



ASET

13th Asian Symposium on Ecotechnology

Final Program

2 and 3, December, 2006

**Toyama International Conference Center,
Toyama, Japan**

Organized by



National Institute of National College of Technology, Japan



Toyama National College of Technology

Co-Organized by



International Association of Ecotechnology Research

Schedule

December 2 (Sat)

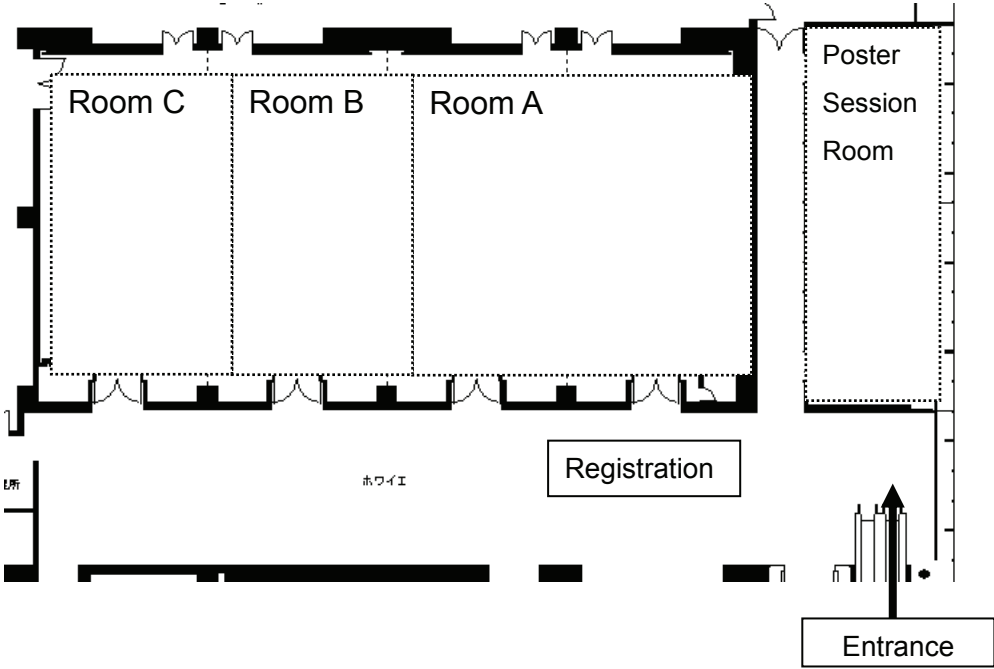
9:30 – 17:00	Registration
10:00 – 11:15	Student Mixer
11:15 – 13:00	Lunch, Poster Session
13:00 – 13:15	Opening Ceremony
13:15 – 14:45	Keynote Lectures
14:45 – 15:00	Break
15:00 – 16:00	Finalist of ASET Student Award
16:00 – 16:15	Break
16:15 – 17:45	Invited Lectures and Oral Presentations
18:30 – 20:30	Banquet (at Toyama Shimin-Plaza)

December 3 (Sun)

9:30 – 12:00	Registration
10:00 – 11:15	Invited Lectures and Oral Presentations
11:15 – 13:00	Lunch, Poster Session
13:00 – 15:00	Oral Presentations
15:00	Closing

Floor Plan

2nd Floor, Toyama International Conference Center



Keynote Lectures

Dec. 2 (Sat) 13:15 – 14:45 Room A

- K-1** **Development of Technology Harmonized with Environment for East Asian Countries**
SADAKATA Masayoshi
Professor, Kogakuin University, Japan
- K-2** **Meaning and Case of Close-to-nature Stream Restoration**
OH Jong-Min
Professor, Kyung Hee University, Korea

Finalist of ASET Student Award

Dec. 2 (Sat) 15:00 – 16:00 Room A

- S-1** **Verification of Terrestrial Biotic Ligand Model (TBLM) to Copper Accumulated in Barley**
YOSHIZAWA Eriko, SHOJI Ryo, Japan
- S-2** **Influence of Form of Heavy Metals on Accumulation in Blue Mussel**
TAKA Haruko, KUSUI Takashi, Japan
- S-3** **Fatigue Behavior Analysis of Stainless Steel Coated with TiN Film**
FUKUI Satoshi, KICHIBAYASHI Takuya, FUKUMOTO Yukio, Japan
- S-4** **Metal Ion-Immobilized Gel: Preparation and Application to the Adsorption of Alcohol Dehydrogenase**
UDDIN Mohammad Washim, TAKANO Maki,
HOSHINO Kazuhiro, MOROHASHI Shoichi, Japan

Invited Lectures and Oral Presentations

Dec. 2 (Sat)

16:15 – 17:45 Room A and C

Dec. 3 (Sun)

10:00 – 11:15, 13:00– 15:00 Room A, B and C

Dec. 2 (Sat)

	Room A	Room B	Room C
16:15-16:30	A1-01 : Invited		C1-01
16:30-16:45	A1-02 : Invited		C1-02
16:45-17:00	A1-03 : Invited		C1-03
17:00-17:15	A1-04 : Invited		C1-04
17:15-17:30	A1-05 : Invited		C1-05
17:30-17:45			C1-06

Dec. 3 (Sun)

	Room A	Room B	Room C
10:00-10:15	A2-01: Invited	B2-01	C2-01
10:15-10:30		B2-02	C2-02
10:30-10:45	A2-03	B2-03	C2-03
10:45-11:00	A2-04	B2-04	C2-04
11:00-11:15	A2-05	B2-05	C2-05
11:15-13:00	Lunch and Poster Session		
13:00-13:15	A2-06	B2-06	C2-06
13:15-13:30	A2-07	B2-07	C2-07
13:30-13:45	A2-08	B2-08	C2-08
13:45-14:00	A2-09	B2-09	C2-09
14:00-14:15	Break		
14:15-14:30	A2-10	B2-10	C2-10
14:30-14:45	A2-11	B2-11	C2-11
14:45-15:00	A2-12	B2-12	C2-12

Dec. 2 (Sat)

[Room A]

A1-01 Invited

Study on Some Problems of Recycling of Industrial Materials

CAI Jiuju, Northeastern University, China

A1-02 Invited

Supercritical Carbon Dioxide for Heavy Metal Extraction as a Green Solvent

KIM Hakwon, Kyung Hee University, Korea

A1-03 Invited

Review of Municipal Sewage Treatment in Shenyang of China

HU Xiaomin, Northeastern University, China

A1-04 Invited

Research on Bio-Oxidation of As-Bearing Gold Ores with Mesophile Arsenic-Resistant Bacteria

YANG Hongying, Northeastern University, China

A1-05 Invited

Recycle of Waste Rubber Powder Using Surface Modification Technique

SHANMUGHARAJ A.M., RYU Sung Hun, Kyung Hee University, Korea

[Room C]

C1-01

Treatment of Wastewater Containing Heavy Metal Ions by Thiourea Dioxide

HAYASHI Eriko, KAGAYA Shigehiro, TOHDA Koji

C1-02

Adsorption of Proteins onto Hydrolyzed Polyacrylamide Gel: A Quantitative Consideration for the Mechanism

TAKANO Maki, MURAKAMI Masayuki, UDDIN Mohammad Washim, HOSHINO Kazuhiro, MOROHASHI Shoichi

C1-03

Effects of Chemical Species and Microbial Activity on Arsenic Accumulation by the Hyperaccumulator Fern

MAKI Teruya, TSUTSUMIBATA Ryota, TSUNEKAWA Daigenn, KAKIMOTO Tatsuya, HASEGAWA Hiroshi, Ueda Kazumasa

C1-04

Formation of Cirrus Clouds Associated with Deep Convection over the Tibetan Plateau

TOBO Yutaka, IWASAKA Yasunobu, SHI Guangyu, ZHANG Daizhou

C1-05

Functional Improvement of Activated Sludge by Using Nucleic Acid Compounds

SHIMA Toshiaki, MOROHASHI Shoichi, HOSHINO Kazuhiro

C1-06

Mechanochemical Effects on Acidic Properties of Copper Cyclo-tetraphosphate

OKUMOTO Ken-ichi, ONODA Hiroaki, NAKAHIRA Atsushi, TANAKA Isao

Dec. 3 (Sun)

[Room A]

A2-01 *Invited*

Defluorination Characteristics during Coal Combustion

LIU Dan, SADAKATA Masayoshi

A2-03

Seasonal Characteristics of Poly-cyclic Aromatic Hydrocarbons in Ambient Particles in Siem Reap and Angkor Monument Area, Cambodia

MURASE Takahiro, FURUUCHI Masami, TSUKAWAKI Shinji, HANG Peou, SIENG Sotham, HATA Mitsuhiro

A2-04

Decomposition of Poly-cyclic Aromatic Hydrocarbons (PAHs) in Smoke Particles from Biomass Burning by Soft X-Ray Irradiation

BAI Yunhe, FURUUCHI Masami, TEKASAKUL Perapong, CHOOSONG Thitiworn, TEKASAKUL Surajit, OTANI Yoshio, AIZAWA Masaya, HATA Mitsuhiro

A2-05

Improvement of Low-Energy PIXE System for Precious Surface Analysis

KADA Wataru, ISHIKAWA Ippei, KISHI Atsuya, IHARA Yohei, SATO Fuminobu, KATO Yushi, IIDA Toshiyuki

A2-06

Development of Inorganic Phosphate Catalyst for Decomposition of Global Warming Gas

ONODA Hiroaki

A2-07

**Recycling Process of Waste Glass Containing Hazardous Heavy Metal
- Extraction of SiO₂ and Pb from Waste glass by Alkali Fusion -**

MORI Hidetsugu

A2-08

Continuity Assessment of Desulfurization Gypsum as Alkali Soil Amendment in Northeastern China

SAKAI Yuji, LIU Dan, SADAKATA Masayoshi

A2-09

Fluidization of Bio-Membrane by Arsenic Toxicity

HUONG Tran Thi Thanh, TUAN Le Quoc, HONG Pham Thi Anh

A2-10

Microcolumn Preconcentration of Trace Metal Ions in Environmental Samples Using Nanometer Sized Alumina Immobilized with Chromotropic Acid and Determination by Inductively Coupled Plasma Atomic Emission Spectrometry

RAMESH Attinti, HASEGAWA Hiroshi, MAKI Teruya, UEDA Kazumasa

A2-11

Removal of Some Polycyclic Aromatic Hydrocarbons and 1-nitropyrene with Hämatite Catalyst at 500 °C

TABATA Masahiro, SHIRAMATA Yuji, SHOJI Hiromichi, TAKATA Daisuke, CHOHJI Tetsuji, HAYAKAWA Kazuichi

A2-12

Separation of Lead (II) Ion from Tap Water Using Silica Gel Adsorbed Water-Soluble Porphyrin

MANAKA Atsushi, IGARASHI Shukuro

[Room B]

B2-01

The Utilization of Sweet Potato Shochu Lees for Sawdust Cultivation of *Pleurotus Ostreatus*

SENDO Hirotaka, KIHARA Masato, YAMADA Masayoshi, IMAYA Ryuichi, YAMAUCHI Masahito

B2-02

Bio-ethanol Production from Paper Cellulose by Simultaneous Saccharification and Fermentation

UMEDA Asami, YOSHIMURA Tadayosi

B2-03

Nitrogen Removal using Soil Column Mixed with Wood Chips

TAKAI Yoshie, YAMAMOTO-IKEMOTO Ryoko, TAKANO Morihito

B2-04

Numerical Analysis of Solar Pond with Low Salt Water

ISHISAKA Takuya, SHIMADA Hajime, KAMAKURA Katsuyoshi

B2-05

Working Environment in a Semi-opened Factory Building Polluted by Smoke from Biomass Fuel Burning and Health Influences to Workers

CHOOSONG Thitiworn, FURUUCHI Masami, TEKASAKUL Perapong, TEKASAKUL Surajit, CHOMANEE Jiraporn, JINNO Tsuyoshi, OTANI Yoshio, HATA Mitsuhiko

B2-06

Contaminated Air Cleaning by the Corona Discharge Reactor

FUJII Tomio, ARAO Yasushi, REA Massimo

B2-07

The Effect of Molding Temperature on Tensile Properties of Bacterial Cellulose

UCHIDA Kei, TAKAGI Hitoshi

B2-08

PLA-Bamboo Composites and Their Thermal Conductivity

KAKO Shuhei, TAKAGI Hitoshi, KUSANO Koji, OUSAKA Akiharu

B2-09

Decomposition Characteristics of Ambient Pollutants on Photo-catalytic Aerosol Particles in Supersonic Flow

FURUUCHI Masami, HATA Mitsuhiko, TANIUCHI Mai, PRATIM Biwas

B2-10

Additional Effects of Lanthanum on Preparation and Powder Properties of Cobalt Phosphate Pigment

TANGE Keisuke, ONODA Hiroaki, YAMAMOTO Kazuhiro, KOJIMA Kazuo, TANAKA Isao

B2-11

Constriction of *Escherichia coli* Expressing Polycysteine and Its Application on Metal Ions Bioaccumulator

MATSUSHIMA Takashi, MOROHASHI Shoichi, HOSHINO Kazuhiro

B2-12

New Phosphors for Mercury-free Lighting

TODA Kenji, IMANARI Yu-ichiro, KAWADA Satoshi, SHIRAKURA Shigeki, KAWAKAMI Yoshitaka, KOUSAKA Shin-ichiro, UEMATSU Kazuyoshi, SATO Mineo

[Room C]

C2-01

Effect of Temperature and Dust Properties on Filtration and Regeneration Characteristics of Candle Type Ceramic filter

HATA Mitsuhiko, OKAMOTO Taiju, FURUUCHI Masami

C2-02

Preparation of Highly Concentrated Solutions by Falling-Film Freeze Concentration Method

WATANABE Takashi, SAKAMOTO Naoya, TAGUCHI Yoji

C2-03

Study on the Reduction of Chromium Using Humic Substance and Clay Minerals

KANO Naoki, OTSUKI Yusuke, LU He, IMAIZUMI Hiroshi

C2-04

Various Properties of Bismuth Oxide Glasses as New Solder Glasses for Electronic Devices

KAWANAKA Yuji, MATUSITA Kazumasa

C2-05

Preparation of Surface-Sulfonated Organic-Inorganic Hybrid Particles for Proton Conducting Electrolyte

OGURA Kota, DAIKO Yusuke, KATAGIRI Kiyofumi, MUTO Hiroyuki, SAKAI Mototsugu, MATSUDA Atsunori

C2-06

Preconcentration of Ultratrace Mercury in Rain Water by Using Zinc Sulfide

KITAMORI Kazunori, KAGAYA Shigehiro, TOHDA Koji

C2-07

Selective Separation of Mercury(II) Ions by Combination of Polythioamide Sorbent and Chemical Vaporization

ITO Masahiro, KAGAYA Shigehiro, TOHDA Koji, KANBARA Takaki

C2-08

Determination of Iron in Phytoplankton Cultures by Radiochemical Analysis with ⁵⁵Fe

HASEGAWA Hiroshi, OKUMURA Chikako, MAKI Teruya, UEDA Kazumasa

C2-09

Risk Assessment of Water Resources in an Average Household

TANABE Kazutoshi, UCHIYAMA Hirohumi, OHTA Tsutomu, ONO Shuichiro

C2-10

Consideration of Environmental Assessment of Deep-Ocean Water

TANABE Kazutoshi, MASUKO Reiko, OHTA Tsutomu, ONO Shuichiro

C2-11

Pilot Study on Exposure to Atmospheric Pyrene and 1-Nitropyrene During Driving in Shenyang, China

*TANG Ning, KAKIMOTO Kensaku, MIZUKAMI Satoko, KAMEDA Takayuki, TORIBA Akira,
TAMURA Kenji, KONDO Yoshinori, YAMAZAKI Shin, HASEGAWA Shuichi, HAYAKAWA Kazuichi*

C2-12

Relation between Heavy Metal Concentration in River and Their Accumulation in Aquatic Organisms

HORI Yusuke, KUSUI Takashi

Poster Session

Dec. 2 (Sat) and Dec. 3 (Sun) 11:15 – 13:00

Poster Session Room

P-01

Ultrasonic Washing of Plastic Wastes

LEE Joo Heon, LIM Yoon Hee, OH Jong Min, JO Young Min

P-02

Optimum Condition for Hydrogen Fermentation of Organic Waste

HWANG Eung-Ju, KANG Mi-Yeon

P-03

Mixture State of Individual Aerosols at the Coastal Area of the Japan Sea

NAKATA Naonobu, IWASAKA Yasunobu, YAMADA Maromu, TOBO Yutaka, ZHANG Daizhou, KOMURA Ryotaro, WADA Masashi, KANAOKA Chikao

P-04

Double Diffusive Phenomena of Hot Waste Solution in River Water

YOSHIOKA Masae, ISHISAKA Takuya, KAMAKURA Katsuyoshi

P-05

Double Diffusive Phenomena of Hot Block Solution in Water

ITO Tomoko, ISHISAKA Takuya, KAMAKURA Katsuyoshi

P-06

Development of a Robotic Volcano Probe

FUKUI Satoshi, NAKAZAWA Tadafumi, SUGAHARA Takaharu

P-07

Influence of Biomass Fuel Burning for Rubber Sheet Production on Characteristics of Ambient Poly-cyclic Aromatic Hydrocarbons in Hat Yai, Thailand

FURUUCHI Masami, JINNO Tsuyoshi, TEKASAKUL Perapong, TEKASAKUL Surajit, CHOOSONG Thitiworn, CHOMANEE Jiraporn, OTANI Yoshio, HATA Mitsuhiko

P-08

Preparation of a Highly Dissolved-Ozone Solution by Using a Two-Fluids Nozzle

WATANABE Yoishiro, TAGUCHI Yoji, HASHIMOTO Zyun, SAKAI Ryutaro

P-09

Long-range Transport of Polycyclic Aromatic Hydrocarbons from China to Japan

OKADA Yumi, YANG Xiaoyang, TANG Ning, KAMEDA Takayuki, TORIBA Akira, HAYAKAWA Kazuichi

P-10

Electrochemical Debromination Reaction of Brominated Epoxy Resin

KAWAFUCHI Hiroyuki, MIZUNO Yuuki, URITA Kouji, KURODA Hirofumi, SIBATA Katsuji

P-11

Ceramic Use of Coal Fly ash

OH Jong Min, JO Young Min, LIM Yoon Hee, LEE Joo Heon

P-12

Preparation and Acidic Properties of Magnesium Doped Nickel Phosphates

KAWADE Hiroki, ONODA Hiroaki, MATSUOKA Masao, TAMAKI Jun, TANAKA Isao

P-13

Synthesis of Porous Aluminum Phosphate Bulks using Hydrothermal Hot-Pressing Processes

SAKAI Ryusuke, ONODA Hiroaki, NAKAHIRA Atsushi, TAKENAKA Atsushi, TANAKA Isao

P-14

Additional effects of Urea on Preparation and Acidic Properties of Lanthanum Condensed Phosphates

ISHIMA Yuya, ONODA Hiroaki, NAKAYAMA Hirokazu, TAKENAKA Atsushi, TANAKA Isao

P-15

Integrated Biodiesel Production by Means of Ultrasonic Energy: A Comparison between Different Homogeneous Catalyst Systems

HANH Hoang Duc, DONG Nguyen The, OKITSU Kenji, MAEDA Yasuaki, NISHIMURA Rokuro

P-16

Reaction of Calcium and Phospahte Ions in Aluminate Gels

TAFU Masamoto, KOBAYASHI Mikiko, CHOHI Tetsuji

P-17

A Simple and Rapid Separation Technique for Trace Elements in Magnesium-Containing Salts by Internal Standardization-Assisted Rapid Coprecipitation with Magnesium Hydroxide

KAGAYA Shigehiro, MIZUNO Toshiyuki, MIWA Satoshi, TOHDA Koji

P-18

Extractability of Organometallic Compound and Metal Complex with Alkyl Phosphonate or Phosphate

KAGAYA Shigehiro, MAEBA Emiko, KOMATSUBARA Nae, TOHDA Koji

P-19

Measurement of Snow Particles using Two Radars

SAKON Yusuke, SHIINA Toru, NISHI Kaoru, OSAKI Tomoki

P-20

Separation of Lead (II) ion from Tap water using Polystyrene Beads Immobilized Water-Soluble Porphyrin

WATANABE Masaki, MANAKA Atsushi, IGARASHI Shukuro

P-21

Microbial Community Analysis of Nitrogen-Saturated Soils by PCR-DGGE Method

IWAMOTO Chizuru, UENO Hiromi, NAKASHIMA Yuri, KAWAKAMI Tomonori

P-22

Measurement of Nitrous Oxide (N₂O) Flux from a Rice Field

DEGUCHI Mayuko, KAWAKAMI Tomonori

P-23

The Development of New Adsorptive Stripping Voltammetry for Estrogen Detection Based on the Formation of Micro-Organic Ion-Associate Phase at the Electrode Surface

SEKIYAMA Saori, HATA Noriko, TAGUCHI Shigeru, KURAMIZ Hideki

P-24

Development of Signal Enhancement Technique for Electrochemical Microbead-Based Enzyme Immunoassay

TAKEUCHI Miki, UENO Eiji, HATA Noriko, TAGUCHI Shigeru, KURAMIZ Hideki

P-25

Removal of Fluorine from Waste Water by Calcium Aluminates

SATO Kenji, MORINAGA Hiroko, TOKUMITSU Toshiaki, TODA Kenji, KAWADA Satoshi, SHIRAKURA Shigeki, UEMATSU Kazuyoshi, SATO Mineo, HOTTA Noriyasu

P-26

Low Temperature Growth of Potassium Niobate Single Crystal

IIDA Akihiro, TAKAHASHI Toshinari, TODA Kenji, UEMATSU Kazuyoshi, SATO Mineo

P-27

Pretreatment Effects on the Solubilization and Biodegradability of Activated Sludge

PARK Byung-Joo, PARK Min-Jung, CHOI Young-Gyun

P-28

Determination of Fe(II) and Fe(III) in the Presence of EDTA in Solutions Using Molecular Recognition Technology(MRT) Products

KINOSHITA Sanae, HASEGAWA Hiroshi, OKUMURA Chikako, MAKI Teruya, UEDA Kazumasa