
Tanaka Masaru, Matsumoto Kazuhiko

Room D: Room7

S-11Hazardous waste

Chair: Prof.Enri Damanhuri (Instituteof Technology Bandung) and Prof.Dr. Nguyen Thi Kim Thai (National University of Civil Engineering, Vietnam)

14:00-14:20 S-11-1 **Metal species in municipal solid waste incineration fly ash particles estimated by correlation analysis at micro-scale level**
Kitamura Hiroki (Tokyo Institute of Technology, Japan)

DahlanAstrydViandila, Takahashi Fumitake

13:50-14:10	S-11-2	**Mercury Waste Management in Vietnam -Current Status and Future Needs"** **Nguyen Thi Kim Thai (Institute for Environmental Science & Engineering)** Tran Hoai Le, Nguye The Hung
14:10-14:30	S-11-3	**A Comparative Analysis of Recycling Systems and Statistics of Waste Battery in Korea Japan and Germany** **Kim Hyunhee (Chungnam National University, Korea)** Yong-Chul Jang, Yeonjeong Hwang, Hyunmyeong Yun
14:30-14:50	S-11-4	**Correlation between leaching concentration and content of Hg for phosphor powder and glass from linear spent fluorescent lamps** **Rhee Seung-Whee (Kyonggi University, Korea)** Choi Hyeong-Jin
14:50-15:10	S-11-5	**Mercury Emission from Waste Incinerator and Future Trend** **Sung Jin-Ho (Yonsei university, Korea)** Back Seung-Ki, JeongBup-Mook, Jang Ha-Na, Kim Seong-Heon. Seo Yong-Chil
15:10-15:30	S-11-6	**Effects of calcium based additives on the PAHs formation during sewage sludge incineration in a fluidized bed combustor** **Qin linbo (Wuhan university of science and technology, China)** Han Jun, Chen Wansheng, Yao xi, Luo Guanqian

S-13 MFA, SFA, IOA

Chair: Dr. Sora Yi (Korea Environment Institute, Korea) and Assoc.Prof.Dr. Nguyen The Chinh (Institute of Strategy and Policy on Natural Resources and Environment, MONRE, Vietnam)

16:10-16:30	S-13-1	**Outlook for Future Material Flows of Mercury in Japan in context of the Minamata Convention on Mercury** **Sodeno Reiko(Keio University, Japan)** Takaoka Masaaki
16:30-16:50	S-13-2	**Current management practices of PBDEs containing wastes in automobiles by substance flow analysis in Korea** **Choi Jonghyun (Chungnam National University, Korea)** Jang Yong-chul
16:50-17:10	S-13-3	**Estimation of In-Use Polybrominated Diphenyl Ether (PBDE) Stocks in Japan** **Nguyen Dien Thanh (Kyoto University Environment Preservation Research Center, Japan)** Hirai Yasuhiro, Sakai Shin-ichi
17:10-17:30	S-13-4	**Constructing a New Waste Input-Output Database and Its Application in Environmental Footprint and Hotspot Analysis** **Kondo Yasushi (Waseda University, Japan)** Tachio Koichi, Nakamura Shinichiro
17:30-17:50	S-13-6	**Study on the Role of Informal Sector in Plastic Waste Collecting and Recycling from Municipal Solid Waste Management in Hanoi city** **Study on the Role of Informal Sector in Plastic Waste Collecting and Recycling from Municipal Solid Waste Management in Hanoi city (Institute for Environmental Science & Engineering)** Tran Hoai Le, Nguyen Thi Kim Thai

Poster Program – March 9th (Wed) 17:40-18:30

P1-1 **Characteristics of organic wastes for solid refuse fuel(SRF) after fry-drying**
Ohm Tae-In (Hanbat National University, Korea)
Chae Jong-seong, Choi Su-Ah, Kim Young-Hyo, Oh Sae-Cheon

P1-02 **Factors influencing future intention of municipal organic waste separation at source: The case study in Hoi An city Vietnam**
Le Loan Thi Thanh (Kyushu University, Japan)
Nomura Hisako, Takahashi Yoshifumi, Yabe Mitsuyasu

P1-03 **Risk Assessment Based on the Bioaccessibility of Heavy Metals in Cheap Children's Products via Oral Ingestion: Vietnam and Japan Markets**
Fujimori Takashi (Kyoto University, Japan)
Matsui Dai, Taniguchi Masaya, Takaoka Masaki, Oguri Tomoko

P1-04 **A Method to Calculate Low heating Value of Domestic Industrial Waste Incinerating Facilities**
Kim Ki-Heon (National Institute of Environmental Research, Korea)
Kwon Young Hyun, Son Jun-Ik

P1-05 **Recovery of Rare Earth Elements from Neodymium Magnets Using Molten Salt Electrolysis**
KAMIMOTO Yuki (Nagoya University, Japan)
ITOH Takashi, ICHINO Ryoichi

P1-06 **Simultaneous removing SO_2 and NO by Ammonia-Fe(II)EDTA Solution Coupled with Fe(III)EDTA Regeneration by Iron**
Yao Xi (Wuhan University of Science & Technology, China)
Han Jun, Zhan Yiqiu, Qin Linbo, Chen Wansheng

P1-07 **Preliminary micro-characteristics analysis of municipal solid waste incineration fly ash generated in a fluidized bed combustor**
DahlanAstrydViandila(Tokyo Institute of Technology, Japan)
Kitamura Hiroki, Sakanakura Hirofumi, Takahashi Fumitake

P1-08 **Identification of Black Colored Plastics Realized with the Aid of Fourier Transform Infrared Radiation with Attenuated Total Reflectance and Fuzzy Radial Basis Function Neural Networks Classifier**
Oh Sung-Kwun (The University of Suwon, Korea)
RohSeok-Beom, Park EunKyu, Choi Woo Zin, Kim Eunok

P1-10 **Feasibility Study on Micro-Hydraulic Power Generation from Sewage**
Uchiyama Tomomi (Nagoya University, Japan)
Honda Satoshi, Okayama Tomoko

P1-11 **Technology Development to Reduce Malodor from Food Waste in South Korea**
Kim Ilho (KICT, Korea)
Jang Choonman, Lee Jaiyeop, Lee Sangmoon

P1-12 **Design of a Distillation Process for Recovery of Valuable Resources from Waste Photoresist Strippers**
ChaniagoYus Donald (Sogang University, Korea)
Kim Jae-Kyeong, Park Myung-Jun, Lee Moonyong, Koo Kee-Kahb

P1-13 **A Study on the Combustion Characteristics of Dried Sewage Sludge for Coal Co-firing in Coal Power Plant**
ImHyuk(Hanbat National University, Korea)
Kim CheolGyu

P1-14 **Estimation of thermal source position in solid waste landfill site based on hot spots' temperature and position on landfill surface**
Komiya Teppei (Kyushu University, Japan)
Akayama Keita, Nakayama Hirofumi, Shimaoka Takayuki

P1-15 **Determination of Material Flow of Refrigerant in Automotive Air Conditioners in Korea**
Chang Yun (Chungnam National University)
KoYoungjae, Jang Young-Chul

P1-16 **Utilization of Leachate and Sludge generated from the Pre-process of Landfill Gas**
Yong sangwoon (Chungnam National University, Korea)
Hyun Jae-Hyuk, Lee Woo-Jin

P1-17 **Studies on Combustion Characteristics of Low Calorific Waste Generated in SRF Manufactory by Mechanical Biological Treatment (MBT)**
Yang Wonseok (Yonsei University, Korea)
Lee Jangsoo, Park Sewon, Kang Jaejun, AlamMdTanvir

P1-18 **Analysis on Plastic Packaging Waste Segregation Behavior Taking into Account Inhabitants' Age Groups and Lifestyles**
Tabata Tomohiro (Kobe University, Japan)
Miyamoto Kazuki, Tsai Peii

P1-19 **Carbon Dioxide Capture and Utilization Using Alkanolamine Type Absorbents and Pretreated Brine Solution**
Kang Dongwoo (Yonsei University, Japan)
Lee Min-Gu, Jo Hoyong, Lee Sang Yup, Park Jinwon

P1-20 **Numerical Study of Heat Transfer Characteristics of Char from Waste Tire Pyrolysis**
Park HoonChae (Yonsei University, Korea)
Choi Hang Seok

P1-21 **Numerical modeling & parametric investigation of renewable CaF2 formation from HF wastewater treatment with fluidized bed reactor : particle trajectory behavior with particle size**
Kim Yongju (Chungnam National University, Korea)
Lee Yongguk, Park Minjeong, Shin Misoo, Jang Dongsoon

P1-22 **Numerical Modeling & Parametric Investigation of Renewable CaF2 Formation by HF Wastewater Treatment with Fluidized Bed Reactor : Cold Flow Characteristics with Inlet Configuration**
Lee Yongguk (Chungnam National University, Korea)
Kim Yongju, Park Minjeong, Shin Misoo, Jang Dongsoon

P1-23 **Comparison of incineration heat recovery efficiency By change in conditions of facility**
Lee Woo-Jin (Chungnam National University, Korea)
Hyun Jae-Hyuk, Yong Sang-Woon

P1-24 **A study on the co-firing of pulverized-coal with HHO gas for the reduction of CO_2 and pollutant species emission**
Park minjeong (Chungnam National University, Korea)
Shin Misoo, Kim Yongju, Lee Yongguk, Jang Dongsoon

P1-25 **Scavenging informal sector and the recycling production system of craft village sin the Red River Delta**
Sylvie Fanchette (Hanoi Architectural University)
Nguyen Thai Huyen

P1-26 **A Survey and Analysis on Household Solid Waste in Suburban Area of Hanoi**
Hoang Ngoc Ha (National University of Civil Engineering)

P1-28 **Establishment of Regional Mechanism for Centralized Management ofConstruction Waste in Viet Nam**
Bui DinhNhi (Viet Tri University of Industry)
Dam Thi Thanh Huong, Minh Thi Thao

P1-30 **Comparison of biogas potential of Korean swine manure from livestock farm and in-situ facilities**
Bae Jisu (National Institute of Environmental Research, Korea)
Kwon Younghyun, Lee Dongjin

P1-34 **Properties of Biochar from Hydrothermal Carbonization of Exhausted Coffee Residue**
Daegi Kim (Konkuk University)
Daeun Bae, Kwanyong Lee, Han S. Kim ,Ki Young Park

P1-36 **Characterization of Carbonation Aggregates for Using Construction Materials**
Hong Bum-Ui (Institute for Advanced Engineering)
Choi Chang-Sik, JeongCheol-Jin, Jeong Doo-Su

P1-39 **Semi-continuous Co-digestion of Waste Activated Sludge with Algal Biomass Residue from Bioethanol**
Lee Kwanyong (Konkuk University)
Oh Dooyoung, Kim Daegi, Park Ki Young

P1-41 **End-of-life NiMH and Li-ion battery generations from next-generation vehicles**
Xu Guochang (Kyoto University, Japan)
Yano Junya, Sakai Shin-ichi

P1-42 **Developing a strategic framework for E-waste in Mongolia**
Bat-ochirEnkhjargal (MUST, Mongolia)
GanchimegJamsran

P1-43 **Community - based Solid Waste Management: Case Study of Sai Son Commune, Quoc Oai District, Hanoi Capital**
MA. Ngo Thanh Mai (National Economic University, Vietnam)
Assoc.Prof. Nguyen The Chinh (Institute of Strategy and Policy on Natural Resources and Environment, Vietnam)

P1-44 **Comparative kinetic study of biogas production from the co-digestion of differential biomass waste**
Dang Ngoc Phuong (Vietnam Academic of Science and Technology, Vietnam)
Ngo Kim Chi, Nguyen Xuan Dung, Bui Xuan Giang

P1-45 **Pollution prevention by energy recovery from biomass waste at lab, pilot scale for dissemination**
Ngo Kim Chi (Institute of Natural Products Chemistry, Vietnam)
Dang Ngoc Phuong, Nguyen Xuan Dung

P1-46 **Research on sorbent synthesis for hydrogen sulfide treatment at the high temperature**
Dang Ngoc Phuong (Institute of Natural Products Chemistry, Vietnam)
Ngo Kim Chi, Nguyen Thi Hong

P1-47 **Study of biogas production from organic municipal solid waste**
Bui Xuan Giang (Vietnam Academic of Science and Technology, Vietnam)
Ngo Kim Chi, Nguyen Thi Thu Hong, Dang Ngoc Phuong

P1-48 **Semi-continuous Co-digestion of Waste Activated Sludge with Algal Biomass Residue from Bioethanol**
Park Ki Young (Konkuk University, Korea)
Lee Kwanyong, Oh Dooyoung, Kim Daegi, Park Ki Young

P1-49 **Proferties of Biochar from Hydrothermal Carbonization of Exhausted Coffee Residue**
Kim Han Seung (Konkuk University, Korea)
Kim Daegi, Bae Daeun, Lee Kwanyong, Kim Han Seung, Park Ki Young

Poster Program – March 10th (Thu) 17:30-18:30

P2-01 **A Study on the Drying Characteristics of the Carbonation Product from the Slurry of Waste CMB Catalyst**
Choi yeonseok (Korea Institute of Machinery & Materials)
choi sang kyu, kimseockjoon, jeongyeon woo, han so young

P2-02 **Cyanide uptake tested by raw and iron-doped zeolite**
Maulana Irwin (Tokyo Institute of Technology, Japan)
Takahashi Fumitake

P2-03 **Mixotrophic growth of Chlorella Sorokiniana for simultaneous organic and inorganic removal**
LEE TAE-HUN (Chonbuk national university, Korea)
KIM HYUN-WOO

P2-04 **Influential factors on solid-liquid separation of wastewater from food waste disposer**
AhnJaehong (Seoul National University, Japan)
JuMunsol, Oh Jeong-Ik, Kim Jae Young

P2-05 **Pipe Flow Analysis of an Automated Vacuum Waste Collection System Installed in Korea**
Jang Choon-Man (Korea Institute of Civil Engineering and Building Technology)
Lee Sang-Moon

P2-06 **Recycling Wastewater from Biodiesel Fuel Production Process to Liquid Fertilizer for Hydroponics**
Kohda Jiro (Hiroshima City University, Japan)
Nakano Yasuhisa, Kugimiya Akimitsu, Takano Yu, Yano Takuo

P2-07 **Micro-characteristics of refuse plastic fuel combustion fly ash generated in a fluidized bed combustor**
IshizakiFUmikazu (Tokyo institute of technology, Japan)

P2-08 **Development on the generation unit of flood debris in South Korea**
Cho Young Hoon (Seoul National University)
JuMunsol, Kim Jae Young

P2-09 **Food Waste Generation and Treatment in the Food Supply Chain in Japan**
LIU Chen (IGES, Japan)
HOTTA Yasuhiko

P2-10 **Onsite Rapid Analysis of Asbestos Utilizing Vehicle Equipped with Analytical Instruments in Disaster-Stricken Area**
Toyoguchi Toshiyuki (Environmental Control Center. Co.Ltd, Japan)
Tanaka Chihiro

P2-11 **Indicators of acidification in mesophilic and thermophilic anaerobic digestion processes of food waste**
Kim Joonrae Roger (Seoul National University)
Kim Jae Young

P2-12 **Evidence of low-temperature-destruction of 1 2 3 4-tetrachlorobenzene enhanced by alkali and zeolite**
Kawamoto Shunji (Osaka Institute of Technology, Japan)
Watanabe Nobuhisa

P2-13 **A Study on the Heating Effect of Anaerobic Digestion System using Fermentation Heat from Aerobic Decomposition for Heating Energy and the Characteristics of the Conversion of Organic Wastes into Biogas**
Choi Woo-Seok (SEOUL NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY, Korea)
Kim Yeong-Shin, PhaeChae-Gun

P2-14 **A Study on the Improvement of National Waste Statisstical Research Method based on the Evaluation of Previous National Statistical Researches on Municipal Solid Wastes.**
KIM joosin (Seoul National Univ. of Science and Technology, Korea)
KIM yeong shin, Phaechae gun

P2-15 **Recovery of Ga and In from MOCVD dust based LED industry by acidic leaching**
Chan Gi Lee (Institute for Advanced Engineering (IAE), Korea)
Kyung-soo Park, Basudev Swain, ByoungyongIm, Leeseung Kang

P2-16 **Development of system for explosive gases & DCS (Dichlorosilane) treatment in chemical plant**
Choi Hee-Young (Institute for Advanced Engineering, Korea)
Hong Bumui, Choi Changsik

P2-17 **Stability Test of Mercury in Waste from Industrial Process using a Sequential Extraction Procedure**
BACK Seung-Ki (Yonsei University, Korea)
SUNG Jin-Ho, JOUNG Bup-Mook, SEO Yong-Chil, CHUNG David, KIM Ki-Heon

P2-18 **The effect of particle size ranges on water holding capacity of natural soils with/without coal fly ash amendment**

SONG Mengzhu (Tokyo institute of technology, Japan)
LIN Shenglei, Takahashi Fumitake

P2-19 **Dissolution of waste concrete in HCl solution for indirect carbonation**
Jo Hoyong (Yonsei university, Korea)
Lee Min-Gu, Kang Dongwoo, Jung Kwang-deok, Park Jinwon

P2-20 **Enrichment and Separation of Rare Earth Metals from Dilute Solution by Solvent Extraction: Possible Application for Value Recovery from Effluent of Rare-Earth Extraction Industry**
Lee Chan Gi (Institute for Advanced Engineering (IAE), Korea)
Kang Leeseung, Swain Basudev, Lee Jieun, Park Kyung-Soo

P2-21 **The study on pyrolytic characteristics of biomass by slow pyrolysis for pyrolysis oil; an analysis of GC-MS and FTIR**
Lee Sumin (Yonsei University, Korea)
Park Jinwon

P2-22 **Mercury immobilization by chelate-complexation for MSWI fly ash: its dependency on chelate/mercury ratio chelate/mercury storage time & temperature and effect of co-existing ions**
Takahashi Fumitake (Tokyo Institute of Technology, Japan)
Fong Cheng Lip, Sakanakura Hirofumi

P2-23 **Color preference of trash containers for combustible waste incombustible waste PET bottles and cans scaled by binary pairwise comparison method**
Jiang Qiuhui (Tokyo institute of technology, Japan)
Izumi Takuya, Takahashi Humitake, Suzuki Shinya

P2-24 **Survey on readability of biomass energy online information in Indonesian language (Bahasa Indonesia)**
Biddinika Muhammad Kunta (Tokyo Institute of Technology, Japan)
Diponegoro Ahmad Muhammad, Ali Raden Muhammad, Tokimatsu Koji, Takahashi Fumitake

P2-25 **Acid fermentation of wasted primary sludge producing volatile fatty acids as an external carbon source for a post denitrification process**
Cho Jinwoo (Sejong University, Korea)
Kurniawan Allen, Shin Jung-Hun

P2-26 **Experimental Studies on Long-term Behavior of Mercury Containing-Waste under Monofill Condition**
Ishigaki Tomonori (National Institute for Environmental Studies, Japan)
Sato Masahiro, Yamada Masato, Oka Kaoru

P2-27 **A Study on the Heating Effect of Anaerobic Digestion System using**
Fermentation Heat from Aerobic Decomposition for Heating Energy and
the Characteristics of the Conversion of Organic Wastes into Biogas
PhaeChae Gun (SEOUL NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY,Korea)
Choi Woo Seok, Kim Yeong Sin

P2-28 **Study on the combustion process of waste in the Vertical combustor**
Yamada Yuji (Plantec Inc., Japan)
IwamuraChikashi, Sotani Yukihiro, Masumoto Takashi

P2-29 **A Study on the Improvement of National Waste Statisstical Research Method based on the Evaluation of Previous National Statistical Researches on Municipal Solid Wastes.**
KIM joosin (Seoul National Univ. of Science and Technology, Korea)
KIM yeong shin, Phaechae gun

P2-30 **Removal of chromium (VI) ion from water by coir pith**
Nguyen Xuan Huan (Faculty of Environmental Science, Viet Nam)
Doan Thi Anh, Duong Thi Thu Huyen, Trinh Kieu Trang

P2-32 **The role of energy efficiency service providers in low carbon transition in Vietnam**
Nguyen Thi Anh Tuyet (Hanoi University of Science and Technology)
Van Dinh Son Tho

P2-33 **"Developing Indicators on Evaluation and Proposing a Model towards, Green Manufacturing for Vietnam Brewery Enterprises"**
Hoang Hong Hanh (Institute of Strategy and Policy on Natural Resources and Environment, Viet Nam)

P2-34 **A study on the characteristics of the bench-scale torrefaction process with mixed biomass: Waste wood and Sewage sludge**
Jaehong Min (IAE (Institute of Advanced Engineering), Korea)
Soo-Nam Park, Yong-TaekIm, Dong-ju Kim, Jae Hoi Gu, Sang Ik Nam

P2-35 **A study on torrefaction of the mixed biomass depending on the ratio of sewage sludge**
Nam Sung-Bang (IAE(Institute of Advanced Engineering), Korea)
Min Jaehong, Im Yong-Taek, Gu Jae Hoi, Nam Sang-Ik, PoudelJeeban

P2-38 **A study on the mixing characteristics and the transition of moisture content of the waste biomass for application to the solid fuel production**
Kim Dong-ju (Institute for advanced engineering, Korea)
Min Jae-hong, Park Young-su, Park Su-nam, Yoon Young-sik, Gu Jae-hoi

P2-42 **Post-Earthquake Disaster Waste Management - A Case Study**
HaldarHimadriSekhar (International Society of Waste Management Air & Water)
Chatterjee Soumyajit, DebnathBiswajit, GhoshSadhan Kumar

P2-43 **Study to refined SiO2 from rice husk ash in thermal power factory to produce high quality building material**
Vu Hai Yen (Ho-Chi-Minh University of Technology, Vietnam)

P2-44 **Study to utilize making compost from pepper shells**
Vu Hai Yen (Ho-Chi-Minh University of Technology, Vietnam)

P2-45 **Analysis of Waste-to-Energy Conversion Efficiencies based on Different Estimation Methods in Seoul Area**
Jong-In Dong (University of Seoul, Korea)
Nguyen Thi Huong Nhai, Eui-Teak Jung, Won-Jun Lee, Geun-Su Na

P2-37 **Hydrothermal carbonization(HTC) of food waste and sewage sludge**
Cho Woori (The University Of Seoul)
Oh Minah, Chung Wonduck, Kim Hyeong wook, Lee Jai-Young

P2-40 **A Preliminary Study on the Isolation with Biomineralization Sludge Bacterias on Boleo Mine in Mexico**
Kim Joon-Ha (University of Seoul)
Lee Jai-young