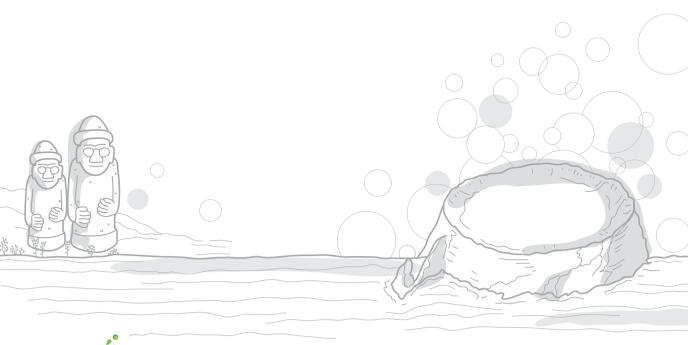


AAC2017

The 10th Asian Aerosol Conference

July 2nd(Sun) ~ 6th(Thu). 2017 ICCJEJU. Jeiu. Korea



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AEROSOL CHEMICAL, PHYSICAL PROPERTIES ANALYSIS



TOF Aerosol Mass Spectrometer, Aerodyne Model : TOF-AMS



Lab OC/EC Analyzer, SUNSET Model : 5L



Ambient Ion Monitor, URG Model : URG-9000



Aerodynamic Particle Sizer, TSI
Model: 3321



Scanning Mobility Particle Sizer, TSI Model: 3938L72



DustTrack, TSI Model: 8530



Aethalometer, Magee Model AE33



Nephelometer, Ecotech Model: Aurora 3000



MicroAeth, Aethlabs Model: AE51

㈜에이피엠엔지니어링



경기도 부천시 원미구 송내대로 388, 202동 808호 Tel: (032) 219-7700 Fax: (032) 219-7707

Website: www.apm.co.kr E-mail: apm@apm.co.kr







Advanced Air Pollution Environmental Eqiupments









KNJ200 Gas Sampler

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KN-LS25



Light Scattering Analyzer
KN-LS25



Continuous Particulate Ar

FH62CI4

Air Quality Monitoring System

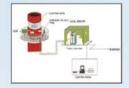


PM10 / PM2.5











5F KNJ Daehyeon Techno, #174, Ojeon-Dong, Uiwang-City, Kyonggi-Do, 473-820 Korea Tel: 82-31-451-7082(Rep.), 82-2-424-7082 / Fax: 82-31-459-7321 Email: knj@knj-eng.co.kr / Web: www.knj-eng.co.kr





AAC2017

The 10th Asian Aerosol Conference

July $2^{nd}(Sun) \sim 6^{th}(Thu)$. 2017 ICCJEJU. Jeiu. Korea



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"This work was supported by the Korean Federation of Science and Technology Societies Grant funded by the Korean Government."





Dear Aerosol Researchers.

We are very happy to announce that the Asian Aerosol Conference (AAC2017) will be held in Jeju, Republic of Korea from July 2 to 6, 2017.

We will do our very best to host this event and make sure that every scientist and engineer in the field of aerosol science and technology has a nice and comfortable stay. For this purpose, meticulous preparations and concerted efforts will be made to provide various wellorganized programs, including up-to-date technical sessions on the current topics of interest.

We are proud that the venue of this conference, Jeju Island, has been designated as UNESCO-accredited sites such as a Biosphere Reserve, a World Natural Heritage Site, and a Geopark. We hope you enjoy your stay in Jeju which is a world-renowned treasure island worthy of worldwide attention and conservation.

We hope that aerosol scientists and engineers from all over Asia and the Pacific will participate in this conference in 2017, and that all of them will not only exchange the most up-to-date technical information and enjoy getting to know each other but also will experience the wonders of Jeiu Island and learn about Korean culture and history.

See you in Jeju 2017.

Kang-Ho Ahn, Ph.D.

ahm Kang Ho

Co-Chairman,

AAC2017 Committee

Yong Pyo Kim, Ph.D.

Co-Chairman,

AAC2017 Committee

Hee Dong Jang, Ph.D.

Co-Chairman, AAC2017 Committee

Hyuksang Chang, Ph.D.

Co-Chairman, AAC2017 Committee

AAC2017 Conference

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Dong-Su KIM ABC Trading	Byung Uk LEE Konkuk University	

DATE	July 2 (Sun)
16:00~18:00	Registration [3F, Foyer]
1 8:00~19:20	Welcome Reception [5F, OceanView]

	July 3 (Mon)			
DATE VENUE	3F	Foyer, Halla, Samda	4F Room 401, Room 4	402
	Halla [A]	Samda [B]	Room 401 [C]	Room 402 [D]
8:00	Regist	ration (08:00 - 17:30) / Exh	nibition (09:00 - 17:30) [3F,	Foyer]
8:30		Coffee Break (08:30) - 09:00) [3F, Foyer]	
9:00		Opening Ceremony (0	9:00 - 09:30) [3F, Halla]	
9:30		Plenary Lecture 1 [PL1] (
10:00		Prof. Yoshio (OTANI, Japan	
10:30		Oral Session 1	(10:30 - 12:00)	
11:00	[OS1-A]	[OS1-B]	[OS1-C]	[OS1-D]
11:30	Aerosol Chemistry	Aerosol Physics	Instrumentation and Measurement	Materials Processing
12:00				
12:30		Lunch Break (12:00 - 13:30) [5F, OceanView]		
13:00				
13:30		Plenary Lecture 2 [PL2] (13:30 - 14:30) [3F, Halla]		
14:00		Prof. Pratim I	BISWAS, USA	
14:30		Oral Session 2		
15:00	[OS2-A] Aerosol Chemistry	[OS2-B] Filtration and	[OS2-C] Instrumentation and	[OS2-D] Indoor Aerosol
15:30	Acrosor chemistry (Control Technology	Measurement	indeen / Kresen
16:00		Coffee Break (16:00) - 16:30) [3F, Foyer]	
16:30		Oral Session 3	(16:30 - 18:30)	
17:00	[OS3-A]	[OS3-B]	[OS3-C]	[OS3-D]
17:30	Aerosol Chemistry III	Bioaerosols	Instrumentation and Measurement	Aerosol and Global Climate
18:00				
18:30				

Subject to change

AAC2017 PROGRAM AT A GLANCE

		July 4	(Tue)		
DATE VENUE	3F	Foyer, Halla, Samda	4F Room 401, Room	1402	
	Halla [A]	Samda [B]	Room 401 [C]	Room 402 [D]	
8:00	Registra	ation (08:00 - 17:30) / Exh	nibition (09:00 - 17:30) [3F	F, Foyer]	
8:30		Coffee Break (08:30	- 09:00) [3F, Foyer]		
9:00	Plenary Lecture 3 [PL3] (09:00 - 10:00) [3F, Halla]				
9:30		Prof. Chuen-Jinn TSAI, Taiwan			
10:00		Coffee Break (10:00) - 10:30) [3F, Foyer]		
10:30		Oral Session 4	(10:30 - 12:00)		
11:00	[OS4-A] Long-Range Transported Air	[OS4-B] Bioaerosols	[OS4-C] Incineration & Combustion	[OS4-D] Micro and Nanotechnology	
11:30	Pollutants in East Asia - Observation, Measurements, and Model Analysis		Aerosols		
12:00	(12:00 12:20) [FE Ocean\/iout]				
12:30			AARA Board Meeting & Lunch [3F, Room 302]		
13:00			[57,105111552]		
13:30		Plenary Lecture 4 [PL4]	(13:30 - 14:30) [3F, Halla]		
14:00		Prof. Min	HU, China		
14:30		Oral Session 5	(14:30~16:30)		
15:00	[OS5-A]	[OS5-B-SS]	[OS5-C]	[OS5-D]	
15:30	Long-Range Transported Air	LG Electronics Special Session	Aerosol Modeling	Nanoparticles and Materials	
16:00	Pollutants in East Asia - Observation, Measurements, and Model Analysis	·			
16:30		Coffee Break (16:30	0 - 17:00) [3F, Foyer]		
17:00	Deute Control	0011 (17.00 10.30)			
17:30		PS1] (17:00 - 18:30) foyer]			
18:00			AAQR Board Meet	ting (18:00 - 20:00)	
18:30~ 20:00			[3F, Roc	om 302]	

[※] Subject to change

	July 5 (Wed)				
DATE VENUE	3F	Foyer, Halla, Samda	4F Room 401, Room 4	102	
	Halla [A]	Samda [B]	Room 401 [C]	Room 402 [D]	
8:00		Registration (08:00	Registration (08:00 - 17:30) [3F, Foyer]		
8:30		Coffee Break (08:30) - 09:00) [3F, Foyer]		
9:00		Plenary Lecture 5 [PL5] (09:00 - 10:00) [3F, Halla]			
9:30		Prof. Gediminas MAINELIS, USA			
10:00		Awards Ceremony (10	0:00 - 10:30) [3F, Halla]		
10:30		Oral Session 6 (10:30 - 12:30)			
11:00	[OS6-A]	[OS6-B]	[OS6-C]	[OS6-D]	
11:30	Atmospheric Aerosols	Filtration and Control Technology	Health Related Aerosols	Instrumentation and Measurement V	
12:00	7(103013	Control recimology (/\tel03013	Wedsdrennent IV	
12:30					
13:00					
13:30					
14:00					
14:30					
15:00		Free	Time		
15:30					
16:00					
16:30					
17:00					
17:30					
18:00					
~ 20:00		Gala Dinner (18:00~	20:00) [5F, Tamna B]		

[※] Subject to change

AAC2017 PROGRAM AT A GLANCE

	July 6 (Thu)			
DATE VENUE	3F	Foyer, Halla, Samda	4F Room 401, Room	402
	Halla [A]	Samda [B]	Room 401 [C]	Room 402 [D]
8:00		Registration (08:00	- 12:30) [3F, Foyer]	
8:30		Coffee Break (08:30) - 09:00) [3F, Foyer]	
9:00	Plenary Lecture 6 [PL6] (09:00 - 10:00) [3F, Halla]			
9:30		Prof. Kang-Ho AHN		
10:00		Coffee Break (10:00) - 10:30) [3F, Foyer]	
10:30		Oral Session 7	(10:30 - 12:30)	
11:00	1007.41		1007 61	1007 53
11:30	[OS7-A] Atmospheric	[OS7-B] Aerosol Emissions	[OS7-C] Health Related	[OS7-D] Instrumentation and
12:00	Aerosols	7 (Crosor Errinssions	Aerosols	Measurement V
12:30				
13:00		Break (12:	30 - 13:30)	
13:30	Oral Session 8	(13:30 - 15:30)		
14:00	[O.CO. 41]	5050 81		
14:30	[OS8-A] Atmospheric	[OS8-B] Filtration and		
15:00	Aerosols	Control Technology III		
15:30		Closing Ceremony (15	:30~16:00) [3F, Halla]	
16:00				
16:30				
17:00				
17:30				
18:00				
~ 20:00				

[※] Subject to change

OVERVIEW

Title	The 10 th Asian Aerosol Conference (AAC 2017)		
Date	July 2 (Sun) - 6 (Thu), 2017		
Venue	ICC Jeju, JEJU, Republic of Korea		
Participants	600 from 20 Countries (Domestic 300, Overseas 300) Exhibition: 28 Companies 35 Booths		
Homepage	www.aac2017.org		
Language	English		
Hosted By	KOrean Association for Particle and Aerosol Research		
Supported By	KOREA TOURISM ORGANIZATION Jeju Special Self-Governing Province Jeju Convention & Visitors Bureau KOREA TOURISM ORGANIZATION Jeju Special Self-Governing Province Jeju Convention & Visitors Bureau		
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AAC2017 CONFERENCE INFORMATION

Welcome Reception

All registered participants are invited to attend the Welcome Reception which will take place at OceanView on the 5th floor, ICC JEJU. It will be an excellent opportunity to network and socialize with other participants, while enjoying a mini buffet with delicious finger foods and beverages.

- Date & Time: July 2 (Sun), 18:00~19:20

- Place: OceanView (5F)

Opening Ceremony

All participants and exhibitors are warmly invited to join and celebrate the official opening ceremony.

- Date & Time: July 3 (Mon), 09:00~09:30

Place: Halla Hall (3F)

AAC Gala Dinner

If you would like to experience a special night in Jeju, you are cordially invited to the Gala Dinner. Delicious foods will be served along with a dynamic traditional Korean musical performance. This will be a great opportunity to relax with wonderful entertainment while also allowing time to get to know each other better. Please make sure to bring the Gala Dinner ticket with you.

- Date & Time: July 5 (Wed), 18:00~20:00

- Place: Tamna B Hall (5F)

- Ticket Price: US \$70 / person / A small number of tickets are available on site.

Awards Ceremony

Awards Ceremony for AARA Fellows and Asian Young Scientist Awards(AYASA) will be held after Plenary Lecture 5. Please join the ceremony and celebrate the awardees together.

- Date & Time: July 5 (Wed), 10:00~10:30

- Place: Halla Hall (3F)

Closing Ceremony

All participants are cordially invited to join the Closing Ceremony to cherish the memories from AAC 2017.

- Date & Time: July 6 (Thu), 15:30~16:00

- Place: Halla Hall (3F)

Lunch Breaks

The registration fee for regular participants and students includes lunches for 2 days(July 3~4).

- Date & Time: July 3 (Mon) 12:00~13:30 / July 4 (Tue) 12:00~13:30

Place: OceanView (5F)

Coffee Breaks

Coffee, tea and refreshments will be served to all participants on the 3rd floor foyer between session programs.

Preview Room

Location: 3F. Room 301A

Operation: July 2 (Sun) 16:00~18:00 / July 3 (Mon) ~ July 5 (Wed) 08:00 ~ 18:00 / July 6 (Thu) 08:00 ~ 14:00

Please visit the preview room and submit your presentation material at least 2 hours prior to your session. You can also modify your presentation file at the preview room. Come and get accustomed to using the equipment we have for you at the conference. You are recommended NOT to use your own computer for your presentation. If you have to use Apple Mac with our beam projector, we request you bring your Mac gender changer and go straight to the session room to test your Mac at least 2 hours before

☆ Time allocated for Presentation

Oral Presentation	Total of 15 minutes (12 mins. for presentation and 3 mins. for Q&A)	
Invited Speakers Presentation	Total of 30 minutes (25 mins. for presentation and 5 mins. for Q&A)	
Plenary Lecturers Presentation	Total of 60 minutes (50 mins. for presentation and 5~10 mins. for Q&A)	

Presentation Schedule

Date	Session	
July 3 (Mon)	PL01~PL02, OS01~OS03	
July 4 (Tue)	PL03~PL04, OS04~OS05, PS	PL: Plenary Lecture
July 5 (Wed)	PL05, OS06	OS: Oral Session PS: Poster Session
July 6 (Thu)	PL06, OS07~OS08	13.103(01303)

Session Topics

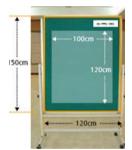
Aerosol Chemistry, Aerosol Emissions, Aerosol Modeling, Aerosol Physics, Atmospheric Aerosols, Bioaerosols, Filtration and Control Technology, Health Related Aerosols, Incineration and Combustion Aerosols, Indoor Aerosols, Instrumentation and Measurement, Materials Processing, Micro and Nanotechnology, Nanoparticles and Materials, Aerosols and Global Climate, Electrical Effects

Poster Session

Poster Session: July 4 (Tue), 17:00~18:30, 3F, Foyer

Poster Setting: July 3 (Mon), 18:30~20:00 - July 4 (Tue), 08:00~16:00

Poster Takeoff: July 4 (Tue), 19:00~22:00



Posters will be displayed at the foyer of ICC JEJU (3F). The secretariat will not be held liable for any lost or damaged posters. All poster presenters are encouraged to be at their poster panels for discussion with participants during presentation time.

Poster Board Information

The poster-board surface for each poster will be 150cm high by 120cm wide. Posters prepared by presenters should be maximum of 120cm height and 100cm width for comfortable angle for viewers.

Poster board is covered with nonwoven green fabric material.

Scotch tape, pins and scissors will be prepared in poster session area for presenter's to attach their posters.

AAC2017 CONFERENCE INFORMATION

Transportation

From Jeju International Airport, you will reach to the venue in approximately 40-50 minutes by car. The airport limousine buses are also available every 15-20 minutes at the airport

Airport Limousine Bus Route (No. 600)

Airport \rightarrow Sun Hotel \rightarrow Grace Hotel \rightarrow Entrance to the Eomiji Botanical Garden \rightarrow Hana Hotel \rightarrow Hyatt Hotel \rightarrow Shilla Hotel \rightarrow Suites Hotel \rightarrow Lotte Hotel \rightarrow Hankook Condominium \rightarrow KTO Jeju \rightarrow Seaes Hotel \rightarrow Bouyoung Hotel and Resort \rightarrow Jeju International Convention Center(ICC JEJU) \rightarrow World Cup Stadium \rightarrow New Gyeongnam Hotel \rightarrow Seogwipo Port \rightarrow Paradise Hotel \rightarrow KAI

Taxi: Individual Taxi Service Association (+82-64-744-2793)
Call taxi operators (+82-64-727-1111)

Registration

Registration Fee

- Registration for students requires you to bring with a copy of student card or an official letter from your participating university confirming that you are a full time student. Students will need valid student card at the on-site registration desk.
- · Registration for retirees requires you to bring with resume and retirement certificate (ex, verifying your current retired position, such as confirmation letter from head of your association or previous organization)

Category	Early-bird Registration (Received on or before May 31, 2017)	On-site Registration (Received after May 31, 2017)	
Standard	US\$ 500.00	US\$ 700.00	
Student	US\$ 200.00	US\$ 300.00	
Exhibitor	US\$ 500.00	US\$ 700.00	
Retiree	US\$ 200.00		
AAC Dinner	US\$ 70.00		

Registration Fee Covers

- Admission to Scientific Sessions
- Welcome Reception and Coffee Breaks
- Conference Materials (Congress bag, Program book, Name card)

Methods of Payment

- · All registration fees are quoted in US dollar (USD). Payment in any other currency will not be accepted.
- · Registration not accompanied by appropriate payments will not be honored until full payment is made.
- · Receipts will be provided at the on-site registration desk.
- · We also take credit card (VISA, MasterCard, Amex and JCB) and wire transfer for the payment.

I.D. Badges

- Exhibition

All participants are required to check in at the registration desk to pick up their name badge. Badges must be worn during all scientific sessions and social programs.

Emergency Phone Numbers

Tourist Information: 1330 / Police: 112 / First Aid: 119

AAC2017 Secretariat

224 Jungmungwangwang-ro, Seogwipo, Jeju Special Self-Governing Province, Korea, 63547, International Convention Center JEJU Tel. +82-64-735-1035 / Fax. +82-64-735-1098 / e-mail. info@aac2017.org

Housing Bureau

The AAC2017 has selected hotels in different rate categories for participants of AAC 2017 and invites participants to join an exclusive tour program that is designed to make your stay more enjoyable and memorable.

Contact Information

AAC 2017 Housing Bureau: Hana Tour Jeju / E-mail: housingbureaujeju@gmail.com Tel: +82-(0)64-713-9860

* Request for any change or cancellation will be accepted in working hours: Monday to Friday, 09:00~18:00 (UTC+09:00).



301A: 7/2~6 Preview Room

2 301B: 7/2~6 Organizing Committee

302: 7/2~6 Board Meeting Room

4 **300:** 7/2~6 Secretariat

Foyer: 7/2~6 Registration

7/3~5 Exhibition7/4 Poster Session7/3~6 Coffee Breaks

6 Halla Hall: 7/3 Opening Ceremony

(Room [A]) 7/3~6 Plenary Lectures &

Oral Sessions

7/6 Closing Ceremony

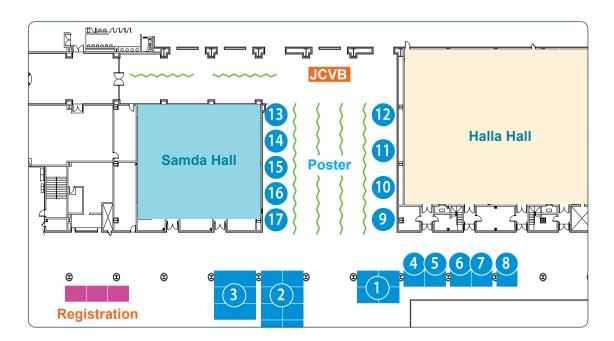
Samda Hall: 7/3~6 Oral Session

(Room [B])



- 1 Room 401: 7/3~6 Oral Session (Room [C])
- 2 Room 402: 7/3~6 Oral Session (Room [D])
- 3 Tamna Hall B: 7/5 Gala Dinner
- **Oceanview:** 7/2 Welcome Reception 7/3-4 Lunch

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10	Topas GmbH JINSOL			5OL	
11	TSI Inc.				
12	ABC Trading				
13	Cambustion Ltd.				
14	Dekati Ltd.				
15	KANOMAX JAPAN INC.				
16	PALAS GmbH				
17	Aerosol and Air Quality Research				



PLENARY LECTURERS

INVITED SPEAKERS



Plenary Lecture 1

July 3(Mon) [09:30-10:30]

Chairperson: Dr. Hee Dong JANG (KIGAM, Republic of Korea)

Prof. Yoshio OTANI

Vice President of Kanazawa University President of JAAST Professor of Kanazawa University

Japan

Education

1977 B.S., Dept. of Chemical Engineering, Kanazawa Univ. 1979 M.S., Dept. of Chemical Engineering, Graduate School of Engineering, Kanazawa Univ. 1982 Ph.D., Dept. of Chem. Eng. and Materials Sci., Syracuse Univ., NY

[PL1] Nanofiber Filter and Application of Air Filter to Aerosol Measurement

Yoshio OTANI

Graduate School of Natural Science and Technology, Kanazawa University, Japan

Plenary Lecture 2

July 3(Mon) [13:30-14:30] Chairperson: Prof. Hyuksang CHANG (Yeungnam University, Republic of Korea)

Prof. Pratim BISWAS

The Lucy and Stanley Lopata Professor Asst. Vice Chancellor and Chair, EECE Washington University in St. Louis

USA

Education

1985 Ph.D.Mechanical Engineering California Institute of Technology 1981 M.S. Chemical, Nucl., Thermal Engr. University of California, Los Angeles 1980 B.Tech. Mechanical Engineering Indian Institute of Technology, Bombay



[PL2] Aerosol Science and Engineering Enabling Applications in Energy, **Environment, Agriculture and Medicine**

Pratim BISWAS

Dept. of Energy, Environmental and Chemical Engineering/Washington University in St. Louis/St. Louis, MO 63130, USA

AAC2017 PLENARY LECTURERS

Plenary Lecture 3

July 4(Tue) [09:00-10:00]

Chairperson: Prof. Kang-Ho AHN (Hanyang University, Republic of Korea)

Prof. Chuen-Jinn TSAI

Editor of Aerosol and Air Quality Research
Distinguished ProfessorInstitute of Environmental Engineering
National Chiao Tuna Univ.

Taiwan



1990 Ph. D. in Mechanical Engineering, University of Minnesota, June 1986 M.S. in Mechanical Engineering, University of Minnesota, Dec. 1977 B.S. Mechanical Engineering, National Taiwan University, June



[PL3] The Accuracy of Ambient PM2.5 Sampling and Monitoring

Chuen-Jinn TSAI

Institute of Environmental Engineering, National Chiao Tung University, Hsinchu, Taiwan

Plenary Lecture 4

July 4(Tue)

[13:30-14:30]

Chairperson: Prof. Yong Pyo KIM (Ewha Womans University, Republic of Korea)

Prof. Min HU

Director of State Key Joint Laboratory of Environmental Simulation and Pollution Control Professor of College of Environmental Sciences and Engineering Peking University

China

Education

1983 – 1987 B. S., Department of Technical Physics, Peking University

1987 – 1990 M. S., Center of Environmental Science, Peking University

1990 – 1993 Ph.D., Center of Environmental Science, Peking University



[PL4] Primary Emissions and Secondary Formation of Aerosol from Chinese Gasoline Engine

M. HU^{1*}, J. F. PENG¹, Y. H. QIN¹, Z. F. DU¹, M. R. LI¹, R. ZHENG², J. ZHENG¹, D. J. SHANG¹, S. H. LU¹, Y. S. WU¹, S. GUO¹, L. M. ZENG¹, M. SHAO¹, Y. H. WANG², S. J. SHUAl²

¹State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences and Engineering, Peking University, China ²State Key Laboratory of Automotive Safety and Energy, Department of Automotive Engineering, Tsinghua University, China

Plenary Lecture 5

July 5(Wed) ro

[09:00-10:00]

Chairperson: Prof. Jungho HWANG (Yonsei University, Republic of Korea)

Prof. Gediminas MAINELIS

Professor, Dept. of Environmental Sciences, Rutgers University, New Jersey

LISA

Education

1992-1993 Salzburg University, Austria, Dept. of Biophysics, Biophysics 1994 Vilnius University, Lithuania, Dept. of Physics Physics B.S. 2000 The University of Cincinnati, Dept. of Environ. Health Environ. Health Ph.D. 2000-2001 The University of Cincinnati, Dept. of Environ. Health Bioaerosols Post.Doc



[PL5] Bioaerosol Encounters: From Exposure Assessment to Environmental Impacts

Gediminas MAINFLIS

Department of Environmental Sciences, Rutgers, The State University of New Jersey, USA

Plenary Lecture 6

July 6(Thu)

[09:00-10:00]

Chairperson: Dr. Gwi-Nam BAE (KIST, Republic of Korea)

Prof. Kang-Ho AHN

University of Minnesota, Research Associate Hanyang University

Republic of Korea

Education

1988 Ph.D.University of Minnesota (Mechanical Engineering) 1984 M.S. M. E. University of Minnesota (Mechanical Engineering) 1982 B.S. Hanyang University (Mechanical Engineering)



[PL6] Development of Atmospheric Aerosol Vertical Profile Measurement Methods Using Balloon, Drone, and PM-Sonde System

Kang-Ho AHN

Department of Mechanical Engineering, Hanyang University, ERICA Campus, Ansan, R. of Korea

July 3(Mon)



Prof. Jiaxing HUANG

Associate Professor of Materials Science and Engineering at Northwestern University USA

[IN1-PS0065]

Aerosol Assisted Synthesis and Assembly of Nanoparticles

July 4(Tue)



Prof. Shiro HATAKEYAMA

Tokyo University of Agriculture and Technology Japan

[IN2-PS0078]

Contribution of Transboundary Pollutants Evaluated by Use of Several Markers



Prof. Neng-Huei LIN

Editor-in-Chief, Aerosol and Air Quality Research Asian J. Atmospheric Environment, Editorial Advisory Board Professor, Dept. Atmospheric Science, National Central University **Taiwan**

[IN3-PS0492]

What We Have Learned from Seven South East Asian Studies (7-SEAS)

July 4(Tue)



Prof. Hansu KIM *Hanyang University Republic of Korea*

[IN4-PS0389]
Facile Process Route for Si/SiOx-Conductive Polymer Core-Shell
Nanospheres as a High Capacity Anode Material for Lithium-Ion Battery



Prof. Maosheng YAOEditorial Board Member, Journal of Aerosol Science and Atmospheric Environment.

Associate Professor Tenure- New Academic Track Peking University

China

[IN5-PS0524]
Use of An Integrated System in Addressing Aerosol Problems

July 5(Wed)



USA

Prof. David Y.H. PUIDistinguished McKnight University Professor, LM Fingerson/TSI Inc.

Chair in Mechanical Engineering, Director of the Particle Technology Laboratory, University of Minnesota

[IN6-PS0523]
Filtration Solutions to Mitigate PM2.5 Pollutans in Urban Air



ORAL SESSION

July 3 24

Session 1~3

July 4 36

Session 4~5

Session 6

July 6 48

Session 7~8



Aerosol Chemistry |

	July 3 (Mon)	Halla [A] 10:30 - 11:30	
Chairperson	Prof. Man Nin CHAN (Earth System Science Program, The Chinese University of Hong Kong, Hong Kong) Dr. Yong Bin LIM (KIST, Republic of Korea)		
[PS0037]	Effects of Relative Humidity on the Heterogeneous OH Oxidation of Aqueous Organic Droplets		
OS1-A01	M. N. CHAN ^{1,2*} , M. M. CHIM ¹ , C.Y. CHOW ¹ , J. F. DAVIES ³ ¹ Earth System Science Programme, Faculty of Science, The Chinese University of Hong Kong, Hong Kong		
031701			
	² The Institute of Environment, Energy and Sustainability, The Chinese University of Hong Kong, Hong Kong ³ Chemical Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA, USA		
[PS0069]	Characteristics and Source Apportionments of Organic Aerosols at Both a Regional and an Urban		
OS1-A02	Site of the North China Plain Mengren Ll ^{1*} , Min HU ¹ , Yao XIAO ¹ , Xin FANG ¹ , Liping ZHOU ² ¹ State Key Joint Laboratory of Environmental Simulation and Pollution Control, Peking University, China		
	² Laboratory for Earth Surface Processes, Department of Geography, Peking University, China		
[PS0071]	NOx Effects on Hygroscopic Haze Particles		
OS1-A03	Y. LIM ^{1*} , J. SEO ¹ , J. KIM ¹ and B. TURPIN ²		
	¹ Center for Environment, Health and Welfare Research, Korea Institute of Science and ² Department of Environmental Science and Engineering, University of North Carolina,	37, 1	
[PS0082]	Phase State of Inorganic and Organic Aerosol Particles and the Effects on Gas-To-Particle Conversion		
OS1-A04	Yong Jie LI ^{1,2*} , Pengfei LIU ¹ , Clara. BERGOEND ¹ , Adam P. BATEMAN ¹ , and	Scot T. MARTIN ^{1*}	
0317107	¹ John A. Paulson School of Engineering and Applied Sciences & Department of Earth a	nd Planetary Sciences, Harvard	
	University, Cambridge, Massachusetts, USA ² Department of Civil and Environmental Engineering, Faculty of Science and Technology	ul Iniversity of Macau Macau	
	Department of Civil and Environmental Engineering, racaity of Science and reciniology	, or inversity or ivideda, ivideda	

Aerosol Physics

	July 3 (Mon) Samda [B] 10:30 - 12:00		
Chairperson	Prof. Alexander SHCHEKIN (St Petersburg State University, Russian Federation) Dr. Chang Gyu WOO (KIMM, Republic of Korea)		
[PS0102]	Investigating the Dehydration Behavior and Phase Transition of Inorganic Nanoparticles by a Hygroscopic Differential Mobility Analyzer – Aerosol Particle Mass System		
OS1-B01	Po-Hsiang HUANG ^{1*} and Ta-Chih HSIAO ¹		
	¹ National Central University, Taiwan		
[PS0169]	The Immersion Mode Ice Nucleation Efficiency of Fine Urban Aerosols in the Atmosphere of Beijing, China		
OS1-B02	Jie CHEN ¹ *, Zhijun WU ¹ , Song GUO ¹ , Min HU ¹ and Xiangyu PEI ²		
	¹ State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences and Engineering, Peking University, Beijing 100871, China ² Department of Chemistry and Molecular Biology, University of Gothenburg, 41296, Gothenburg, Sweden		
[PS0193]	The Size-Resolved Effective Density of Submicron Particles in a Regional Atmospheric Environment of Beijing, China		
OS1-B03	Kai QIAO ^{1*} , Zhuofei DU ¹ , Jing ZHENG ¹ , Song GUO ¹ , Yusheng WU ¹ , Zhijun WU ¹ , Min HU ¹ , Qianyun LIU ² , Dongjie SHANG ¹ , Xiangyu PEI ³ and Mattias HALLQUIST ³		
	¹ Peking University, China ² Hong Kong University of Science and Technology, Hong Kong ³ University of Gothenburg, Sweden		
[PS0202]	Calculation of the Density Profile and the Disjoining Pressure in Small Aerosol Particle with Charged or Uncharged Solid Coree		
OS1-B04	Alexander SHCHEKIN ^{1*} and Tatiana LEBEDEVA ¹		
	¹ St Petersburg State University, Russian Federation		
[PS0235]	Aerosol Physic Properties of Spring Outflow from Southeast Asia. Based on 2016 IOP at Mt. Lulin		
OS1-B05	Kuo CHUNCHIANG ¹ *		
03. 503	¹ National Central University, Taiwan		
[PS0080] Comprehensive Observational Study of Hygroscopic Properties of Urban Aeroso Cloud Condensation Nuclei Activities During the MAPS-Seoul Campaign			
OS1-B06	Najin KIM ¹ *, Minsu PARK ¹ , Seong Soo YUM ¹ , Jong Sung PARK ² , In Ho SONG ² , Hye Jung SHIN ² , Joon Young AHN ² , Kyung-Hwan KWAK ³ , Hwa-Jin KIM ⁴ , Gwi-Nam BAE ⁴ and GangWoong LEE ⁵		
	¹ Department of Atmosphere Sciences, Yonsei University, Seoul, Republic of Korea ² Climate and Air Quality Research Department, National Institute of Environment Research, Incheon, Republic of Korea ³ School of Natural Resources and Environmental Science, Kangwon National University, Gangwon-do, Republic of Korea ⁴ Center for Environment, Health and Welfare Research, Korea Institute of Science and Technology, Seoul, Republic of Korea ⁵ Environmental Science Division, Hankuk University of Foreign Studies, Yongin, Republic of Korea		

Instrumentation and Measurement |

	July 3 (Mon) Room 401 [C] 10:30 - 12:00		
Chairperson	Prof. Da-Ren CHEN (Virginia Commonwealth University, USA)		
	Prof. Chuen-Jinn TSAI (National Chiao Tung University, Taiwan)		
[PS0058]	Performance Evaluation of a Curved Plate Mobility Classifier		
OS1-C01	Da-Ren CHEN¹* and Qiaoling LIU¹		
031-001	¹ Particle Laboratory, Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, USA		
[PS0081]	Real-time Chemical Characterization of Atmospheric Particulate Matter in China: A Review		
OS1-C02	Yong Jie L11*, Yele SUN², Qi ZHANG³, Xue L1⁴, Mei L1⁴, Zhen ZHOU⁴, and Chak K. CHAN⁵*		
031-002	¹ Department of Civil and Environmental Engineering, Faculty of Science and Technology, University of Macau, Taipa, Macau ² State Key Laboratory of Atmospheric Boundary Layer Physics and Atmospheric Chemistry, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China		
³ Department of Environmental Toxicology, University of California, Davis, CA 95616, USA			
	⁴ Institute of Mass Spectrometer and Atmospheric Environment, Jinan University, Guangzhou 510632, China ⁵ School of Energy and Environment, City University of Hong Kong, Hong Kong		
[PS0158]	Non-Bouncing PM2.5 Impactor as the Inlet of the PM2.5 Sampler		
OS1-C03	Chuen-Jinn TSAI¹ and Thi Cuc LE¹*		
031 003	¹ National Chiao Tung University, Taiwan		
[PS0420]	Test Method for Nanoparticle Release from a Composite Containing Nanomaterial Using a Chamber System		
OS1-C04	Gun Ho LEE ¹ *, II Je YU ² and Kang-Ho AHN ¹		
	¹ Hanyang University, Republic of Korea		
	² Hoseo University, Republic of Korea		
[PS0377]	MEMS-Based Electrical Cascade Impactor		
OS1-C05	Hong-Lae KIM ^{1*} , Jang Seop HAN ¹ , Sang-Myun LEE ¹ , Hong-Bum GOWN ¹ , Jungho HWANG ¹ and Yong-Jun KIM ¹		
031 003	¹ School of Mechanical Engineering, Yonsei University, Republic of Korea		
[PS0022]	Size Classification Without Charging – Characterization Of The New Aerodynamic Aerosol Classifier		
OS1-C06	J.P.R. SYMONDS*1, M. IRWIN1, C. LOWNDES1 and J.S. OLFERT2		
¹ Cambustion, J6 The Paddocks, Cambridge, CB1 8DH, UK ² Department of Mechanical Engineering, University of Alberta, Edmondton, Alberta, T6G 2G8, Canada			

Materials Processing |

	July 3 (Mon)	Room 402 [D] 10:30 - 11:30	
Chairperson	Dr. Masaru KUBO (Hiroshima University, Japan)		
[IN1-PS0065]	Aerosol Assisted Synthesis and Assembly of Nanoparticles Huali NIE ¹ , Hee Dong JANG ² and Jiaxing HUANG ^{3*}		
OS1-D01	¹ College of Chemistry, Chemical Engineering and Biotechnology, Donghua University, Shanghai, 201620, China ² Resources Utilization Center, Korea Institute of Geoscience and Mineral Resources, Daejeon, 34132, Republic of Korea ³ Department of Materials Science and Engineering, Northwestern University, Evanston, Illinois 60208, USA		
[PS0139]	Continuous Synthesis of Metal-Organic Framework HKUST-1 by Spray-Drying		
OS1-D02	Masaru KUBO ^{1*} , Teruaki SAITO ¹ and Manabu SHIMADA ¹ ¹ Hiroshima University, Japan		
[PS0164]	[PS0164] Controlling the Structure of Metal Oxide Layers Grown on Carbon Nanotubes Surface by In		
OS1-D03	K. KUSDIANTO ¹ , Manabu SHIMADA ^{2*} , Masaru KUBO ² and Hidetaka MASUDA ²		
	¹ Hiroshima University, Institut Teknologi Sepuluh Nopember (Indonesia), Japan ² Hiroshima University, Japan		

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Aerosol Chemistry ||

	July 3 (Mon)	Halla [A] 14:30 - 15:30	
Chairperson	Prof. Yanlin ZHANG (Nanjing University of Information Science and Technology, China) Dr. Mingqiang HUANG (Minnan Normal University, China)		
[PS0092] OS2-A01	High Contribution of Non-Fossil Sources to Sub-Micron Organic Aerosols in Beijing, China Yanlin ZHANG ^{1*} ¹ Nanjing University of Information Science and Technology, China		
[PS0097] OS2-A02	Rapid Formation and Evolution of Extremely Severe Haze Episodes in I Yele SUN ^{1*} ¹ Institute of Atmospheric Physics, Chinese Academy of Sciences, China	Northern China in Winter	
[PS0108] OS2-A03	Measurements of Aged Aromatic Secondary Organic Aerosol With Calcium Chloride Seeds Using Aerosol Laser Time-Of-Flight Mass Spectrometer Mingqiang HUANG ^{1*} , Jun XU ¹ and Weijun ZHANG ² ¹ Minnan Normal University, China ² Anhui Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China		
[PS0140] OS2-A04	Regional PM2.5 Pollution in the Winter of Beijing Xin FANG ^{1*} , Min HU ¹ , Mengren LI ¹ , Tianyi TAN ¹ , Yusheng WU ¹ , Dongjie SHAQingfeng GUO ¹ , Yao XIAO ¹ and Zhijun WU ¹	ANG ¹ , Yu WANG ¹ , Fangting GU ¹ ,	
	¹ Peking University, China		

Filtration and Control Technology I

	July 3 (Mon) Samda [B] 14:30 - 16:00			
Chairperson	Chairperson Dr. Kyung-Hoon YOO (KITECH, Republic of Korea)			
	Dr. Hyun-Seol PARK (KIER, Republic of Korea)			
[PS0112]	A Workstation Designed by Flow Control to Improve Containment Efficiency of Local Ventilation			
Jia-Kun CHEN¹, Tzu-l TSENG², Meng-Chun TSAl¹* and Tz-Chia TSENG¹				
032 001	¹ National Taiwan University, Taiwan ² National Applied Research Laboratories, Taiwan			
[PS0338]	Photocatalytic Degradation of VOCs Using TiO2-Containing Droplets Atomized by Ultrasonic Irradiation			
OS2-B02	Norikazu NAMIKI ^{1*} , Satsuki SUZUKI ¹ , Ryoichi NAKAYAMA ¹ , Kazuhiko SEKIGUCHI ² , Susumu NII ³ , Naoki KAGI ⁴ and Yoshihide SUWA ⁵			
	¹Kogakuin University, Japan			
	² Saitama University, Japan ³ Kagoshima University, Japan			
	ATokyo Institute of Tchnology, Japan			
	⁵ Shibaura Institute of Tchnology, Japan			
[PS0448]	An Experiment on Energy Consumption in an FFU Type Cleanroom with Indoor Water Spray Humidification			
OS2-B03	Kyung-Hoon YOO1* and Won-II SONG1			
	¹ Korea Institute of Industrial Technology, Republic of Korea			
[PS0192]	Removal Of Cooking Fume By Using The Combination Of The Sustainable Packing Bed And Negative Air Ionizer			
OS2-B04	Xuan-En YANG ¹ *, Yen-Chi CHEN ¹ and Kuo-Pin YU ¹			
	¹ National Yang-Ming University, Taiwan			
[PS0442]	Recent Industrial Applications in KIMM for Exhaust-Gases Cleaning Using Electrostatic Air Cleaning Technologies Against Ultrafine Particles			
OS2-B05	Hak-Joon KIM ¹ *, BangWoo HAN ¹ , Chang-Gyu WOO ¹ and Yongjin Kim ¹			
	¹ Korea Institute of Machinery and Materials, Republic of Korea			
[PS0459]	A Study on Characteristics of the Fabricated Alumina Nanoparticle Size Distribution by a Thermophoretic Separator			
OS2-B06	Byungkwon KIM ¹ *, Jungho SONG ² , Jeong-Yeol KIM ² , Jungho HWANG ¹ and Dongho PARK ²			
	¹ Yonsei University, Republic of Korea ² Korea Institute of Industrial Technology, Republic of Korea			

Instrumentation and Measurement ||

	July 3 (Mon)	Room 401 [C] 14:30 - 15:45	
Chairperson	Prof. Se-Jin YOOK (Hanyang Univ., Republic of Korea)		
	Dr. Bangwoo HAN (KIMM, Republic of Korea)		
[PS0041]	Evaluation of an Isokinetic Sampler According to Free Stream Velocity Under Low Pressure Condition		
OS2-C01	Jun-Hyung LIM ¹ , Nae-Gang HEO ¹ , Seung-Yoon NOH ¹ , Kang-Ho AHN ² and	I Se-Jin YOOK1*	
	¹ School of Mechanical Engineering, Hanyang University, Republic of Korea ² Dept. of Mechanical Engineering, Hanyang University, Republic of Korea		
[PS0383]	A State Of The Art Device For Continuous Unattended Measurements Of Ultrafine Particles		
OS2-C02	Markus PESCH ^{1*} and Volker ZIEGLER ²		
	¹ Grimm Aerosol Technik Pouch GmbH, Germany ² Grimm Aerosol Technik Ainring GmbH, Germany		
[PS0077]	Retrievals of Aerosol and Subvisual Cirrus Properties from Ground-Based Spectral Measurements		
OS2-C03	Ukkyo JEONG ^{1,2*} , Si-Chee TSAY ² , Peter PANTINA ^{2,3} , Jay R. HERMAN ^{2,4} , Nad	er ABUHASSAN ^{2,4}	
¹ Earth System Science Interdisciplinary Center, University of Maryland, College Park, Ma		aryland, USA	
	² Goddard Space Flight Center, NASA, Greenbelt, Maryland, USA ³ Science Systems and Applications Inc., Lanham, Maryland, USA		
	⁴ Joint Center for Earth Systems Tecknology, University of Maryland, Baltimore County, Baltimore, Maryland, USA		
[PS0117]	Dekati® eFilter™ Application to Indoor, Outdoor and Stack Emission Measurements		
OS2-C04	Erkki LAMMINEN ^{1*}		
	¹ Dekati Ltd., Finland		
[PS0409]	The Development of Wet Electrostatic Precipitator for Home with Antil	pacterial Activity	
OS2-C05	Chang Gyu WOO1*, Bangwoo HAN1, Hak-Joon KIM1 and Yongjin Kim1		
	¹ KIMM, Republic of Korea		

Indoor Aerosols

	July 3 (Mon) Room 402 [D] 14:30 - 16:00	
Chairperson	Prof. Duckshin PARK (Korea Railroad Research Institute, Republic of Korea) Prof. Taesung KIM (Sungkyunkwan Univ., Republic of Korea)	
[PS0443] OS2-D01	Recent Commercialization Researches for IAQ Using Electrostatic Air Cleaning Technologies Against Ultrafine Particles Hak-Joon KIM ^{1*} , Bangwoo HAN ¹ , Chang-Gyu WOO ¹ and Yongjin Kim ¹ ¹ Korea Institute of Machinery and Materials, Republic of Korea	
[PS0121] OS2-D02	Aerodynamics Analysis of Flow Control in Improving CO2 Concentration at Residential Area Yi-Lin WU ^{1*} , Jia-Kun CHEN ¹ and Tzu-ITSENG ² ¹ College of Public Health, National Taiwan University, Taiwan ² National Center for High-Performance Computing, Taiwan	
[PS0324] OS2-D03	Study on Size Distribution Characteristics of Fine Particulate Matters in Subway Tunnel Kyomin CHOI ^{1*} , Yongil LEE ¹ , Yongjang KWON ¹ , Jin Ki EOM ¹ , Taesung KIM ² and Duckshin PARK ¹ ¹ Korea Railroad Research Institute, Republic of Korea ² Sungkyunkwan University, Republic of Korea	
[PS0335] OS2-D04	The Estimation of Configuration Ratio of Ion Compound with Carbonate in Subway Yongil LEE ^{1*} , Wonseok JUNG ¹ , Taesung KIM ² , Duckshin PARK ¹ , Seung Yeon CHO ³ and Hee-Man KIM ⁴ ¹ Korea Railroad Research Institute, Republic of Korea ² Sungkyunkwan University, Republic of Korea ³ Yonsei University, Republic of Korea ⁴ KORAIL, Republic of Korea	
[PS0413] OS2-D05	Fabrication of Novel Charger of Carbon Fiber for Air Handling Unit Dongho SHIN ^{1,2} , Chang Gyu WOO ² , Hak-Joon KIM ² , Yongjin KIM ² , Bangwoo HAN ^{1,2*} ¹ University of Science and Technology, Republic of Korea ² Korea Institute of Machinery & Materials, Republic of Korea	
[PS0106] OS2-D06	Particle Generation and Deposition in an Underground Subway Tunnel Sang Hee WOO ^{1*} and Gwi-Nam BAE ² ¹ KIST, Hanyang University, Republic of Korea ² KIST, Republic of Korea	

Aerosol Chemistry III

	July 3 (Mon) Halla [A] 16:30 - 18:15	
Chairperson	Prof. Mijung SONG (Chonbuk National University, Republic of Korea) Prof. Dan JAFFE (University of Washington, USA)	
[PS0145]	Liquid-Liquid Phase Separation in Several Types of Secondary Organic Aerosols Without Inorganic Salts	
OS3-A01	Mijung SONG ^{1*} , Penfei LIU ² , Scot MARTIN ² and Allan BERTRAM ³	
	¹ Chonbuk National University, Republic of Korea ² Harvard University, USA ³ University of British Columbia, Canada	
[PS0180]	Primary and Secondary Sources of Organic Aerosols in the Summer of Beijng, China	
OS3-A02	Rongzhi TANG 1* , Zepeng WU 1 , Mengren LI 1 , Yujue WANG 1 , Song GUO 1 , Dongjie SHANG 1 , Yao XIAO 1 , Min HU 1 and Zhijun WU 1	
	¹ Peking University, China	
[PS0190]	Participation of Organics and Ammonia in Particle Nucleation and Growth at a Regional Site in North China Plain	
OS3-A03	Xin FANG ¹ *, Dongjie SHANG ¹ , Min HU ¹ , Song GUO ¹ , Yusheng WU ¹ , Ying LIU ¹ , Micheal Le BRETON ² , Yujue WANG ¹ , Yuechen LIU ¹ and Mattias HALLQUIST ²	
	¹ State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences and	
	Engineering, Peking University, China ² Gothenburg University, Sweden	
[PS0199]	Aerosol Water Content And Its Link To Secondary Aerosol Formation In The Atmosphere Of Beijing, China	
OS3-A04	Zhijun WU ^{1*} , Yu WANG ¹ , Fangting GU ¹ , Yuxuan BIAN ¹ , Rong SU ¹ , Yusheng WU ¹ , Keding LU ¹ , Chunsheng ZHAO ¹ , Limin ZENG ¹ , Yuanhang ZHANG ¹ and Min HU ¹	
	¹ Peking University, China	
[PS0219]	Compositional Evolution of Particle Phase Reaction Products in the Heterogeneous OH Oxidation of Aqueous Methylsuccinic Acid Droplets	
OS3-A05	Thomas BERKEMEIER¹, Man Mei CHIM²*, Chiu Tung CHENG², James F. DAVIES³, Kevin R. WILSON³, Manabu SHIRAIWA⁴, Andreas ZUEND⁵ and Man Nin CHAN²	
	¹ Georgia Institute of Technology, Atlanta, USA ² The Chinese University of Hong Kong, Hong Kong ³ Lawrence Berkeley National Laboratory, USA ⁴ University of California, Irvine, USA ⁵ McGill University, Canada	
[PS0262]	Observations of Black Carbon (BC) and Total Aerosol Absorption at the Mt. Bachelor Observatory in Central Oregon, USA	
OS3-A06	Daniel JAFFE ^{1*} , James LAING ¹ and Art SEDLACEK ¹	
	¹ University of Washington, USA	
[PS0315]	Mapping Ozone Diffusion and Reaction Within Mixed Iron-Organic Aerosol Particles	
OS3-A07	Peter ALPERT ^{1*} , Pablo CORRAL ARROYO ¹ , Markus AMMANN ¹ , Jing DOU ² , Ulrich KRIEGER ² , Sarah STEIMER ³ , Stéphanie ROSSIGNOL ⁴ , Monica PASSANANTI ⁵ , Christian GEORGE ⁶ , Jan-David FÖRSTER ⁷ , Florian DITAS ⁷ , Alexander LASKIN ⁸ , Swarup CHINA ⁸ , Shuang ZHANG ⁹ and Bingbing WANG ⁹	
	¹ Paul Scherrer Institut, Switzerland ² ETH Zurich, Switzerland ³ University of Cambridge, UK ⁴ Aix-Marseille Université, France ⁵ University of Helsinki, Finland ⁶ Institut de Recherches sur la Catalyse et l'Environnement de Lyon, France ⁷ Max Planck Institute, Germany ⁸ Pacific Northwest National Laboratory, USA ⁹ Xiamen University, China	

Bioaerosols |

	July 3 (Mon) Samda [B] 16:30 - 18:15	
Chairperson	Prof. Senchao LAI (South China University of Technology, China) Dr. Ali Mohamadi NASRABADI (Yonsei University, Republic of Korea)	
[PS0191]	Proteins and Amino Acids in Fine Particulate Matter in Rural Guangzhou, Southern China	
OS3-B01	Tianli SONG¹, Shan WANG¹, Yingyi ZHANG¹, Pingqing FU², Manabu SHIRAIWA³, Fobang LIU⁴, Junyu ZHENG¹ and Senchao LAI¹*	
	¹ South China University of Technology, China ² Institute of Atmospheric Physics, Chinese Academy of Sciences, China ³ University of California, Irvine, USA ⁴ Max Planck Institute for Chemistry, Germany	
[PS0194]	Purify Airborne Bacteria from Similar Size Distribution of Polystyrene Latex Particle	
OS3-B02	Ali MOHAMADI ^{1*} , Jang-Seop HAN ¹ and Jungho HWANG ¹ ¹ Yonsei University, Republic of Korea	
[PS0231]	Detection of Pathogens from Human Exhaled Breath and Throat Swabs by Loop Mediated	
OS3-B03	Isothermal Amplification Yunhao ZHENG ^{1*} , Xiaoguang LI ² and Maosheng YAO ¹	
	¹ Peking University, China ² Peking University Third Hospital, China	
[PS0246]	Collection of Airborne Influenza Virus in a Student Health Care Center through Water-Based Condensation Growth	
OS3-B04	Maohua PAN¹, Tania BONNY¹, Julia LOEB¹, Xiao JIANG¹, John LEDNICKY¹,	
	Arantzazu EIGUREN-FERNANDEZ ^{2*} , Susanne HERING ² , Hugh FAN ¹ and Chang-Yu WU ¹ ¹ University of Florida, USA ² Aerosol Dynamics Inc., USA	
[PS0286]	Development of a Cyclone-Based Bioaerosol Sampler with Liquid Film	
OS3-B05	Giwoon SUNG ^{1*} , Hyeong U KIM ¹ , Jihye CHOI ¹ and Taesung KIM ¹	
[PS0277]	¹ Sungkyunkwan Univ., Republic of Korea Characteristics of Aerosol Suspension in a Rotating Chamber	
	Wei Ren KE ^{1*} , Yu-Mei KUO ² , Chih-Wei LIN ¹ , Sheng-Hsiu HUANG ¹ and Chih-Chieh CHEN ¹	
OS3-B06	¹ National Taiwan University, Taiwan ² Chung Hwa University of Medical Technology, Taiwan	
[PS0230]	Design and Evaluation of a High-flow Portable Microbial Aerosol Sampler	
OS3-B07	Haoxuan CHEN ^{1*} and Maosheng YAO ¹ ¹ Peking University, China	

Instrumentation and Measurement |||

	July 3 (Mon) Room 401 [C] 16:30 - 18:15	
Chairperson	Prof. Gedi MAINELIS (Rutgers University, USA) Dr. Ralf ZIMMERMANN (Helmholtz Zentrum München/ University of Rostock, Germany)	
[PS0236]	New Technology For Assessing Personal Bioaerosol Exposures: Personal Electrostatic Bioaerosol	
OS3-C01	Sampler Gedi MAINELIS ^{1*} , Taewon HAN ¹ and Nirmala THOMAS ¹	
	¹Rutgers University, USA	
[PS0239]	A Miniature Cylindrical Differential Mobility Analyzer for Sub-3 nm Particle Sizing	
OS3-C02	Runlong CAI ¹ , Da-Ren CHEN ² , Jiming HAO ¹ and Jingkun JIANG ^{1*}	
	¹ Tsinghua University, China ² Virginia Commonwealth University, USA	
[PS0161]	The Development of a Ten-Stage Electrical Micro-Orifice Cascade Impactor (EMCI) for the Real Time Monitoring of Aerosol Size Distribution from 32 nm to 10 µm	
OS3-C03	Chuen-Jinn TSAI ¹ , Chi-Yu TIEN ^{1*} , Michel ATTOUI ² and Ran-Hao KE ¹	
	¹National Chiao Tung University, Taiwan	
	² University Paris Est Creteil, France	
[PS0203]	Aerosol Loading Effects on Particle Size-Selective Samplers	
OS3-C04	Ting-Ju CHEN1*, Yu-Mei KUO2, Wan-Chen LEE1, Sheng-Hsiu HUANG1 and Chih-Chieh CHEN1	
033-004	¹ National Taiwan University, Taiwan	
	² Chung Hwa University of Medical Technology, Taiwan	
[PS0188] OS3-C05	Multiple On-Line Analyses of Individual Airborne Aerosol Particles by Laser Mass Spectrometry: Detection of Polyaromatic Organics from the Particle-Surface and Inorganic Constituents from the Particle-Core	
	Johannes PASSIG ^{1*} , Julian SCHADE ¹ , Martin SLORZ ¹ , Mathias FUCHS ¹ , Markus OSTER ¹ and Ralf ZIMMERMANN ¹	
	¹ Helmholtz Zentrum München/ University of Rostock, Germany	
[PS0251]	Multispectral BC Comparison to Continuous Mass Measurement of Wide-Ranging Aerosols	
OS3-C06	Seung-Ho HONG ¹ *	
033-006	¹ Met One Instruments Inc., USA	
[PS0375]	Heterogeneous Uptake Rates Of Dinitrogen Pentoxide In Both Winter And Summer Time In Beijing, 2016	
OS3-C07	Keding LU ¹ , Haichao WANG ^{1*} , Xiaorui CHEN ¹ , Zhijun WU ¹ , Song GUO ¹ , Yusheng WU ¹ , Sebastian SCHMITT ² , Astrid KIENDLER-SCHARR ² , Andreas WAHNER ² , Mattias HALLQUIST ³ , Min HU ¹ and Yuanhang ZHANG ²	
	¹ Peking University, China ² Forschungszentrum Juelich, Germany ³ University of Gothenburg, Sweden	

Aerosols and Global Climate

	July 3 (Mon)	Room 402 [D] 16:30 - 17:30
Chairperson	Gwi-Nam BAE (Korea Institute of Science and Technology, Republic of Korea)	
[PS0012] OS3-D01	Haze Transportation and Mixing Observed By a Scanning Lidar in Beijing Ju LI¹, Zhigang CHENG¹, Xiaoyan CAO¹ and Yunhui ZHENG²* ¹Institute of Urban Meteorology, CMA, Beijing, China ²Sigma Space Corp, Lanham, MD, USA	
[PS0195] OS3-D02	Molecular Characterization of Organosulfates and its Secondary Formation at Rural and Urban Sites in Northern China Yujue WANG¹, Min HU¹*, Song GUO¹, Michael LE BRETON², Jing ZHENG¹, Yudong YANG¹, Zhuofei DU¹, Yusheng WU¹, Zhijun WU¹, Jianzhen YU³ and Mattias HALLQUIST² ¹State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences and Engineering, Peking University, China ²University of Gothenburg, Sweden ³Hong Kong University of Science & Technology, Hong Kong	
[PS0412] OS3-D03	Long Term Aerosol Climatology over Indo-Gangetic Plain Manish KUMAR ^{1*} , Kulwinder Singh PARMAR ² , Dudam Bharath KUMAR ³ , Alaa MHAWISH ¹ and Tirthankar BANERJEE ¹ ¹ Institute of Environment and Sustainable Development, Banaras Hindu University, Varanasi, India ² Dept. of Mathematics, Punjab Technical University, Jalandhar-Kapurthala, India ³ Dept. of Civil Engineering, Indian Institute of Technology, Kharagpur, India	
[PS0237] OS3-D04	S0237] Submicrometer Marine SOA And Bio-Sulfate Estimation Based On Measurements Over The Atlantic Ocean	

Long-Range Transported Air Pollutants in East Asia - Observation, Measurements, and Model Analysis |

	July 4 (Tue)	Halla [A] 10:30 - 11:45
Chairperson	Dr. Yongjie LI (University of Macau, Macau)	
[IN2-PS0078]	Contribution of Transboundary Pollutants Evaluated by Use of Several Markers S. HATAKEYAMA ^{1,2,3*} , K. SHIMADA ² , Y. TANIGUCHI ³ , S. TATSUTA ³ , K. MIURA ³ , T. SUGIYAMA ⁴ , NH. LIN ^{2,5} ,	
OS4-A01	Y.P. KIM ^{2,6} , C.K. CHAN ⁷ , and A.TAKAMI ⁸	, , , , , , , , , , , , , , , , , , ,
Invited	¹ Center for Environmental Science in Saitama, Japan ² Global Innovation Research Organization, Tokyo University of Agriculture and Technology, Japan ³ Graduate School of Agriculture, Tokyo University of Agriculture and Technology, Japan ⁴ Graduate School of Engineering, Kyoto University, Japan ⁵ Department of Atmospheric Science, National Central University, Taiwan ⁶ Department of Chemical Engineering & Materials Science, Ewha Womans University, Republic of Korea ⁷ School of Energy and Environment, City University of Hong Kong, Hong Kong ⁸ National Institute for Environmental Studies, Japan	
[PS0144]	Evolution of the Multi-Day Haze in East Asian Outflow	
OS4-A02 Jihoon SEO ^{1*} , Jin Young KIM ¹ , Daeok YOUN ² , Ji Yi LEE ³ , Hwajin KIM ¹ , Yong Bin IM ¹ , Yumi KIM Hyoun Cher JIN ¹		Bin IM¹, Yumi KIM⁴ and
	¹ Korea Institute of Science and Technology, Republic of Korea ² Chunqbuk National University, Republic of Korea	
	³ Chosun University, Republic of Korea ⁴ Korea Environment Institute, Republic of Korea	
[PS0468]	Long-Term Monitoring of Atmospheric PCDD/Fs at Mount Lulin During Spring Season (2010-201 PCDD/F Source Apportionment Through a Simultaneous Measurement in Southeast Asia	
OS4-A03	Yu Shiang YANG¹, Ngo Tuan HUNG¹, Neng-Huei LIN² and Kai Hsien CHI¹*	
	¹ Institute of Environmental and Occupational Health Sciences, National Yang Ming Ur ² Department of Atmospheric Sciences, National Central University, Chungli 320, Taiwa	, · · · · · · · · · · · · · · · · · · ·
[PS0410]	Aerosol Chemical Characterization in Asian Continental Outflow at Cap Northeast Monsoon Onset Period	pe-Fuguei in East Asia During
OS4-A04	Shantanu PANI ^{1*} , Chung-Te LEE ¹ , Neng-Huei LIN ¹ and Charles C.K. CHOU ²	
	¹ National Central University, Taiwan ² Academia Sinica, Taiwan	

Bioaerosols ||

	July 4 (Tue)	Samda [B] 10:30 - 11:15
Chairperson	Prof. Maosheng YAO (Peking Univ., China) Prof. Jungho HWANG (Yonsei Univ., Republic of Korea)	
[PS0288] OS4-B01	Study of Corona Discharge Effect on DNA of Bioaerosols in Various Conditions Amin PIRI ^{1*} , Hyeong Rae KIM ¹ and Jungho HWANG ¹ 1 Yonsei University, Republic of Korea	
[PS0327] Evaluation of Anti-Viral Performance for Air Filter Coated with Ag Nanoparticles : Against Airborne Infectious Virus		noparticles:
OS4-B02	Dae Hoon PARK ^{1*} , Yun Haeng JOE ² and Jungho HWANG ¹	
	¹ Yonsei University, Republic of Korea ² Korea Institute of Energy Research, Republic of Korea	
[PS0368]	Use of GREATpa System in Solving Aerosol Related Problems	
OS4-B03	Maosheng YAO1*	
03-1 003	¹ Peking University, China	

Incineration & Combustion Aerosols

	July 4 (Tue) Room 401 [C] 10:30 - 11:45	
Chairperson	Dr. Jason OLFERT (University of Alberta, Canada) Dr. Hungsoo JOO (Anyang Uninversity, Republic of Korea)	
[PS0360] OS4-C01	Soot Formation Model of Gasoline Surrogates: The Effects of PAH Species on Soot Nucleation Longfei CHEN ^{1*} 1 Beihang University, China	
[PS0170] OS4-C02	Spatial And Temporal Variability Of The Black Carbon Mass Concentration In A Southeast Asian Megacity: A Case For Metro Manila, Philippines Honey Dawn ALAS ^{1*} , Thomas MÜLLER ¹ , Wolfram BIRMILI ² , James Bernard SIMPAS ³ , Maria Obiminda CAMBALIZA ³ , Mylene CAYETANO ⁴ , Simonas KECORIUS ¹ , Edgar VALLAR ⁵ , Maria Cecilia GALVEZ ⁵ and Alfred WIEDENSOHLER ¹ ¹ Leibniz Insitute for Tropospheric Research, Leipzig, Germany ² Federal Environment Agency, Berlin, Germany ³ The Manila Observatory, Quezon City, Philippines ⁴ Institute of Environmental Science and Meteorology, University of the Philippines, Diliman, Quezon City, Philippines ⁵ Applied Research for Community, Health and Environment Resilience and Sustainability, De La Salle University, Taft Avenue, Manila, Philippines	
[PS0243] OS4-C03	An Investigation of the Effect of NaCl Additive on the Evolution of Particles in a Diffusion Flame Alireza MOALLEMI ¹ , Mohsen KAZEMIMANESH ¹ , Larry KOSTIUK ¹ and Jason OLFERT ¹ * 1 University of Alberta, Canada	
[PS0321] OS4-C04	Characteristics of PM and Trace Elements from Combustion of Bituminous Coals Mona Loraine BARABAD ^{1*} , Youngmin CHO ¹ , Sangwon GO ¹ , Kiyoung LEE ¹ and Duckshin PARK ¹ ¹ Korea Railroad Research Institute, Republic of Korea	
[PS0425] OS4-C05	Hungson IOO1.3* Tsatsa BATMUNKH¹ li Yi LEF2 Yuwoon CHANG2 Lucille BORLAZA1 and Kihong PARK1	

Micro and Nanotechnology

	July 4 (Tue) Room 402 [D] 10:30 - 12:00	
Chairperson	Dr. Kazuhiko SEKIGUCHI (Saitama University, Japan)	
	Dr. Sun Kyung KIM (Korea Institute of Geoscience and Mineral Resources, Republic of Korea)	
[IN4-PS0389]	Facile Process Route for Si/SiOx-Conductive Polymer Core-Shell Nanospheres as a High Capacity	
OS4-D01	Anode Material for Lithium-Ion Battery Eunjun PARK ¹ , Jeonghun KIM ² , Dong Jae CHUNG ¹ , Jung Ho KIM ² and Hansu KIM ^{1*}	
Invited	¹ Hanyang University, Republic of Korea ² University of Wollongong, Australia	
[PS0129]	One-Step Synthesis of Silicon-Graphene Composites via Aerosol Process for Lithium Ion Batteries	
OS4-D02	Sun Kyung KIM ^{1*} , Hankwon CHANG ¹ , Ji-Hyuk CHOI ¹ , Dae Sup KIL ¹ and Hee Dong JANG ¹	
034-002	¹ Korea Institute of Geoscience and Mineral Resources, Republic of Korea	
[PS0218]	Antifungal Properties of Silver Nanoparticles Supported by TiO2 Against Mould Growth on	
	Building Materials	
OS4-D03	Yen Chi CHEN ¹ * and Kuo Pin YU ¹	
OS4-D03	-	
OS4-D03 [PS0238]	Yen Chi CHEN¹* and Kuo Pin YU¹	
[PS0238]	Yen Chi CHEN ^{1*} and Kuo Pin YU ¹ ¹ National Yang-Ming University, Taiwan	
	Yen Chi CHEN ^{1*} and Kuo Pin YU ¹ ¹ National Yang-Ming University, Taiwan Degradation and Mineralization of VOC Gas on Ultrasonic Mist Using Advanced Oxidation Processes Kazuhiko SEKIGUCHI ^{1*} , Soma NARAHARA ¹ , Kenshi SANKODA ¹ , Norikazu NAMIKI ² and Susumu NII ³ ¹ Saitama University, Japan	
[PS0238]	Yen Chi CHEN ^{1*} and Kuo Pin YU ¹ ¹ National Yang-Ming University, Taiwan Degradation and Mineralization of VOC Gas on Ultrasonic Mist Using Advanced Oxidation Processes Kazuhiko SEKIGUCHI ^{1*} , Soma NARAHARA ¹ , Kenshi SANKODA ¹ , Norikazu NAMIKI ² and Susumu NII ³	
[PS0238]	Yen Chi CHEN ^{1*} and Kuo Pin YU ¹ ¹ National Yang-Ming University, Taiwan Degradation and Mineralization of VOC Gas on Ultrasonic Mist Using Advanced Oxidation Processes Kazuhiko SEKIGUCHI ^{1*} , Soma NARAHARA ¹ , Kenshi SANKODA ¹ , Norikazu NAMIKI ² and Susumu NII ³ ¹ Saitama University, Japan ² Kogakuin University, Japan ³ Kagoshima University, Japan Study of a Hign-Power DCFC System: Reducing the Charge Transfer Resistance via New Design	
[PS0238] OS4-D04	Yen Chi CHEN ^{1*} and Kuo Pin YU ¹ ¹ National Yang-Ming University, Taiwan Degradation and Mineralization of VOC Gas on Ultrasonic Mist Using Advanced Oxidation Processes Kazuhiko SEKIGUCHI ^{1*} , Soma NARAHARA ¹ , Kenshi SANKODA ¹ , Norikazu NAMIKI ² and Susumu NII ³ ¹ Saitama University, Japan ² Kogakuin University, Japan ³ Kagoshima University, Japan Study of a Hign-Power DCFC System: Reducing the Charge Transfer Resistance via New Design Approach	
[PS0238] OS4-D04	Yen Chi CHEN ^{1*} and Kuo Pin YU ¹ ¹ National Yang-Ming University, Taiwan Degradation and Mineralization of VOC Gas on Ultrasonic Mist Using Advanced Oxidation Processes Kazuhiko SEKIGUCHI ^{1*} , Soma NARAHARA ¹ , Kenshi SANKODA ¹ , Norikazu NAMIKI ² and Susumu NIII ³ ¹ Saitama University, Japan ² Kogakuin University, Japan ³ Kagoshima University, Japan Study of a Hign-Power DCFC System: Reducing the Charge Transfer Resistance via New Design	

Long-Range Transported Air Pollutants in East Asia - Observation, Measurements, and Model Analysis ||

	July 4 (Tue) Halla [A] 14:30 - 16:30		
Chairperson	Dr. Song GUO (Peking Univ., China) Prof. Kojiro SHIMADA (Waseda Univ., Japan)		
[IN3-PS0492]	What We Have Learned from Seven South East Asian Studies (7-SEAS)		
OS5-A01	Neng-Huei (George) LIN ^{1*}		
Invited	¹ Department of Atmospheric Sciences, National Central University, Taoyuan, Taiwan		
[PS0054]	Long-Term Trend of Source Apportionment of PM2.5 Over Japan Evaluated by the Tagged Tracer		
OS5-A02	Method on the Air Quality Model S. ITAHASHI ^{1*} , H. HAYAMI ¹		
	¹ Environmental Science Research Laboratory, Central Research Institute of Electric Power Industry, Japan		
[PS0070]	Aerosol In High Altitude Russian Arctic		
[P30070]	O. POPOVICHEVA ^{1*} , A. MAKSHTAS ²		
OS5-A03	¹Lomonosov Moscow State University, Moscow, Russian Federation		
	² Arctic Antarctic Research Institute, Russian Federation		
[PS0177]	Region-Wide Source Apportionment of PM2.5 in the Pearl River Delta, China		
OS5-A04	Zibing YUAN ¹ *, Xiaxia ZHANG ² , Alexis LAU ² and Jian Zhen YU ²		
	¹ South China University of Technology, China ² Hong Kong University of Science and Technology, Hong Kong		
[PS0143]	Chemical Characteristics and Causes of Atmospheric Fine Particles During Air Pollution Episodes in an Intensive Industrial City		
OS5-A05	Chung-Shin YUAN ^{1*}		
	¹ Institute of Environmental Engineering, National Sun Yat-sen Univerisity, Taiwan		
[PS0204]	Sources and Mixing State of Black Carbon at a High-Altitude Mountain Site in Southwest China		
OS5-A06	Tianyi TAN ^{1*} , Min HU ¹ , Zhuofei DU ¹ and Nan MA ²		
	1 Peking University, China		
	² Leibniz Institute for Tropospheric Research, Germany		
[PS0269]	Seasonal and Annual Changes in PAHs Transported from East Asia to Cape Hedo, Okinawa		
OS5-A07	Kojiro SHIMADA ¹ *, Kaori MIURA ¹ , Taichi SUGIYAMA ¹ , Kei SATO ² , Akinori TAKAMI ² , Chak K. CHAN ³ , Yong Pyo KIM ⁴ , Neng-Huei LIN ⁵ and Shiro HATAKEYAMA ⁶		
	1 Tokyo University of Agriculture and Technology, Japan		
	² National Institute for Environmental Studies, Japan ³ City University of Hong Kong, Hong Kong		
	⁴ Ewha Womans University, Republic of Korea		
	⁵ Tokyo University of Agriculture and Technology, Taiwan ⁶ Center for Environmental Science in Saitama, Japan		
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LG Electronics Special Session

	July 4 (Tue)	Samda [B] 14:30 - 16:30
Chairperson	Prof. Jungho HWANG (Yonsei Univ., Republic of Korea) Prof. Gedi MAINELIS (Rutgers University, USA)	
[IN5-PS0524] OS5-B01	Use of An Integrated System in Addressing Aerosol Problems Maosheng YAO1*	
Invited	¹ Peking University, China	
[PS0522]	Study on Air cleaning Using Diffusin Charging and Dielectric Filter	
OS5-B02	Yanghwa LEE ¹ , Keonwang LEE ¹ , Deok HUH ¹ and Hyungho PARK ^{1*} ¹ Air Solution R&D lab, Air care advanced Team, LG Electronics, Republic of Korea	
[PS0181]	Bioaerosol Field Studies Using Electrostatic Sampler and Impactor weent Abundance and Diversity of Bacteria	ith MALDI-TOF MS for Differ-
OS5-B03	Hyeong Rae KIM1* and Jungho HWANG1	
	¹ Yonsei University, Republic of Korea	
[PS0189]	Investigation of Bioaerosol Characterization on a Global Scale Using Auto	mobile Air Conditioning Filter
OS5-B04	Jing L1* and Maosheng YAO ¹ 1 Peking University, China	
[PS0264]	Inactivation of Airborne Virus (MS2 Bacteriophages) with Non-Conductive	e Ultrasonic Transducers (NCUT)
OS5-B05	Michael VERSOZA ^{1*} and Duckshin PARK ¹ ¹ Korea Railroad Research Institute, Republic of Korea	
[PS0248]	Advances in Bioaerosol Capture via Passive Techniques: Design and	Performance of Rutgers
OS5-B06	Electrostatic Passive Sampler (REPS) Gedi MAINELIS ^{1*} , Jennifer THERKORN ¹ and Jerry SCHEINBEIM ¹	
	¹ Rutgers University, USA	
[PS0221]	PM2.5 Meets Blood: in Vivo Damages and Immune Defense	
OS5-B07	Xiangyu ZHANG ^{1*} and Maosheng YAO ¹ ¹ Peking University, China	

Aerosol Modeling

	July 4 (Tue) Room 401 [C] 14:30 - 16:00	
Chairperson	Dr. Ho-Tang LIAO (National Taiwan University, Taiwan)	
	Prof. Sung-Hoon PARK (Suncheon University, Republic of Korea)	
[PS0088]	Quantification of Long-Range Transported Secondary Aerosols Using An Integrated Trajecto-	
OS5-C01	ry-Source Apportionment Method	
	HT. LIAO ¹ and CF. WU ^{1,2,3*} ¹ Institute of Occupational Medicine and Industrial Hygiene, National Taiwan University, Taiwan	
	² Institute of Environmental Health, National Taiwan University, Taiwan	
	³ Department of Public Health, National Taiwan University, Taiwan	
[PS0184]	Evaluation of Transparent Electrode Efficiency by Using Dynamic Mesh	
OS5-C02	Ali MOHAMADI ^{1*} and Jungho HWANG ¹	
033 002	¹ Yonsei University, Republic of Korea	
[PS0197]	Receptor Modeling of VOCs, PM2.5 and Gaseous Pollutants with Contribution Constraints	
OS5-C03	Yan-Da CHEN ¹ *, Ho-Tang LIAO ¹ and Chang-Fu WU ¹	
033-003	¹ National Taiwan University, Taiwan	
[PS0242]	Grouped Monte Carlo Method for Multicomponent Aerosol Aggregation	
OS5-C04	Zhenghang XIAO ^{1*} , Jiankun ZHUO ¹ , Qiang YAO ¹ and Richard L. AXELBAUM ²	
	¹ Tsinghua University, China ² Washington University in St Louis, USA	
[PS0254]	Development of an Aerosol Behavior Model Estimating Particle Size Growth in Nuclear Power Plants	
OS5-C05	Jihyeon LEE1* and Jungho HWANG1	
033-003	¹ Yonsei University, Republic of Korea	
[PS0341]	Source Apportionment of PM2.5 in Daebu Island, Korea Using Organic Markers for CMB Model	
OS5-C06	Sun-Hye KIM ^{1*} , Tae Young KIM ¹ , Dae Gun PARK ¹ , Seung-Muk YI ¹ and Jongbae HEO ¹ 1 Seoul National University, Republic of Korea	

Nanoparticles and Materials

De Deele - disAICED (December 2011) in the Company of the Company	
Dr. Rashed KAISER (Pusan National University, Republic of Korea)	
Prof. Tawatchai CHARINPANITKUL (Chulalongkorn University, Thailand)	
A SnS2-2D Material as High Performance NO2 Sensing with Ultrafast Response and High Sensitivity	
Duy Thach PHAN ^{1*} , Young-Ho KIM ¹ , Cheol-Min PARK ² and Ki-Joon JEON ¹	
¹ Inha University, Republic of Korea ² Kumoh National Institute of Technology, Republic of Korea	
Synthesis of ZnO-TiO2 Core-shell Nanowires Using Thermal CVD Method for Photoelectrochemi-	
cal Application.	
Kyuwon JUNG¹, Jinse PARK¹*, Prashant DESHMUKH¹ and Weon Gyu SHIN¹	
¹ Chungnam National University, Republic of Korea	
Effect of Aspiration Pressure on Rapid Solidification of Liquid Metal During Gas Atomization.	
Rashed KAISER ^{1*} and Donggeun LEE ¹	
¹ School of Mechanical Engineering,Pusan National University, Republic of Korea	
Synthesis of Magnetite and Hematite Nanoparticles Deposited on Crumpled Graphene as Supercapacitor Electrode Materials	
Chongmin LEE ^{1*} , Sun Kyung KIM ² , Ji-Hyuk CHOI ² , Hankwon CHANG ² and Hee Dong JANG ²	
¹ University of Science and Technology (UST), Republic of Korea	
² Korea Institute of Geoscience and Mineral Resources, Republic of Korea	
Synthesis Of Boron-Tio2 Core-Shell Nanoparitcles Using Thermal Chemical Vapor Deposition	
Minsang SHIN ^{1*} , Jinyeong SUNG ¹ , Haneol LEE ¹ and Weon Gyu SHIN ¹	
¹ Chungnam National University, Republic of Korea	
Black P-Graphene Heterojunction: Fast Response Humidity Sensor with Good Reversibility and Stability	
Duy-Thach PHAN ^{1*} , Inyong PARK ¹ , Cheol-Min PARK ² and Ki-Joon JEON ¹	
¹Inha Universiry, Republic of Korea	
² Kumoh National Institute of Technology, Republic of Korea	
A Deterministic Model for Predicting Production of Carbon Nanotubes Based on a Combination of Thermodynamics and Kinetics of Glycerol and Ferrocene Pyrolysis	
Tawatchai CHARINPANITKUL ^{1*} , Prakitr SRISUMA ¹ , Nutatawat SUWATTANAPONGTADA ¹ and Konrat KERDNAWEE ¹	
¹ Chulalongkorn University, Thailand	

Atmospheric Aerosols |

	July 5 (Wed) Halla [A] 10:30 - 12:15	
Chairperson	Dr. Naoki KANEYASU (National Institute of Advanced Industrial Science and Technology, Japan) Dr. Song GUO (Peking University, China)	
[PS0073] OS6-A01	Characteristics of Submicron Aerosols in 2013 Summer of Beijing: Particle Size, Density, Hygroscopicity, and Mixing State S. GUO ^{1*} , M. HU ¹ , D. SHANG ¹ , J. ZHENG ¹ , Z. DU ¹ , R. ZHANG ^{1,2}	
	¹ State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences and Engineering, Peking University, Beijing, 100871, China ² Department of Atmospheric Sciences, Texas A&M University, College Station, TX 77843, USA	
[PS0087] OS6-A02	Source Identification of Nitrosamines in the Atmosphere at Seoul, Republic of Korea Na Rae CHOI1*, Yun Gyong AHN², Hyung Bae LIM³, Ji Yi LEE⁴, Yong Pyo KIM¹,5 ¹Department of Environmental Science and Engineering, Ewha Womans University, Republic of Korea ²Omics System Research Team, Western Seoul Center, Korea Basic Science Institute, Republic of Korea ³Air Quality Research Division, National Institute of Environmental Research, Republic of Korea ⁴Department of Renewable Energy Convergence, Chosun University, Republic of Korea ⁵Department of Chemical Engineering and Materials Science, Ewha Womans University, Republic of Korea	
[PS0094]	Seasonal Characteristics of Atmospheric PM2.5 and its Secondary Formation During Heavy Air	
OS6-A03	Pollution in 2015 in Beijing Yao XIAO ^{1*} , Min HU ¹ , Mengren LI ¹ and Tianyi TAN ¹ 1 Peking University, China	
[PS0098]	The Phase State of Sub-Micrometer Particles in the Winter of Urban Beijing China	
OS6-A04	Yuechen LIU ¹ *, Zhijun WU ¹ , Yu WANG ¹ , Fangting GU ¹ , Yusheng WU ¹ , Liming ZENG ¹ and Min HU ¹ 1 Peking University, China	
[PS0100] OS6-A05	Size Characteristics of Resuspended 137Cs Adsorbed on Soil Particles Measured after the Fukushima Accident Naoki KANEYASU ^{1*} , Hideo OHASHI ² , Fumie SUSZUKI ² , Tomoaki OKUDA ³ , Fumikazu IKEMORI ⁴ , Naofumi AKATA ⁵ and Toshihiro KOGURE ⁶ ¹ National Institute of Advanced Industrial Science and Technology, Japan ² Tokyo University of Marine Science and Technology, Japan ³ Keio University, Japan ⁴ Nagoya City Institute for Environmental Sciences, Japan ⁵ National Institute for Fusion Science, Japan ⁶ The University of Tokyo, Japan	
[PS0104] OS6-A06	Chemical Characteristics and Source Apportionment of PM2.5 in Taiwan Chung-Te LEE ^{1*} , Charles CK. CHOU ¹ , Shih-Yu CHANG ¹ , Wei WANG ¹ , Nai-Yun LIN ¹ and Shao-En SUN ¹ 1 National Central University, Taiwan	
[PS0124] OS6-A07	Effects of Aqueous-Phase and Photochemical Processing on Secondary Organic Aerosol Formation and Evolution in Beijing, China Weiqi XU ¹ , Jie Ll ^{1*} , Pingqing FU ¹ , Zifa WANG ¹ , Douglas R. WORSNOP ² , Yele SUN ¹ , Tingting HAN ¹ , Wei DU ¹ , Qingqing WANG ¹ , Chen CHEN ¹ , Jian ZHAO ¹ and Yingjie ZHANG ¹ **Institute of Atmospheric Physics, Chinese Academy of Sciences, China	

Filtration and Control Technology ||

	July 5 (Wed) Samda [B] 10:30 - 12:30	
Chairperson	Prof. Yoshio OTANI (Kanazawa University, Japan) Dr. Sven SCHUETZ (Palas GmbH, Germany)	
OS6-B01	Filtration Solutions to Mitigate PM2.5 Pollutants in Urban Air David Y.H. PUI ^{1*} ¹ University of Minnesota, USA	
[PS0212] OS6-B02	Effect of Slip Flow on the Pressure Drop of Nanofiber Filters Hyun-Jin CHOl ^{1,2*} , Yuki INUl ² , Mikio KUMITA ² , Takafumi SETO ² , Hidenori HIGASHI ² , Li BAO ³ , Toshiyuki FUJIMOTO ⁴ , Yoshio OTANI ² ¹ Korea Environment Institute, Republic of Korea ² Kanazawa University, Japan ³ Nippon Muki Co., Ltd., Japan ⁴ Muroran Institute of Technology, Japan	
[PS0255] OS6-B03	Study on the Faceseal Leakage Characteristics of Self-Contained Breathing Apparatus Shyang-Haw YANG ^{1*} , Sheng-Hsiu HUANG ¹ , Chih-Wei LIN ¹ , Wan-Chen LEE ¹ and Chih-Chieh CHEN ¹ 1 National Taiwan University, Taiwan	
[PS0292] OS6-B04	Improvement of Quantitative Fit Testing Methods Using Ambient Aerosols Hsien-I CHIU ¹ , Ting-Xuan ZHOU ¹ , Kai-Jie YANG ¹ , Chih-Wei LIN ¹ , Sheng-Hsiu HUANG ¹ and Chih-Chieh CHEN ^{1*} 1 National Taiwan University, Taiwan	
[PS0290] OS6-B05	Evaluation of the Leakage Test Systems for Exhalation Valve Ning YU ^{1*} , Wan-Chen LEE ¹ , Chih-Wei LIN ¹ , Sheng-Hsiu HUANG ¹ and Chih-Chieh CHEN ¹ 1 National Taiwan University, Taiwan	
[PS0116] OS6-B06	Modular Filter Test Rig System In Accordance to Engine Intake Filter ISO 5011/ ISO TS 19713 as well as General Ventilation Air Filters EN 779/ ASHRAE 52.2 and ISO/DIS 16890 Sven SCHUETZ ^{1*} 1 Palas GmbH, Germany	
[PS0196] OS6-B07	Development of a PAPR System for Motorcycle Helmets Ai-Lun JIAN ^{1*} , Sheng-Hsiu HUANG ¹ , Wan-Chen LEE ¹ and Chih-Chieh CHEN ¹ ¹ National Taiwan University, Taiwan	

Health Related Aerosols |

	July 5 (Wed) Room 401 [C] 10:30 - 12:15	
Chairperson	Dr. Kin-Fai HO (The Chinese University of Hong Kong, Hong Kong) Prof. Hsiao-Chi CHUANG (Taipei Medical University, Taiwan)	
[PS0111] OS6-C01	Polycyclic Aromatic Hydrocarbons (PAHs) and Oxygenated-PAHs (OPAHs) and Related Bioreactivity in PM2.5 in Northern China Xinyi NIU ^{1*} , Junji CAO ² and Kin-Fai HO ³ ¹ Xian Jiaotong University, China ² Institute of Earth Environment, Chinese Academy of Sciences, China ³ The Chinese University of Hong Kong, Hong Kong	
[PS0424] OS6-C02	Variability in Toxicity and Chemical Composition Among Aerosols Produced from Different Sources Minhan PARK ^{1*} , Hungsoo JOO ¹ , KwangYul LEE ¹ , Tsatsral BATMUNKH ¹ , Lucille BORLAZA ¹ , Han-Gyul SONG ¹ , Heung-Bin LIM ² , Han-Jae SHIN ³ , Myoseon JANG ⁴ , Ji Yi LEE ⁵ , Min-Suk BAE ⁶ , Kyuhuck JUNG ⁷ and Kihong PARK ¹ ¹ Gwangju Institute of Science and Technologyn, Republic of Korea ² Chungbuk National University, Republic of Korea ³ KT&G Central Research Institute, Republic of Korea ⁴ University of Florida, USA ⁵ Chosun University, Republic of Korea ⁶ Mokpo University, Republic of Korea ⁷ Sungkyunkwan University, Republic of Korea	
[PS0015] OS6-C03	Wind Speed Regulated Particulate Bioreactivity in a Vicinity of a Petrochemical Complex Hsiao-Chi CHUANG ^{1*} , Ruei-Hao SHIE ² , Chia-Pin CHIO ³ , Tzu-Hsuen YUAN ³ , Jui-Huan LEE ² , Chang-Chuan CHAN ³ ¹ School of Respiratory Therapy, College of Medicine, Taipei Medical University, Taipei, Taiwan ² Green Energy and Environment Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan ³ Institute of Occupational Medicine and Industrial Hygiene, College of Public Health, National Taiwan University, Taipei, Taiwan	
[PS0021] OS6-C04	Characterization and Bioreactivity of PM2.5 near Landfill Sites in Hong Kong K.F. HO ^{1*} , K. H. LUI ¹ , Tim JONES ² , Kelly BÉRUBÉ ³ , and S. C. LEE ⁴ ¹ The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong ² School of Earth and Ocean Sciences, Cardiff University, Cardiff, UK ³ School of Biosciences, Cardiff University, Cardiff, UK ⁴ Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hong Kong	
[PS0423] OS6-C05	Differences in Elemental Carbon Fractions Between Ambient and Carbon Nanotube (CNT) Raw Material Samples Kyung Hwan KIM ^{1*} , Jong Bum KIM ² , Jun Ho JI ³ , Seung-Bok LEE ² and Gwi-Nam BAE ² ¹ Dong-il Shimadzu, Republic of Korea ² Korea Institute of Science and Technology, Republic of Korea ³ EcoPictures, Republic of Korea	
[PS0099] OS6-C06	Human Lung Cells Exposed to Various Combustion Aerosols at the Air-Liquid-Interface: Cytotoxic and Molecular Biological Effects Ralf ZIMMERMANN ^{1*} and HICE- CONSORTIUM ¹ ¹ Helmholtz Zentrum München/University of Rostock, Germany	
[PS0400] OS6-C07	Ambient PM2.5 in South Korea: Chemical Characteristics, Oxidative Potential, and Source Apportionment Lucille Joanna BORLAZA ^{1*} , Kwangyul LEE ¹ , Minhan PARK ¹ , Haebam LEE ¹ , Kihong PARK ¹ , Hungsoo JOO ¹ and Seojong KIM ¹ ¹ Gwangju Institute of Science and Technology, Republic of Korea	

Instrumentation and Measurement IV

	July 5 (Wed)	Room 402 [D] 10:30 - 12:15
Chairperson	Prof. Jeonghoon LEE (Korea University of Technology and Educ	cation, Republic of Korea)
	Prof. Se-Jin YOOK (Hanyang University, Republic of Korea)	
[PS0312]	Development of Electric Field Assisted Megasonic Atomizat	ion for Generating Nanoparticles
OS6-D01	Hyeong-U KIM ¹ , Vinit KANADE ^{1*} , Atul KULKARNI ¹ , Soohyun HA	A ¹ , Dongjoo SHIN ¹ and Taesung KIM ¹
	¹ Sungkyunkwan University(SKKU), Republic of Korea	
[PS0337]	Evaluation of a NanoAerosol Generator of Kanomax FMT Inc	c. in Aerosolization of Size Standard
OS6-D02	Nanoparticles and Proteins	
030-002	Hiromu SAKURAI ^{1*} , Yoshiko MURASHIMA ¹ , Yohei HAYAKAWA ²	and Nobuhiko FUKUSHIMA ²
	¹ AIST, Japan ² Kanomax Japan, Inc., Japan	
[PS0344]	The Effect of Sheath Flow Rate on the Particle Trajectory Insid Configuration	le an Optical Cavity with Direct Flow
OS6-D03	Weon Gyu SHIN ¹ , Haneol LEE ¹ *, Young-Su JEONG ² and Kibong	CHOI ²
	¹ Chungnam National University, Republic of Korea	CHOI
	² Agency for Defense Development, Republic of Korea	
[PS0363]	A New Condensation Particle Counter for Measuring Solid S	oot Particles Only Under a Wide
OS6-D04	Range of Operation Temperature Longfei CHEN ^{1*}	
	¹ Beihang University, China	
[PS0064]	Particle Trajectory Simulation for Flux Tower Measurement	
OS6-D05	Seung-Yoon NOH ¹ , Se-Jin YOOK ^{1*} , Gwang-Jae LEE ² , and Jun-H	
	¹ School of Mechanical Engineering, Hanyang University, Seoul, Republic of EcoPictures Co., Ltd., Seoul, Republic of Korea	of Korea
[PS0447]	A Non-Filter Based Measurement of Black Carbon Using a Pl	hotothermal Interferometer
OS6-D06	Jeonghoon LEE ¹ *	
030 000	¹ School of Mechanical Engineering, Korea University of Technology and E	ducation, Republic of Korea
[PS0401]	Insights Into Aerosol Chemistry During The 2015 China Victor	ory Day Parade: Results From
OS6-D07	Simultaneous Measurements At Ground Level And 260 m In	n Beijing
U3U-DU/	Jian ZHAO1* and Yele SUN1	
	¹ Institute of Atmospheric Physics, Chinese Academy of Sciences, China	

Atmospheric Aerosols ||

	July 6 (Thu) Halla [A] 10:30 - 12:00	
Chairperson	Dr. Lin Chi WANG (Cheng Shiu University, Taiwan)	
	Dr. Hwajin KIM (Korea Institute of Science and Technology, Republic of Korea)	
[PS0247]	Chemical Composition, Sources and Atmospheric Processes of Organic Aerosol in Urban Air of China During Haze Pollution Events	
OS7-A05	Ru-Jin HUANG ^{1*} , Yichen WANG ¹ , Yao HE ¹ and Junji CAO ¹	
	¹ Institute of Earth Environment, Chinese Academy of Sciences, China	
[PS0240]	A New Balance Formula To Estimate Particle Formation Rate: Reevaluating the Effect of Coagulation Scavenging	
OS7-A01	Runlong CAI ^{1*} and Jingkun JIANG ¹	
	¹ Tsinghua University, China	
[PS0205]	Influence of Intense Secondary Aerosol Formation and Long Range Transport on Aerosol Chemistry and Properties During Spring Time: Results from KORUS-AQ Campaign.	
OS7-A02	Hwajin KIM ¹ * and Qi ZHANG ²	
	¹ Korea Institute of Science and Technology, Republic of Korea ² Universtiy of California, Davis, USA	
[PS0213]	Assesment of Ambient Particulate Matter in Urban Areas of Indonesia	
OS7-A03	Muhayatun SANTOSO¹*, Diah Dwiana LESTIANI¹, Syukria KURNIAWATI¹, Endah DAMASTUTI¹, Indah KUSMARTINI¹, Djoko Prakoso Dwi ATMODJO¹, Dyah Kumala SARI¹, Rita MUKHTAR², Esrom HAMONANGAN², Tamrin³, Windi Dwi WINDIANDI⁴, Slamet WIDODO⁵, Sukadi¹, Sunarta⁶ and Henny Dwi FERITA ⁷	
	¹ National Nuclear Energy Agency of Indonesia (BATAN), Indonesia ² Minister of Environment and Forestry, Indonesia ³ Environmental Protection Agency of Jakarta Province, Indonesia ⁴ Environmental Protection Agency of West Java Province, Indonesia ⁵ Environmental Protection Agency of Central Java Province, Indonesia ⁶ Environmental Protection Agency of East Java Province, Indonesia ⁷ Environmental Protection Agency of Surabaya City, Indonesia	
[PS0232]	The Vertical Profile of Particle Number Size Distributions Near Surface Boundary Layer in Beijing, China	
OS7-A04	Zhijun WU¹*, Yishu ZHU¹, Yonghee PARK², Yu WANG¹, Haichao WANG¹, Yusheng WU¹, Keding LU¹, Limin ZENG¹, Kang-Ho AHN² and Min HU¹	
	¹ Peking University, China ² Hanyang University, Republic of Korea	
[PS0279]	Chemical Compositional Bulk Analysis of Size-Segregated Aerosol Particles Using ATR-FTIR	
OS7-A06	Li WU ¹ *, Hee-Seung CHAE ¹ , Abdul MALEK ¹ and Chul-Un RO ¹	
O37-A00	¹ Inha University, Republic of Korea	

Aerosol Emissions

	July 6 (Thu)	Samda [B] 10:30 - 11:45
Chairperson	Dr. Seung-Bok LEE (KIST, Republic of Korea)	
[PS0285]	Analysis of Particulate Matter Sources in Subway Tunnels	
OS7-B01	Won Seok JUNG ^{1*} and Duckshin PARK ¹ ¹ Korea Railroad Research Institute, Republic of Korea	
[PS0349]	A Fast Method for Estimating the Emission Factors of Air Pollutants fro	om In-use Vehicles
OS7-B02	Seung-Bok LEE ^{1*} , Kyung Hwan KIM ² , Bo-Eun PARK ¹ and Gwi-Nam BAE ¹ ¹ Korea Institute of Science and Technology, Republic of Korea ² Dong-il SHIMADZU, Republic of Korea	
[PS0008]	[PS0008] Source Apportionment of Water-Soluble Humic-Like Substances (HULISWS) and Their Oxida Potential in Fine Particulate (PM2.5) in Beijing	
OS7-B03	Yiqiu MA ^{1,2*} , Yubo CHENG ² and Di HU ²	
	¹ State Key Joint Laboratory for Environmental Simulation and Pollution Control, Co. Engineering, Peking University, Beijing, China ² Department of Chemistry, Hong Kong Baptist University, Hong Kong	llege of Environmental Sciences and
[PS0032]	Formation of Secondary Organic Aerosols From Gas–Phase Emission	ns of Heated Cooking Oils
OS7-B04	Tengyu LIU ¹ , Zijun LI ² , Man Nin CHAN ^{2,3} , and Chak K. CHAN ^{1,*}	
	¹ School of Energy and Environment, City University of Hong Kong, Hong Kong ² Earth System Science Programme, The Chinese University of Hong Kong, Hong Kon ³ The Institute of Environment, Energy and Sustainability, The Chinese University of H	
[PS0294]	Hygroscopic Properties and Respiratory System Deposition Behavio Emitted By Mining and Smelting Operations	r of Particulate Matter
OS7-B05	Jong-Sang YOUN ¹ *, Janae CSAVINA ² , Kyle RINE ³ , Taylor SHINGLER ³ , Mar Eric BETTERTON ³ and Armin SOROOSHIAN ³	k TAYLOR⁴, Eduardo SAEZ³,
	¹ Inha University, Republic of Korea ² National Ecological Observatory Network, USA ³ University of Arizona, USA ⁴ Macquarie University, Australia	

Health Related Aerosols ||

	July 6 (Thu) Room 401 [C] 10:30 - 12:30	
Chairperson	Dr. Jongbae HEO (Seoul National University, Republic of Korea)	
	Prof. Tawatchai CHARINPANITKUL (Chulalongkorn University, Thailand)	
[PS0366]	Isokinetic Sampling for Observing Formation of Carbon Nanoparticles and Their Derivatives in Pyrol-	
OS7-C01	ysis of Glycerol and Ferrocene	
	Tawatchai CHARINPANITKUL ^{1*} , Naphon OPASANON ¹ , Karanick MENAKANIST ¹ and Konrat KERDNAWEE ¹	
	¹ Chulalongkorn University, Thailand	
[PS0234]	Direct- and Electrospray-Depositions of Particles Derived from Burning Candles	
OS7-C02	Ferry FAIZAL ^{1*} , S. YOKOTE ¹ , M. P. KHAIRUNISSA ¹ and Wuled LENGGORO ¹	
	¹ Tokyo University of Agriculture and Technology, Japan	
[PS0429]	The Association Between Air Pollution and Neurodevelopment Among Preterm Children in the Greater Taipei Area	
OS7-C03	Hsing CHAO ^{1*} , Yu-Ting YANG ¹ , Ling-Chu CHIEN ¹ , Chuen-Bin JIANG ² and Chih-Da WU ³	
	¹ Taipei Medical University, Taiwan	
	² Taipei Mackay Memorial Hospital, Taiwan	
	³ National Chiayi University, Taiwan	
[PS0297]	Direct Detection of Exhaled Particles in Human Breath by Using NanoSESI-HRMS	
OS7-C04	Dandan JIN ^{1*} and Xue LI ¹	
	¹ Jinan University, China	
[PS0354]	Important Sources and Chemical Species of Ambient Fine Particles related to Adverse Health Effects Jongbae HEO1*	
OS7-C05	¹ Seoul National University, Republic of Korea	
	Seodi National Oniversity, Republic of Roled	
[PS0369]	Different Toxicity of Particulate Matters in Multiple Cities tested by the GFP-tagged Saccharomyces Cerevisiae Yeast	
OS7-C06	Ting ZHANG ^{1*} , Kaiyue CHEN ¹ , Maosheng YAO ¹ and Chunxiong LUO ¹	
	¹ Peking University, China	
[PS0391]	Diurnal Trends Of Particulate Matter Induced Oxidative Potential In Different Urban Environments	
OS7-C07	Nirmal Kumar GALI ^{1*} , Zhi NING ¹ , Svetlana STEVANOVIC ² and Zoran RISTOVSKI ²	
	¹ City University of Hong Kong, Hong Kong ² Queensland University of Technology, Australia	
[PS0083]	Effect of Particle Morphology on Performance of ESP-ALI	
067.600	Jing-Chi LIN¹ and Ta-Chih HSIAO¹*	
OS7-C08	$^1 Graduate \ Institute \ of \ Environmental \ Engineering, National \ Central \ University, Taiwan$	

Instrumentation and Measurement V

	July 6 (Thu) Room 402 [D] 10:30 - 11:45	
Chairperson	Dr. Volker ZIEGLER (GRIMM Aerosol Technik Ainring, Germany)	
	Prof. Donggeun LEE (Pusan National University, Republic of Korea)	
[PS0384]	Smart Air Quality Network, the Measurement Network for the Future	
OS7-D01	Volker ZIEGLER ^{1*} and Markus PESCH ²	
037 001	¹ GRIMM Aerosol Technik Ainring, Germany ² GRIMM Aerosol Technik Pouch, Germany	
[PS0403]	0403] Real-time Measurement of Carbonaceous Aerosols Using Laser-Induced Breakdown Spectroscopy	
OS7-D02	Gibaek KIM ¹ , Myoseon JANG ² , Hae Bum LEE ^{1*} , Hyunok MAENG ¹ , Gangnam CHO ¹ and Kihong PARK ¹	
037 002	¹ Gwangju Institute of Science and Technology (GIST), Republic of Korea ² University of Florida, USA	
[PS0421]		
OS7-D03	and Gas Chromatography-triple Quadrupole Mass Spectrometry (GC-TQMS)	
	Kyung Hwan KIM ¹ *, Youngmin HONG ¹ , Hangji OK ¹ , Minhe LEE ¹ , Jin-Young KIM ² and Gwi-Nam BAE ² ¹ Dong-il Shimadzu, Republic of Korea	
	² Korea Institute of Science and Technology, Republic of Korea	
[PS0395]	Measurement of Atmospheric Charged Particle During a Lightning Event	
OS7-D04	Hong Ku LEE ^{1*} and Kang-Ho AHN ¹	
037-004	¹ Hanyang University, Republic of Korea	
[PS0287] Development of Aerosol Mass Spectrometer Coupled with Light Scattering Module fo		
OS7-D05	of a Single Particle with High Hitting Efficiency	
33, 503	Hee-Joo CHO1*, Taewan SON2, Donggeun LEE2 and Kihong PARK1	
	¹ GIST, Republic of Korea	
	² Pusan National University, Republic of Korea	

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Atmospheric Aerosols |||

	July 6 (Thu) Halla [A] 13:30 - 15:15	
Chairperson	Prof. Chak K. CHAN (City University, Hong Kong) Dr. Hungsoo JOO (Anyang University, Republic of Korea)	
[PS0171]	Composition and Variation of PM2.5 in Northern Taiwan During Winter Monsoon and Local Pollution Episode in 2015	
OS8-A01	Yi Na Ll¹*, Kai Hsien CHl¹ and Tuan Hung NGO¹	
	¹ National Yang-Ming University, Taiwan	
[PS0300]	Real-Time Investigation of Chemical Compositions and Hygroscopic Properties of Aerosols Generated from NaCl and Oxalic Acid Mixture Solutions Using in Situ Raman Microspectrometry	
OS8-A02	Xue Ll ^{1*} , Jisu LEE ¹ and Chul-Un RO ¹	
	¹Inha University, Republic of Korea	
[PS0330]	Diurnal and Seasonal Variation of PM2.5 OC / EC in Tokyo in 2016	
OS8-A03	Hiroaki SAINO ^{1*} , Hiroshi HAYAMI ² , Kazuhiko MIURA ¹ and Shinji SAITO ³	
	¹ Tokyo University of Science, Japan ² Central Research Institute of Electric Power Industry, Japan	
	³ Tokyo Metropolitan Research Institute for Environmental Protection, Japan	
[PS0332]	Analysis of PM2.5 Chemical Composition During High PM2.5 Events Over Central Tokyo	
OS8-A04	Kiyotaka TANAKA ¹ *, Hiroshi HAYAMI ² , Hiroaki SAINO ¹ , Kazuhiko MIURA ¹ , Shuichi ITAHASHI ² and Shinji SAITO ³	
	¹ Tokyo University of Science, Japan ² Central Research Institute of Electric Power Industry, Japan	
	³ Tokyo Metropolitan Research Institute for Environmental Protection, Japan	
[PS0414]	Abundance and Sources of Phthalic Acids, Benzene-Tricarboxylic Acids and Phenolic Acids in PM2.5 in The Pearl River Delta Region, China	
OS8-A05	Ting ZHANG¹, Dui WU², J. Z. YU², Xiao HE³* and X.H. Hilda HUANG⁴	
	¹ Atmospheric Research Center, HKUST Fok Ying Tung Graduate School, China ² Institute of Technology on Atmospheric Environmental Safety and Pollution Control, Jinan University, China ³ Division of Environment, The Hong Kong University of Science and Technology, China ⁴ Institute of Environment, The Hong Kong University of Science and Technology, China	
[PS0422]	Characteristics of N-Nitrosamines in Atmospheric PM2.5 and PM0.1 at Roadside Environment	
OS8-A06	Kyung Hwan KIM ¹ *, Youngmin HONG ¹ , Hangji OK ¹ , Minhe LEE ¹ , Masatoshi KINOSHITA ² , Shinji KUDO ² , Kazuhiko SAKAMOTO ² and Kazuhiko SEKIGUCHI ²	
	¹ Dong-il Shimadzu, Republic of Korea ² Saitama University, Japan	
[PS0446]	Diurnal And Day-to-day Characteristics Of Ambient Particle Mass Size Distributions From HR-ToF-AMS Measurements At An Urban Site And A Suburban Site In Hong Kong	
OS8-A07	Berto LEE ¹ , Hao WANG ² and Chak K. CHAN ¹ *	
	¹ City University, Hong Kong ² Hong Kong University of Science and Technology, Hong Kong	

Filtration and Control Technology |||

	July 6 (Thu)	Samda [B] 13:30 - 14:30
Chairperson	Dr. Yun Haeng JOE (KIER, Republic of Korea)	
·	Dr. Myong-Hwa LEE (KITECH, Republic of Korea)	
[PS0263]	Aerosol Removals in Pool Under Severe Accident in Nuclear Power Pl	lant
OS8-B01	Hyun Joung JO ^{1*} , Kwang Soon HA ¹ and Jungho HWANG ²	
O30-B01	¹ Korea Atomic Energy Research Institute, Republic of Korea ² Yonsei University, Republic of Korea	
[PS0331]	Antimicrobial Test of Silver Nanowire Coated Nanofiber Filter	
OS8-B02	Kyuhyun PARK ^{1*} and Jungho HWANG ¹	
O30-B02	¹ Yonsei University, Republic of Korea	
[PS0351]	Numerical Simulation of Cyclone Separator Using DDPM	
OCO BOS	In Sik HWANG ¹ *, Sangwoo KIM ¹ and Jungho HWANG ¹	
OS8-B03	¹ Yonsei University, Republic of Korea	
[PS0186]	Design and Performance Evaluation of a 11-Stage Electrical Low Pres	•
OS8-B04	Measurement of the Size Distribution of Airborne Particulate Matter	
030-004	Jangseop HAN ¹ *, Jungho HWANG ¹ , Joohee SEO ¹ and Junho HYUN ¹	
	¹ Yonsei University, Republic of Korea	





POSTER SESSION



	Aerosol Chemistry	
[PS0521]	Chemical Speciation and Radioactive Particle Analysis of Asian Dust Using Non-Destructive Analytical Techniques	
PS-AC01	Kishore Babu DASARI ^{1*} , H. CHO ¹ , S. H. CHOI ² and Y. –H. YIM ¹	
	¹ Center for Inorganic Analysis, Division of Metrology for Quality of Life, Korea Research Institute of Standards and Science, Republic of Korea ² Pohang Accelerator Laboratory, Pohang University of Science and Technology, Republic of Korea	
[PS0519]	Decomposition of Gas Using a Visible Photo Catalyst Impregnated Activated Carbon Filter	
PS-AC02	Hooncheol JEON ^{1*} , Sunyoung MOON ¹ , Deok HUH ¹ and Hyungho PARK ¹ ¹ Air Solution R&D lab, LG Electronics, Republic of Korea	
[PS0497]	Seasonal Variation Characteristics of Organosulfates Isolated from Urban Aerosol in Beijing:	
PS-AC03	A Study by Ultra-High-Resolution Mass Spectrometry Jingyi ZHANG ^{1*} , QUAN SHI ¹ and Yongmei LIANG ¹	
	¹ China University of Petroleum (Beijing), China	
[PS0490]	Feedbacks Between Atmospheric Aerosol Microphysics and Photochemical Aging	
PS-AC04	Pablo CORRAL ^{1*} , Peter ALPERT ¹ , Jing DOU ² , Ulrich KRIEGER ² , Beiping LUO ² and Markus AMMANN ¹ ¹ Paul Scherrer Institute, Switzerland ² ETH Zurich, Switzerland	
[PS0394] PS-AC05	Size Resolved Aerosols by the Different Regional Influences in the West Coastal Korea During KORUS-AQ Campaign	
	Min-Suk BAE ^{1*} , Zang-Ho SHON ² , Sea-Ho OH ¹ , Taehyoung LEE ³ , Seung-Shik PARK ⁴ and Gyutae PARK ¹ Mokpo National University, Republic of Korea ² Dong-Eui University, Republic of Korea ³ Hankuk University of Foreign Studies, Republic of Korea ⁴ Chonnam National University, Republic of Korea	
[PS0209]	The Ratio of Plant-Derived Carbon in PM2.5 in Summer and Autumn in Kazo, Japan	
PS-AC06	Kouki SASAKA ^{1*} , Qingyue WANG ² and Kazuhiko SAKAMOTO ³	
	¹ Center for Environmental Science in Saitama, Japan ² Graduate School of Science and Engineering, Saitama University, Japan ³ Asia Center for Air Pollution Research, Japan	
[PS0175]	Secondary Organic Aerosol During the Biomass Burning Season in Northern Southeast Asia	
PS-AC07	I-Ting KU ^{1*} , Olga POPOVICHEVA ² , Guenter ENGLING ³ and Neng-Huei LIN ⁴	
	¹ Research Center for Environmental Changes, Academia Sinica, Taiwan ² Lomonosov Moscow State University, Russian Federation ³ California Air Resources Board, USA ⁴ Department of Atmospheric Sciences, National Central University, Taiwan	
[PS0075]	The Effects of Inorganic Seed Aerosol on the Oxidation State of Secondary Organic	
	Aerosol - α-Pinene Ozonolysis	
PS-AC08	Dan Dan HUANG ¹ *, Xuan ZHANG ² , Nathan DALLESKA ² , Hanna LIGNELL ² , Matthew COGGON ² , Chi Ming CHAN ¹ , Richard C. FLAGAN ² , John H. SEINFELD ² and Chak K. CHAN ³	
	¹ Hong Kong University of Science and Technology, Hong Kong ² California Institute of Technology, USA ³ City University of Hong Kong, Hong Kong	

	Aerosol Chemistry	
[PS0068] PS-AC09	Reactive Uptake of Dimethylamine by Ammonium Sulfate and Ammonium Sulfate – Sucrose Mixed Particles Yangxi CHU¹ and Chak K. CHAN¹.2.3* ¹Division of Environment, The Hong Kong University of Science and Technology, Hong Kong ²Department of Chemical and Biomolecular Engineering, The Hong Kong University of Science and Technology, Hong Kong ³School of Energy and Environment, City University of Hong Kong, Hong Kong	
[PS0030] PS-AC10	The Pollution Characteristics of Carbonaceous Aerosol in Handan City During a Heavy Haze in Winter Wenjing CHENG ^{1,2*} , Wei HU ^{3,4} , Wei PIAN ^{1,2} , Shanshan YAN ^{1,2} and Jinbo ZHAO ^{1,2} ¹ Key Laboratory of Resource Exploration Research of Hebei Province, Hebei University of Engineering, China ² Hebei Collaborative Innovation Center of Coal Exploitation, Hebei University of Engineering, China ³ State Key Joint Laboratory of Environmental Simulation and Pollution Control, Peking University, China ⁴ Faculty of Environmental and Symbiotic Sciences, Prefectural University of Kumamoto, Japan	
[PS0013] PS-AC11	Aerosol Assisted Langmuir-Blodgett Assembly of Nanomaterials Jiaxing HUANG¹ and Huali NIE²* ¹Northwestern University, USA ²Donghua University, China	

	Aerosol Emissions
[PS0520] PS-AE01	Decrease of VOC Emissions from Vehicular Emissions in Hong Kong from 2003 to 2015: Results from a Tunnel Study Shun-Cheng LEE ^{1*} , L. CUI ¹ , X.L. WANG ² , K.F. HO ³ , Judith C. CHOW ² and John G. WATSON ² ¹ Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hong Kong ² Division of Atmospheric Sciences, Desert Research Institute, USA ³ School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong
[PS0488] PS-AE02	Electricity Output Trend in North Korea Using the Data Produced by North Korea Min Ju YEO ^{1*} and Yong Pyo KIM ¹ ¹ Ewha Womans University, Republic of Korea
[PS0402] PS-AE03	Determination of Source Profiles for Laboratory-Generated Aerosols from Various Sources and Their Comparison with US EPA Source Profiles Kwangyul LEE ¹ , Kihong PARK ¹ , Wajih Ur REHMAN ^{1*} and Hungsoo JOO ¹ ¹ Gwangju Institute of Science and Technology (GIST), Republic of Korea
[PS0373] PS-AE04	Estimation of Non-Exhaust (Tire and Break Wear) PM Emissions from Road Traffic in Seoul Metropolitan Area Sehyun HAN ^{1*} , Ki-Joon JEON ¹ and Yong-Won JUNG ¹ ¹ Inha University, Republic of Korea
[PS0355] PS-AE05	Comparison and Evaluation of the Air Pollutant Emissions in North Korea from Various Sources Min Ju YEO ^{1*} and Yong Pyo KIM ¹ ¹ Ewha Womans University, Republic of Korea
[PS0323] PS-AE06	Physical Characterization of Tire Wear Particles Under Various Driving Conditions Using a Tire Simulator Seokhwan LEE ^{1*} , Kibaek KIM ¹ and Yongrae KIM ¹ ¹ Korea Institute of Machinery and Materials, Republic of Korea

	Aerosol Emissions
[PS0320]	A Study on BC Emission from Vehicles Using Different Types of Fuel
PS-AE07	KyungHoon KIM ¹ *, Jihwan SON ² , Jounghwa KIM ² , Sunmoon KIM ² , Gyutae PARK ¹ , Kijae SUNG ² , Ingu KIM ² , Taekho CHUNG ² , Taehyun PARK ¹ , Seokwon KANG ¹ , Ji Hee BAN ¹ , Jeong Soo KIM ² , Jung-Hun WOO ³ and Taehyoung LEE ¹
	¹ Hankuk University of Foreign Studies, Republic of Korea ² National Institute of Environmental Research, Republic of Korea ³ Konkuk University, Republic of Korea
[PS0291]	Emissions of Nanoparticle and Volatile Organic Compounds (VOCs) in 3D Printing Operations
PS-AE08	$Jong-Sang\ YOUN^{1*}, Eunji\ HAN^1, Sehyun\ HAN^1, Yong-Won\ JUNG^1, Ki-Joon\ JEON^1\ and\ Eungyoung\ YANG^1$
	¹ Inha University, Republic of Korea
[PS0256]	A Study on Potential Aerosol Formation from Different Vehicle`s Fuel Types Using HR-ToF-AMS in an Oxidation Flow Reactor
PS-AE09	Gyutae PARK ^{1*} , Taehyoung LEE ¹ , Jihwan SON ² , Jounghwa KIM ² , Sunmoon KIM ² , Kyunghoon KIM ¹ , Kijae SUNG ² , Ingu KIM ² , Taekho CHUNG ² , Taehyun PARK ¹ , Seokwon KANG ¹ , Ji Hee BAN ¹ and Jeong Soo KIM ²
	¹ Hankuk University of Foreign Studies, Republic of Korea ² National Institute of Environmental Research, Republic of Korea
[PS0241]	Dangerous Emissions Sources and Their Assessments in India and Russia
PS-AE10	Olga POPOVICHEVA ^{1*} and Tunde ETCHIE ²
	¹ Moscow State University, Russian Federation ² International Clinical Epidemiology Network (INCLEN) Trust New, India
[PS0150]	Metal Composition and Sources Apportionment of PM2.5 in the Vicinity of The Electric Arc Furnace Steel Plant in Central Taiwan
PS-AE11	Jun-Wei WU ¹ * and Hui-Tsung HSU ¹
	¹ China Medical University, Taiwan
[PS0148]	Using Bivariate Polar Plots and Positive Matrix Factorization to Characterize the Emission Sources of PM2.5 in Sheng-Gang, Taiwan
PS-AE12	Ruei-De PAN ¹ *, Hui-Tsung HSU ¹ and Ruei-Hao SHIE ²
	¹ China Medical University, Taiwan ² Industrial Technology Research Institute, Taiwan
[PS0142]	Methodologies to Estimate of NOx Emission from Mobile Sources in Korea
PS-AE13	Nakyung KIM ^{1*} , Jihyung HONG ² and Yong Pyo KIM ³
	¹ Konyang University, Republic of Korea
	² National Institute of Environmental Research, Republic of Korea ³ Ewha Womans University, Republic of Korea
[PS0084]	Investigating Tourist Exposures to Ultrafine and Multi-Sized Particles in an Asian Street Market
	Tsai-Yu LIN¹, Li-Te CHANG²*, Chin-Sheng TANG³ and Shih-Chun Candice LUNG⁴
PS-AE14	¹ Department of Applied Mathematices, Feng Chia University, Taiwan
	² Department of Environmental Engineering and Science, Feng Chia University, Taiwan
	³ Department of Public Health, Fu Jen Catholic University, Taiwan ⁴ Research Center for Environmental Changes, Academia Sinica, Taiwan

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[PS0017]	Wildfire in the Boreal Eurasia: Temporal and Spatial Variations and Controlling Factors
PS-AE15	C. ZHU ^{1*} , Y. KANAYA ¹ , H. KOBAYASHI ¹ and M. SAITO ³
F3-ALI3	¹ Japan Agency for Marine-Earth Science and Technology, Japan
[PS0029]	Comparison of Chemical Properties of Emission from Diesel Engine Fuelled with Conventional and 10% Biodiesel Fuel (B10) Under Transient Mode
PS-AE16	K. SHIBATA ¹ *, K. ENYA ¹ , N. YANAGISAWA ¹ and K. SAKAMOTO ²
	¹ 2nd Engine Research Dept. Isuzu Advanced Engineering Center, LTD., Japan
	² Asia Center for Air Pollution Research (ACAP), Japan Environmental Sanitation Center., Japan

	Aerosol Modeling
[PS0504] PS-AM01	Development of a Numerical Model to Predict the Growth of Hygroscopic Aerosol Particles Due to Coagulation and Condensation Sung Hoon PARK ¹ , Min Young KIM ^{1*} , Ju-Yong KIM ¹ , Byung Wook CHO ¹ and Dong Wan KIM ¹ 1 Sunchon National University, Republic of Korea
[PS0493] PS-AM02	The Role of Glycerol During Aerosol Formation in an Electrically Heated Tobacco Product Markus NORDLUND ^{1*} 1 Philip Morris International Research & Development, Philip Morris Products S.A., Switzerland
[PS0483] PS-AM03	A Simple Numerical Simulation on Electrostatic Particle Removal of a Charged Conductive Fiber Jung Yeul YUN ¹ , Hyung-Woo LEE ² , Hye Moon LEE ¹ , Dong Yun CHOI ^{1*} , Eun Jeong AN ¹ , Soo-Ho JUNG ¹ , Dong Keun SONG ³ and Duckshin PARK ⁴ ¹ Korea Institute of Materials and Science, Republic of Korea ² Pusan National University, Republic of Korea ³ Korea Institute of Machinery and Materials, Republic of Korea ⁴ Korea Railroad Research Institute, Republic of Korea
[PS0445] PS-AM04	The Impact of Industrial Zones on Aerosol Concentration of Nearby Cities in Korea Sungjoo KIM ^{1*} and Pyosuk SEO ² ¹ Korea Advanced Institute of Science and Technology, Republic of Korea ² Yonsei University, Republic of Korea
[PS0441] PS-AM05	Characteristics of Meteorological Parameters and Fine Dust Adsorbents According to the Inflow Path of Fine Dust Su Been PARK ^{1*} and Hyun Jeong CHOI ¹ ¹ Korea Science Academy of KAIST, Republic of Korea
[PS0431] PS-AM06	Particulate Matter's Pathway Modeling According to the Urban Thermal Environment Using Envi-Met. Donghwi KIM ^{1*} and Hyun Jeong CHOI ¹ ¹ Korea Science Academy of Kaist, Republic of Korea
[PS0386] PS-AM07	Urban PM10 Distribution According to the Thermal Comfort Evaluation Using the Envi-Met. Micro Climate Model Hyun Jeong CHOI ^{1*} ¹ Korea Science Academy, Republic of Korea

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[PS0275]	A Numerical Analysis on the Effect of Droplet Sizes on the Performance of a Spray Type Scrubber
PS-AM08	Hyuksang CHANG ^{1*} and Chanhyun LEE ¹
	¹ Yeungnam University, Republic of Korea
[PS0159]	Numerical Methods for Factor Characterization in Source Apportionment Studies
PS-AM09	HT. LIAO ¹ , P.K. HOPKE ² , SM. YI ³ and CF. WU ^{1*}
1 3-AMOS	¹ National Taiwan University, Taiwan
	² Clarkson University, USA
	³ Seoul National University, Republic of Korea
[PS0016]	Numerical Analysis on Removal Efficiency of Water Droplets in a Curved Vane Mist Eliminator
PS-AM10	D.K. SONG ¹ *
1 J AWIO	$^{1} Environmental \ and \ Energy \ Systems \ Research \ Division, Korea \ Institute \ of \ Machinery \ and \ Materials, Republic \ of \ Korea \ Normal \ $

Aerosol Physics	
[PS0473]	Nucleation with Excluded Volume and the Kolmogorov-Avrami Theory
PS-AP01	Alexander SHCHEKIN ^{1*} and Anatoly KUCHMA ¹
	¹ St Petersburg State University, Russian Federation
[PS0462]	Particle Size Selection in Post-Spark Dusty Plasma in Non-Uniform Electric Field
PS-AP02	Peter PIKHITSA ^{1*} , Mansoo CHOI ¹ and Woongsik KIM ¹
1 3 Al 02	¹ Seoul National University, Republic of Korea
[PS0438]	Designing Urban Structure to Induce Air Circulation
PS-AP03	Hyun Jeong CHOI ¹ and Hoyeon CHANG ¹ *
F3-AF03	¹ Korea Science Academy of KAIST, Republic of Korea
[PS0276]	Characteristics of Aerosol Suspension Time in a Rotating Chamber
PS-AP04	Sheng-Hsiu HUANG ¹ , Chih-Chich CHEN ¹ , Wei-Ren KE ^{1*} , Yu-Mei KUO ² and Chih-Wei LIN ¹
1 3-AF04	¹ National Taiwan University, Taiwan
	² Chung Hwa University of Medical Technology, Taiwan

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[PS0517] PS-AA01	Combining Multiple Satellites and Models to Understand Changes in Asian Aerosol Emissions Jason COHEN ^{1*} 1 Sun Yat-Sen University, China
[PS0516] PS-AA02	CFD Simulations of Urban Air Quality in a Densely Populated Area Based on the Estimation of On-Road Vehicle Emissions Kyung-Hwan KWAK ^{1*} , Yeon-Uk KIM ¹ , Jae-Hee HAHM ¹ , Seung-Bok LEE ² and Gwi-Nam BAE ²
	¹ Kangwon National University, Republic of Korea ² Korea Institute of Science and Technology, Republic of Korea

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[PS0515] PS-AA03	Analysis of Aerosol Influx by Wind Element at 1km, Using UAV in Ansan, Korea Jaehyuk BAE ¹ , Hee Sang KIM ^{1*} , Kang-Ho AHN ¹ , Hongku LEE ¹ , Heeram EUN ¹ , Yonghee PARK ¹ and Wooyoung KIM ¹ ¹ Hangyang Univ., Republic of Korea
[PS0512] PS-AA04	Development of Aerosol Detection/Classification Algorithms for Next Generation Geostationary Satellite Gi-Hun HONG ^{1*} , Mi-Kyung CHOI ¹ and Kwon-Ho LEE ¹ ¹ Gangnueng & Wonju National University, Republic of Korea
[PS0511] PS-AA05	Identification of Major Sources of Polycyclic Aromatic Hydrocarbons (PAHs) in The Ambient Aerosols at Seoul Sanghee HAN ^{1*} , Yong Pyo KIM ¹ , Ji Yi LEE ² and Jongbae HEO ³ ¹ Ewha Womans University, Republic of Korea ² Chosun University, Republic of Korea ³ Seoul National University, Republic of Korea
[PS0508] PS-AA06	Relationship Between Visibility Distance and Atmospheric PM2.5 Concentration in Major Urban Areas Yong-Hee LEE ^{1*} , Jae-Hee HAHM ¹ , Ha-Yoon JEONG ¹ , A-Young KIM ¹ , Kwon-Chan PARK ¹ and Kyung-Hwan KWAK ¹ ¹ Kangwon national University, Republic of Korea
[PS0507] PS-AA07	Comparison in Air Pollutant Concentrations Between Inside and Outside Tunnels in Seoul, Republic of Korea Seung-Bok LEE ¹ , Gwi-Nam BAE ¹ , Kyung-Hwan KWAK ² , Seung-Hyeop LEE ² , Seong-Chan LIM ² , Sang-Eun LEE ² and Yeon-Uk KIM ^{2*} ¹ Korea Institute of Science and Technology, Republic of Korea ² Kangwon National University, Republic of Korea
[PS0495] PS-AA08	Estimation of Secondary Organic Carbon Combined with Measurement of Equivalent Black Carbon During KORUS-AQ Jeonghoon LEE ^{1*} , Min-Suk BAE ² and Joon-Young AHN ³ ¹ Korea University of Technology and Education, Republic of Korea ² Mokpo National University, Republic of Korea ³ National Institute of Environmental Research, Republic of Korea
[PS0494] PS-AA09	Group Analysis of Organic Aerosol in the Atmosphere Over Seoul Based Using Two Dimensional Gas Chromatography-Time of Flight Mass Spectrometry (GC×GC TOFMS) Data Sohyeon JEON ^{1*} , Hyungbae LIM ² , Narae CHOI ³ , Jiyi LEE ² , Yunkyong AHN ¹ and Yong Pyo KIM ³ ¹ Korea Basic Science Institute, Republic of Korea ² Chosun University, Republic of Korea ³ Ewha Womans University, Republic of Korea
[PS0491] PS-AA10	Source Apportionment of PM2.5 Using Chemical Speciation and PMF Modeling in Busan, Korea Geehyeong PARK ^{1*} , Eunyu KWON ¹ , Jeonggoo CHO ¹ and Byeongkyu LEE ² ¹ Busan Institute of Health and Environment, Republic of Korea ² Civil and Environmental Engineering, University of Ulsan, Republic of Korea

	Atmospheric Aerosols
[PS0471]	Microbial Population Structure in Aerosols from Near-Ground During Fog-Haze Days in Northern China
PS-AA11	Yunping HAN ^{1*} , Lin LI ¹ and Junxin LIU ¹
	¹ Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China
[PS0463]	Classification of Aerosol Type Based on AERONET Clustering Analysis at Gangenung, Korea
PS-AA12	Sung-Kyun SHIN ¹ * and Kwon-Ho LEE ¹
	¹ Gangneung-Wonju National University, Republic of Korea
[PS0461]	Size Distribution and Source of Black Carbon Aerosol in Urban Beijing During Winter Haze Episodes
PS-AA13	Yunfei WU ¹ * and Renjian ZHANG ¹
	¹ Institute of Atmospheric Physics, Chinese Academy of Sciences, China
[PS0434]	Removal of Nitrogen Oxide by Na2S
PS-AA14	San KIM ¹ *
1370011	¹ Korea Institute of Machinery and Materials, Republic of Korea
[PS0417]	Measurement of Ultrafine and Fine Particles at Different Locations (Urban, Coastal, and Arctic Sites)
PS-AA15	KwangYul LEE ¹ , Hee-Joo CHO ¹ *, Jiyeon PARK ¹ , Minhan PARK ¹ , Hoseung CHAE ¹ , Dohyung KIM ¹ , Peter MCMURRY ¹ and Kihong PARK ¹
	¹ Gwangju Institute of Science and Technology, Republic of Korea
[PS0406]	Measurements of Long-Range Transported Aerosols Over the Yellow Sea
PS-AA16	Hyunok MAENG ^{1*} , Seojeong KIM ¹ , Kwangyul LEE ¹ , Se Pyo LEE ² , Joo Wan CHA ² , Sang Boom RYOO ² and Kihong PARK ¹
	¹ GIST, Republic of Korea ² NIMS, Republic of Korea
[PS0404]	Elemental Composition of Arctic Soils and Aerosols in Ny-Ålesund Measured Using Laser- Induced Breakdown Spectroscopy
PS-AA17	Gibaek KIM ¹ *, Young-Jun YOON ² , Hae Bum LEE ¹ , Hee-Joo CHO ¹ and Kihong PARK ¹
	¹ Gwangju Institute of Science and Technology (GIST), Republic of Korea ² Korea Polar Research Institute, Republic of Korea
[PS0399]	Physical and Chemical Characterization of Road Dust at Urban Sites in Korea and Mongolia
PS-AA18	Kwangyul LEE ¹ *, Tsatsral BATUNKH ¹ , Hung Soo JOO ¹ and Kihong PARK ¹
rs-AA10	¹ Gwangju Institute of Science and Technology, Republic of Korea
[PS0397]	Different Ratios of Thermal-Optical Elemental Carbon to Equivalent Black Carbon by Chemical
PS-AA19	Characteristics During KORUS-AQ Campaign Min-Suk BAE ^{1*} , Jeonghoon LEE ² , Hye-Jung SHIN ³ and Joon-Young AHN ³
	¹ Mokpo National University, Republic of Korea
	² Korea University of Technology and Education, Republic of Korea
	³ National Institute of Environmental Research, Republic of Korea

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[PS0396] PS-AA20	Classification and Identification of Organic Aerosols in The Atmosphere Over Seoul Using Two Dimensional Gas Chromatography-Time of Flight Mass Spectrometry (GC×GC/TOF-MS) Data Sohyeon JEON ^{1*} , Hyungbae LIM ² , Narae CHOI ³ , Jiyi LEE ² , Yunkyong AHN ¹ and Yong Pyo KIM ³ ¹ Korea Basic Science Institute, Republic of Korea ² Chosun University, Republic of Korea ³ Ewha Womans University, Republic of Korea
[PS0393] PS-AA21	Relationship Between Reactive Oxygen Species and Benzene Carboxylic Acids in the Coastal Area During KORUS-AQ Campaign Min-Suk BAE¹*, Zang-Ho SHON², Taehyoung LEE³, Ju-Hee JEONG⁴, Chul-Un RO⁵ and James SCHAUER⁶ ¹Mokpo National University, Republic of Korea ²Dong-Eui University, Republic of Korea ³Hankuk University of Foreign Studies, Republic of Korea ⁴Pusan National University, Republic of Korea ⁵Inha University, Republic of Korea 6University of Wisconsin-Madison, USA
[PS0387] PS-AA22	Implication Of Light Absorption Enhancement And Mixing State Of Black Carbon (BC) By Coatings Guoliang Ll ^{1*} and Zhi NING ¹ 1 City University of Hong Kong, Hong Kong
[PS0385] PS-AA23	Detection of Organic Component in Ambient Particulate Matter Samples Using Surface Enhanced Raman Spectroscopy (SERS) Monica Blaise SANIEL ^{1*} ¹ Institute of Chemistry, University of the Philippines, Philippines
[PS0380] PS-AA24	Effect of NOx and NH3 on Secondary Organic Aerosol formation of Isoprene from Ozonolosis and Photooxidation Zaeem BABAR ^{1*} , Ho-Jin LIM ¹ and Jun-Hyun PARK ¹ ¹ Kyungpook National University, Republic of Korea
[PS0378] PS-AA25	A Study on the Emission Characteristics of Hazardous Air Pollutants (HAPs) from Solid Fuel (SRF and Bio-SRF) Using Facilities Sun Hwa HEO ^{1*} , Kee Won JANG ¹ , Seung Young LIM ¹ , Dae II KANG ¹ and Sang Bo LEE ¹ ¹ National Institute of Environmental Research, Republic of Korea
[PS0367] PS-AA26	Estimation of Influence of Artifact on Carbonaceous Aerosol Measurement by Newly Developed Cyclone Sampler Shuichi HASEGAWA ^{1*} and Tomoaki OKUDA ² ¹ Center for Environmental Science in Saitama, Japan ² Keio University, Japan
[PS0353] PS-AA27	Source Apportionment of Semi-Continuous PM2.5 Data in South Korea Using PMF Model – Long Range Transport and Local Effects of High Concentration Events Jieun PARK ^{1*} , Eun Ha PARK ¹ , Kwang-Joo MOON ² , Jongbae HEO ¹ , Yoo-Duck HONG ² and Seung-Muk YI ¹ ¹ Seoul National University, Republic of Korea ² National Institute of Environmental Research, Republic of Korea

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[PS0350] PS-AA28	Surface Flux of Particle Numbers and Ionic Species Measured Over Rice Paddy in Greater Tokyo Hiroshi HAYAMI ^{1*} , Syuichi ITAHASHI ¹ , Hiroaki SAINO ³ , Kentaro HAYASHI ² and Keisuke ONO ² 1 CRIEPI, Japan 2 NIAES, Japan
[PS0345] PS-AA29	TUS, Japan Characteristics of the Cloud Condensation Nuclei at the Summit of Mt. Fuji (3776m a.s.l.) During the Summer of 2015, 2016 Konosuke SATO ^{1*} , Ryota KATAOKA ¹ , Yoko IWAMOTO ¹ and Kazuhiko MIURA ¹ 1 Tokyo University of Science, Japan
[PS0333] PS-AA30	Mongolian Ecological Footprint Accounts and Its Trend Enkhjargal VOLODYA1* 1 Ewha Womans University, Republic of Korea
[PS0329] PS-AA31	Identification of PM2.5 Sources in Japan Using Organic and Inorganic Markers by Positive Matrix Factorization Akihiro IIJIMA ^{1*} , Shinji KUDO ¹ , Kimiyo KUMAGAI ² , Hiroshi TAGO ² , Yoshinori SAITOH ² , Shinya KIMURA ² and Kazuhiko SEKIGUCHI ² 1 Takasaki City Univ. of Economics, Japan 2 Gunma Prefectural Institute of Public Health and Environmental Sciences, Japan
[PS0328] PS-AA32	Chemical Composition of Aerosol Measurements in the Air Pollution Plume During KORUS-AQ Taehyun PARK ^{1*} , Yury DESYATERIK ² , Jaebum LEE ³ , Yongjae LIM ³ , Junyoung AHN ³ , Jinsoo PARK ³ , Jongho KIM ⁴ , Soobog PARK ⁴ , Jeffrey COLLETT ² and Taehyoung LEE ¹ ¹ Hankuk University of Foreign Studies, Republic of Korea ² Colorado State University, USA ³ National Institute of Environmental Research, Republic of Korea ⁴ Hanseo University, Republic of Korea
[PS0326] PS-AA33	Temporal Variation and Characteristics of Organic Compounds in PM2.5 at a Background Area in Korea Jong Sik LEE ^{1*} , Eun Sil KIM ² , Yong Pyo KIM ³ , Chang Hoon JUNG ⁴ , Ki Ae KIM ¹ , Soo Bin HONG ¹ and Ji Yi LEE ¹ ¹ Chosun University, Republic of Korea ² National Institute of Meteorological Sciences Anmyeondo Global Atmosphere Watch Station, Republic of Korea ³ Ewha Womans University, Republic of Korea ⁴ Kyungin Womens College, Republic of Korea
[PS0318] PS-AA34	Characteristics of Temperature-Resolved Fractions of OC and EC in PM2.5 Based on One Year Observation at Anmyeon Island, a Background Site in South Korea Yu Woon CHANG ^{1*} , Jong Sik LEE ¹ , Eun Sil KIM ² , Yong Pyo KIM ³ , Chang Hoon JUNG ⁴ and Ji Yi LEE ¹ ¹ Chosun Univercity, Republic of Korea ² National Institute of Meteorological Sciences Anmyeondo Global Atmosphere Watch Station, Republic of Korea ³ Ewha Womans University, Republic of Korea ⁴ Kyungin Women's College, Republic of Korea
[PS0302] PS-AA35	Characteristics of PM2.5 Aerosol and Precursor Gas Species and Its Source Apportionment Basma LOUAHEMMSABAH ^{1*} , Al Maliki Dugham RADHI OBAID ¹ , Modeste MUGABO ¹ , Seokwon KANG ¹ , Kyunghoon KIM ¹ , Taehyun PARK ¹ and Taehyoung LEE ¹ 1 Hankuk University of Foreign Studies, Republic of Korea

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[PS0301]	Single-Particle Investigation of Antarctic Sea Spray Aerosols Using Low-Z particle EPMA, Raman Microspectrometry, and ATR-FTIR Imaging Techniques
PS-AA36	Xue LI ^{1*} , Hyo-Jin EOM ¹ , Heejin HWANG ² , Soondo HUR ² , Yeontae GIM ³ and Chul-Un RO ¹
	¹ Inha University, Republic of Korea ² Division of Paleo Environment Sciences, Korea Polar Research Institute, Republic of Korea ³ Division of Polar Climate Sciences, Korea Polar Research Institute, Republic of Korea
[PS0284]	Transboundary Transport of Anthropogenic Sulfur in PM2.5 at a Coastal Site in the Sea of Japan
PS-AA37	Yayoi INOMATA ^{1*} , Tsuyoshi OHIZUMI ² , Naoko TAKE ² and Keiichi SATO ³ ¹ Institute of Nature and Environmental Technology, Japan ² Niigata Prefectural Institute of Public Health and Environmental Sciences, Japan ³ Asia Center for Air Pollution Research, Japan
[PS0278]	Characterization of Ambient Aerosols from Amazonian Rainforest and City of Manaus, Brazil
PS-AA38	Cybelli BARBOSA ¹ , Li WU ^{2*} , Dhrubajyoti GUPTA ² , Ricardo H. M. GODOI ¹ and Chul-Un RO ²
	¹ Environmental Engineering Department, Federal University of Paraná, Curitiba, PR, Brazil ² Inha University, Republic of Korea
[PS0273]	Characteristic Evaluation of Chemical Components in PM0.1-2.5 and PM0.1 Collected in Chiang Mai, Thailand during Biomass Burning Season
PS-AA39	R. Yamaguchi ¹ , K. Sekiguchi ^{1,*} , K. Sankoda ¹ , K. Kumagai ² , Y. Fujitani ³ , T. Chetiyanukornkul ⁴ , and R. Janta ⁴
	¹ Graduate School of Science and Engineering, Saitama University, Japan ² Prefectural Institute of Public Health and Environmental Science, Japan ³ National Institute for Environmental Studies, Japan ⁴ Fuculty of Science, Chiang Mai University, Thailand
[PS0271]	Detailed Analysis of Water-Soluble Organic Components in Size-Segregated Particles Collected at a Suburban Site in Saitama, Japan Using an Inertial Filter Sampler
PS-AA40	Yuta KUROTSUCHI ^{1*} , Kazuhiko SEKIGUCHI ¹ and Kenshi SANKODA ¹
	¹ Saitama University, Japan
[PS0253]	Hygroscopic Behavior of Individual Ambient Aerosol Particles Collected at Gosan, Jeju Island, South Korea with Special Emphasis on Reacted Sea Salt Aerosols
PS-AA41	Han-Jin YOO1*, Hyo-Jin EOM1, Dhrubajyoti GUPTA1 and Chul-Un RO1
	¹ Inha University, Republic of Korea
[PS0228]	New Particle Formation Observed at the Tokyo Skytree, Japan
PS-AA42	Takenori SATO ^{1*} , Ryota KATAOKA ¹ , Masahiro MOMOI ¹ , Kazuhiko MIURA ¹ and Yoko IWAMOTO ²
	¹ Tokyo University of Science, Japan ² Hiroshima University, Japan
[PS0227]	Investigation of Organic Markers of the Carbonaceous Aerosols for the Source Identification at a Background Site in Korea
PS-AA43	Sang Hee HAN¹*, Yong Pyo KIM¹, Ji Yi LEE², Jongsik LEE², Jongbae HEO³ and Eun-Sill KIM⁴
	¹ Ewha Womans University, Republic of Korea
	² Chosun University, Republic of Korea ³ Seoul National University, Republic of Korea
	⁴ Meteorological Administration, Republic of Korea

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[PS0226]	Absorption Properties of Brown Carbon in PM2.5 at an Urban Site of Gwangju During KORUS-AQ Campaign
PS-AA44	Geun-Hye YU1*, Jaemyeong YU1 and Seungshik PARK1
	¹ Chonnam National University, Republic of Korea
[PS0225]	Investigation on Sources of Water-Soluble Organic Aerosols in PM2.5 at an Urban Site Using a US EPA Positive Matrix Factorization Model
PS-AA45	Geun-Hye YU ^{1*} and Seungshik PARK ¹
	¹ Chonnam National University, Republic of Korea
[PS0217]	Source Apportionment of Organic Aerosols by Using Aerosol Mass Spectrum Data of Traffic Intersection in Japan
PS-AA46	Yuji FUJITANI ^{1*} , Akinori TAKAMI ¹ and Shinji KOBAYASHI ¹
	¹ National Institute for Environmental Studies, Japan
[PS0201]	Characteristics of Water-Soluble Inorganic Ions of PM2.5 in a Coastal City of China
PS-AA47	Xin WU ¹ *, Junjun DENG ¹ , Jinsheng CHEN ¹ , Youwei HONG ¹ , Lingling XU ¹ , Liqian YIN ¹ , Wenjiao DU ¹ , Zhenyu HONG ¹ , Nanzhen DAI ¹ and Chung-Sing YUAN ²
	¹ Institute of Urban Environment, Chinese Academy of Sciences, China ² Institute of Environmental Engineering, National Sun Yat-sen University, China
[PS0163]	Estimation of Visual Range for Fog Detection on Road Using Human Eyes and a CCTV-Based Image
PS-AA48	Kyungwon KIM ^{1*}
	¹ Department of Environment and Energy Science, Gyeongju University, Republic of Korea
[PS0162]	Detection of Sea Fog Using a Pattern Recognition Method of an Image
PS-AA49	Kyungwon KIM ^{1*}
	¹ Department of Environment and Energy Science, Gyeongju University, Republic of Korea
[PS0149]	Characterization of Aerosols Collected during KORUS-AQ (Korea US Air Quality) Sampling Period in Olympic Park, Seoul, Using Low-Z Particle EPMA and ATR-FTIR Techniques
PS-AA50	Han-Jin YOO ^{1*} , Hyeonsu KIM ¹ and Chul-Un RO ¹
	¹ Inha University, Republic of Korea
[PS0146]	Characteristics Of Fine And Coarse Aerosol Particles In South Korea
PS-AA51	Byeongsu CHO ^{1*} and Mijung SONG ¹
	¹ Chonbuk National University
[PS0138]	Impact of Biomass-Burning Aerosol from Indochina on Cloud Water Chemistry at Mt Bamboo in Taiwan
PS-AA52	Thu Thuy BUI ^{1*} , Wei-Ti TSENG ¹ and Neng-Huei LIN ¹
	¹ National Central University, Taiwan
[PS0113]	Viscosities of Secondary Organic Aerosols Derived from α-Pinene and Ammonia
PS-AA53	Suhan HAM1* and Mijung SONG ¹
	¹ Department of Earth and Environmental Sciences, Chonbuk National University, Republic of Korea

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[PS0101] PS-AA54	Characterization of Elements Focused on Coal Combustion and Rare Earth Elements in PM2.5 in China, Japan and Jeju, Korea Shinichi YONEMOCHI ^{1*} , Senlin LU ² , Yu SHANG ² , Ki-Ho LEE ³ and Young-ju KIM ³ ¹ Center for Environmental Science in Saitama, Japan ² Shanghai University, China ³ Jeju National University, Republic of Korea	
[PS0096] PS-AA55	Particle Size Characteristics Based on HR-ToF-AMS Measurements at Two Suburban Sites in the PRD Region Hao WANG ^{1*} ¹ Hong Kong University of Science and Technology, Hong Kong	
[PS0086] PS-AA56	Analysis of Aerosol Chemical Composition Observed at Urban and Rural Sites A. TAKAMI¹*, A. YOSHINO¹, M. HAYASHI², K. HARA², C. NISHITA², N. KANEYASU³, and S. HATAKEYAMA⁴ ¹ Center for Regional Environment Research, National Institute for Environmental Studies, Japan ² Department of Earth System Sciences, Fukuoka University, Japan ³ National Institute of Advanced Industrial Science and Technology, Japan ⁴ Institute of Agriculture, Tokyo University of Agriculture and Technology, Japan	
[PS0074] PS-AA57	Individual Particle Analysis of Marine Aerosols Collected Over the North Pacific Around the Izu Islands During Summer Momoka YOSHIZUE ^{1*} , Yoko IWAMOTO ¹ , Koji ADACHI ² , Fumikazu TAKETANI ³ , Kazuo OSADA ⁴ and Kazuhiko MIURA ¹ ¹ Tokyo University of Science, Japan ² Meteorological Research Institute, Japan ³ Japan Agency for Marine-Earth Science and Technology, Japan ⁴ Nagoya University, Japan	
[PS0067] PS-AA58	Factors Controlling Daytime and Nighttime New Particle Formation at the Summit of Mt. Fuji, Japan R. KATAOKA ¹ , M. MOMOl ² , K. MIURA ^{2*} , Y. IWAMOTO ² , M. YABUKI ³ and S. KATO ⁴ ¹ Department of Physics, Graduate School of Science, Tokyo University of Science, Japan ² Department of Physics, Faculty of Science Division 1, Tokyo University of Science, Japan ³ Research Institute for Sustainable Humanosphere, Kyoto University, Japan ⁴ Division of Applied Chemistry, Faculty of Urban Environmental Sciences, Tokyo Metropolitan University, Japan	
[PS0059] PS-AA59	Comparison of Surface and Column Measurements of Aerosol Size Distribution Over Tokyo, Japan Masahiro MOMOI ^{1*} , Kazuhiko MIURA ¹ , Kazuma AOKI ² ¹ Tokyo University of Science, Japan ² University of Toyama, Japan	
[PS0034] PS-AA60	Comparison of Morphology and Elemental Composition Between Artificially-Prepared Dust Particles and Desert Soil Under Scanning Electron Microscope: Cases of Tengger Desert Natsuo MURAKAMI¹, Feng WU², Satoshi FUKUSHIMA¹, Makiko NISHI¹, Shinichiro FUKUYAMA¹, Rin TOMISAKI¹, Yuka HORIKAWA¹, Wei HU¹, Ayumi NAGANUMA¹, Daizhou ZHANG¹ ¹Faculty of Environmental and Symbiotic Sciences, Prefecutural University of Kumamoto, Japan ²Institute of Earth Environment, Chinese Academy of Science, Xiʿan, China	

	Bioaerosols
[PS0505] PS-BI01	Novel Electrostatic Precipitator (ESP) System Using Al-Coated Fibrous Filter: Evaluation of Antimicrobial Performance Juhee KANG ^{1*} , Ki Joon HEO ² , Dong Yun CHOI ³ , Eun Jeong AN ³ , Soo-Ho JUNG ³ , Byung Uk LEE ² , Hye Moon LEE ³ and Jae Hee JUNG ¹ ¹ Korea Institute of Science Technology (KIST), Republic of Korea ² Konkuk University, Republic of Korea ³ Korea Institute of Materials and Science, Republic of Korea
[PS0502] PS-Bl02	Highly Enriched, Continuous, and Automated Bioaerosol Sampling System Using an Air-To-Liquid Wet-Cyclone Technique Yusung CHO ^{1*} , Jongbeom PARK ² and Jaehee JUNG ³ ¹ Korea University, Republic of Korea ² University of Seoul, Republic of Korea ³ Korea Institute of Science and Technology, Republic of Korea
[PS0478] PS-BI03	Detection of Air-Borne Bacteria Using the Paper Disc Immobilized with Luciferase-Luciferin Hey Ri KIM ¹ , Min Kyoung SON ¹ , Byoung Chan KIM ¹ and Dung NGUYEN ^{1*} 1 Korea Institute of Science and Technology (KIST), Republic of Korea
[PS0472] PS-BI04	Bioaerosol Emission and Microbial Characteristics of a Full-scale Thermophilic Biofilter for Sludge Drying Exhaust Removal Lin Ll ^{1*} ¹ Research Center for Eco-Environmental Sciences Chinese Academy of Sciences, China
[PS0453] PS-BI05	A Portable Thermal Energy Generator and Airborne Microorganisms Byung Uk LEE ¹ , Sang Bin JEONG ^{1*} , Ki Joon HEO ¹ and Chang Hun SIN ¹ ¹ Konkuk University, Republic of Korea
[PS0416] PS-BI06	Walking of Humans and the Concentration of Bioaerosols in Indoor Environments Ki Joon HEO ^{1*} , Cheol Eon LIM ¹ , Sang Bin JEONG ¹ and Byung Uk LEE ¹ ¹ Konkuk University, Republic of Korea
[PS0415] PS-BI07	Antimicrobial Activity of Wet Electrostatic Precipitator Using Grapefruit Seed Extract Won Ki CHO ^{1*} ¹ Korea Institute of Machinery and Materials, Republic of Korea
[PS0336] PS-BI08	Effect of Collection Media on Microbial Recovery in the Electrostatic Particle Concentrator Seongkyeol HONG ^{1*} , Myeong-Woo KIM ¹ and Jaesung JANG ¹ ¹ UNIST (Ulsan National Institute of Science and Technology), Republic of Korea
[PS0137] PS-BI09	Quantification of Viable Staphylococcus Aureus and Viable Bacteria in Indoor Air by PMA-qPCR Ching-Wen CHANG ^{1*} and Meng-Hsuan LIN ¹ ¹ National Taiwan University, Taiwan

	Filtration and Control Technology
[PS0525] PS-FCT01	A Study on Effect of Functional Essential Oil Generated by Electrospray S.H. LEE ^{1*} , S.J. BAECK ¹ , O.C. HYUN ¹ , H.C. LEE ¹ , B.Y. CHUNG ¹ ¹ Advanced Air conditioning Lab, L&A research center, LG Electronics, Republic of Korea
[PS0500] PS-FCT02	Air Purification Technique Using Magnetic Nanoparticle-Coated Fibrous Filter Juyoung KIM ^{1*} , Seung Chan HONG ² , Gwi-Nam BAE ¹ and Jae Hee JUNG ¹ ¹ Korea Institute of Science Technology (KIST), Republic of Korea ² Seoul National University, Republic of Korea
[PS0489] PS-FCT03	Fabrication Of Fe-Cr-Al Porous Metal With Different Powder Sizes Yujeong YI ^{1*} ¹ KIMS, University of Ulsan, Republic of Korea
[PS0484] PS-FCT04	Acid Gas (SO2 and HCI) Removal Performance of Two Different Sorbents Tested in a Dry Type Reactor with Downstream Baghouse at Waste to Energy Plant Conditions Naim HASOLLI ^{1*} , Seong-Min JEON ¹ , Kang-San LEE ¹ , Jae-Rang LEE ¹ , Jae-Won HAN ² , Gwang-Deuk KIM ¹ and Young-Ok PARK ¹ ¹ Korea Institute of Energy Research, Republic of Korea ² Hanyang University, Republic of Korea
[PS0482] PS-FCT05	Low Flow-Resistive, Low-Cost, Al-Coated Conductive Fibrous Filters for High-Efficient Removal of Ultrafine Particulate Pollutants Dong Keun SONG¹, Duckshin PARK², Jung Yeul YUN³, Hyung-Woo LEE⁴, Hye Moon LEE³, Dong Yun CHOI³*, Eun Jeong AN³ and Soo-Ho JUNG³ ¹Korea Institute of Machinery and Materials, Republic of Korea ²Korea Railroad Research Institute, Republic of Korea ³Korea Institute of Materials and Science, Republic of Korea ⁴Pusan National University, Republic of Korea
[PS0481] PS-FCT06	Filtration Characteristics of Star Shape Ceramic Filter in Pilot Scale Air Pollution Control System Jae-Rang LEE ¹ , Jungho HWANG ² , Young-Ok PARK ¹ , Kang-San LEE ^{1*} , Naim HASOLLI ¹ , Seong-Min JEON ¹ and Kwang-Deuk KIM ¹ ¹ Korea Institute of Energy Research, Republic of Korea ² Department of Mechanical Engineering, Republic of Korea
[PS0469] PS-FCT07	Evaluation and Improvement of the Leakage Test System for Exhalation Valve Ning YU ^{1*} ¹ National Taiwan University, Taiwan
[PS0460] PS-FCT08	Sustainable Purification Techniques For The Removal Of Airborne And Waterborne Endocrine Disruptors In Personal Care Products' Antimicrobials Chun-Hsuan BAI ^{1*} , Yen-Chi CHEN ¹ and Kuo-Pin YU ¹ ¹ National Yang-Ming University, Taiwan
[PS0440] PS-FCT09	Investigation of a Cyclone Separator Having a Collector Housing With Low Pressure Drop Joonmok SHIM ^{1*} , Yun-Haeng JOE ¹ and Heon-Seol PARK ¹ ¹ Korea Institute of Energy Research, Republic of Korea

	Filtration and Control Technology
[PS0436]	Analysis of Filtration Mechanism of an Electret Filter
PS-FCT10	Hyun-Seol PARK ¹ , Yun-Haeng JOE ^{1*} and Joonmok SHIM ¹
1316110	¹ Korea institute of energy research, Republic of Korea
[PS0435]	Study on Water Droplet Removal and Pressure Drop Performance of a Cyclone
PS-FCT11	Sumin KIM ^{1*}
	¹ Korea Institute of Machinery and Materials, Republic of Korea
[PS0346]	Experimental Investigation And Numerical Modeling Of The Orientation Angle Of Silver Nanowires Passing Through Polyester Filters
PS-FCT12	Seoungho LIM ¹ , Haneol LEE ^{1*} , Hyunseol PARK ² and Weon Gyu SHIN ¹
	¹ Chungnam National University, Republic of Korea
	² Korea Institute of Energy Research, Republic of Korea
[PS0342]	Development of Filter-Free Removal of PM2.5 Ultrafine Particles Using Corona Discharger
PS-FCT13	Tae June PARK ^{1*} , Miji LEE ¹ and Donggeun LEE ¹
	¹ Pusan National University, Republic of Korea
[PS0340]	Experimental and Theoretical Studies of a Two-Stage Electrostatic Precipitator for Oil Fume Control
PS-FCT14	Chuen-Jinn TSAI ¹ , Mo-Fei TUNG ¹ , Yung-Jie LIN ¹ , Wen-Chang KONG ¹ and Ziyi LI ^{2*}
	¹ National Chiao Tung University, Taiwan
	² University of Science and Technology Beijing, China
[PS0281]	Effect of an Image Force on the Collection of Highly Charged Molecular Ions by Metal Screen
PS-FCT15	Tomoya TAMADATE ^{1*} , Hyun-Jin CHOI ¹ , Toshiyuki FUJIMOTO ² , Takafumi SETO ¹ , Yoshio OTANI ¹ , Mikio KUMITA ¹ and Hidenori HIGASHI ¹
	¹ Kanazawa University, Japan ² Muroran Institute of Technology, Japan
[PS0260]	Challenged Amounts of Organic Solvents to Neutralize Electret Filters
PS-FCT16	Eun-Seon PARK ¹ , Taesung KIM ² and Myong-Hwa LEE ^{1*}
P3-FC116	¹ Korea Institute of Industrial Technology, Republic of Korea ² Sungkyunkwan University, Republic of Korea
[PS0259]	Characterization of Flow Through Centrifugal Filter
	Yutaka TANAKA¹, Takafumi SETO¹, Yoshio OTANI¹, Yuki HIRUMA¹*, Totrangkhanon SHIN-ARTS¹ and
PS-FCT17	Mikio KUMITA ¹
	¹ Kanazawa University, Japan
[PS0258]	Capture of Heavy Metal Species on Dust Cake Layer
PS-FCT18	Han-Bin KIM1*, Min-Jeong OH1, Ki Bong LEE2 and Myong-Hwa LEE1
1310110	¹ Korea Institute of Industrial Technology, Republic of Korea
	² Korea University, Republic of Korea
	Callaction Douterman so of Contributed Filter Under Dust Loaded Conditions
[PS0223]	Collection Performance of Centrifugal Filter Under Dust-Loaded Conditions
[PS0223] PS-FCT19	Yoshio OTANI ^{1*} , Yutaka TANAKA ² , Ryo OZAWA ¹ , Kosuke SHIMADZU ¹ , Hidenori HIGASHI ¹ , Mikio KUMITA ¹ and Takafumi SETO ¹

	Filtration and Control Technology
[PS0222]	Effect of Surface Characteristics of Wall Materials on The Deposition of Submicron Particles
PS-FCT20	Driven by The Negative Air Ionizer Kuo-Pin YU ^{1*} , Whei-May LEE ² and Chang-Jhe PENG ¹
	¹ National Yang-Ming University, Taiwan ² National Taiwan University, Taiwan
[PS0216]	Influence of Deliquesce of Salt Particles Collected in Filter on Pressure Drop of Air Filters
PS-FCT21	Yoshio OTANI¹, Shota TSURUI¹*, Takaharu KATO², Kentaro ISHIDA¹, Hidenori HIGASHI¹, Mikio KUMITA¹ and Takafumi SETO¹
	¹ Kanazawa University, Japan ² AQC Co., Ltd., Japan
[PS0215]	An Electrostatic Air Filter Mounting on a Quadcopter Drone
PS-FCT22	Seongkyeol HONG ^{1*} , Myeong-Woo KIM ¹ and Jaesung JANG ¹
1310122	¹ UNIST (Ulsan National Institute of Science and Technology), Republic of Korea
[PS0214]	Charge Neutralization of Electret Filter by Organic Solvent
PS-FCT23	Hyun-Jin CHOI ^{1,2} , Takafumi SETO ² , Mikio KUMITA ² , Hidenori HIGASHI ² , Mizuki TANAKA ² , Hiroshi TANAKA ³ , Toshiaki HAYASHI ⁴ , Yoshio OTANI ^{2*}
	¹ Korea Environment Institute, Republic of Korea
	² Kanazawa University, Japan ³ Vilene Co., Ltd., Japan
	⁴ Toyobo Co., Ltd., Japan
[PS0210]	Generation of CNF Test Aerosol with Super-Jet Mill
PS-FCT24	Yoshio OTANI¹, Naoya MORIOKA¹*, Hiroyuki AMANO², Hidenori HIGASHI¹, Mikio KUMITA¹ and Takafumi SETO¹
	¹ Kanazawa University, Japan ² Sinto Kogio Ltd., Japan
[PS0038]	Inactivation of an Airborne Virus by an Ozone Free Vacuum Ultraviolet Photocatalyst
PS-FCT25	Jeonghyun KIM¹ and Jaesung JANG¹*
1310123	¹ Sensors and Aerosols Laboratory, School of Mechanical and Nuclear Engineering, Ulsan National Institute of Science and Technology, Republic of Korea

Health Related Aerosols	
[PS0503] PS-HRA01	Atmospheric Concentrations of Respirable Crystalline Silica During Part of the Yellow Dust Storm Periods Boowook KIM ^{1*}
	¹ Occupational Lung Disease Institute, Republic of Korea
[PS0480]	Assessment of Formaldehyde Concentration in the Paints for Auto-Vehicle
PS-HRA02	Won-Seok CHA ^{1*} ¹ Korea Worker's Compensation & Welfare Service, Republic of Korea

	Health Related Aerosols
[PS0479] PS-HRA03	Study on the Behavioral Intention of the Action of Fine Suspended Particles in Science and Technology University and Its Related Factors
131111103	Wang-Kun CHEN ¹ *, Gwo-Liang YE ¹ , Chie-Chien TSENG ¹ and Yi-Ching TSAl ¹
[DC0 474]	Jinwen University of Science and Technology, Taiwan Pool time Management of File and Linear and IV Differential Machillet And Indian and Italy
[PS0474]	Real-time Measurement of Fibers Using an HY-Differential Mobility Analyzer with an Optical Particle Counter(KOFAM)
PS-HRA04	Hyunwook KIM ¹ , Sungwon CHOI ^{2*} , Kwangmyung JANG ¹ and Kyunghoon PARK ¹
	¹ Department of Preventive Medicine, The Catholic University of Korea, Republic of Korea ² Occupational Lung Disease Institute, Department of Preventive Medicine, The Catholic University of Korea, Republic of Korea
[PS0439]	Urban Inversion Layer and Air Pollutions
PS-HRA05	Gyulim KANG ^{1*} and Hyunjung CHOI ¹
	¹ Korea Science Academy of KAIST, Republic of Korea
[PS0334]	Development of Eye-Only Exposure Chamber for Environmental Eye disease Research
PS-HRA06	Jaeseong YI ¹ *, Sehyun HAN ¹ , Hyunsoo LEE ² , Jeongwon SEO ³ and Kijoon JEON ¹
	¹ Inha University, Republic of Korea ² The Catholic University of Korea, Republic of Korea ³ Hallym University, Republic of Korea
[PS0299]	Development of In-Vivo and In-Vitro Techniques for the Identification of Mechanism in Environmental Eye Disease Caused by Exposure of Fine Particles (PM10, PM2.5)
PS-HRA07	Ki-Joon JEON¹, Sehyun HAN¹*, Jong-Sang YOUN¹, Soon-Jo KWON¹, Hyun-Soo LEE², Jungwon SEO³ and Se-Joon PARK⁴
	¹ Inha University, Republic of Korea ² The Catholic University of Korea, Republic of Korea
	³ Hallym University, Republic of Korea
	⁴ Myongji University, Republic of Korea
[PS0173]	Oxidative Potential of Biomass Burning Particles Under Different Burning Stages
PS-HRA08	Kihong PARK¹, Bhuwan PAUDEL¹, Seojong KIM¹, Lucille Joanna BORLAZA¹* and Hungsoo JOO¹
	¹ Gwangju Institute of Science and Technology, Republic of Korea
[PS0172]	Oxidative Potential and Chemical Characteristics of Ambient PM2.5 Collected from Various Sites in the Philippines
PS-HRA09	Lucille Joanna BORLAZA ^{1*} , Kihong PARK ¹ , Melliza CRUZ ² and James SIMPAS ²
	¹ Gwangju Institute of Science and Technology, Republic of Korea ² Manila Observatory, Philippines
[PS0152]	Relationship Between Airborne Markers and Biomarkers for Secondhand Smoke Exposure of Non-Smoking Staffs in Hospitality Venues
PS-HRA10	Jeonghoon KIM^{1*} , $Kiyoung LEE^2$, Ho -Jang $KWON^3$, $Do Hoon LEE^4$, Kil -Yong $CHOl^1$, $Chae$ -Bong KIM^1 , $Eunsun LEE^1$ and $Kyoosang KIM^1$
	¹Seoul Medical Center, Republic of Korea
	² Graduate School of Public Health, Seoul National University, Republic of Korea ³ Dankook University College of Medicine, Republic of Korea
	⁴ National Cancer Center, Republic of Korea

Health Related Aerosols	
[PS0147] PS-HRA11	Relationship Between the Air Pollutant and Atopic Dermatitis: Systematic Review and Meta Analysis Chaebong KIM ^{1*} , Kyoosang KIM ¹ , Yongmin CHO ² and Minkyung HAN ³ ¹ Seoul Medical Center, Republic of Korea ² Smartive Coporation Institute, Republic of Korea ³ Yonsei University, Republic of Korea
[PS0119] PS-HRA12	Assessing Uncertainty in Estimating the Health Impact of Fine Particulate Matters Sun Kyoung PARK ^{1*} ¹ Pyeongtaek University, Republic of Korea
[PS0079] PS-HRA13	Exposure Assessment of Particulate and Gaseous Pollutants Emitted from Surgical Practice in a Hospital Hsiao-Chi CHUANG ^{1*} , Ta-Chih HSIAO ² , Tzu-Ting YANG ³ , Kai-Jen CHUANG ⁴ , Yang-Hwei TSUANG ⁵ ¹ School of Respiratory Therapy, College of Medicine, Taipei Medical University, Taipei, Taiwan ² Graduate Institute of Environmental Engineering, National Central University, Taoyuan, Taiwan ³ Department of Environmental Engineering and Health, Yuanpei University of Medical Technology, Hsin Chu, Taiwan ⁴ School of Public Health, College of Public Health and Nutrition, Taipei Medical University, Taipei, Taiwan ⁵ Department of Orthopedics, Shuang Ho Hospital, Taipei Medical University, New Taipei City, Taiwan
[PS0033] PS-HRA14	Development of the High Volume Simultaneous Sampler for Fine and Coarse Aerosol Particles Using a Combination of Virtual Impactor and Multi-Cyclone T. OKUDA ^{1,*} , D. SHISHIDO ¹ , Y. TERUI ¹ , K. FUNATO ² and K. FUNATO ² 1 Faculty of Science and Technology, Keio University, Japan 2 Tokyo Dylec Corp., Japan

Incineration and Combustion Aerosols	
[PS0398]	Measurement of Physicochemical Properties of PM2.5 Produced from Biomass Burning
PS-ICA01	KwangYul LEE ^{1*} , Shila MASKEY ¹ , Arom SEO ¹ , Lucille BORLAZA ¹ , Min-Suk BAE ² and Kihong PARK ¹ ¹ Gwangju Institute of Science and Technology, Republic of Korea
	² Mokpo National University, Republic of Korea
[PS0379]	The Characteristics of Particulate Matter from Industrial Facilities Using Solid Fuel
DC ICAO2	Keewon JANG ¹ *, Seungyoung LIM ¹ , Sunhwa HEO ¹ , Hyungchun KIM ¹ , Sangbo LEE ¹ and Daeil KANG ¹
PS-ICA02	¹ National Institute of Environmental Research, Republic of Korea
[PS0249]	Using Magnetic Tube to Reduce PAH Emissions from a Diesel Engine Generator
PS-ICA03	Lin-Chi WANG ^{1*} , Chia-Yang CHEN ² , Wen-Jhy LEE ² and John MWANGI ¹
1 3-ICAU3	¹ Cheng Shiu University, Taiwan ² National Cheng Kung University, Taiwan
[PS0245]	Using Waste Cooking Oil as Auxiliary Fuel to Reduce PCDD/F Emissions from a Hazardous Waste Incinerator
PS-ICA04	Lin-Chi WANG ^{1*} , Chia-Yang CHEN ² , Wen-Jhy LEE ² , Jhong-Lin WU ² and Sheng-Lun LIN ¹
	¹ Cheng Shiu University, Taiwan
	² National Cheng Kung University, Taiwan

	Incineration and Combustion Aerosols	
[PS0224]	Light Absorption Characteristics of Water-Soluble Organic Aerosols from Size-Resolved Biomass Burning Smoke Emissions	
PS-ICA05	Jaemyeong YU1* and Seungshik PARK1	
	¹ Chonnam National University, Republic of Korea	
[PS0168]	Experimental Investigation of Cavitation Effect of Diesel Atomization	
PS-ICA06	Jiaping FENG ^{1*} , Sang In CHOI ¹ , Ho Suk SEO ² and Young Min JO ¹	
P3-ICA00	¹ Kyunghee University, Republic of Korea ² Easy Power Tec Co., Ltd., Republic of Korea	
[PS0166]	Cavitation Effects for Split of Diesel Fuel	
DC 16407	Sang In CHOI ^{2*} , Mi Jeong PARK ² , Dong Won JEONG ² , Ho Suk SEO ¹ and Young Min JO ²	
PS-ICA07	¹ Easy Power Tec Co., Ltd., Republic of Korea ² Kyunghee University, Republic of Korea	

	Indoor Aerosols
[PS0513] PS-IA01	Prediction of the PM10 Concentration in Subway Station Using Deep Learning Method Minhae KIM ^{1*} , Sechan PARK ¹ , Hyeong-Gyu NAMGUNG ² and Soon-Bark KWON ² ¹ University of Science and Technology, Republic of Korea ² Korea Railroad Research Institute, Republic of Korea
[PS0510]	Characteristics of Nanoparticle Generation in Monochrome and Color Output Hyeong-Gyu NAMGUNG ^{1*} , Sechan PARK ¹ , Minhae KIM ¹ and Soon-Bark KWON ¹
PS-IA02 [PS0499]	¹ Korea Railroad Research Institute, Republic of Korea Effect of Mold Exposure During Pregnancy on the Development of Offspring's Atopic Dermatitis
PS-IA03	Sung Chul SEO ¹ , Ji Tae CHOUNG ¹ , Kilyong CHOI ^{1*} and Young YOO ¹ ¹ Anam, Korea University, Republic of Korea
[PS0498] PS-IA04	Evaluation System for Indoor Environment for Evacuation Study Shigeru KIMOTO ^{1*} , Yoshiro SADATANI ¹ , Koichi KINOSHITA ² , Yuya UCHIYAMA ² , Yasuto MATSUI ¹ and Minoru YONEDA ¹
	¹ Kyoto University, Japan ² Tokyo Dylec Corp., Japan
[PS0470] PS-IA05	Ventilation to Reduce Pollutant Exposures from a Residential Natural Gas Stove Yu-Cheng CHEN ^{1*} and Chin-Yu HSU ¹ ¹ National Health Research Institutes, Taiwan
[PS0464] PS-IA06	Air Cleaning Performance of an Electrostatic Air Cleaning Device Using Activated Carbon Fiber Filter Giteak LIM1* 1 Korea Institute of Machinery & Materials, Republic of Korea

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	Indoor Aerosols
[PS0458] PS-IA07	Indoor Air Quality Analysis of Particle Matters and Volatile Organic Compounds in Malaysia Yasuto MATSUI ^{1*} , Nobumitsu SAKAI ¹ , Shigeru KIMOTO ¹ and Minoru YONEDA ¹ 1 Kyoto University, Japan
[PS0456] PS-IA08	Observation Of Particles In a Chamber Using PIV Yoshiro SADATANI ^{1*} , Shigeru KIMOTO ¹ , Nobuyuki KATO ² , Yasuto MATSUI ¹ and Minoru YONEDA ¹ ¹ Kyoto University, Japan ² National Institute of Occupational Safety and Health, Japan
[PS0444] PS-IA09	Short-Term Exposure to Indoor PM2.5 and Particle Number Concentrations for Passengers at Two Intercity Bus Terminals in Taipei City An-Chi LI ^{1*} and Yu-Hsiang CHENG ¹ ¹ Ming Chi University of Technology, Taiwan
[PS0433] PS-IA10	Species Profiles of Indoor Volatile Organic Compounds and Their Concentration Levels at Two Intercity Bus Terminals in Taipei City Gu-Wei YEN ^{1*} and Yu-Hsiang CHENG ¹ ¹ Ming Chi University of Technology, Taiwan
[PS0408] PS-IA11	Comparison Between AHAM CADR and CA Clean Air Delivery Rate of Indoor Air Cleaner Keejung HONG ^{1*} ¹ Korea Institute of Machinery & Materials, Republic of Korea
[PS0207] PS-IA12	Characterization of Ultrafine Particles Emitted from a Fixing Unit of Laser Printers Nishino YUKI ^{1*} ¹ Kogakuin University, Japan
[PS0206] PS-IA13	Collection of Ultrafine Particles Using Droplets Atomized by Ultrasonic Irradiation Nishishita KIMITO ^{1*} ¹ Kogakuin University, Japan
[PS0151] PS-IA14	The Exposure of Surgeons to Volatile Organic Compounds in Electrosurgical Smoke Resulted from Surgeries Yaw-Huei HWANG ^{1*} , Nai-Yun CHENG ¹ , Hsiao-Chi CHUANG ² and Ruei-Hao SHIE ³ ¹ College of Public Health, National Taiwan University, Taiwan ² Green Energy & Environmental Research Laboratories, Industrial Technology Research Institute, Taiwan ³ School of Respiratory Therapy, Taipei Medical University, Taiwan
[PS0005] PS-IA15	Characteristics of Particulate Matter Concentrations in an Office Building During Different Time Periods Y.H. CHENG ^{1,*} and G.W. YEN ¹ ¹ Department of Safety, Health and Environmental Engineering, Ming Chi University of Technology, Taiwan

	Instrumentation and Measurement
[PS0506] PS-IM01	A Novel Miniature Inverted Burner for the Steady Generation of Soot Particles Jason OLFERT ^{1*} , Mohsen KAZEMIMANESH ¹ and Jordan TITOSKY ¹ ¹ University of Alberta, Canada
[PS0466] PS-IM02	Universal Spot Sampler: A New Approach with Unlimited Possibilities for the Chemical Characterization of Ambient Aerosols Arantzazu EIGUREN ^{1*} , Patricia KEADY ² , Gregory LEWIS ¹ and Susanne HERING ¹ ¹ Aerosol Dynamics Inc., USA ² Aerosol Devices Inc., USA
[PS0465] PS-IM03	An On-line Monitor of the Oxidative Capacity of Airborne Particulate Matter (o-MOCA) Nathan KREISBERG ¹ , Susanne HERING ¹ and Arantzazu EIGUREN ^{1*} 1 Aerosol Dynamics Inc., USA
[PS0457] PS-IM04	Online Measurement of Trace Multi-Elemental Aerosols Using Inductively Coupled Plasma Time-of-Flight Mass Spectrometry and X-ray Fluorescence Spectroscopy Hiroyuki HAGINO ^{1*} , Martin TANNER ² , Olga BOROVINSKAYA ² , Toshihide HIKITA ³ , Akio SHIMONO ⁴ , Kohei NISHIGUCHI ⁵ and Yusuke MIZUNO ⁶ ¹ Japan Automobile Research Institute, Japan ² Tofwerk, Switzerland ³ Shoreline Science Research, Japan ⁴ Science Research, Japan ⁵ J-SCIENCE LAB, Japan ⁶ Horiba, Japan
[PS0450] PS-IM05	Need of a High-Volume PM2.5 Sampler for Performing Better Gravimetric Measurements and Chemical Analyses S.G. AGGARWAL¹, P. PATEL¹, C.J. TSAl², D. SONl¹, K. SINGH¹, T. OKUDA³*, R.K. KOTNALA¹, V.N. OJHA¹ and D.K. ASWAL¹ ¹CSIR-National Physical Laboratory, New Delhi 110012, India ²Institute of Environmental Engineering, National Chiao Tung University, Hsinchu 30010, Taiwan ³Department of Applied Chemistry, Keio University, Yokohama 223-8522, Japan
[PS0437] PS-IM06	Experimental Method to Evaluate Malfunction of SMPS Using ESP Yun-Haeng JOE ^{1*} , Joonmok SHIM ¹ and Hyun-Seol PARK ¹ ¹ Korea institute of energy research, Republic of Korea
[PS0426] PS-IM07	Development of On-Line Heavy Metal Analyzer Using X-ray Fluorescence Spectrometry Mijin CHOI ^{1*} , Gwanhoon YOON ¹ , Sungchan KIM ¹ , Wonhee HAN ¹ , Myeongbok KIM ¹ and Geunsung PARK ¹ 1 APM Engineering Co., Ltd., Republic of Korea
[PS0419] PS-IM08	Nanoparticles Release Test from Nanoproducts Using a Chamber System Gun Ho LEE ^{1*} , Hong Ku LEE ¹ , Hee Ram EUN ¹ , Yong Hee PARK ¹ , II Je YU ² and Kang-Ho AHN ¹ ¹ Hanyang University, Republic of Korea ² Hoseo University, Republic of Korea

	Instrumentation and Measurement
[PS0418]	Atmospheric Aerosol Measurement Using Tethered Balloon Package System (TBPS)
PS-IM09	Yonghee PARK ^{1*} , Hongku LEE ¹ , Gunho LEE ¹ , Heeram EUN ¹ , Heesang KIM ¹ , Wooyoung KIM ¹ , Jaehyeok BAE ¹ and Kang-Ho AHN ¹
	¹ Hanyang University, Republic of Korea
[PS0411]	Application of Laser Induced Breakdown Spectroscopy for Real Time Detection of Contamination Particles in Industrial Fabrication Process.
PS-IM10	Hae Bum LEE ^{1*} , Hyunok MAENG ¹ , Gibaek KIM ¹ , Kyoungtae KIM ¹ and Kihong PARK ¹
	¹ Gwangju Institute of Science and Technology, Republic of Korea
[PS0407]	Development of a Triggering-Laser Induced Breakdown Spectroscopy (LIBS) System for Real-Time Detection of Elements in a Single Particle
PS-IM11	Hyunok MAENG ^{1*} , Hoseung CHAE ¹ , Heesung LEE ¹ , Gibaek KIM ¹ , Haebum LEE ¹ , Kyoungtae KIM ² , Jihyun KWAK ¹ , Gangnam CHO ¹ and Kihong PARK ¹
	¹ GIST, Republic of Korea ² Samsung Electronics, Republic of Korea
[PS0381]	Development of PM2.5 Organic and Elemental Carbon Analyzer
PS-IM12	J.H. KANG¹, Y.D. KIM¹*, M.E. KIM¹, J.Y. LEE¹, J.S. JUNG¹, S. LEE¹
1 3-11/11/2	¹ Korea Research Institute of Standards and Science, Republic of Korea
[PS0371]	Extending the Use of 1nm-Growth Enhancers to a Wider Range of CPCs
PS-IM13	Axel ZERRATH ¹ *, Jacob SCHECKMAN ¹ , Juergen SPIELVOGEL ² and Andrea TIWARI ¹ ¹ TSI Inc., USA ² TSI GmbH, Germany
[PS0358]	Investigation of Process Mediated Particle Characteristics Using PBMS
PS-IM14	Dongbin KIM ¹ *, Hyeongu KIM ² , Ju-Young YUN ³ , Sang-Woo KANG ³ and Taesung KIM ¹
F 3-11VI 1-4	¹ Mechanical Engineering, Sungkyunkwan Univ., Republic of Korea
	² Sungkyunkwan Advanced Institute of Nano Technology, Sungkyunkwan Univ., Republic of Korea ³ Vacuum Center, Korea Research Institute of Standards and Science, Republic of Korea
[PS0325]	High Spatial Resolution Aerosol Lidar with a Multispectral Detector
[P30323]	Masanori YABUKI¹*, Fumiya KITAFUJI¹ and Toshitaka TSUDA¹
PS-IM15	¹ Research Institute for Sustainable Humanosphere, Kyoto University, Japan
[PS0257]	Study on Particulate Collecting Efficiency and Jet to Sintering Filter Distance of Inertial Impacto
-	C.H. HUANG ^{1*} and I.C. WANG ¹
PS-IM16	¹ Yuanpei University of Medical Technology, Taiwan
[PS0208]	Development of a Downsized Virtual Impactor for PM2.5/10 Mass Concentration Measuremen
PS-IM17	for Stack Samplings
r 3-11V1 1 /	Sho OKAMOTO ^{1*}
	¹ Kogakuin University, Japan
[PS0160]	Aerosol Temperature and Humidity Effects of the Evaporation Loss of PM2.5 Water Soluble
PS-IM18	Inorganic Ions from Filter Samplers Pei-Yun SHIH ¹ , Chuen-Jinn TSAI ¹ , Thi Cuc LE ^{1*} and Sneha GAUTAM ¹
	TEITIGH SHIFT, CHUEHTIIH TSAL, THE CUCLE - AND SHEHA GAUTAW

	Materials Processing
[PS0487] PS-MP01	The Reduction of Nickel Oxide in the Hydrogen Reduction Fluidized Bed Reactors Jae Rang LEE ^{1*} , Naim HASOLLI ¹ , Seong Min JEON ¹ , Kang San LEE ¹ , Kwang Deuk KIM ¹ and Young Ok PARK ¹ ¹ Korea Institute of Energy Research, Republic of Korea
[PS0486] PS-MP02	Enhanced Antimicrobial Efficacy of Thermal-Reduced Silver Nanoparticles Supported by Titanium Dioxide Wan-Tien SHEN ^{1*} ¹ National Yang-Ming University Institute of Environmental and Occupational Healt, Taiwan
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[PS0265]	¹ Saitama University, Japan Unipolar Charging of Aerosol by Surface-Discharge Microprasma
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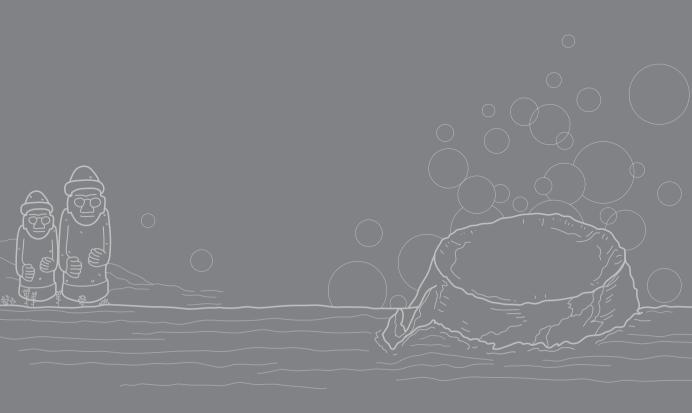
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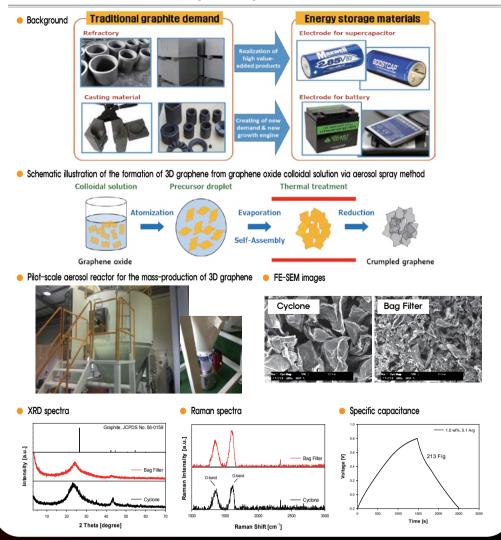


Technology for Manufacturing Graphene Based Energy Storage Materials from Graphite

Project Manager: Hee Dong Jang, Ph. D.

Research Objectives

Development of Mass Production Technology of 3D Graphene from Natural Graphite for Energy Storage Materials



Korea Institute of Geoscience and Mineral Resources (KIGAM)
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 $09:30 \sim 10:00$

기념행사 개막 및 기념사 (환경부장관, 국회의원, 단체장)

10:00 ~ 10:30

공기의날 유공자 포상

10:30 ~ 10:50

공기의날 공모전 시상

10:50 ~ 11:10

공기의날 퍼포먼스

11:10 ~ 11:30

공기의날 주제가 합창

11:30 ~ 11:40

(레인보우 합창단)

11:40 ~

기념촬영

공기의날 국제 심포지움

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aïrVïta



PLUG TYPE AIR PURIFIER
AIRVITA CAPSULE400



CHARGEABLE AIR PURIFIER **AEBALL**



CAR AIR PURIFIER
AIRSTICK/CARVITA3S



MULTI STERILIZER

DAYS



Air purifying & health improvement



Anti bacterial removes virus (typeH5N1)



No Filter Replacement Se-mi permanent Use



Emit 2million Anion



Deodorization smok smell indoor smell

CAMBUSTION & Instruments

So, you want a **true** monodisperse aerosol...?





Aerodynamic Aerosol Classifier

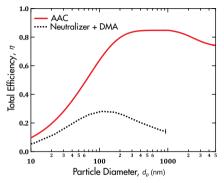
Classification of aerosol particles by their aerodynamic diameter...

- ...without charging
- ...without a radioactive or X-ray source!
- ...from 25nm to >5 μ m





Booth #13 - AAC 2017

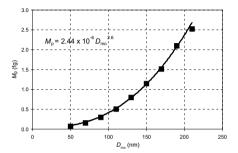




"Abstract PS0022, J Symonds, Instrumentation & measurement session 1, ~11:45, Monday 3rd July, Room 401[Cl"

Centrifugal Particle Mass Analyzer

Classification by mass:charge ratio
Forms part of an aerosol mass standard
High throughput, high resolution
Determination of particle density & morphology
Ideal for instrument calibration (e.g. SP2, AMS...)

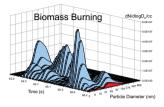


Carbon/Salt Particle Image Credits: Nasa/Goddard Space Flight Center

Fast Aerosol Mobility Size Spectrometer

Fastest time response (200 ms T_{10.90%} @ 10 Hz) Widest size range (5 nm – 1 µm or 2.5 µm) Widest concentration range (9 orders) Best sensitivity...

...amongst fast response particle mobility sizers



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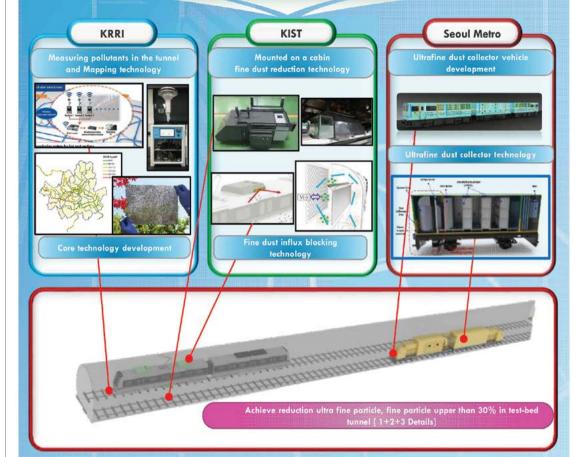


Development of air pollution control technologies in subway tunnels

Subway IAQ Research Corps., Leader of research: Dr. Duckshin Park (Korea Railroad Research Institute, Uiwang, South Korea)

Development of air quality map inside urban subway tunnels and management of air quality at hot spot sections Development of trainmounted fine dust removal technology for urban subway tunnels

Development of particulate matter removing vehicle system



This work was supported by research grants for the Railway Technology Research Project from the Ministry of Land, Infrastructure and Transport, Republic of Korea (17RTRP-B082486-04).









KIMM Air Cleaning Technology

Air Cleaner Test & Evaluation



Clean air delivery rate measurement



Particle collection efficiency test



Deodorization efficiency test



Noise measurement



Energy consumption efficiency rating



Ozone emission test

Emission
Control
Technology



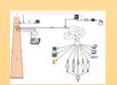
ESP for coal-fired power plant



Oil-gas separator



Electrostatic Scrubber for Semiconductor process



Exhaust particle monitoring for coal-fired power plant



ESP for diesel/marine engine emission





Computational Fluid Dynamics

KOLOK FITTING COMPANY

Hansun SS316,316L fitting & valve





♣ Item of Acquisition ♣

SS316,316L fitting & valve, SS316,316L Tubing

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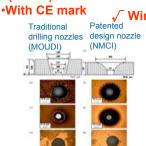


Series 1000M/A NMCI

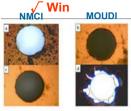
NCTU Micro-orifice Cascade Impactor

Advantage

- Patented nozzle design (7th-10th Stage)
- •All nozzles can be cleaned with an ultrasonic cleaner
- •Can replace the existing nozzles of the MODUI with new patented nozzles
- •Each jet-to plate distance of Impactor has been calibrated to obtain highly accurate data
- •With Semi Automatic (1000M) and Fully Automatic (1000A) Series



NMCI can be cleaned with an ultrasonic cleaner about 1hr MOUDI's nozzles are damaged only 1 minute







for PM_{2.5}/Aerosol and Gas

Series 9000 On-line Analyzer

Advantage

- Patented PPWD for precursor gas sampling
- Patented SDEC or PILS for PM_{2.5} soluble ion sampling
- Patented Software with Interface can connect with all types of Ion Chromatograph for direct Measurements of Nitrate, Sulfate, Nitrite, Phosphate and Chloride, Sodium, Ammonium, Calcium, Potassium, Magnesium, Hydrogen Chloride, Nitric Acid, Sulfur Dioxide, Hydrogen Fluoride and Ammonia
- Can connect with ICP-MSD or Anodic & Cathodic Voltammetry Instrument for direct heavy metal ion detection



Our product IAQ-Pro is a field-display type Indoor Air Quality monitor. It can detect and display the PM_{2.5}/ PM₁₀ / Gas / Temperature / Humidity readings simultaneously while controlling your HVAC system at the same time.





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Contact: jusun@jusun.com.tw
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A State of the Art Device for Continuous Unattended Measurements of Ultrafine Particles Markus Pesch1, Volker Ziegler2 Abstract

1 Grimm Aerosol Technik Pouch GmbH, Germany 2 GRIMM Aerosol Technik Ainring GmbH & Co.KG, Germany

Keywords: Ultrafine Particles, Air quality network, source apportionment, hot-spot measurements

Although ultrafine particles account only for a little share in the total mass concentration, they are under a cloud of being harmful to health. For this reason an additional monitoring of this particle fractions' exposure is absolutely necessary. First steps of continuous measurements of ultrafine particles have already been realized in high sophisticated systems like the Grimm EDM665 Wide Range Aerosol Spectrometer. Due to the temporal resolution of the integrated mobility spectrometer (SMPS) as well as it comparatively high costs it does not focus on area-wide monitoring of ultrafine particles. A more competitive alternative for measuring the particle ambient exposure of ultrafine particles with high temporal resolution (1 second) is the combination of special environmental Condensation Particle Counter (CPC) in combination with a well-established Nafion drying system and an air conditioned mini-shelter.

- [1] Ref.: Review of evidence on health aspects of air pollution REVIHAAP project: final technical report. Hrsg.: World Health Organisation, Regional Office Europe, Kopenhagen, Dänemark (2013)
- [2] Birmili, W., Rückerl, R., Hoffman, W., Weinmayer, G., Schins, R., Kuhlbusch T.A.J., Vogel, A., We-ber, K., Franck, U., Cyrys, J., Peters, A.: Ultrafeine Partikel in der Außenluft: Perspektiven zur Aufklä-rung ihrer Gesundheitseffekte. Gefahrstoffe Reinhaltung der Luft 74 (2014) Nr. 11/12.
- [3] Peters, A.; Wichmann, H. E.; Tuch, T.; Heinrich, J.; Heyder. J.: Respiratory effects are associated with the number of ultrafine particles. Am. J. Respir. Crit. Care Med. 155, Nr. 4, (1997) S.1376-1383

Smart Air Quality Network, the measurement network for the future V.Ziegler ¹, Dr.M.Pesch ² Abstract

¹ GRIMM Aerosol Technik Ainring GmbH & Co.KG, Germany ² GRIMM Aerosol Technik Pouch GmbH, Germany

Keywords: Alternative Measurement Network, Instrumentation, Low Cost Sensor, Algorithm

Air Quality and with this, subjective and health related life quality, is one of the biggest topics of modern cities and developing countries in our time. For many regions and cities it is difficult to take action regarding air quality in mobility, residential or working areas, because there is no fine-meshed and profound database available for making in time the right decisions.

Although the necessary basic data as well as the measurement principles would be available, the platform for connection and the strategy for combination of the data to get a profound decision base is still missing. SmartAirQualityNetwork shall be a very pragmatic and data driven attempt in which all available data for the first time will be combined with mobile measurements into an integrated measurement strategy. With the connection and combination of open data sources like metrology, official data as well as research data, city development plans, remote sensing of influencing factors, comprehensive coverage with ultra-low-cost-Sensors, "scientific scouts", demand-oriented usage of UAVs together with methods of real-time-modelling and analyzing, a new measurement and analyzing concept will be developed.

Corresponding author: vz@grimm-aerosol.com

Founding: mFUND / BMVI; Cooperation partners: Karlsruher Institut für Technologie (KIT-TECO), Karlsruhe; Karlsruher Institut für Technologie (KIT-IMK-IFU), Garmisch-Partenkirchen; Aerosol Akademie e.V., Pouch; Helmholtz Zentrum München, Neuherberg; Universität Augsburg, Augsburg

GRIMM Aerosol Technik, a member of the Durag Group, is one of the worldwide leading companies in the field of high-tech aerosol measurement instrumentation due to its innovations and quality manufacturing. We determine particle number and particle size as well as particle mass distribution.

The company is developing and manufacturing devices from portable handheld spot measurements to complete stationary systems.

The product portfolio of GRIMM including:

- Dust Monitors for PM10, PM2.5 and PM1
- Nanoparticle Counting and Sizing
- Indoor Air Quality Monitors
- Workplace Monitors
- Particle Counters for Filter Efficiency Tests
- Aerosol Generators

meets the requirements of a worldwide increasing number of customers in the research field and industry

Our specialists advise about the most adequate device application, e.g. for ambient air, emission, occupational health, filter efficiency and / or exhaust gas measurements, for quality control and for pharmaceutical, atmospheric or epidemiological studies.

We offer first-class Customer Service worldwide through our subsidiaries and a close network of international representatives.















Objective of Research

- •To develop new technology for solar and molecular energy as an alternative to fossil fuels by implementing an innovative approach for highly efficient multiscale future energy systems
- •To create a new scientific blended technology based on multi-scale energy research

Research Overview

- •Research Period: 2011. 9 ~ 2020. 8 (9 years)
- •Annual Research Budget: about USD 10 millions
- •Participating institution: SNU, UNIST, KAIST, Hanyang U, KIMM, Sogang U, Yonsei U, SKKU, KIST, POSTECH, KIRCT, Korea U, U of Pittsburgh, U of Seoul, DGIST
- •Participants: 400 researchers per year

Research content

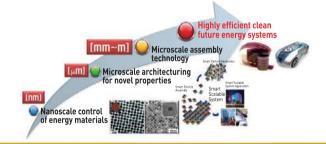
- To develop a multi-scale architecturing technology that integrates nano, micro and macroscales
- To build a new concept of solar and molecular energy convergence systems

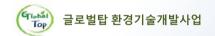
Strategy

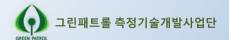
- To build a non-profit organization that performs four core research projects
- To secure world-class technology based on the values of challenge, convergence, and openness
- To build a global evaluation system through peer review process from international counseling advisors
- To accommodate moving targets; future target to be subject to change and be upgraded according to technological and social environment developments

Director

Director Mansoo Choi is a professor in mechanical engineering at Seoul National university (SNU). He received his BS and MS degrees in mechanical engineering from Seoul National University (SNU), in 1980, 1982 respectively and PhD degrees from University of California, Berkeley, in 1987. He became a director of Global Frontier Center for Multiscale Energy systems in 2011 and has been leading the center to develop new concept solar and fuel cells employing multiscale approach.







<u> 초미세먼지 측정기술장비개발</u>

Ultra Fine Particle Measurement Technology Equipment Development

◆연구목적 ----

- 1. 초미세먼지 입경 별 수 농도 및 질량농도를 신속하게 측정할 수 있는 실시 간 초소형 초미세먼지 측정 기술 필요
- 2. 초미세먼지를 측정하는 장치를 고속 이동 시스템(UAV, 차량, 지하철 등)에 탑재할 수 있는 시스템의 개발이 필요

◆연구개요 ----

1. 연구기간: 2014.12 ~ 2018.04 (40개월)

2. 연구예산: 7,794,000,000원

3. 총괔책임자 : 안강호

4. 참여기관 : **KEΠTEK** ■





◆기대효과 ---

- 1. 기술적효과
 - 초미세먼지 계측에 대한 우리나라 전반적인 기술 수준 향상
- 2. 산업, 경제적 효과
 - 외화 절감 & 반도체 및 디스플레이 산업, 자동차 산업 등 여러 산업 분야에서의 비용절감을 통한 제품의 가격 경쟁력 도모
 - 중국 시장 진출로 해외 진출의 교두보 역할 기대
- 3. 환경적 효과
 - 환경 분야에서의 대 국민 서비스 향상에 크게 기여
 - 효과적인 대기오염관리 정책 수립, 국민 삶의 질 향상에 기여

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- · Perfect handling of PFCs gas.
- · Power supply design technology.
- Plasma Torch design technology.
- Low power consumption of 5kW or
- Achieve minimum carbon emissions with high efficiency and low energy.

Thermal Scrubber



- · Stable operation by heater
- Securing reaction chamber PM period.
- Application of anti-corrosion technology.
- · Competitive equipment price
- Minimum operating cost
- · Applicability of various models.

Wet EP Scrubber



- Perfect treatment of fine powder and harmful white smoke.
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- Operational cost teduction technology.
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Core competitiveness

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BUNSINESS

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- Develop appropriate operating system for various equipment.
- Timely support of operating system development technology

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360° 공기청정기