

PROGRAM
BOOK



BIEN 2017

Woman Scientists and Engineers Shaping the Future

August 31 (Thu) ~ September 2 (Sat), 2017
The Plaza Hotel, Seoul, Korea

Organized by



The Association of Korean Woman
Scientists and Engineers



International Network of Women
Engineers and Scientists

Supported by



Ministry of Science
and ICT

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WELCOME MESSAGE



Haryoung P00
President of KWSE

Message from BIEN 2017 Chair

On behalf of the Association of Korean Woman Scientists and Engineers (KWSE), I welcome all of you to BIEN 2017 Conference entitled "Women Scientists and Engineers Shaping the Future" in Seoul, Korea. We also celebrates the 24th anniversary of KWSE this year to become a leading, recognized organization representing women scientists and engineers in Korea. Since it held the first-ever convergence-themed international academic conference on biotechnology (BT), information technology (IT), environment and energy technology (ET), and nanotechnology (NT), called "BIEN" in 2003, the association has been striving to promote academic collaboration and leadership capability among women scientists and engineers around the world.

Women scientists and engineers with a pioneering spirit will go on to become future leaders of scientific and technological innovation based on their excellent communication and convergence abilities. The KWSE has organized BIEN 2017 to celebrate the dedication and tenacity of women scientists and engineers and to promote greater interchange and collaboration among future women leaders in science and technology fields

Under the theme of "Women Scientists and Engineers Shaping the Future," BIEN 2017 will bring together experts in bio, Information, Environment/Energy/Earth, Nano and Space technologies from about 28 countries worldwide and have them engage research achievements and information exchange with active discussions. The conference will also host special sessions on the specific topics, policy, and KWSE/APNN International Young Woman Scientist Camp to enable the participants to forecast future developments in science and society and to engage in productive networking for cooperative culture.

We cordially welcome all of the participants of BIEN 2017, where we can all celebrate greater convergence and solidarity in gender and research with the goal of designing and ushering in a new and better future.

Your support and active participation would be greatly appreciated.

Thank you.

WELCOME MESSAGE



Young-Min YOU
Minister of Ministry
of Science and ICT

Message from Minister of Ministry of Science and ICT

I sincerely congratulate you on holding the BIEN 2017.

It is my great honor and pleasure to deliver my warmest greeting and appreciation to KWSE, all of distinguished guests and honorary participants of BIEN 2017.

This year, BIEN is the fourth BIEN which is the first the convergence-themed international academic conference for women scientists and engineers worldwide in 2003. This international conference has come a long way in expanding global cooperation in Asia and Pacific regions, and improving the status of Korean woman scientists and engineers.

BIEN 2017 aims to present academic researches on innovative convergent technology leading to the fourth industrial revolution, sharing outstanding research achievements with you all, and discuss the roles of women scientists and engineers. I expect that this event provides over 500 participants from 25 countries with invaluable opportunities for strengthening global cooperation network, improving research competitiveness and incubating global promising human resources.

In order to guide the world into the era of the fourth industrial revolution, it is the most important that cooperation among technologies in the various fields results in convergence technology development. Women delicate emotion could be necessary asset for future science based on technology fusion. We believe that this convergent technological breakthrough play a key role in innovating modern civilization and quality of human beings. Thereafter, the roles and responsibilities of woman scientists and engineers is gaining increasing importance.

I expect the woman scientists and engineers present here today to become the pioneers to illuminate our new and better future.

Again, I would like to offer my sincere congratulations to BIEN 2017 and wish all the best for continued success and happiness in your future endeavors.

Thank you.

CONGRATULATORY MESSAGE



Sang Jin SHIN
Chairman of Science, ICT,
Broadcasting and
Communication Committee

Message from Chairman of Science, ICT, Broadcasting and Communication Committee

It is my great honor and pleasure to deliver my warmest greeting to all of distinguished guests and honorary participants of BIEN 2017.

I am Sang Jin Shin, chairman of Science, ICT, Broadcasting and Communication Committee, National Assembly of Republic of Korea.

First of all I would like to offer my most sincere congratulations on successfully hosting of BIEN 2017 organized by KWSE.

BIEN is an incredible international event that highlight important themes around academics such as convergent technology, women in science and engineering and the next generation. This year under the theme of "Woman Scientists and Engineers Shaping the Future", BIEN 2017 would provide participants with invaluable opportunities to discuss share research achievements from the field of science and technology in order to solving various problem that humankind is facing around the world.

I expect that this year's BIEN 2017 will be a spark of hope that illuminates future convergent technology innovation and the roles of woman scientists and engineers for our sustainable future. I believe that your diverse experiences and wisdom will enable you to serve as innovative guides on our journey with science and technology into better Korea and future.

I would like to thank you to KWSE and everyone whose painstaking efforts and dedication has made this conference a reality and wish all the best for a productive and memorable conference for all of you.

Thank you.

WELCOME MESSAGE



Hye-On YOON
Vice President of KWSE

Message from Organizing Committee Co-Chairs

On behalf of BIEN 2017 organizing committee, we would like to extend our sincere welcome all of scientists and engineers to the BIEN 2017.

As the biggest and quadrennial international event of KWSE, BIEN is a convergence conference that aims to bring together experts and leaders from science and technology to discuss interdisciplinary cooperation in order to give directions to contribute to development of S & T as well as society. Since the first BIEN was hosted by KWSE at Daejeon in 2003, KWSE has been actively engaged in science diplomacy to build an international network with woman scientists and engineers all over the world and to uplift the status of Korean women scientists and engineers.



Hyo-Suk LIM
Vice President of KWSE

This year, under the theme of "Woman Scientists and Engineers Shaping the Future", we are honored to organize our conference program consisted of 3 plenary sessions, 5 scientific sessions on Bio, Information, Environment / Energy / Earth, Nano and Space technologies, 3 special sessions on future society, leadership and women in industry, 2017 international young woman scientist camp and policy forum, MAPWiST. We would like to deliver our sincere gratitude to session chairs, camp and forum chairs who dedicated their precious time and tremendous efforts to recruit 55 prominent speakers from 10 countries and about 570 promising papers from academia, industry and research institutes. Also, we are so grateful to our sponsors where participants would be able to explore various opportunities in the future. At last we thank all members of KWSE for their sincere concern and strong networking in whole preparation process. We hope our distinguished guests, presenters and participants enjoy this variety festival.

Again we appreciate your participation in BIEN 2017 and look forward to having a meaningful and successful conference.

ORGANIZING COMMITTEE

Organizing Committee

BIEN 2017 Chair

Haryoung POO (KRIBB)

Organizing Committee Co-Chairs

Hye-On YOON (KBSI)

Hyo-Suk LIM (KARI)

Scientific Committee Chair

Hyewhon RHIM (KIST)

Finance Committee

Mun Ja KANG (KAERI)

Mi Young HAN (Pai Chai U)

Hye Young KIM (Korea Natl. Sport U)

Young-Sil KWAK (KASI)

Jung-Sook LEE (KRIBB)

Publicity Committee

Myung-Ae CHUNG (ETRI, PACST)

Seong Jin JU (ADD)

Kyung Sook LEE (KISTI, PACST)

Youngsun SONG (Inje U)

Eun-Jung SUNG (KRISS)

Planning Committee

Sook-Kyung KIM (KRISS)

Jang Hee CHU (KIPO)

Mijeong HAN (KRICT)

Ji Youn LEE (KRISS)

Ghil-Soo NAM (KIST)

Publication Committee

Eun-Wie CHO (KRIBB)

Jihye GWAK (KIER)

Gwi Sook JANG (KAERI)

Hae Sun JEONG (KAERI)

Seung Mi LEE (KRISS)

Eun Kyung LIM (KRIBB)

Gender Strategy Committee

Jung Sun KIM (Dongseo U)

Sun Jung KIM (DHC)

Miray OHM (Dongseo U)

Hye Young PARK (Pusan Natl. U)

Seonock WOO (KIOST)

Scientific Committee

BT

[Biotechnology Subcommittee]

Jungwoon LEE (KRIBB)

Sihyun HAM (Sookmyung Women's U)

Eun Mi HUR (KIST)

Eun Sook HWANG (Ewha Womans U)

Hye Ran KIM (KRIBB)

Jieun E KIM (Ewha Womans U)

So Yeon KIM (KIST)

IT

[Information Technology Subcommittee]

Jinah PARK (KAIST)

Soo Mi CHOI (ITRC, Sejong U)

Yoo-Joo CHOI (SMIT)

Hyunjoo LEE (KAIST)

Yanghee NAM (Ewha Womans U)

Alice OH (KAIST)

Hwa Jin PARK (Sookmyung Women's U)

Mee Young SUNG (Incheon Natl. U)

Jungsun YOON (KISTI)

Sun Jin YUN (ETRI)

E³T

[Environment / Energy / Earth Technology Subcommittee]

Meehye LEE (Korea U)

Eun-Young CHOI (KAERI)

Young Sin CHUN (Natl. Typhoon Center)

Hyen-Mi CHUNG (NIER)

Youngsook HUH (Seoul Natl. U)

Heeyeon KIM (KIER)

Hyun Mee KIM (Yonsei U)

Jin Young KIM (KIST)

NT

[Nano Technology Subcommittee]

Eun Joo ROH (KIST)

So-Hye CHO (KIST)

Yun Jeong HWANG (KIST)

Jinsoo KIM (KRICT)

Yong Ae KIM (HUFS)

Jeong-O LEE (KRICT)

So-Jung PARK (Ewha Womans U)

Chaok SEOK (Seoul Natl. U)

ST

[Space Technology Subcommittee]

Eun-Jung CHOI (KASI)

Aeree CHUNG (Yonsei U)

Yoola HWANG (ETRI)

Hyeon Kyoung KIM (KARI)

Sujin KIM (KASI)

Jeong-Eun LEE (Kyunghee U)

Wookyoung LEE (KASI)

Seok Hee LIM (KARI)

Jo Ryeong YIM (KARI)

Special Committee

Hyuneui LIM (KIMM)

Kyeongsook KIM (KEPCO)

Sul-Ah AHN (KISTI)

Moon Jeong CHOI (KAIST)

Sun Mi CHOI (KIOM)

Sohee JEONG (KIMM)

Ayoung KIM (KAIST)

Min Sun KIM (KITECH)

Jeehye KWEON (WISNET)

Young Ju KWON (KT&G)

Eunok LEE (NIE)

Jihyun LEE (KIMM)

Haein YIM (Sookmyung Women's U)

YWS Camp

[Young Woman Scientist Camp]

Sangmi JUN (KBSI)

Mee A KANG (Andong Natl. U)

Soon Hyung KANG (Chonnam Natl. U)

Hyo Jung KIM (Pusan Natl. U)

Jung-Ae KIM (Yeungnam U)

Jeong Kyun SEO (KIMM)

Younsook SHIN (Chonnam Natl. U)

PROGRAM AT A GLANCE

	8. 31 (Thu)			9.1 (Fri)				9.2 (Sat)
	Orchid Hall (4F)	Maple Hall (4F)	Grand Ballroom (B2)	Orchid Hall (4F)	Maple Hall (4F)	Oak Room (4F) Serve Room (B2)	Grand Ballroom (B2)	Maple Hall (4F)
09:00	Registration			Scientific Session (NT)	Scientific Session (ST)	Special Session (Leadership)	YWS Camp & SS Workshop II	MAPWiST
10:00				Coffee Break				Coffee Break
11:00	Opening Ceremony			Scientific Session (NT)	Scientific Session (ST)	Special Session (Leadership)	YWS Camp & SS Workshop II	MAPWiST
	Plenary Session I							Closing
12:00	Lunch			Lunch				Optional Tour
13:00	APNN Country Exhibition			Poster Session II				
14:00	Scientific Session (IT)	Special Session (Future Society)	YWS Camp & SS Workshop I	Scientific Session (BT)	Special Session (Women in Industry)	Scientific Session (E ³ T)	YWS Camp & SS Workshop III	
15:00	Coffee Break			Coffee Break				
16:00	Scientific Session (IT)	Special Session (Future Society)	YWS Camp & SS Workshop I	Scientific Session (BT)	Special Session (Women in Industry)	Scientific Session (E ³ T)	YWS Camp & SS Workshop III	
17:00	Plenary Session II			Plenary Session III				
18:00	Poster Session I			Poster Session III				
19:00	Welcome Reception			Banquet				
20:00								

Scientific Sessions

BT : Biotechnology

IT : Information Technology and Convergence

E³T : Environment / Energy / Earth Technology

NT : Nano Technology

ST : Space Technology

YWS Camp & SS Workshop

KWSE / APNN (Asia Pacific Nation Network)

International Young Woman Scientist Camp &

Smart Sister Workshop

MAPWiST

The Meeting of Asia and Pacific Women in Science and Technology

Poster Sessions

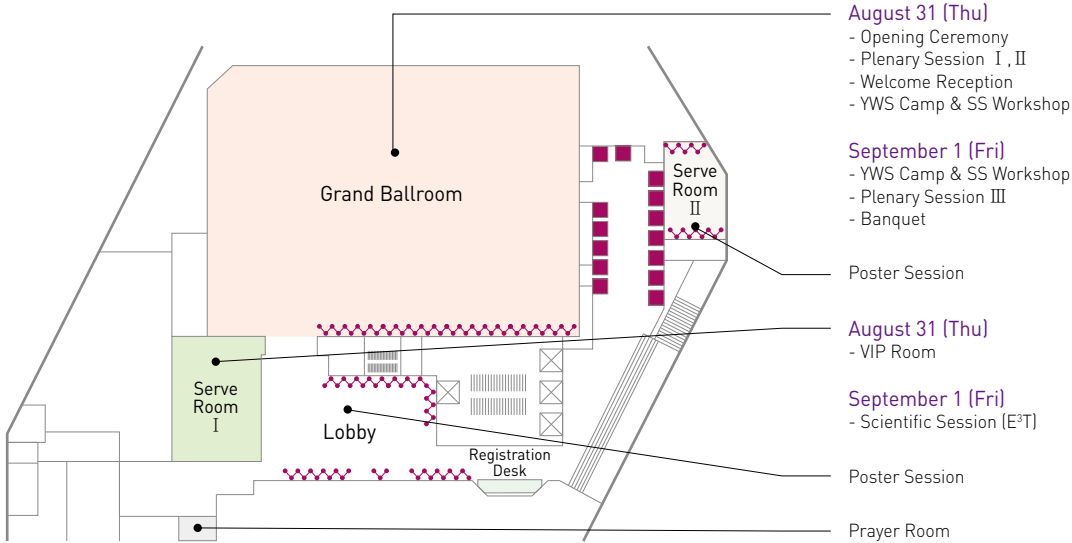
P I : IT, E³T, Basic Science

P II : NT, ST-1, YWS Camp & SS Workshop

P III : ST-2, BT, Policy

FLOOR MAP

B2



PRESENTATION INSTRUCTION

Oral Presentation

In order to check or modify, please bring your presentation files on a USB memory stick to the Preview Room (Pine Room, 4F) at least 2 hours before your scheduled presentation. Your presentation file must be submitted to the session room. To set your presentation, please arrive at your session room at least 20 minutes before the session begins.

Equipment

- Session rooms will be equipped with a computer running Windows (IBM only, no Mac), projector and microphone.
- Podiums will be equipped with a monitor, microphone, mouse and smart pointer (No keyboard).

Poster Presentation

Poster sessions will be held in Grand Ballroom (B2), Serve Room (B2), Lobby (B2 & 4F). Presenting authors should be present beside the posters during the assigned sessions.

Set-Up

- Mounting and Removal must be done during the assigned schedule only. If not, it will be removed by staff without notice and the organizing committee will not take responsibility for any damages or losses.
- Adhesive tape will be available to attach your poster to the panel. Tape will be provided in the poster session room.

Size

- Poster size should be A0 (1189mm x 841mm)
- Poster panels are 2,350mm in height by 950mm in width

Presentation Schedule

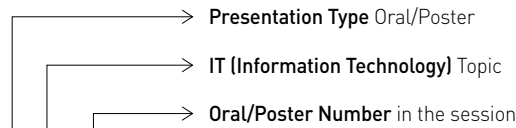
Posters will be displayed on the dates and times below.

	Session1		Session 2		Session 3	
Date	August 31 (Thu)		September 1 (Fri)		September 1 (Fri)	
Mounting	09:00-17:50		08:00-13:00		15:00-17:50	
Presentation	17:50-19:00		13:00-14:00		17:50-19:00	
Removal	19:00-20:00		14:00-15:00		19:00-19:30	
Location	IT	Lobby (B2)	NT	Lobby & Serve Room (B2) Grand Ballroom (B2)	BT	Lobby (B2 & 4F) Serve Room (B2)
	E ³ T	Lobby (4F)	ST	Lobby (B2 & 4F)	Policy	Serve Room (B2)
	BS	Serve Room (B2)	YWS	Grand Ballroom (B2)		

Poster Award

- 2 posters from each topic will be awarded the **Best Poster Award** and 3 posters will be awarded the **Outstanding Poster Award** in consideration of the appearance of the poster, quality of the research, knowledge and clarity of the presentation. (5 Awardees from each topic IT, BT, E³T, NT, ST, and 1 awardee from BS)
- The evaluation will be conducted by the Scientific Committee during poster presentation hours.
- Awardees will receive prizes and certificates during the award ceremony at the Banquet (September 1, 19:00-21:00).

Presentation Code

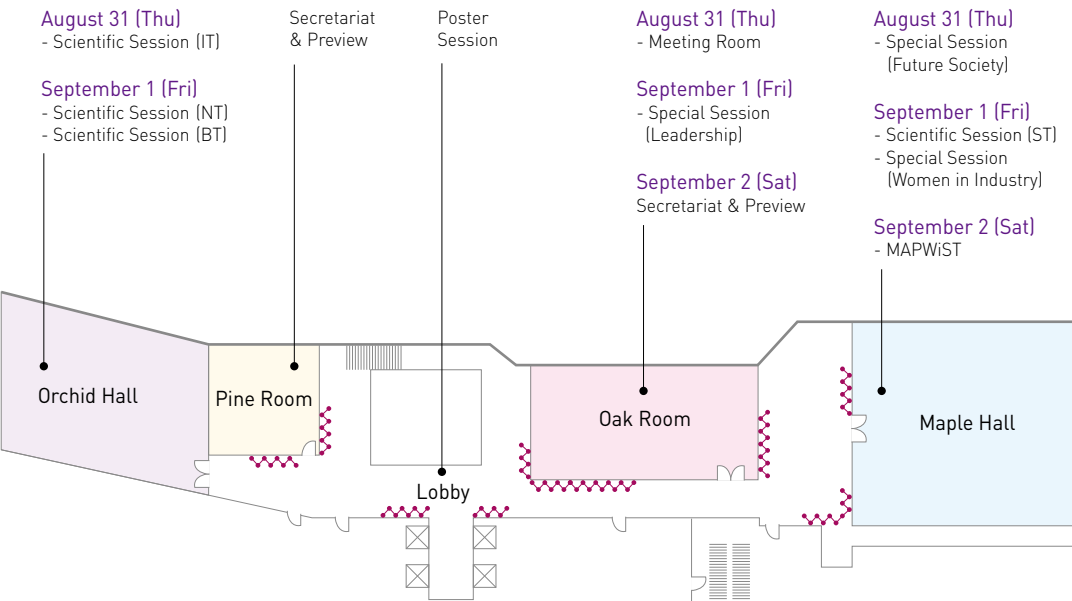


O-IT-001

Acronym

- BT : Biotechnology
- IT : Information Technology and Convergence
- ET : Environment / Energy / Earth Technology
- NT : Nano Technology
- ST : Space Technology
- BS : Basic Science
- PC : Policy
- FS : Future Society
- LS : Leadership
- WI : Women in Industry
- MW : MAPWiST
- YS : YWS Camp & SS Workshop

4F



SESSION DESCRIPTION

BT Neurodevelopment and Stem Cell Technology

There are more than 600 kinds of neurological disorders, requiring extensive research and development of treatments based on our understanding of neurogenesis. In particular, damaged nerve tissue cannot be regenerated, and is thus very difficult to restore, leading researchers to develop stem cell technologies as a tool for investigation in order to overcome that obstacle.

The BT session will focus on recent advances in the field of neurological research, technologies, and clinical applications with the theme "Neuro-Development and Stem Cell Technology." This session is expected to promote networking among woman scientists and engineers specializing neurogenesis, stem cells and regenerative medicine and lay a foundation for collaborative research going forward.

IT Human-Centric Computing and Interaction

The IT session will feature presentations under the theme of "Human-Centric Computing and Interaction" to look into the technologies leading the Fourth Industrial Revolution from a user's perspective. We start with a keynote lecture on healthcare wearables, followed by six invited lectures covering human-computer interaction in smart homes, machine learning, big data, and virtual reality (VR).

These lectures will provide opportunities for participants to gain a deeper understanding of current studies that have been attracting much attention with the rise of the Fourth Industrial Revolution, in which sensibility, communication and creativity are essential.

NT Convergence Research on Nano-technology and Chemistry

Nanomaterial synthesis through the bottom-up approach, utilizing chemical bonding and molecular interaction, has been attracting significant attention, as it offers the advantage of allowing for the more flexible adjustment of the nanostructure and material performance, in comparison to the top-down approach, where synthesis begins with bulk material that is then cut and shaped to make the desired product. The role of chemistry in nanotechnology has thus been gaining increasing importance.

The nanotechnology session consists of presentations on integrated research in the areas of nanoscience and chemistry, with a focus on basic and applied research toward the convergence of diverse research areas. Specifically, this session will introduce two areas: self-assembly of nanoparticles and two-dimensional, graphene-like nanomaterials. Using the chemical interactions between nanomaterials and surface molecules, studies are now being done to develop technology for the self-assembly of nanoparticles and combine such technology with biomaterials. Furthermore, the chemical bonds of graphene-based nanomaterials can be manipulated, allowing such materials to be applied to various sectors.

SESSION DESCRIPTION

E³T Sustainable and Safe Future

Human life is fundamentally linked to energy consumption as an index of societal and economic growth. However, the combustion of fossil fuels contaminates the environment, causes climate change, and endangers the sustainability of life on Earth.

The reduction of environmental pollution through the conversion to clean energy will be crucial to protecting and preserving people's lives on the local scale and conserving the environment of this planet on the global scale, as well as to ensuring a sustainable future for the generations to come.

Amid such circumstances, this E³T session presents and discusses the latest research on interdisciplinary topics encompassing energy, the environment, and the Earth, under the theme of "Sustainable Earth and Secure Future," and seeks to enhance the capabilities of woman scientists and engineers. Numerous presentations by leading scientists have been planned, covering various issues, including particulate matter (PM), climate change, natural disasters, environmental pollution, and renewable energy.

ST Future Space Science & Technology with International Cooperation

The development of space science and technology for the peaceful use of outer space and the scientific exploration requires significantly international collaboration, more so than any other area. The common ideals of humankind and the mission of space science, no longer subject to international competition, are now being realized through international collaboration and information exchange. Space development and exploration, which require massive amounts of physical and financial resources and state-of-the-art technologies, have been achieved more efficiently when carried out through broad international cooperation.

The Space Technology (ST) session will discuss the future development of space science and technology, such as launch vehicles, satellites, aviation, satellite imagery, astronomy, and space situational awareness. Specifically, the topics discussed will include the experiences for international cooperation in various space science and technology fields such as the effort on the peaceful use of space of the UN Committee on the Peaceful Uses of Outer Space (COPUOS), the opportunities for cooperation in astronomy and space science, the development of launch vehicles for space exploration and the international collaboration among private businesses in the space development.

This session will give a time for us to share the challenge for human society and the process of preparation in the space age.

SESSION DESCRIPTION

FUTURE SOCIETY

4th Industrial Revolution and Future Technology

The Fourth Industrial Revolution has begun. Industries based on big data, artificial intelligence, robotics, the Internet of Things, and augmented reality are now creating new types of products and services, transforming people's lives in the process. This session will discuss the potential of, strategic response to, and impact of the Fourth Industrial Revolution on our society. The trends of new and advanced technologies, such as biotechnology, 3D printing, soft robotics, and biomimetics, will also be presented and discussed.

LEADERSHIP

Improving Leadership through the Meeting of Senior and Junior

The Association of Korean Woman Scientists & Engineers (KWSE), the first professional organization for woman scientists and engineers in Korea, keeps dedicating itself to the advancement of woman scientists and engineers into home and abroad work place since it succeeded in having the Act on Fostering and Supporting Women Scientists and Engineers enacted.

The KWSE has played a pivotal role in helping Korean woman scientists forge a tightly knit network with overseas woman scientists as well as foster solidarity among its members. And it puts the effort into the improvement of the leadership capabilities of woman scientists working in the middle-management level or higher. The Leadership session, led by 15 advisory members of the KWSE, will cover presentations and discussions on advice given by retired senior scientists, the role of Korean woman scientists and engineers in the international community, the process of policy-making on science, and the role of woman scientists and engineers as "Open Science Enablers."

WOMEN IN INDUSTRY

Roles and Achievements of Women in Industry

The participation of qualified women workers is gaining increasing importance as national growth potential human resource in this era of low fertility rates, population ageing, and the advent of the Fourth Industrial Revolution. However, the rate of employed women in their 30s or older is significantly lower than that of male workers, and the proportions of women working in industry and women in middle management positions or higher in Korea fall short of those of developed countries. The unfriendly culture to woman across Korean businesses and society in general is hindering the advancement of woman workers in industry.

This session aims to bring together woman scientists and engineers with leaders working in industry and representatives of the government and related organizations to review the status of woman scientists and engineers in the IT, biopharmaceutical, and telecommunications sectors, to discuss the attitudes and roles of organization leaders, which determine corporate competitiveness, and to seek the policies to increase the utilization of woman R&D resources in industry.

SESSION DESCRIPTION

YWS CAMP & SS WORKSHOP

YES, we are the future of Asia!

Every year, the KWSE hosts the Young Woman Scientist Camp (YWS Camp), which aims to nurture and strengthen the capabilities of the next generation of young woman scientists and engineers, and operates the Smart Sister Program, a year-around program. The YWS Camp, which started in 2012, strives to build a global network among, strengthen the research capacity of, and cultivate the global leadership capabilities of domestic and foreign woman scientists and engineers residing in Korea, as well as young woman scientists and engineers in the Asia-Pacific region.

Since 2013, the KWSE has also run the Smart Sister Program, a regular exchange program designed to build a stable, collaborative network among domestic and foreign woman scientists and engineers in Korea. With five regional chapters nationwide, the program conducts academic exchanges, mentoring, and online and offline information exchanges.

The 2017 KWSE/APNN International Young Woman Scientist (YWS) Camp and Smart Sister (SS) Workshop, held in conjunction with BIEN 2017, will host lectures by prominent speakers, oral and poster presentations, discussions on global issues related to research major, and group mentoring session. These events are expected to give the next generation of woman scientists and engineers opportunities to expand network among the world's most renowned woman scientists and engineers in each field, and to enhance their global research and leadership capabilities.

MAPWiST

Mapping the Future of Women in STEM in Asia and the Pacific Nations

The MAPWiST (Meeting of Asia & Pacific Women in Science and Technology) policy forum is a gathering of APNN members (Asia & Pacific National Network) for information sharing, discussions and cooperative planning to build the "policy development roadmap" for women in STEM. MAPWiST was first held in 2014 as part of the efforts of KWSE to conduct research on the gender gap of woman scientists and engineers in the Asia-Pacific region. Under the theme, "Action plans toward gender equality in STEM for Asia and the Pacific Nations," 60 participants from 14 countries attended the 2014 meeting in Seoul.

The second MAPWiST is held this year under BIEN 2017, with the theme, "Mapping the Future of Women in STEM in Asia and the Pacific Nations." The 2017 MAPWiST comprises of lectures and panel discussions on the balanced development of young women in science and technology, addressing issues on the future changes of society, gender policy in higher education, and awareness of gender inequality in the Asia-Pacific region. The forum intends to lay the foundation for a "SHE Figures"-like evidence base for women in STEM in Asia and the Pacific.

REGISTRATION

Registration Desk

Registration is open from August 31 to September 2 in the lobby of Grand Ballroom (B2) and Maple Hall (4F) at the following times:

Operation Times

August 31

Time: 09:00-19:00

Place: the lobby of Grand Ballroom (B2)

September 1

Time: 08:00-19:00

Place: the lobby of Grand Ballroom (B2)

September 2

Time: 08:00-11:00

Place: the lobby of Maple Hall (4F)

Registration Fees

Category	Early Registration (by July 31, 2017)		On-site Registration (after August 1, 2017)	
	USD	KRW	USD	KRW
KWSE Member	300	350,000	350	400,000
Non-Member	350	400,000	400	450,000
Graduate Student	100	100,000	130	150,000
Accompanying Person	200	230,000	250	280,000
Undergraduate Student		free		

Registration fees include

- Admission to all sessions, welcome reception, lunches, coffee breaks, reception and banquet
- Conference materials including program book, abstracts and conference bag

* An Accompanying Person is family member. The accompanying person fee includes admission to the reception and banquet.
Please note that business partners do not qualify as Accompanying Persons and are not allowed to register as an Accompanying Person.

Name Badge Policy

For security purposes, wearing the badge is required for admission to all areas during the conference.

Prayer Room

A prayer room will be available during the conference for attendees looking for a quiet space for thought, reflection, and prayer.

SOCIAL PROGRAM

Welcome Reception

Date & Time August 31 (Thu), 19:00-20:30

Place Grand Ballroom (B2)

MC Jihye GWAK (Korea Institute of Energy Research)

Program Opening
Welcome Address
Congratulatory Address
Dinner & Networking
Performance (Yoon Joo Hee's Microcosmic Ensemble)
Introduction of Traditional Costumes
Closing

We will celebrate your first day of the conference together with colleagues and enjoy a lively performance and full course dinner at the BIEN 2017 Welcome Reception. You are encouraged to join as entrance is included in the registration fee. Be sure to verify your attendance when you register for the conference, and don't forget to bring your name badge when you come to the reception. We look forward to seeing you there!

Banquet

Date & Time September 1 (Fri), 19:00-21:00

Place Grand Ballroom (B2)

MC Heeyeon KIM (Korea Institute of Energy Research), Sangmi JUN (Korea Basic Science Institute)

Program Opening
Welcome Address
Congratulatory Address
Awards Ceremony
Dinner & Networking
Photos of BIEN 2017
Performance (Musical by Woo SUN)
Closing Address

All participants and accompanying persons are cordially invited to attend the Banquet as well as a welcome reception, which will be an excellent occasion to relax, network and have fun. Drinks and a buffet will be served. A performance by Woo SUN, a famous musical performer, will be awaiting you followed by a special awards ceremony. This is an event you won't want to miss! Please come and give them your applause. Be sure to verify your attendance when you register for the conference, and don't forget to bring your name badge when you come to the Banquet.



Traditional Coustumes of
2016 YWS Camp & SS Workshop

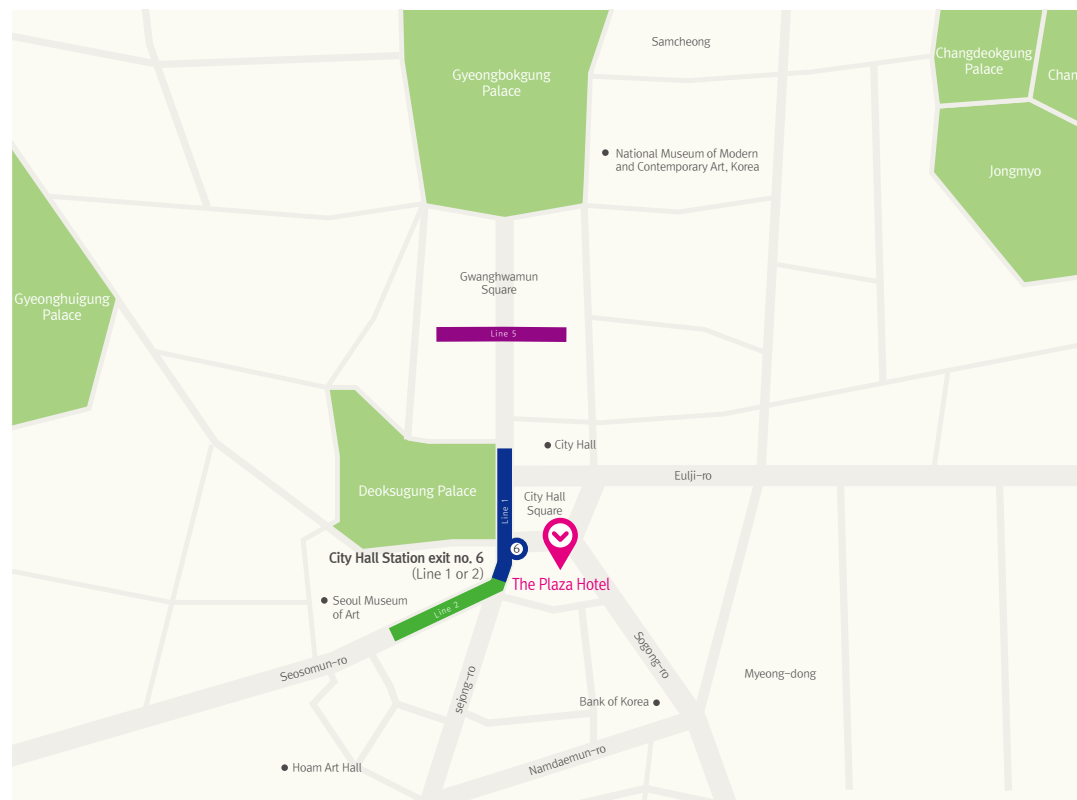


Yoon Joo Hee's Microcosmic Ensemble



Woo SUN (Musical Actress)

VENUE



The Plaza Hotel

119 Sogong-ro, Jung-gu, Seoul, Korea 04525 Tel: 82.2.771.2200

Subway

Get off at City Hall Station (Line 1 or 2), take exit no. 6 and walk about 1~2 minutes.

Bus

Get off at the City Hall Bus Stop

To Incheon Airport (Kal limousine)

- Route: City Hall
- Travel Time: 70 min.
- Interval: 20 min.
- Fare: 16,000KRW(One Way)
- Operating Hours: 05:00 / 05:20 / 05:40 / 06:00 / 06:25~18:30 (Hotel→ Airport)

OPTIONAL TOUR

BIEN 2017 will offer exciting tour programs which aim at showing conference participants the historical sites and cultural wealth of the city. There is an additional charge to join the tour programs.

Tour Booking Conditions

1. To apply, please contact the official travel agency at the latest 1 day prior to the tour date.
2. Payment can be made to a tour guide either in cash or by credit card on the day of the tour.
3. Tours are subject to change or cancellation if the number of participants fails to reach the set minimum.
4. In case of cancellation, the travel agency will contact participants individually.
5. Any request for change/cancellation should be made by calling +82-(0)2-730-1090.

Tour Course 1: Modern Seoul Afternoon Tour



Date/Time	09/02 (Sat) Modern Seoul Afternoon Tour: Meals not included (13:00~17:00)
Itinerary	The Plaza Hotel → COEX Aquarium → Han River Cruise (*Trick Eye Museum in case of rain) → Bongunsa Temple → The Plaza Hotel
Price	KRW 100,000 / (Minimum 5 person basis)
Conditions	English speaking tour guide, transportation, all admissions included
Description	Enjoy this 4-hour afternoon tour that will show you Seoul from a different perspective. You will enjoy a river cruise, learn about the Han River, experience the COEX Aquarium, Bongunsa Temple and visit an amethyst factory.

Tour Course 2: Charming Korea Afternoon Tour



Date/Time	09/02 (Sat) Charming Korea Afternoon Tour: Dinner included (14:00~19:00)
Itinerary	The Plaza Hotel → Changdeokgung Palace → Bukchon Hanok Village (Bukchon Best Photo Zone Views #4, #5, #6) → Traditional tea café (Korean traditional snacks, tea included) → Naksan Park, Seoul Fortress → Dinner (Menu: Bibimbap) → The Plaza Hotel
Price	KRW 105,000 / (Minimum 5 person basis)
Conditions	Dinner, English speaking guide, transportation and all admissions included.
Description	Enjoy this half-day afternoon tour of Seoul, highlights of which include: BukchonHanok Village, Naksan park, Changdeokgung Palace and two delicious food stops, first at a café where you can enjoy some rice cake, and then at a restaurant where you can enjoy a bibimbap dinner.

Tour Course 3: Royal Palace Afternoon Tour



Date/Time	09/02 (Sat) Royal Palace Afternoon Tour : Meals not included (13:00~17:00)
Itinerary	The Plaza Hotel → Bukak Skyway "Palgakjeong" Observatory → Changdeokgung Palace → Insadong Alley → Namdaemun Market → The Plaza Hotel
Price	KRW 45,000 / person / (Minimum 5 person basis)
Conditions	English speaking guide, transportation and all admissions included
Description	Join us on this special afternoon tour and visit Chandeokgung Palace, followed by Namdaemun Market and Insadong's antique shops.

Inquiries & Applications

BIEN 2017 Official Travel Agency, I Love Seoul Tour Co., Ltd.

Attn. Ms. Jiin Shin Tel : +82-(0)2-730-1090 | Fax : +82-(0)2-730-1074 | E-mail : support@iloveseoultour.com

PLENARY
SESSION



PLENARY SESSION

PLENARY SESSION I



Jae Ung JUNG

Distinguished Professor and Chair, University of Southern California, USA

Zika virus and brain defects in babies

11:10-12:00, August 31 (Thu)

The recent widespread outbreak of Zika virus (ZIKV) in the Americas and South East Asia is a major global health concern, largely due to the association with fetal abnormalities resulted from infection during pregnancy. The re-emerged Asian lineage ZIKV associated with fetal abnormalities appeared to have evolved from the original African lineage first discovered back in 1947 at Uganda. Despite a 90% sequence homology between the two lineages, stark differences in the replication kinetics, infectivity and immune responses have been reported during infection of neural cells. I will discuss two topics regarding ZIKV-mediated immune modulation and neuropathogenesis.

Blood monocytes are the frontline immunomodulators of the peripheral system categorized into classical or non-classical subsets, subsequently differentiating into M1 pro- or M2 anti-inflammatory macrophages upon stimulation. Pregnancy is a sophisticated immune-altering process which requires prudent immunomodulation of innate immunity to ensure healthy pregnancy outcome. In particular, circulating maternal monocytes play a crucial role, where the activation and transition of monocytes to macrophages is essential for healthy placental development. Using whole human blood infection, we identified that contrasting immunoprofiles of infected blood were a M1-skewed inflammation by African-lineage ZIKV infection and a M2-skewed immunotolerance by Asian-lineage ZIKV infection. Importantly, Asian-lineage ZIKV infection of pregnant women's blood drastically induced the M2-skewed immunotolerance of non-classical monocytes in conjunction with the aberrant expression of host genes associated with pregnancy complications. This study demonstrates the differential immunomodulatory responses of blood monocytes, particularly during pregnancy, upon infection with different lineages of ZIKV.

Among various key cellular pathways, Akt-mTOR signaling has been shown to be essential for brain development and autophagy regulation. We found that ZIKV infected human fetal neural stem cells (fNSCs), causing developmental defects and aberrant autophagy activation. Screens of the three structural proteins and seven nonstructural proteins of ZIKV identified that co-expression of the NS4A and NS4B not only inhibited the neurosphere growth and differentiation potential of fNSCs, but also induced autophagy for viral replication. Furthermore, the ZIKV NS4A-NS4B cooperatively suppressed the Akt-mTOR pathway, consequently linking their roles in neurogenesis suppression and autophagy induction. Our study demonstrates that the ZIKV NS4A and NS4B are potential virulence determinants of ZIKV pathogenesis, discovering the promising targets for anti-ZIKV therapeutic interventions.

PLENARY SESSION

PLENARY SESSION II



Justine CASSELL

Professor and Associate Dean, Carnegie Mellon University, USA

Socially aware artificial intelligence: Women changing the future of computer science

17:00-17:50, August 31 (Thu)

In today's era of intelligent assistants of all kinds, a conversational front end is a necessity. Particularly in the mobile and home domains where users may be engaged in multiple tasks at the same time, and have their eyes on something other than a screen, the ability to use conversation to access services is particularly important. On the other hand, most existent conversational user interfaces are really thinly veiled search engines. The interaction between user and system couldn't be called a "conversation" by a long shot. In this talk I'll discuss the SARA (Socially-Aware Robot Assistant) project and, more generally, our work around building socially-aware agents of all kinds, and therefore how we intend to revolutionize the conversational front end of intelligent personal assistants, pedagogical agents, homebots, and other systems that interact with people repeatedly. I am often asked if I - and other women working on the more social aspects of artificial intelligence - have chosen this topic because women are more social than men. I usually reply that it's because to be women in computer science we have already ignored boundaries and obstacles, and so we are perhaps more likely to be breaking into new paradigms in our work as well. In this talk I'll let you judge for yourself.

PLENARY SESSION

PLENARY SESSION III



Marlene KANGA

President Elect, World Federation of Engineering Organizations, Australia

Smart diversity strategies for shaping a sustainable future

17:00-17:50, September 1 (Fri)

In September 2015, the world came together at the United Nations to agree on the sustainable development goals which will shape the future of our planet for the next 15 years. These cover diverse areas such as health and education, environment and resources, including energy and water and for sustainable cities. They recognize that an integrated approach for sustainable development is essential for all people, the planet, for prosperity and for partnerships for peace.

Women have a key role in achieving the sustainable development goals, especially scientists and engineers. Science, engineering and technology will be needed to develop and implement solutions to achieve the sustainable development goals.

The World Federation of Engineering Organizations provides engineers with a voice at the highest international levels – at the United Nations and its various agencies. Together with our international partners in science and engineering, including the International Network for Women Engineers and Scientists and its members such as the Korean Woman Science and Engineering Association, we have a voice and must use it to put forward the key issues for policy makers and governments to consider and to establish frameworks for implementing and monitoring progress in achieving the sustainable development goals.

With the rapid advance of science and technology and increasing innovations in a wide range of fields, it has been increasingly important to consider the impact of science, technology and innovation on women – at home and at work. Technological and digital developments will impact women's current jobs creating large upheavals. It is imperative that women receive the necessary educational opportunities to develop skills in science, technology, engineering and mathematics to equip them for the jobs of the future. Women with skills in science technology engineering and mathematics (STEM) will be equipped for the jobs of the future which will increasingly be technologically based.

Women also need to be encouraged to return to work and to continue to make a contribution to the economic growth of their countries when they start having their families. Importantly women also need to be mentored and supported to take up leadership roles. This presentation will discuss the rationale for attracting and retaining women in science, technology and engineering and their essential role in shaping a future sustainable world. It will also present innovative strategies for organizations to have a more diverse and inclusive culture and will draw on successes in other countries as examples of practical approaches to this important issue.

YWS PLENARY SESSION

YWS CAMP & SS WORKSHOP PLENARY SESSION I



Nguyen Thi LAN

Acting President, Vietnam National University of Agriculture, Vietnam

Vietnam woman in scientific research

14:00-14:30, August 31 (Thu)

In the trend of integration and development of the knowledge economy, female scientists play an increasingly important role in scientific research institutions. However, scientific research for Vietnam women is a thorny and strenuous path, but that is not lessen the passion in their research. The results achieved after long days of passion, concern, repeated experiments repeatedly is the great happiness of the researcher. Always try to work hard because in science "Nothing is impossible". Compared to many other areas, scientific research is one of the areas that require time, dedication and passion. In Viet Nam, women are guaranteed equal rights with men, are provided with flexible working schedules, are provided with the right conditions to work, improve their proficiency and health care, to increase the material and spiritual welfare of the female scientist so that the female scientist can effectively promote scientist research. In my opinion, in order for a woman to be successful in her career, she needs basic training, she has knowledge, qualifications, and especially her passion for scientific research to overcome all the hardships. I myself always try to learn, explore, dynamic and creative with the determination to follow the path of research to get the research to bring benefit the community. Besides, I have to know the harmonious arrangement of time for family life and scientific research. It is necessary to spend some time with the family, taking care of my children, as this is a source of motivation, encouraging the spirit to empower me in scientific research. I also spend time to updating information and improving knowledge through domestic and international conferences, coordinating the development and implementation of research projects in the field of expertise. Finally, let the female scientist develop her ability in scientific research they need support of the family and appropriate policies social.

YWS PLENARY SESSION

YWS CAMP & SS WORKSHOP PLENARY SESSION II



Wha-Jin HAN

President, Center for Women in Science, Engineering and Technology, Korea

Korea's policy and key support programs for women in STEM

14:30-15:00, August 31 (Thu)

Among OECD countries, Korea's R&D expenditure by GDP is the highest, around 4.3%. The number of researchers is also higher than that of other countries. However, proportions of women in STEM disciplines remain low, even an increasing trend has been observed for the last 15 years. Korea it ranked the 1st position for choosing a major in the STEM field. On the other hand, the ratio of female student is lower than the OECD average. Some statistics show that in higher education or career levels, larger gender gaps exist. The labor force participation of women in STEM is relatively low due to career interruption stage. In 2015, only 8.6% women were working as R&D project leaders which are representing a low figure. Furthermore, in large-scale projects with high budgets, the proportion of women is even low.

The Korean government has begun to recognize the severity of the situation and has continuously made efforts to support women in STEM. In this context, the Act on Fostering and Supporting women in STEM was enacted in 2002 and since then more systematic approach has been made to promote gender equality by establishing the Basic Plan for every 5 years. In addition, as a part of cornerstone for government efforts, WISET was founded. WISET has been implementing various tailored support programs in the whole career cycle of women in STEM to achieve the governmental goal.

Recently, a decrease in the national growth potential due to a low birth rate and aging population has raised more attention to foster women excellences as well as to maximize their competencies. In particular, the need of women workforce in STEM has continually increased and women's role is more important than ever. Yet in spite of significant gender equality advances and better support, there are still many issues concerned such as women leadership in higher education and R&D, work-life balance, structural and cultural change for empowering women in STEM etc.

In this talk, the current status of women in STEM in Korea with some statistics as well as WISET activities will be explored. Also major fostering and support programs for women in STEM and their achievements will be outlined along with some challenging issues in the era of accelerating innovation and the 4th industrial revolution.

MAPWiST PLENARY SESSION



Kong-Ju-Bock LEE

Professor, Ewha Womans University, Korea

Balanced development of human resources in STEM for the future of artificial intelligence

09:00-09:40, September 2 (Sat)

This presentation is based on the '2016 Policy Report on Balanced Development of Human Resources for the Future' [1]. Korea is expected to be a super-aged society in the next 10 years. The super-aged society means that more than 20% of its population are aged 65 or older. Considering that Korea's birth rate is the lowest in the world, it indicates a rapid decline of the labor force population. In the age of artificial intelligence, a national competitiveness may not depend on the manpower. However, it is necessary to keep some critical mass for the competent workforce and for the development of novel technology.

Recent shifts to new era will be shared with numbers and several international statistics on human resources development are also discussed. To perform a comparative analysis of female human resources development, HDI, GDI, and GII by UNDP and GGI by WEF are analyzed quantitatively by nations. This rough comparison of the status of human resources development around the world is more or less meaningful although each international organization has different objectives. In addition, the analysis of indices from the perspective of gender will focus on the balanced development of human resources.



CONFERENCE SCHEDULE

CONFERENCE SCHEDULE

August 31 (Thu)

10:30-11:10	Opening Ceremony	Grand Ballroom, B2
Plenary Session I		
Chair Meehyein KIM, Korea Research Institute of Chemical Technology, Korea		
11:10-12:00	Zika virus and brain defects in babies	
PL-01	Jae Ung JUNG, University of Southern California, USA	
12:00-13:00	Lunch	Grand Ballroom, B2
Scientific Session-IT		
Orchid Hall, 4F		
Theme Human-Centric Computing and Interaction		
Chairs Sun Jin YUN, Electronics and Telecommunications Research Institute, Korea Hwa Jin PARK, Sookmyung Women's University, Korea Yoo-Joo CHOI, Seoul Media Institute of Technology, Korea		
14:00-14:30	Wearable healthcare (bio-medical systems & circuits) / Keynote	
O-IT-01	Hoi-Jun YOO, Korea Advanced Institute of Science and Technology, Korea	
14:30-14:50	Smart homes and HCI	
O-IT-02	Jaeyeon JUNG, Samsung Electronics Limited, Korea	
14:50-15:10	Machine Learning for Computational Social Science	
O-IT-03	Alice OH, Korea Advanced Institute of Science and Technology, Korea	
15:10-15:30	Making use of 'big data' in educational technology research	
O-IT-04	Gahgene GWEON, Seoul National University, Korea	
15:30-15:50	Coffee Break	
15:50-16:10	Reconstruction of 3D objects from freeform sketch	
O-IT-05	Hyewon SEO, Universite de Strasbourg - CNRS, France	
16:10-16:30	Mobile VR technology and applications	
O-IT-06	Soo-Mi CHOI, Sejong University, Korea	
16:30-16:50	VR FPS Game: Interaction and Artificial Intelligence	
O-IT-07	Kyoungju PARK, Chung-Ang University, Korea	

CONFERENCE SCHEDULE

Special Session-Future Society		Maple Hall, 4F
Theme 4 th Industrial Revolution and Future Technology		
Chairs Moon Jeong CHOI, Korea Advanced Institute of Science and Technology, Korea Jihyun LEE, Korea Institute of Machinery & Materials, Korea		
14:00-14:40	Re-thinking the fourth industrial revolution: Inclusive growth and R&D in the techno-human interface / Keynote	
S-FS-01	So Young KIM, Korea Advanced Institute of Science and Technology, Korea	
14:40-15:05	Social implications of artificial intelligence: algorithmic biases	
S-FS-02	Shubha GOKHALE, Sejong University, Korea	
15:05-15:30	The HRST strategy to lead the future in the 4 th industrial revolution era	
S-FS-03	Jin Ha KIM, Korea Institute of Science & Technology Evaluation and Planning, Korea	
15:30-15:45	Coffee Break	
15:45-16:10	Recent trends of 3D bioprinting technology	
S-FS-04	Hyun-Wook KANG, Ulsan National Institute of Science and Technology, Korea	
16:10-16:35	Soft robotic technology	
S-FS-05	Kyu-Jin CHO, Seoul National University, Korea	
16:35-17:00	A-cent technologies: Learning from ancient futures	
S-FS-06	Jinhee KIM, National Institute of Ecology, Korea	

CONFERENCE SCHEDULE

YWS Camp & SS Workshop I		Grand Ballroom, B2
Theme YES (Young Women Engineers and Scientists), we are the future of Asia		
14:00-14:30	Vietnam woman in scientific research	
O-YS-01	Nguyen Thi LAN, Vietnam National University, Vietnam	
14:30-15:00	Korea's policy and key support programs for women in STEM	
O-YS-02	Wha-Jin HAN, Center for Women in Science, Engineering and Technology, Korea	
15:00-15:15	Smart Sister Program Regional Presentation	
15:15-15:30	Coffee Break	
15:30-16:30	Oral Presentation	
O-YS-03	Legal provision, practices & constraint of environmental assessment and its implementation in Nepalese context Sharmila GIRI, Earthquake Emergency Assistance Project, Nepal	
O-YS-04	Growth and mineral nutrition of crops grown on tannery polluted soil and its remediation Afrida NAZIBAH, University of Dhaka, Bangladesh	
O-YS-05	Nature-inspired tilted nanopillar fabricated with glacing angle plasma-etching Lan PHAN, Korea University of Science and Technology, Korea	
O-YS-06	Introducing the project "The first female German Astronaut": how the fascination for space science can influence the perception of women in science Birsen Irem YOLAS, dib – German Women Engineering Association/Technical University of Berlin, Institute of Aeronautics and Astronautics, Germany	
Plenary Session II		Grand Ballroom, B2
Chair Jinah PARK, Korea Advanced Institute of Science and Technology, Korea		
17:00-17:50	Socially aware artificial intelligence: women changing the future of computer science	
PL-02	Justine CASSELL, Carnegie Mellon University, USA	
17:50-19:00	Poster Session I -IT, E ³ T, BS	Lobby, B2 & 4F
19:00-20:30	Welcome Reception	Grand Ballroom, B2

CONFERENCE SCHEDULE

September 1 (Fri)

Scientific Session-NT		Orchid Hall, 4F
Theme Convergence Research on Nano-technology and Chemistry		
Chairs Chaok SEOK, Seoul National University, Kore So-Hye CHO, Korea Institute of Science and Technology, Korea		
09:00-09:40	Nanostructured materials by covalent self-assembly / Keynote	
O-NT-01	Kimoon KIM, Pohang University of Science and Technology / Institute for Basic Science, Korea	
09:40-10:10	Band-engineered graphene for carbon-based semiconductor electronics	
O-NT-02	Gap Soo CHANG, University of Saskatchewan, Canada	
10:10-10:40	DNA-based self-assembly for dynamic nanostructures	
O-NT-03	So-Jung PARK, Ewha Womans University, Korea	
10:40-11:00	Coffee Break	
11:00-11:30	Transparency of graphene; graphene-substrate interface plays a critical role	
O-NT-04	Jeong-O LEE, Korea Research Institute of Chemical Technology, Korea	
11:30-12:00	Repurposing polymers via post-polymerization modification	
O-NT-05	Christopher BIELAWSKI, Ulsan National Institute of Science and Technology / Institute for Basic Science, Korea	
Scientific Session-ST		Maple Hall, 4F
Theme Future Space Science & Technology with International Cooperation		
Chairs Hyun Ok KIM, Korea Aerospace Research Institute, Korea Aeree CHUNG, Yonsei University, Korea		
09:00-09:40	Women in space science and engineering: challenges and opportunities / Keynote	
O-ST-01	Mazlan OTHMAN, Academy of Sciences Malaysia, Korea	
09:40-10:10	Readiness for space situational awareness in Korea	
O-ST-02	Jung Hyun JO, Korea Astronomy and Space Science Institute, Korea	
10:10-10:40	Liquid rocket engines for space exploration	
O-ST-03	Jinhan KIM, Korea Aerospace Research Institute, Korea	
10:40-11:00	Coffee Break	
11:00-11:30	'Astronomy for all', hosting the 31 st IAU general assembly in Busan, Korea	
O-ST-04	Hye Sung KANG, Pusan National University, Korea	
11:30-12:00	International cooperation for space capability build-up	
O-ST-05	Ee Eul KIM, Satrec Initiative, Korea	

CONFERENCE SCHEDULE

*Official Language: Korean

Special Session-Leadership		Oak Room, 4F
Theme	Improving Leadership through the Meeting of Senior and Junior	
Chair	Myung Hee JUNG, Institute for Basic Science, Korea	
09:00-09:30	What should we prepare for retirement	
S-LS-01	Mi Ja LEE, KT&G, Korea	
09:30-10:00	Active role of Korean women scientists and engineers in international society	
S-LS-02	Kong-Joo LEE, Ewha Womans University, Korea	
10:00-10:30	Open Science, a shared economy for researchers	
S-LS-03	Sun Hwa HAHN, Korea Institute of Science and Technology Information, Korea	
10:30-10:50	Coffee Break	
10:50-11:20	Policy making process of science and technology	
S-LS-04	Byung Joo MIN, Ulsan National Institute of Science and Technology, Korea	
11:20-12:00	Discussion and Networking	
YWS Camp & SS Workshop II		Gyeongbokgung Palace
09:00-12:00	Cultural Tour (Gyeongbokgung Palace)	
12:00-13:00	Lunch	Grand Ballroom, B2
13:00-14:00	Poster Session II - NT, ST-1, YWS	Lobby, B2 & 4F

CONFERENCE SCHEDULE

Scientific Session -BT		Orchid Hall, 4F
Theme	Neurodevelopment and Stem Cell Technology	
Chair	Yoichi KOSODO, Korea Brain Research Institute, Korea Mi-Ryoung SONG, Gwangju Institute of Science and Technology, Korea	
14:00-14:40	Transcription control of motor neuron diversity and survival / Keynote	
O-BT-01	Mi-Ryoung SONG, Gwangju Institute of Science and Technology, Korea	
14:40-15:10	Therapeutic implications of directly converted human adult stem cells for neuroregeneration	
O-BT-02	Mi-Sook CHANG, Seoul National University, Korea	
15:10-15:40	Gene regulatory networks for motor neuron generation	
O-BT-03	Seung-Hee LEE, Seoul National University, Korea	
15:40-16:00	Coffee Break	
16:00-16:30	Role of defined intrinsic and extrinsic factors to regulate neural stem cell differentiation	
O-BT-04	Yoichi KOSODO, Korea Brain Research Institute, Korea	
16:30-17:00	Modeling of peripheral neuropathy by using direct cell engineering tools	
O-BT-05	Yong Jun KIM, Kyung Hee University, Korea	
Special Session-Women in Industry		Maple Hall, 4F
Theme	Roles and Achievements of Women in Industry	
Chair	Kwang-Ryeol LEE, Korea Institute of Science and Tehcnology, Korea	
14:00-14:30	Suggestions for improving the utilization of woman R&D manpower	
S-WI-01	Dong-Gyun KIM, Korea Institute for Advancement of Technology, Korea	
14:30-15:00	How to grow as a professional and leader	
S-WI-02	Mee Nam SHIN, Doosan Fuel Cell, Korea	
15:00-15:30	Nurturing female talent in Korea Telecom	
S-WI-03	Sun Joo LEE, KT, Korea	
15:30-15:50	Coffee Break	
15:50-16:20	Woman scientists in Dong-A pharmaceutical company	
S-WI-04	Hyun Joo SHIM, Dong A Pharmaceutical Co., Ltd., Korea	
16:20-16:50	Samsung electronics' HR strategy for women engineers	
S-WI-05	Young Soon LEE, Samsung Electronics Limited, Korea	

*Official Language: Korean

CONFERENCE SCHEDULE

Scientific Session-E ³ T		Serve Room, B2
Theme	Sustainable and Safe Future	
Chair	Meehye LEE, Korea University, Korea	
14:00-14:30	Fine particle pollution in northeast Asia / Keynote	
O-ET-01	Gwi-Nam BAE, Korea Institute of Science and Technology, Korea	
14:30-14:50	Renewable energy resource mapping using earth observations	
O-ET-02	Hyun Goo KIM, Korea Institute of Energy Research, Korea	
14:50-15:10	Modeling long-term emission changes in the Los Angeles Basin and their impacts on air quality	
O-ET-03	Si-Wan KIM, NOAA Earth System Research Laboratory, USA	
15:10-15:30	20 th century variability and trends of refractory black carbon in europe retrieved from a caucasian ice core	
O-ET-04	Saehee LIM, UCI Earth System Science, Korea	
15:30-15:50	Coffee Break	
15:50-16:10	Climate change mitigation and sustainability: Global trend of critical elements recovery from waste sources	
O-ET-05	Ji Whan AHN, Korea Institute of Geoscience and Mineral Resources, Korea	
16:10-16:30	Nuclear fuel cycle status in Korea	
O-ET-06	Eun-Young CHOI, Korea Atomic Energy Research Institute, Korea	
16:30-16:50	The legal framework of Korean environmental monitoring and data quality management	
O-ET-07	Hyen-Mi CHUNG, National Institute of Environmental Research, Korea	
YWS Camp & SS Workshop III		Grand Ballroom, B2
14:00-15:20	Group Discussion (by Major Field of Study)	
15:20-15:30	Coffee Break	
15:30-16:40	Group Mentoring	
Plenary Session III		Grand Ballroom, B2
Chair	Hye Young PARK , Pusan National University, Korea	
17:00-17:50	Smart diversity strategies for shaping a sustainable future	
PL-03	Marlene KANGA, Engineers Australia, World Federation of Engineering Organisations, Australia	
17:50-19:00	Poster Session III - ST-2, BT, Policy	Lobby, B2& 4F
19:00-21:00	Banquet	Grand Ballroom, B2

CONFERENCE SCHEDULE

September 2 (Sat)

MAPWiST		Orchid Hall, 4F
Theme	Mapping the Future of Women in STEM in Asia and the Pacific Nations	
Chair	Jung Sun KIM, Dongseo University, Korea	
09:00-09:40 O-MW-01	Balanced development of human resources in STEM for the future of artificial intelligence / Plenary <u>Kong-Ju-Bock LEE</u> , Ewha Womans University, Korea	
09:40-10:20 O-MW-02	Making full use of human potential: how structural change is being promoted in the European Union <u>Caroline Belan MENAGIER</u> , Head of European Union & International Relations / Université Confédérale Léonard de Vinci, France	
10:20-10:30	Coffee Break	
Panel Discussion		
10:30-11:40 O-MW-03	Gender barriers perceived and experienced by women scientists and engineers among APNN member countries <u>Yanghee KIM</u> , Gender & Leadership, Korea <u>Fumie TAKEI</u> , National Defence Medical College, Japan <u>Jun HADA</u> , WISE Nepal, Nepal <u>Li-Ling TSAI</u> , National Kaohsiung Normal University, Taiwan <u>Ariunbolor PURVEE</u> , Mongolian Univ. of Science and Technology, Mongolia Open Discussions and Questions from the Floor	

POSTER
PRESENTATION



POSTER PRESENTATION

Poster Session I

17:50-19:00, August 31 (Thu), 2017

Lobby (B2 & 4F), Serve Room I (B2)

IT (Information Technology)

- P-IT-001** **Voxel-based haptic rendering during shape changes**
Kimin KIM, Jinah PARK
 Korea Advanced Institute of Science and Technology, Korea
- P-IT-002** **Keeping valuables in a safe: dealing with ransomware from an economical perspective**
Seongyeol OH¹, Sullha PARK¹, Tai Gil SONG¹, Jae min SOHN²
¹Korea Atomic Energy Research Institute, ²Korea Atomic Energy Research Institute, Korea
- P-IT-003** **Head pose estimation with transfer learning**
Tran Thi Bao HANH, Yong-Guk KIM
 Sejong University, Korea
- P-IT-004** **Food intake monitoring application with wearable sensors**
Jinwoo JO, Ahyoung CHOI
 Gachon University, Korea
- P-IT-005** **Real-time brittle fracture simulation for haptic interaction based on a node-link model**
Hyunyul CHO, Seokyeol KIM, Jinah PARK
 Korea Advanced Institute of Science and Technology, Korea
- P-IT-006** **Priority and reputation based message routing**
Yein SIM, Woojin JOE, Sangsu LEE, Hyunji JUNG
 Chungnam National University, Korea
- P-IT-007** **A novel model for group membership and authentication**
Yoonjae CHO, Euitaek OH, Seunghee LEE, Jinwook KIM
 Chungnam National University, Korea
- P-IT-008** **Fitness management platform using real time database**
Sunmin LEE, Sohyang JEON, Haeun KIM, Dong-hee NA, Unesik PARK
 Chungnam National University, Korea
- P-IT-009** **Capabilities of data safeguarding security intelligence using big data**
Yoonyoung YANG, Minyoung AHN
 Chungnam National University, Korea
- P-IT-010** **Low cost tethered unmanned aerial vehicle system**
Donghee HA, Yeonghak SEO, Dongwoo SIM, Minsun LEE
 Chungnam National University, Korea
- P-IT-011** **Video streaming with encryption on mesh network using Batman**
Hyunmin KO, Jeongsoo HA, Jeongeun LEE
 Chungnam National University, Korea
- P-IT-012** **Practically classifying unmanned aerial vehicles sound using convolutional neural networks**
Gayoung KIM¹, Donghyun LIM¹, Heongyeom KIM¹, Sanggi HONG¹, Sanghee LEE¹, Austin SNAIR², Lucy GOTWALS², John C. GALLAGHER³
¹Chungnam National University, Korea, ²Purdue University, ³Wright State University, USA
- P-IT-013** **Internet of things infrastructure for a SMART building**
Sujin KIM, Minsung KIM, Geunyoung KIM, Jeonghyeon LEE, Hyungjin LEE, Jong Hyun PARK
 Chungnam National University, Korea
- P-IT-014** **Screen sharing and networking in 3D virtual reality games**
Jihyun KIM, Yurim LEE, Jeongeun LEE, Areum CHOI
 Chungnam National University, Korea

- P-IT-015** **Design of state machine interface for building communicative environment with virtual reality avatar**
Andrew LEE, Taeho KIM, Jinah PARK
 Korea Advanced Institute of Science and Technology, Korea
- P-IT-016** **A common modular architecture for fire control system**
Hye-Min CHANG, Suk-Jong KANG, Joon-Sung CHOI
 Agency for Defense Development, Korea
- P-IT-017** **A method to analyze terrain for global path planning**
Won-Ik PARK, Hye-Min CHANG, Joon-Sung CHOI
 Agency for Defense Development, Korea
- P-IT-018** **Phase correlation accuracy improvement in thermal images using scharr filter**
Yonghun LEE, Joo Hyun BAEK, Joonsung CHOI
 Agency for Defense Development, Korea
- P-IT-019** **Automatic enhancement of accessibility using pedestrian information on smart platform**
Eunyoung CHO, Soyeon LEE, Feyissa WOYANO, Sangjoon PARK
 Electronics and Telecommunications Research Institute, Korea
- P-IT-020** **Silk-fibroin bio-adhesives based on calcium chelate reaction for epidermal sensors**
Hyojung KIM, Ji-Won SEO, Hyunjoo J. LEE
 Korea Advanced Institute of Science and Technology, Korea
- P-IT-021** **Implantable bladder volume monitoring sensor based on Polypyrrole/agarose hydrogel composite**
Mi Kyung KIM, Sungwoo LEE, In Ug YOON, Geon KOOK, Hyojung KIM, Yeon Su JUNG, Jiwon SEO, Hyunjoo J. LEE
 Korea Advanced Institute of Science and Technology, Korea
- P-IT-022** **Near-field measurement of W-band horn antenna using a photonic-assisted system**
Hyunji KOO, Young-Pyo HONG, Dong-Joon LEE
 Korea Research Institute of Standards and Science, Korea
- P-IT-023** **360° Image interaction using mesh deformation**
Kanghyun CHOI, Yeo-Jin YOON, Soo-Mi CHOI
 Sejong University, Korea
- P-IT-024** **VR interaction using the front-facing camera on HMDs**
Dong-Hyun KIM, Bo-Hyun KIM, Yeo-Jin YOON, Soo-Mi CHOI
 Sejong University, Korea
- P-IT-025** **An integrated method for packer identification**
Sooyeon LEE, Hyunji JUNG, Gayoun KIM, Seoksu LEE, Eun-Sun CHO
 Chungnam National University, Korea
- P-IT-026** **Classification of 3D printing patterns**
Kanygul CHYNYBEKOVA, Soo-Mi CHOI
 Sejong University, Korea
- P-IT-027** **A design of big data analytics architecture for textual data analysis on patent analysis**
Hyeyoung CHO, Youngim JUNG
 Korea Institute of Science and Technology Information, Korea
- P-IT-028** **A research of big data analysis for data mining of patents based on manycore system**
Hyeyoung CHO, Youngim JUNG
 Korea Institute of Science and Technology Information, Korea
- P-IT-029** **Automatic defect classification using PEC in the pipe under insulation combined with signal analysis method**
Eunsook HAN, Young-kuk KIM
 Chungnam National University, Korea
- P-IT-030** **Hand gesture modification based on Laban Movement Analysis to express an avatar's affection in a communicative VR environment**
YoungJin AN, Taeho KIM, Jinah PARK
 Korea Advanced Institute of Science and Technology, Korea

- P-IT-031** **Interactive shadow printing wall based on motion analysis**
Jaeyong LEE, Youngmin KIM, Junghwan SUH, Injae JO, Insung CHOI, Yoo-Joo CHOI
Seoul Media Institute of Technology, Korea
- P-IT-032** **Intelligent IoE fog networking platform based on information-centric networking**
Kwihoon KIM, Taewan You, Jungha HONG, Yong-Geun HONG
Electronics and Telecommunication Research Institute, Korea
- P-IT-033** **2D transfer function design for live-cell image data using ISODATA clustering method**
Jihoon CHO, Taeho KIM, Jinah PARK
Korea Advanced Institute of Science and Technology, Korea
- P-IT-034** **Interactive multimodal virtual display of 2D-coordinates plane**
Minjoo KIM, Jinah PARK, Jisu LEE
Korea Advanced Institute of Science and Technology, Korea
- P-IT-035** **Empathy in VR compared to paper-based evaluations of the trolley problem**
Yujin KIM¹, Matthias SALA², Yanghee NAM¹
¹Ewha Womans University, Korea, ²Gbanga, Switzerland
- P-IT-036** **Strategies for open science of NTIS focused on joint utilization of experimental data**
YunJeong KIM, ChulSu LIM, MyungSeok YANG, KiSeok CHOI
Korea Institute of Science and Technology Information, Korea
- P-IT-037** **A Study on efficient management of changed information in NTIS**
Yejin JO, ChulSu LIM
Korea Institute of Science and Technology Information, Korea
- P-IT-038** **Keyword network analysis on patents in bio sector**
Youngim JUNG¹, Hyeyoung CHO¹, Changhee PARK²
¹Korea Institute of Science and Technology Information, ²PLUS International IP Law Firm, Korea
- P-IT-039** **Design stable peer- review system of conference paper**
Youngim JUNG, Joongbaek KIM, Jungsun YOON
Korea Institute of Science and Technology Information, Korea
- P-IT-040** **Product recommendation model using personal genetic information and cosmetic ingredients**
Migyeong GWAK¹, Mee Young SUNG²
¹University of California, L.A., USA, ²Incheon National University, Korea
- P-IT-041** **A study on issues on building a cloud computing service in physical network separation**
Hyosoo KANG, Eunju PARK, Dongseop MUN, Taigil SONG, Jaemin SOHN
Korea Atomic Energy Research Institute, Korea
- P-IT-042** **A trend analysis of women scientists activities based on journal papers**
YongJu SHIN, Jiseong SON, Il-kwon LIM, Yejin JO, ChulSu LIM
Korea Institute of Science and Technology Information, Korea
- P-IT-043** **Speckle noise reduction in optical diffraction tomography using convolutional neural network**
Inwoo HWANG, Jinah PARK
Korea Advanced Institute of Science and Technology, Korea
- P-IT-044** **Bi-directional and corporate-participative promising-business Items -discovering model for SMEs : automotive components industries**
Hyunsook ROH, Eunsun KIM, Yunjeong CHOI
Korea Institute of Science and Technology Information, Korea
- P-IT-045** **Femtosecond laser direct writing for ICT and biomedical applications**
Jiyeon CHOI, Yejin SON, Jihyun KIM, Yonghyeon KIM, Sungil KIM, Sanghoon AHN
Korea Institute of Machinery & Materials, Korea
- P-IT-046** **Fine tuning access control to check sensitive contents in NTIS service**
ChulSu LIM, YunJeong KIM, ByeongJeong KIM, Yongju SHIN
Korea Institute of Science and Technology Information, Korea

E³T (Environment / Energy / Earth Technology)

- P-ET-001** **Understanding behavior of sulfur mustard (HD) in environmental matrices**
Hyunsook JUNG, Dongha KAH, Seungki CHOI
Agency for Defense Development, Korea
- P-ET-002** **Uranium recovery by liquid cadmium cathode electrorefining**
Gha-Young KIM, Junhyuk JANG, Sung-Jai LEE
Korea Atomic Energy Research Institute, Korea
- P-ET-003** **Study on stress responses in coral using microarray**
Seonock WOO, Seungshic YUM
Korea Institute of Ocean Science and Technology, Korea
- P-ET-004** **Transcriptional changes in *Saxidomus purpuratus* exposed to environmental stresses**
Seonock WOO, Seungshic YUM
Korea Institute of Ocean Science and Technology, Korea
- P-ET-005** **Regulatory approaches of the embedded digital devices in nuclear I&C Systems**
Youngmi KIM, Hungeun LEE
Korea Institute of Nuclear Safety, Korea
- P-ET-006** **Stability evaluation for the element correction coefficient of the thermoluminescence dosimeter**
Mee JANG, Young Hyun CHO, Kun Ho CHUNG, Mun Ja KANG, Wanno LEE
Korea Atomic Energy Research Institute, Korea
- P-ET-007** **A soil moisture estimation algorithm using combination of SAR and TIRS sensors**
Dongok KIM, Duk-jin KIM, Jungkyo JUNG
Seoul National University, Korea
- P-ET-008** **Quality control activities on environmental radioactivity analysis in Korea**
Seong A YIM
Korea Institute of Nuclear Safety, Korea
- P-ET-009** **Characterization of crud prepared in a simulated PWR condition**
Eun-Hee LEE, Dong-Jin KIM
Korea Atomic Energy Research Institute, Korea
- P-ET-010** **Effect of cold work on the PWSCC of Ni-based alloys**
Eun-Hee LEE, Ki-Hyeon EOM, Dong-Jin KIM, Sung-Woo KIM
Korea Atomic Energy Research Institute, Korea
- P-ET-011** **Evaluation of NBC_RAMs with tracer experiments using MvK**
Jiyun SEO, Woosup SHIM
Agency for Defense Development, Korea
- P-ET-012** **Ammonia gas sensor based on organic field effect transistor using indacenodithiophene-co-benzothiadiazole polymer**
Eun-Sol SHIN, Yong-Young NOH
Dongguk University, Korea
- P-ET-013** **Design concept based on information minimalism of a monitoring system for korea nuclear power plants**
Gwi-sook JANG, Gee-yong PARK
Korea Atomic Energy Research Institute, Korea
- P-ET-014** **Improving simulated wind fields for better prediction of radioactive pollutant dispersion**
Kyo-Sun LIM¹, Jong-Myoung LIM¹, Hyeyum Hailey SHIN^{2,3}, Young-Yong JI¹, Wanno LEE¹
¹Korea Atomic Energy Research Institute, Korea, ²NOAA/Geophysical Fluid Dynamics Laboratory, ³University Corporation for Atmospheric Research, USA
- P-ET-015** **P-type doped ambipolar polymer transistors by direct charge transfer from a cationic organic dye pyronin B ferric chloride**
Gunel HUSEYNOVA¹, Yong XU², Benjamin Nketia YAWSON², Eul-Yong SHIN², Mi Jung LEE², Yong-Young NOH¹
¹Dongguk University, ²Kookmin University, Korea

- P-ET-016** Geological survey to construct paleo-geological evolution model around KURT area
S. JUNG¹, K.S. YENGKHOM², C.-W. OH², S.-H. JI¹
¹Korea Atomic Energy Research Institute, ²Chonbuk University, Korea
- P-ET-017** Temperature stability of (Bi,Na)TiO₃-based piezoelectric accelerometer
Gyoung-Ja LEE, Byung-Hoon KIM, Sun-A YANG, Jin-Ju PARK, Min-Ku LEE
Korea Atomic Energy Research Institute, Korea
- P-ET-018** The manufacturing process of energy source for a semi-permanent betavoltaic battery using radioisotope Ni-63
Jin Joo KIM, Sang Mu CHOI, Kwang Jae SON
Korea Atomic Energy Research Institute, Korea
- P-ET-019** Four cases of high-PM₁₀ episodes in Seoul, Korea under cyclonic circulation patterns over East Asia
Sun-Kyong HUR¹, Chang-Hoi HO¹, Youn-Seo KOO²
¹Seoul National University, ²Anyang University, Korea
- P-ET-020** Development of diagnostic technology of geometry and defects in U-bended steam generator tube
Kyung Mo KIM, Deok Hyun LEE, Ga-Hyun CHOI, Myung Sik CHOI
Korea Atomic Energy Research Institute, Korea
- P-ET-021** Surface CO₂ flux estimate using an inverse modeling system with surface and aircraft CO₂ observations
Hyunjung KIM, Hyun Mee KIM
Yonsei University, Korea
- P-ET-022** Gradual decrease in fine particles compared to coarse particles associated with recent hot summers in Seoul, Korea
Greem LEE, Chang-Hoi HO, Hye-Ryun OH
Seoul National University, Korea
- P-ET-023** Disaggregation of remotely sensed LST via SPCA and a guided filter for wildfire monitoring
Yonghyun KIM, Minkyung CHUNG, Yongil KIM
Seoul National University, Korea
- P-ET-024** Monitoring of geometrical defect signals in pipe using nondestructive ultrasonic method
Sebeom-OH, Yongmoo-CHEONG, Doekhyun-LEE, Gahyun-CHOI, Kyungmo-KIM
Korea Atomic Energy Research Institute, Korea
- P-ET-025** Evaluation of convective-scale forecast performance depending on covariance estimation in EnKF-based data assimilation system
SeHyun KIM, Hyun Mee KIM
Yonsei University, Korea
- P-ET-026** Finite element modeling of eddy current signal from deposit in steam generator tube
Ga-Hyun CHOI, Duck-Hyun LEE, Myung-Sik CHOI, Kyung-Mo KIM
Korea Atomic Energy Research Institute, Korea
- P-ET-027** Development of hybrid materials for energy devices
Heeyeon KIM¹, Guk Hyeon KWON^{1,2}, Jang Won O^{1,3}
¹Korea Institute of Energy Research, ²Yonsei University, ³Chnugnam National University, Korea
- P-ET-028** Characteristic of alternative metal oxide for verification of electrolytic reduction equipments
Jeong LEE, Sung-Wook KIM, Dong-hyun HEO, Sang-Kwon LEE, Eun-Young CHOI
Korea Atomic Energy Research Institute, Korea
- P-ET-029** Energy conversion and storage in the future energy system
Young KIM^{1,2}, Seok Ho YOON, Dong Ho KIM, Jun Seok CHOI, Kong Hoon LEE
¹Korea Institute of Machinery & Materials, ²University of Science and Technology, Korea
- P-ET-030** High O₃ episodes in Seoul 2016: VOC or NO_x limited?
Huijeong KIM¹, Meehye LEE¹, Seogju CHO², Jinsang JUNG³, Gangwoong LEE⁴
¹Korea University, ²Seoul Research Institute of Public Health and Environment, ³Korea Research Institute of Standards and Science, ⁴Hankuk University for Foreign Languages, Korea

- P-ET-031** High concentration episodes observed onboard R/V Gisang 1 over the Yellow sea
Inae KWON¹, Huijeong KIM¹, Hyunjin AHN¹, Meehye LEE¹, Beomcheol SHIN², Sangbum RYU², Jinsang JUNG³, Sangwoo KIM⁴
¹Korea University, ²National Institute of Meteorological Sciences, ³Korea Research Institute of Standards and Science, ⁴Seoul National University, Korea
- P-ET-032** Heterogeneous formation of HONO during high O₃ episodes in Seoul, 2016
Junsu GIL¹, Huijeong KIM¹, Meehye LEE¹, Jinsang JUNG², Deugsoo KIM³, Seogju CHO⁴, Gangwoong LEE⁵
¹Korea University, ²Korea Research Institute of Standards and Science, ³Kunsan National University, ⁴Seoul Research Institute of Public Health and Environment, ⁵Hankuk University of Foreign Studies, Korea
- P-ET-033** Decadal change of PAN & O₃ levels in Seoul during May and June
Hojun RHEE¹, Huijeong KIM¹, Woonchul CHOI¹, Meehye LEE¹, Gangwoong LEE², Jinsang JUNG³, HyeJung SHIN⁴
¹Korea University, ²Hankuk University of Foreign Studies, ³National Institute of Environmental Research, ⁴Korea Standards Research Institute, Korea
- P-ET-034** The ecotoxicity of water-soluble components in PM₁, PM_{2.5} and PM₁₀ at Gosan, Jeju
Joo-Ae KIM¹, Meehye LEE¹, Hye-On YOON², In Seon SUH¹
¹Korea University, ²Korea Basic Science Institute, Korea
- P-ET-035** Preliminary results of refractory black carbon physical properties and mixing state at Gosan climate observatory on Jeju during 2016 KORUS-AQ campaign
Saehee LIM¹, Inae KWON¹, Joo-Ae KIM¹, Marco ZANATTA², Meehye LEE¹, Paolo LAJ³, Sangwoo KIM⁴
¹Korea University, Korea, ²Alfred Wegener Institute for Polar and Marine Research, Germany, ³University Grenoble-Alpes, CNRS, Institut des Géosciences de l'Environnement, France, ⁴Seoul National University, Korea
- P-ET-036** High-concentration episodes observed onboard the NASA DC 8(<500m) in comparison with surface measurements
Inseon SUH¹, Jihwan SEO¹, Haneol JEON¹, Meehye LEE¹, Joo-Ae KIM¹, Limseok CHANG², Jason R SCHROEDER³
¹Korea University, ²National Institute of Environmental Research, Korea, ³Universities Space Research Association, National Aeronautics and Space Administration, USA
- P-ET-037** Effect of BVOCs on O₃ production at Taehwa research forest in June during 2011 ~ 2014
Hyunjin AN¹, Meehye LEE¹, Joo-Ae KIM¹, Saewung KIM², Alex GUENTHER², HyunSeok KIM³, Juhan PARK³, Hyunju PARK⁴
¹Korea University, Korea, ²University of California, USA, ³Seoul National University, ⁴National Institute of Environmental Research, Korea
- P-ET-038** Development of HuREX analysis interface for HRA data extraction
Seunghwan KIM, Sunyeong CHOI, Yochan KIM, Wondea JUNG, Jinkyun PARK
Korea Atomic Energy Research Institute, Korea
- P-ET-039** Application of domestic data for level 3 PSA cost evaluation
Sun Yeong CHOI, Seung-Cheol JANG, Ho-Gon LIM
Korea Atomic Energy Research Institute, Korea
- P-ET-040** High-O₃ episodes in Seoul 2015: VOC or NO_x limited?
Joo-Ae KIM¹, Hojun LEE¹, Meehye LEE¹, Jinsang JUNG², Donald.R.BLAKE³, Saewung KIM³, Deugsoo KIM⁴
¹Korea University, Korea, ²Korea Research Institute of Standards and Science, Korea, ³University of California Irvine, USA, ⁴Kunsan National University, Korea
- P-ET-041** Template matching after pose estimation for SARATR based on improved radon transform using the MSTAR public database
Ahrim HAN, Sang Wan KIM
Sejong University, Korea
- P-ET-042** Stabilization mechanism of heavy metals in mine tailings using basic oxygen furnace slag
Seulki JEONG¹, Sang Hyun KIM^{1,2}
¹Korea Basic Science Institute, ²Seoul National University, Korea

- P-ET-043** Genomic analysis reveals versatility of anaerobic energy metabolism in *Geosporobacter ferrireducens* IRF9
So-Jeong KIM¹, Young-Soo HAN¹, Joo Sung AHN¹, Sung-Keun RHEE²
¹Korea Institute of Geoscience and Mineral Resources, ²Chungbuk National University, Korea
- P-ET-044** Color control techniques for transparent a-Si: H solar cells with oxide/metal/oxide structure electrodes
Gayoung KIM^{1,2}, Jung Wook LIM^{1,2}, Sun Jin YUN^{1,2}
¹Electronics and Telecommunications Research Institute, ²University of Science and Technology, Korea
- P-ET-045** Development and validation of gas chromatography-triple quadrupole mass spectrometry method for quantitative determination of eight phthalates in medical devices
 So Hyeon JEON¹, Yong Pyo KIM², Young Lim KHO³, Yun Gyong AHN¹
¹Korea Basic Science Institute, ²Ewha Womans University, ³Eulji University, Korea
- P-ET-046** Phosphate oxygen isotope ratios: principles and applications
Sae Jung CHANG
 Korea Basic Science Institute, Korea
- P-ET-047** Identification and characterization of *Codonopsis lanceolata* according to the origin
Jeoung Hwa SHIN¹, Hee-Ock BOO²
¹Korea Basic Science Institute, ²PHYTO M&F Co. Ltd., Korea
- P-ET-048** WGS reaction over Pt/CeO₂ and Ce-Cu-Mn catalysts for H₂ production
Hyo Been IM¹, Ji Hye PARK², Kee Young KOO¹, Kwang Bok YI²
¹Korea Institute of Energy Research, ²Chungnam National University, Korea
- P-ET-049** Double-layer graphene catalyst on silicon photocathode for hydrogen production
Joonhee MOON
 Korea Basic Science Institute, Korea
- P-ET-050** Statistical analysis of WRF ensembles for typhoon track forecasts
Kyunghun KIM¹, Ji-Sun KANG², Wonsu KIM², Minsu JOH²
¹Kongju National University, ²Korea Institute of Science and Technology Information, Korea
- P-ET-051** Method evaluation for analysis of atmospheric SF₆ using preconcentration-GC-ECD
Gahae KIM^{1,2}, Miyeon PACK², Yera KIM², Doohyun YOON², YunSeong PACK², Jinbok LEE², Dongmin MOON², Jeongsik LIM², Jeongsoon LEE²
¹Chungnam National University, ²Korea Research Institute of Standards and Science, Korea
- P-ET-052** Dissimilar materials joining using laser system as an energy source
Su-Jin LEE¹, Seiji KATAYAMA², Jeong SUH¹
¹Korea Institute of Machinery & Materials, Korea, ²Osaka University, Japan
- P-ET-053** Measurement of trace HFC-134a, HCFC-22, HCFC-142b using LN2-less preconcentrator-GC/MSD
Doo Hyun YOON^{1,2}, Jeong Sik LIM², Dong Min MOON², Jinbok LEE², Yera KIM^{1,2}, Gahae KIM², Miyeon PARK^{1,2}, Yunseong PARK², Jeongsoon LEE²
¹University of Science and Technology, ²Korea Research Institute of Standards and Science, Korea
- P-ET-054** Effective carbonization method using a calcium citrate for high performance in Li-S batteries
Yunju CHOI, Sun-Young LEE, Jong-Seong BAE, Euh Duck JEONG
 Korea Basic Science Institute, Korea
- P-ET-055** Highly efficient solar light-driven photocatalytic activity of upconversion nanocrystal embedded mesoporous carbon-TiO₂ hybrid films
Hannah KWON¹, Kyungwha CHUNG¹, Yu Jin JANG¹, JiSeok LEE², Dong Ha KIM¹
¹Ewha Womans University, ²Ulsan National Institute of Science and Technology, Korea
- P-ET-056** Cross-linked gellan/pullulan polymeric binder for high performance Si anode in lithium-ion batteries
Sun-Young LEE¹, Jong-Seong BAE¹, Yunju CHOI¹, Jung Kyoo LEE², Euh Duck JEONG¹
¹Korea Basic Science Institute, ²Dong-A University, Korea
- P-ET-057** Development of spectral lineshape fitting program technique (data fitting and multiple lineshape fitting)
Yera KIM^{1,2}, Jeongsoon LEE^{1,2}, Miyeon PARK^{1,2}, Gahae KIM¹, YunSeong PARK¹, Dohyun YOON^{1,2}, Jeongsik LIM^{1,2}
¹Korea Research Institute of Standards and Science, ²University of Science and Technology, Korea

- P-ET-058** Sediment microbial community related to phosphate-induced arsenic mobilization in Wetland Mesocosms
Hee Sun MOON¹, Zheyun ZHANG², Peter R. JAFFE³
¹Korea Institute of Geoscience and Mineral Resources, Korea, ²Lawrence Berkeley National Laboratory, USA, ³Princeton University, USA
- P-ET-059** Hierarchical magnetic nanoparticles for heavy metal removal
Ji sun KIM^{1,2}, Hyokyung JEON¹, Ha-jin LEE^{1,2}
¹Korea Basic Science Institute, ²Ewha Womans University, Korea
- P-ET-060** Stability evaluation of sub-nanomole per mole levels dimethyl sulfide primary standard gas mixtures using traceable dynamic dilution method
Mi Eon KIM^{1,2}, Ji Hwan KANG¹, Yong Doo KIM¹, Sangil LEE^{1,3}
¹Korea Research Institute of Standards and Science, ²Yonsei University, ³University of Science and Technology, Korea
- P-ET-061** Study of cross-linked solid polymer electrolyte for lithium sulfur battery
SoHyun PARK^{1,2}, Dongwon KIM¹, Jungdon SUK²
¹Hanyang University, ²Research Institute of chemical Technology, Korea
- P-ET-062** Development of a PSA-based loss of large area analysis method
Meejeong HWANG¹, Woosik JUNG², Myungsu KIM³
¹Korea Atomic Energy Research Institute, ²Sejong University, ³Central Research Institute, Korea
- P-ET-063** The analytical measurement of chlorofluorocarbons (CFC-11, CFC-12, CFC-113) with FTIR
Miyeon PARK^{1,2}, YunSeong PARK², Gahae KIM², Yera KIM^{1,2}, Doohyun YOON^{1,2}, Jinbok LEE², Jeongsoon LEE²
¹Korea University of Science and Technology, ²Korea Institute of Standard and Science, Korea
- P-ET-064** Effects of oxygenated fuels on soot from diesel spray
Wonah PARK¹, Rolf D. REITZ²
¹Korea Institute of Machinery & Materials, ²University of Wisconsin-Madison, USA
- P-ET-065** Flexible p-type PEDOT: PSS/amorphous silicon thin film solar cells on polyimide substrates
Yoo Jeong LEE^{1,2}, Changbong YEON^{1,2}, Jung Wook LIM^{1,2}, Sun Jin YUN^{1,2}
¹Electronics and Telecommunications Research Institute, ²University of Science and Technology, Korea
- P-ET-066** The 3D scientific visualization using VAPOR for huge and massive data in time and space
Seulgi HONG¹, Jin-Hee YUK², Junghyun PARK², Jooneun AN², Minsu JOH², Dongmin JANG²
¹Chungnam University, ²Korea Institute of Science and Technology Information, Korea
- P-ET-067** Development of passive system for safety improvement of nuclear power plant
Sanghee KANG
 Korea Hydro&Nuclear Power Co., Ltd, Central Research Institute, Korea
- P-ET-068** Trace analysis of impurities in HFC-134a by gas chromatograph
Myeongja KIM², YunSeong PARK^{1,2}, Miyeon PARK², Gahae KIM², Year KIM², Doohyun YOON², Jeongsoon LEE²
¹Chungnam National University, ²Korea Research Institute of Standards and Science, Korea
- P-ET-069** Hydrolysis of endosulfan by Fe(0)/iron oxide
MiSeon CHO, Dong-Wuk KIM, Hyeon-Min KIM, Cheol-Min CHO, Kwan-Seok PARK, Hyeon-Jun YOON, Samyoung AHN
 Suncheon national university, Korea
- P-ET-070** Researches and applications of cryogenic expansion systems
Jeong Kyun SEO, Sehwan IN, Hankim YEOM
 Korea Institute of Machinery & Materials, Korea
- P-ET-071** An improvement of quality assurance (QA) process for software development considering insights from previous applications
S.H. PARK, D.H. KIM, B.D. CHUNG, Jongtae KIM
 Korea Atomic Energy Research Institute, Korea

- P-ET-072 Preparation and characterization of ceramic membrane for water purification**
 Yeo-Jin KIM^{1,2}, Ha-Sung KANG¹, Jeong KIM¹, Yeong-Hoon CHO¹, Pyung-Soo LEE¹, Hosik PARK¹, You-In PARK¹, Ho-Bum PARK², Seung-Eun NAM¹
¹Korea Research Institute of Chemical Technology, ²Hanyang University, Korea
- P-ET-073 Electrochemical properties and battery performances of solid polymer electrolytes containing new thiol-ene crosslinkers in lithium ion batteries**
 Hyunjoo KWAK, Jungdon SUK, Yongku KANG, Mijeong HAN
 Korea Research Institute of Chemical Technology, Korea
- P-ET-074 Estimation of mixing height using ceilometer and wind lidar data over Seoul, Korea**
 Sanghee LEE^{1,2}, Seung-On HWANG¹, Jhoon KIM²
¹Hankuk University of Foreign Studies, ²Yonsei University, Korea

BS (Basic Science)

- P-BS-001 Smart current sensing for electrical mining machines**
 Ariunbolor PURVEE¹, Robert MORELOS-ZARAGOZA², Erdenebolor BOLORMAA¹
¹Mongolian University of Science and technology, Mongolia, ²San José State University, USA
- P-BS-002 Estimation unbalance in rotor of induction motors by using vibration analysis**
 Munkjargal TSEDENDORJ¹, Ariunbolor PURVEE², Otgonchimeg CHOIDORJ³
¹Mongolian National University, ²Mongolian Institute for Resources and Technology, ³Mongolian University of Science and Technology, Mongolia
- P-BS-003 Evaluation of power quality of distribution panel of 0.4 Kv**
 Ariunbolor PURVEE¹, Munkhtsooj KHADBAATAR², Chimgee¹
¹Mongolian University of Science and Technology, ²Mongolian National University, Mongolia
- P-BS-004 Result of self-report of faculty members on the teaching perspectives inventory**
 Enkhtsetseg.BAL¹, Otgontsetseg.DUGARJAV²
¹Mongolian University of Science and Technology, ²Mongolian National Defense University, Mongolia
- P-BS-005 A case study on the stratospheric influence during tropical cyclone Peipah (2007) formation over the western North Pacific**
 Minhee CHANG¹, Chang-Hoi HO¹, Myung-Sook PARK²
¹Seoul National University, ²Korea Institute of Ocean Science & Technology, Korea
- P-BS-006 Relativistic analyses of intermediate energy proton scatterings from 58Ni**
 Sugie SHIM
 Kongju National University, Korea
- P-BS-007 Approach to analysis of biomedical samples for human exposure to chemical warfare agents**
 Suhyeon KIM, Yong Han LEE
 Agency for Defense Development, Korea
- P-BS-008 Phylogeographic patterns indicate cryptic species diversity in the red algae *Gloiopeltis furcata* (Gigartinales) from the northern Pacific region**
 Mi Yeon YANG¹, Eun Chan YANG², Gary W. SAUNDERS³, Myung Sook KIM¹
¹Jeju National University, ²Korea Institute of Ocean Science & Technology, Korea, ³University of New Brunswick, Canada
- P-BS-009 Dirac phenomenological analyses of proton inelastic scatterings from Ni isotopes**
 Sugie SHIM
 Kongju National University, Korea
- P-BS-010 Hagfishes of the southern sea of Korea: comparison of egg diameter and fecundity between *Eptatretus burgeri* and *Eptatretus* sp.**
 Young Sun SONG, Hea-Ja BAEK, Jin-Koo KIM
 Pukyong National University, Korea
- P-BS-011 Characterization of whole cells with indigo-reducing activity**
 Younsook SHIN, Eun-Sil CHOI, Kyunghye SON
 Chonnam National University, Korea

Poster Session II

13:00-14:00, September 1 (Fri), 2017

Lobby (B2 & 4F), Serve Room II (B2), Grand Ballroom (B2)

YWS Camp & SS Workshop

- P-YS-001 Understanding the importance of arc fault containment in LV switchgear and IEC 61641**
 Loo Yen TAN
 Member of Institution of Engineers Malaysia, Malaysia
- P-YS-002 A theoretical model of the cell membrane coupled to cytoskeleton**
 Chia-Chun LIANG¹, Kento YASUDA², Shigeyuki KOMURA², Hsuan-Yi CHEN^{3,4}
¹National Tsing Hua University, Taiwan, ²Tokyo Metropolitan University, Japan, ³National Central University, Japan, ⁴Academia Sinica, Taiwan
- P-YS-003 Modulation of tunicamycin-induced ER stress and cell death by globular adiponectin in primary rat hepatocytes**
 Amrita KHAKUREL, NirmalaTilija PUN, Pawan Kumar RAUT, Eun Hye KIM, Hye Jin OH, Aastha SHRESTHA, Pil-Hoon PARK
 Yeungnam University, Korea
- P-YS-004 Implement and development design of laboratory for emergency planning - prudent practices on power systems based on the PLC**
 Erdenechuluun KHURELBAATAR, Munkhtsooj KHADBAATAR
 Mongolian National University, Mongolia
- P-YS-005 Electrochemical desulphurization of coal and it is structural study**
 Battsengel BAATAR, Munkhshur MYEKHLAI, Yaruunaa TURMUNKH
 German-Mongolian Institute for Resources and Technology, Mongoli
- P-YS-006 Factors affecting HIV testing among sexually experienced adult population in Nepal**
 Bimala SHARMA, Eun Woo NAM
 Yonsei University, Korea
- P-YS-007 Maternal health care utilization and it's determents in Kwango, DR Congo**
 Sarita DHAKAL, Dong Eun SIN, Tae Ho LEE, Yean Hee KIM, Ho Cheol LEE, Eun Woo NAM
 Yonsei University, Korea
- P-YS-008 Design, synthesis and structure-activity relationship study of halogen containing 2-Benzylidene-1-Indanones derivatives for inhibition of ROS production**
 Aarajana SHRESTHA, Tara Man KADAYAT, Til Bahadur Thapa MAGAR, Ganesh BIST, Pramila KATILA, Pil-Hoon PARK, Eung-Seok LEE
 Yeungnam University, Korea
- P-YS-009 Modified cumulative sum (MCUSUM) algorithm for gradual change point detection in a process mean**
 Victoria JORRY, Hayong SHIN
 Korea Advanced Institute of Science and Technology, Korea
- P-YS-010 Preparation and evaluation of choline alfoscerate sustained-release tablet**
 Ki-Taek KIM, Trang Thi NGUYEN, Dae-Duk KIM
 Seoul National University, Korea
- P-YS-011 Role of p62 in the suppression of inflammatory cytokine production by adiponectin in macrophages: involvement of autophagy and p21/Nrf2 axis**
 Nirmala Tilija PUN, Pil-Hoon PARK
 Yeungnam University, Korea
- P-YS-012 Effect of permeation enhancers on topical skin deposition of S-methyl methionine**
 Ki Taek KIM, Voradanu VISETVICHAPORN, Dae-Duk KIM
 Seoul National University, Korea
- P-YS-013 Effects of intestinal microbiota on crocin metabolism in vivo and in vitro**
 Rajina SHAKYA, Mahesh Raj NEPAL, Mi-Jeong KANG, Tae Cheon JEONG
 Yeungnam University, Korea

- P-YS-014** Design, synthesis and SAR study of hydroxylated 2-Phenyl-4,6-dithienylpyridines as selective topoisomerase IIa inhibitor
Pramila KATILA¹, Ganesh BIST¹, Til Bahadur Thapa MAGAR¹, Aarajana SHRESTHA¹, Youngjoo KWON², Eung-Seok LEE¹
¹Yeungnam University, ²Ewha Womans University, Korea
- P-YS-015** The electrical characterization of polycrystalline solid electrolytes: application to lithium garnet oxide ionic conductors Li7La3Zr2012
Huyen Tran TRAN¹, Thuy Linh PHAM¹, Dang Thanh NGUYEN¹, Jee-Hoon KIM¹, Eui-Chol SHIN¹, Cheol-Woo AHN², Dong-Soo PARK², Jong-Sook LEE¹
¹Chonnam National University, ²Korea Institute of Materials Science, Korea
- P-YS-016** Pleiotropic effects of metformin in the brain of mouse
Nikita KATILA¹, Sunil BHURTEL², Sina SHADFAR, ³ Dong-Young CHOI¹
 Yeungnam University, Korea
- P-YS-017** Health system barriers in integrating physiotherapy rehabilitation/exercises for the management of uterine prolapse in Nepal
S. SUWAL
 Handicap International, Nepal
- P-YS-018** Adaptive frequency hopping for tactical narrowband software defined radio (using burst detection based spectrum sensing)
Rida SALIM¹, Shoab A. KHAN², Nabeel Ali KHAN³
¹Center for Advanced Studies in Engineering, ²National University of Sciences and Technology, ³Foundation University, Pakistan
- P-YS-019** Convolutional neural network for automated maxillofacial cone beam computed tomography segmentation
Vania MALINDA^{1,2}, Deukhee LEE^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-YS-020** A survey of energy-efficient cluster based routing protocols in wireless sensor networks
Lilian MUTALEMWA, Madiha RAZZAQ
 Chosun University, Korea
- P-YS-021** Underwater ROV manipulation using deep reinforcement learning
Yashashree JADHAV¹, Yong Seon MOON²
¹Sunchon National University, ²Redone Technologies Co., Ltd., Korea
- P-YS-022** ASSAAN: Smart forming and use of ICT
Tehmina SAHAR, Shakil MUHAMMAD, Adnan Mujahid KHAN
¹NESCAM, Pakistan, ²Korea Advanced Institute of Science and Technology, Korea, ³Warwick University, UK
- P-YS-023** The relationship between socioeconomic factors/health status and health behavior in Korean
Yeryeong HWANG¹, Iyn-Hyang LEE²
 Yeungnam University, Korea
- P-YS-024** Autonomous motion of a mobile robot
Albina KAMALOVA
 Yeungnam University, Korea
- P-YS-025** Gender, age and emotion from faces in the wild
 Sungeun HONG¹, Nanda ABHILASHA², Woobin IM³, Jonwoo PARK⁴, Hyun Seung YANG⁵
 Korea Advanced Institute of Science and Technology, Korea
- P-YS-026** Machine-to-machine communication in 3GPP LTE/LTE-A networks: architectures, challenges and state-of-the-art solutions
Devarani Devi NINGOMBAM
 Chosun University, Korea
- P-YS-027** Process mining based analysis of material purchasing process: an industrial application in ship and naval parts manufacturing company
Hind RBIGUI¹, Mohammed ALABSI², Chiwoon CHO¹
¹University of Ulsan, ²Dongseo University, Korea
- P-YS-028** Vehicle-to-vehicle communication with CHR model
Mohammed Abdulhakim ALABSI², Hind RBIGUI¹, Hoon Jae LEE²
¹University of Ulsan, ²Dongseo University, Korea
- P-YS-029** NEURA – IOT and privacy protection
Anushree Shivani PATNAIK
 Women in Science and Engineering, India
- P-YS-030** Synthesis, characterization and antibacterial studies of zinc(II) complexes with hexamethyl-tetraazacyclotetradecadiene Me6[14]diene and C-chiral isomers of its reduced analogue
Sabina YASMIN¹, Saswata RABI¹, Foni Bushon BISWAS², Tapashi Ghosh ROY¹, Falk OLBRICH³, Dieter REHDER³
¹University of Chittagong, Bangladesh, ²Mawlana Bhashani Science and Technology University, Bangladesh, ³University of Hamburg, Germany
- P-YS-031** Comparison of electron emission characteristics of W and CNT field emitter for microcolumn
Anjli SHARMA¹, Sanjeev K. KANTH¹, Ho-Seob KIM¹, Dae-Wook KIM¹, Seung Joon AHN¹, Tae-Sik OH¹, Young Chul KIM²
¹Sun Moon University, ²Eulji University, Korea
- P-YS-032** Preparation of different size of discoidal shaped nanoparticles via top- down method
Susmita ARYAL, E.S.OH, J.H.KEY
 Yonsei University, Korea
- P-YS-033** Optical and electrical properties of core-shell InAsP-InP nanowires
Rochelle LEE¹, Jae Cheol SHIN¹
 Yeungnam University, Korea
- P-YS-034** Ultrahigh performance of portable coaxial fiber-shaped asymmetric supercapacitor based on nanostructured MnO2/CNT-web paper and Fe2O3/ carbon fiber electrodes
Bebi PATIL¹, Suhyun AHN¹, Seongil YU¹, Hyeonjun SONG², Youngjin JEONG², Heejoon AHN¹
¹Hanyang University, ²Soongsil University, Korea
- P-YS-035** Incorporation of Pd catalyst at fuel electrode functional layer of thin-film-based solid oxide cell for low-temperature co-electrolysis
Cam-Anh THIEU^{1,2}, Hyoungchul KIM^{1,2}, Kyung Joong YOON^{1,2}, Jong-Ho LEE^{1,2}, Byung-Kook KIM¹, Ji-Won SON^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-YS-036** Models of solar and lunar motions in chinese zhongxiu-daming calendar
Go-Eun CHOI^{1,2}, Ki-Won LEE³, Byeong-Hee MIHN^{1,2}
¹Korea University of Science and Technology, ²Korea Astronomy and Space Science Institute, ³Daegu Catholic University, Korea
- P-YS-037** Study of thermophysical properties of bulk metallic glasses with electrostatic levitation device
Shraddha P. GANORKAR¹, Geun Woo LEE^{1,2}
¹Korea Research Institute Standards and Science, ²University of Science and Technology, Korea
- P-YS-038** Developing a collaboration framework for Korea space situational awareness mission
Syeun KIM¹, Jeongyoo HONG²
¹University of Science and Technology, ²Korea Astronomy and Space Science Institute, Korea
- P-YS-039** Two distinct types of CME-flare relationships based on SOHO and STEREO observations
Soojeong JANG¹, Yong-Jae MOON¹, Rok-Soon KIM², Sujin KIM², Jae-Ok LEE²
¹Kyung Hee University, ²Korea Astronomy and Space science Institute, Korea
- P-YS-040** Variation of hydroxyl distribution on the lunar surface by geomagnetic field
Eunjin CHO^{1,2}, Jaehyung YU³, Young-Jun CHOI^{1,2}, Yu Yi³, Ik-Seon HONG^{2,3}
¹University of Science and Technology, ²Korea Astronomy and Space Science Institute, ³Chungnam National University, Korea
- P-YS-041** Study of solar energetic particles depending on magnetic connectivity and CME properties using multiple spacecraft
Jinhye PARK, Yong-Jae MOON, Harim LEE
 Kyung Hee University, Korea

- P-YS-042 Tilted HI disk near the galactic center: simulations**
Joowon LEE, Sungsoo S. KIM
 Kyung Hee University, Korea
- P-YS-043 Analysis and control of taxi model of unmanned aerial vehicle**
Maryam WASIM
 National University of Computer and Emerging Sciences, Pakistan
- P-YS-044 Research into stability of exoskeletons, and risk mitigation, for paraplegic users.**
Amy Diann GARDNER, Frazer Kingsley NOBLE, Johan POTGIETER
 Massey University, New Zealand
- P-YS-045 Phylogenetic analysis of respiratory syncytial virus in Myanmar children**
Hsu Htet THWE, Kay Thi AYE, Aung Zaw LATT, Theingi Win MYAT, Sandar AUNG, Wah Wah AUNG, Hlaing Myat THU, Kwang-Soon SHIN, Kyaw Zin THANT
 Department of Medical Research, Myanmar
- P-YS-046 Multi-bioluminescence reporter system visualizes the interactions between cancer cells and bone microenvironment**
Misa MINEGISHI, Tatsuhiko ISOZAKI, Naoya KATAOKA, Takahiro KUCHIMARU, Tetsuya KADONOSONO, Shinae KIZAKA-KONDOH
 Tokyo Institute of Technology, Japan
- P-YS-047 Characterization of *Achromobacter* sp. biofilm for biodegradation of polycyclic aromatic hydrocarbons**
Minh Hong NGUYEN, Hang Thuy DINH, Mai Thi Ngoc DINH, Thao Kim Nu NGUYEN
 Vietnam National University, Vietnam
- P-YS-048 Direct visualization of *Orientia tsutsugamushi* in eschars from biopsy and monocytes of scrub typhus patients**
Hyun-Joo RO^{1,2,3}, Chi-Won CHOI¹, Sung Ho YUN¹, Edmond C. PARK^{1,2,3}, Hyun Seok, SONG^{1,2,3}, Sang-Yeop LEE^{1,2}, Hayoung LEE^{1,3}, Geon-Hwa KIM^{1,3}, Chang-Seop LEE⁴, Seung Il KIM^{1,2,3}, Sangmi JUN^{1,2,3}
¹Korea Basic Science Institute, ²Korea Research Institute of Chemical Technology, ³University of Science and Technology, ⁴Chonbuk National University, Korea
- P-YS-049 Cathepsin S expression is up-regulated by 5-HT7 receptor-dependent serotonin, signaling in triple negative human breast cancer cells**
Jaya GAUTAM, Jung-Ae-KIM
 Yeungnam University, Korea
- P-YS-050 Discovery of novel small molecule inhibitors of tnf-α treating inflammatory bowel disease: Ameliorating effect of ti-1-172 on rat colitis**
Suhrid BANSKOTA, Tara Man KADAYAT, Pallavi GURUNG, Eung-Seok LEE, Tae-Cheon JEONG, Jung-Ae KIM
 Yeungnam University, Korea
- P-YS-051 Regional differences in antihypertensive drug prescription in Korea.**
Da-Young SHIM, Iyn-Hyang LEE
 Yeungnam University, Korea
- P-YS-052 Lin 28 role in drosophila testis stem cell niche**
Van TO, Chang Soo KIM
 Choonam National University, Korea
- P-YS-053 Lactobacillus species from Korean fermented food provide protection against influenza virus infection in mice**
Sarita PAUDEL, Ha-Na YOUN, Seong-Su YUK, Sol JEONG, Jei-Hyun JEONG, Chang-Seon SONG
 Konkuk University, Korea
- P-YS-054 Participatory GIS in rural community development - experiences from education and research cooperation between Tottori University, Japan and University of Sciences, Hue University, Vietnam**
Do Thi Viet HUONG¹, Bui Thi THU¹, Tsutsui KAZUNOBU²
¹Hue University of Sciences, Vietnam, ²Tottori University, Japan
- P-YS-055 Application of damage models in microfracture of rock**
Rehema NDEDA¹, S. E. M. SEBUSANG¹, R. MARUMO¹, E. O. OGUR²
¹University of Botswana, Botswana, ²Technical University of Kenya, Kenya
- P-YS-056 Thin film solar cells based on SnS absorber material**
Shahara BANU^{1, 2}, Se Jin AHN^{1,2}, Jihye GWAK^{1,2}, Young Joo EO¹, Ara CHO^{1,2}
¹Korea Institute of Energy Research, ²University of Science and Technology, Korea
- P-YS-057 Silica-CNF hybrid catalyst support preparation and characterization for PEFCs**
Jahowa ISLAM^{1,2}, Sang-Kyung KIM^{1,2}, Sun-Mi HWANG¹, Gu-Gon PARK^{1,2}
¹Korea Institute of Energy Research, ²University of Science and Technology, Korea
- P-YS-058 Lithium-ion battery industry development and related energy policy in Taiwan**
Meng-Lun LEE^{1,2}
¹The Society of Taiwan Women in Science and Technology, ²Yuan Ze University, Taiwan
- P-YS-059 BTX from pyrolysis fuel oil (PFO) over CoMo/B catalyst**
Dipali P. UPARE¹, Chul Wee LEE^{1,2}
¹Korea Research Institute of Chemical Technology, ²University of Science and Technology, Korea
- P-YS-060 Characterization of green light source in AlGaInN-epitaxial structure optimization**
Thanh Thao TRAN, June-Key LEE
 Chonnam National University, Korea
- P-YS-061 Role of Na in solution-processed CuInSe2 devices: A different story for efficiency improvement**
Shanza REHAN^{1,2}, Jihyun MOON^{2,3}, Young-Joo EO^{1,2}, Ara CHO^{1,2}, Jihye GWAK^{1,2}, Seung Kyu AHN^{1,2}, SeJin AHN^{1,2}
¹University of Science and Technology, ²Korea Institute of Energy Research, ³Chungnam National University, Korea
- P-YS-062 Influence of deposition methods on copper oxide thin films for solar cell application**
Man Hieu TRAN, Jaeyeong HEO
 Chonnam National University, Korea
- P-YS-063 Sensitivities of initial soil moisture and land surface model-UTOPIA spin-up for agro-lands in changing climate in Cocconato, Italy**
Mariam HUSSAIN¹, Claudio CASSARDO^{1,2}, Seon Ki PARK³
¹Ewha Womans University, Korea, ²University of Torino, Italy, ³Center for Climate/Environment Change Prediction Research, Korea
- P-YS-064 Behaviour of deep excavation using earth retaining structures with auxiliary measures in Bangkok subsoils**
Najiha NADZRU
 Senior Civil Engineer, Geotechnical Engineering Division, Malaysia
- P-YS-065 Modelling for generator of absorption chiller with multi-heat sources**
Su Kyoung LEE, Yong Tae KANG
 Korea University, Korea
- P-YS-066 Offshore long-term wind speed forecasting using satellite measurements**
Jin-Young KIM, Hyun-Goo KIM, Yong-Heack KANG, Chang-Yeol YUN, Chang Ki KIM
 Korean Institute of Energy Research, Korea
- P-YS-067 Comparison of cloud cover between ground and satellite observations**
Shinyoung KIM¹, Chang Ki KIM¹, Yong-Heack KANG¹, Chang-Yeol YUN¹, Gilsoo JANG², Hyun-Goo KIM¹
¹Korea Institute of Energy Research, ²Korea University, Korea
- P-YS-068 An offshore wind powered blocking system of fine particulate cloud**
Ha-yang KIM¹, Chang Ki KIM¹, Su-duk KIM², Hyun-goo KIM¹
 Korea Institute of Energy Research, ²Ajou University, Korea
- P-YS-069 Comparative analysis of concentrated solar power performance with heliostat shape**
MinJoo KIM¹, HyunGoo KIM¹, JongGyu KIM¹, Taebeom SEO², YongHeack KANG¹
¹Korea Institute of Energy Research, ²Inha University, Korea
- P-YS-070 Alkali-activated slag – environmental construction materials**
Hoang Thi Bich Huyen
 Chonnam National University, Korea
- P-YS-071 Electrical conductivity relaxations in dual-phase materials for oxygen transport membranes application**
Thuy-Linh PHAM¹, Ji-Haeng YU², Jong-Sook LEE¹
¹Chonnam National University, ²Korea Institute of Energy Research, Korea

- P-YS-072** **Synthesis of Pd nanoparticles by pulsed laser ablation for Pt coated electro-catalysts**
 Susanne MINKUS¹, Christian HÄNSEL², Eunjik LEE², Seok-Hee PARK², Gu-Gon PARK²
¹Technical University of Munich, Germany, ²Korea Institute of Energy Research, Korea
- P-YS-073** **Polarity and dopant effect of ZnO single crystal on the photochemical performance**
 Thi Lan TRAN, Dang Thanh NGUYEN, Eui-Chol SHIN, Jong-Sook LEE
 Chonnam National University, Korea
- P-YS-074** **Alternative buffer layer development in Cu(In,Ga)Se₂ thin film solar cells**
 Marlena OSTRYSZ, Jihye GWAK, Ara CHO
 Korea Institute of Energy Research, Korea
- P-YS-075** **Fabrication of CZTSSe thin films using co-evaporation process for solar cell application**
 Na Kyoung YOUN^{1,2}, Jihye GWAK¹, Jae Ho YUN¹, Young-Joo EO¹, Kihwan KIM¹, Ara CHO¹, Joo Hyung PARK¹, Se Jin AHN¹, Jin Su YOO¹, Seung Kyu AHN¹, Jun Sik CHO¹, Dong Hwan KIM²
¹Korea Institute of Energy Research, ²Korea University, Korea
- P-YS-076** **Application of Cu(In,Ga)Se₂ thin film solar cells for flexible devices**
 Yuna CHO, Jae Ho YUN, Young-Joo EO, Kihwan KIM, Ara CHO, Joo Hyung PARK, Se Jin AHN, Jin Su YOO, Seung Kyu AHN, Jun Sik CHO, Jihye GWAK
 Korea Institute of Energy Research, Korea
- P-YS-077** **Proposal on reducing/minimizing the use of polythene in supermarkets**
 Upekha Tharindi SENARATHNA
 Women in Science and Engineering, Sri Lanka
- P-YS-078** **Ground coal bottom ash as a reactive mineral admixture for high performance fine-grained concrete**
 Thi Hue TA^{1,2}, Thi Quynh Nhu NGUYEN^{2,3}, Thanh Ha LE³
¹University of Transport and Communications-Campus in Ho Chi Minh City, ²Vietnam Association for Intellecture Woman, ³University of Transport and Communications, Vietnam
- P-YS-079** **Environmental and social aspects of urban children's accessibility to recreational open spaces: A study on Dhaka South City Corporation**
 Raisa SULTANA¹, Nurul Islam NAZEM²
¹Asiatic Society of Bangladesh, ²University of Dhaka and Honorary Secretary, Bangladesh
- P-YS-080** **Compressive strength of high performance fine-grained concrete containing coal bottom ash under various curing conditions**
 Thi Quynh Nhu NGUYEN^{1,2}, Thi Hue TA^{2,3}, Gia Ngoc Tu HOANG¹, Thanh Ha LE¹
¹University of Transport and Communications, ²Vietnam Association for Intellecture Woman, ³University of Transport and Communications-Campus in Ho Chi Minh City, Vietnam
- P-YS-081** **Factors influencing place attachment for endogenous rural development: A case study of tawarayama district, Nagato City, Yamaguchi Prefecture, Japan**
 Sae SHINZATO
 Tokyo University of Agriculture and Technology, Japan
- P-YS-082** **Comparative analysis of labeling guidelines for prescribing medications**
 Yu-Jin KANG, lyn-Hyang LEE
 Yeungnam University, Korea

NT (Nano Technology)

- P-NT-001** **Long-term generation of hydrogen peroxide and its diffusion characteristics for the clinical application of the tissue-regenerative all-metallic implants**
 Hae Won HWANG¹, Gayoung JUNG¹, Sangwook WU², Jeong-Yun SUN³, Myoung-Ryul OK¹
¹Korea Institute of Science and Technology, ²Pukyong University, ³Seoul National University, Korea
- P-NT-002** **Cotton fiber with improved protection against chemical warfare agents**
 Hyunsook JUNG, Sunghun KIM, HyunBae PARK, Sam Gon RYU
 Agency for Defense Development, Korea

- P-NT-003** **Zn-MOFs containing flexible dicarboxylates with 1,2-Bis[4-pyridyl]ethane or 1,2-Bis[4-pyridyl]ethylene ligands**
 Youngmee KIM¹, Hyun-Chul KIM², Seong HUH², Sung-Jin KIM¹, Do Nam LEE³
¹Ewha Womans University, ²Hankuk University of Foreign Studies, ³Kwangwoon University, Korea
- P-NT-004** **Design and development of novel antimicrobial peptides derived from natural source**
 Ji-Sun KIM, Ji-Ho JEONG, Yongae KIM
 Hankuk University of Foreign Studies, Korea
- P-NT-005** **Construction of diverse home-built solid-state NMR probes for specific purposes**
 Ji-Ho JEONG, Ji-Sun KIM, Yongae KIM
 Hankuk University of Foreign Studies, Korea
- P-NT-006** **Study on morphology of NiO particles from aqueous droplet in flame aerosol reactor**
 Shin Ae SONG, Sung Nam LIM, Kiyung KIM
 Korea Institute of Industrial Technology, Korea
- P-NT-007** **The effect of bath condition on grain size and thermal diffusion of electroplated nickel and cobalt**
 Young Rang UHM¹, Byoung Gun CHOI², Kwang Jae SON¹, Sang Mu CHOI¹, Jin Joo KIM¹
¹Korea Atomic Energy Research Institute, ²Electronics and Telecommunications Research Institute, Korea
- P-NT-008** **Reversible regulation of enzyme activity by ph-responsive DNA tetrahedron nanostructure**
 Seong Ho KIM^{1,2}, So Yeon KIM^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-NT-009** **Synthesis of benzene tetra carboxamide polyimine (BTCP) and properties, and applications of BTCP in the epoxy resin**
 Seoyoon YU, Bongkuk SEO, Chungsun LIM
 Korea Research Institute of Chemical Technology, Korea
- P-NT-010** **Electronic structures of strained InAs_xP_{1-x} using computational quantum mechanical calculations**
 Seung Mi LEE, Min Young KIM, Young Heon KIM
 Korea Research Institute of Standards and Science, Korea
- P-NT-011** **Silk-fibroin-based memristor in cross-bar architecture**
 Geon KOOK, Mikyung KIM, Sungwoo LEE, Hyunjo J. LEE
 Korea Advanced Institute of Science and Technology, Korea
- P-NT-012** **Nitrogen-doped carbon with transition metal coordination for electrochemical CO₂ reduction**
 Hyejin JUNG^{1,2}, Yun Jeong HWANG^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-NT-013** **Gold nanorods conjugated defective TiO₂ nanoparticles for photothermal and photodynamic cancer therapy**
 Jooran LEE¹, Young Hwa LEE², Chan Bae JEONG¹, Joon Sig CHOI², Ki Soo CHANG¹
¹Korea Basic Science Institute, ²Chungnam National University, Korea
- P-NT-014** **A microfluidic device for lipid extraction using super absorbent polymer**
 Geul BANG¹, Junghyo YOON², Yeong Jun YU¹, Seok CHUNG², Young Hwan KIM^{1,3}, Jeong Ah KIM^{1,3}
¹Korea Basic Science Institute, ²Korea University, ³University of Science and Technology, Korea
- P-NT-015** **Lattice transparency of graphene**
 Sieun CHAE^{1,2}, Seunghun JANG³, Won Jin CHOI¹, Soo Sang CHAE¹, Youn Sang KIM², Hyunju CHANG³, Tae Il LEE⁴, Jeong-O LEE¹
¹Korea Research Institute of Chemical Technology, ²Seoul National University, ⁴Gachon University, Korea
- P-NT-016** **Mechano-chemical synthesis of ZnS and its fabrication of transparent ceramics**
 Hak-Young AHN^{1,2}, Won Jun CHOI¹, Seung Yong LEE¹, Byeong-Kwon JU², So-Hye CHO^{1,3}
¹Korea Institute of Science and Technology, ²Korea University, ³Korea University of Science and Technology, Korea

- P-NT-017** Enzymatic exosomes with GPI-anchored hyaluronidase for enhanced tumor penetration and antitumor efficacy
Yeonsun HONG, Yoosoo YANG, In-San KIM
Korea Institute of Science and Technology, Korea
- P-NT-018** Magnetic iron oxide nanoneedles containing multi-metallic nanoparticles for the catalytic reduction of 4-nitrophenol
Hyokyung JEON¹, Ha-Jin LEE^{1,2}
¹Korea Basic Science Institute, ²Ewha Womans University, Korea
- P-NT-019** Structural evolution of carbon nanomaterials by laser pulse using approximate quantum mechanical calculations
Seung Mi LEE¹, Thomas A. NIEHAUS²
¹Korea Research Institute of Standards and Science, Korea, ²Université de Lyon, France
- P-NT-020** Degradation of phenol by electro fenton reaction, using Sulphur doped iron oxide as effective catalysts
Yunjeong CHOE, Ji Young BYUN, Sang Hoon KIM
Korea Institute of Science and Technology, Korea
- P-NT-021** Effect of Fe particle size and distribution on the hydrogenation properties of ball-milled nano-crystalline powder mixture of Fe and Mg
Julien FADONUGBO^{1,2}, Jee-Yun JUNG^{1,3}, Jin-Yoo SUH^{1,2}, Young-Su LEE¹, Jae-Hyeok SHIM¹, Young Whan CHO¹
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, ³Korea University, Korea
- P-NT-022** Synthesis of large-area multilayer hexagonal boron nitride for high material performance
Soo Min KIM
Korea Institute of Science and Technology, Korea
- P-NT-023** High throughput differential identification of abnormal fusion genes in prostate cancer patient urine
Hyojin LEE¹, Dongjin LEE^{1,2}, Kwan Hyi LEE^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-NT-024** Hit discovery of 4-amino-N-{4-[3-trifluoromethyl]phenoxy}pyrimidin-5-yl)benzamide: a novel EGFR inhibitor
Sora PAIK¹, Ahmed ELKAMHAWY^{2,3}, Yong Sup LEE¹, Eun Joo ROH^{2,4}
¹Kyung Hee University, Korea, ²Korea Institute of Science and Technology, Korea, ³Mansoura University, Egypt, ⁴Korea University of Science and Technology, Korea
- P-NT-025** Synthesis of Y₂O₃: Bi₃+, Eu₃+@SiO₂-based spectral converter for solar cell application
Dmytro KOTOV, Dinh Thi Thuy DUONG, So-Hye CHO
Korea Institute of Science and Technology, Korea
- P-NT-026** Fabrication of silicon template with intaglio nano-dome array structure
Hee-Kyoung BAE, Dongwook LEE, Dongeun YOO, Hae-Chul HWANG, BJ LEE
National NanoFab Center, Korea
- P-NT-027** FRET-based visualization of PDGF receptor activation at membrane microdomains
Jihye Seong^{1,2,3}, Min HUANG¹, Kyoung Mi SIM², Hyunbin KIM^{2,3}, Yingxiao WANG^{1,4}
¹University of Illinois, USA, ²Korea Institute of Science and Technology, Korea, ³Kyung Hee University, Korea, ⁴University of California, USA
- P-NT-028** Suppression of polysulfide channel formation using P/g-C₃N₄ as an efficient membrane for long life lithium-sulphur batteries
Deepika GOYAL, Kwang-Ryeol LEE
Korea Institute of Science and Technology, Korea
- P-NT-029** Oxygen evolution reaction activity enhancement of Ni(OH)₂/NiOOH electrocatalyst on modified carbon supports
Si Young LEE^{1,2}, Hyejin JUNG^{1,2}, Yun Jeong HWANG^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea

- P-NT-030** Enhancement of electrochemical carbon dioxide reduction activity on stable surface oxygen species in silver nanostructures
Michael Shincheon JEE^{1,2}, Hyejin JUNG^{1,3}, Yun Jeong HWANG^{1,3}
¹Korea Institute of Science and Technology, ²Korea University, ³Korea University of Science and Technology, Korea
- P-NT-031** Developing overhauser dynamic nuclear polarization nuclear magnetic resonance systems for signal enhancement
JiWon KIM^{1,2}, Seung-Bo SAUN¹, Oc Hee HAN^{1,2}
¹Korea Basic Science Institute, ²Ewha Womans University, Korea
- P-NT-032** Inhibition of plasminogen activator inhibitor-1 and anti-metastatic activity of EGCG conjugates in human breast cancer cells
Seonhye SHIN, Mi Kyoung KIM, Youhoon CHONG
Konkuk University, Korea
- P-NT-033** Epigallocatechin (EGC), a flavonoid from green tea, shows the early and advanced glycation end product modification of albumin
Eunryeol SHIN¹, Mi Kyoung KIM², Youhoon CHONG²
¹Kyonggi University, ²Konkuk University, Korea
- P-NT-034** A novel probe with a chlorinated α -cyanoacetophenone acceptor moiety shows near-infrared fluorescence specific for tau fibrils
Kyungha YOO, Mi Kyoung KIM, Youhoon CHONG
Konkuk University, Korea
- P-NT-035** Synthesis and upconverting behaviors of stoi- and nonstoichiometric luminescent materials derived from Lanthanum (Yttrium) oxyfluoride host lattices
J. HONG, S. JUNG, Y. GU, C. PARK, S. YANG, S. PARK
Silla University, Korea
- P-NT-036** Transmission kikuchi diffraction method in scanning electron microscope to visualize nitrogen-doped holey graphene monolith and study nano-oxides and ultrafine metallic grains
Hwanuk GUIM¹, Majid ABBASI², Dong-Ik KIM³, Seung Mi LEE⁴
¹Korea Basic Science Institute, ²SK Innovation, ³Korea Institute of Science and Technology, ⁴Korea Research Institute of Standards and Science, Korea
- P-NT-037** Application of a new chiral stationary phase based on (+)-(18-crown-6)-2,3,11,12-tetracarboxylic acid without extra free aminoundecyl groups on the silica surface
Ji Yeong SUNG¹, Su Min LEE^{1,2}, Jong Sung JIN¹
¹Korea Basic Science Institute, ²Dong-A University, Korea
- P-NT-038** Development of simultaneous analysis of arsenic species by using HPLC-ICP-MS includes dimethylmonothioarsinic acid and dimethyldithioarsinic acid
Hosub LEE¹, Seulki JEONG¹, Youn-Tae KIM², Hye-On YOON¹
¹Korea Basic Science Institute, ²Yonsei University, Korea
- P-NT-039** Improvement of sample preparation to determine fluorine in soil using wavelength dispersive X-ray fluorescence spectrometry
Doyoung KIM¹, Youn-Tae KIM², Seulki JEONG¹, Hye-On YOON¹
¹Korea Basic Science Institute, ²Yonsei University, Korea
- P-NT-040** Distinctive luminescent property of Ba₂Y₂Si₆O₂₄: Bi, Eu phosphors based on the site-selected substitution
H. YUN, H. SON, S. PARK
Silla University, Korea
- P-NT-041** Defect-induced self-activating luminescence property of oxyfluoride materials
S. YANG, S. JUNG, S. PARK
Silla University, Korea
- P-NT-042** Removal of As (V) and Cr (VI) and organic pollutants with 3D flower like layered double oxide (LDO) nanocrystals
Mahfuza MUBARAK^{1,2}, Shahinul ISLAM², Ha-jin LEE^{1,2}
¹Korea Basic Science Institute, ²Ewha Womans University, Korea

- P-NT-043** Structural and optical properties of PbS and PbSe prepared by hydrothermal and by selenization treatment
Jungdong KIM¹, Hak-Young AHN², Won Jun CHOI², So-Hye CHO², Eunsoon OH¹
¹Chungnam National University, ²Korea Institute of Science and Technology, Korea
- P-NT-044** Nanomaterials for improving the sensitivity of optical sensors
Kyungwha CHUNG, Dong Ha KIM
Ewha Womans University, Korea
- P-NT-045** Surface modified stainless steel for oxygen evolution reaction catalyst via selenization process and mild electro-oxidation
Seung Yeon LEE^{1,2}, Woong KIM², Yun Jeong HWANG^{1,3}, Byoung Koun MIN^{1,2}
¹Korea Institute of Science and Technology, ²Korea University, ³Korea University of Science and Technology, Korea
- P-NT-046** Construction of bridged azabicyclic ring system via an oxidative mannich-type cyclization
Hanbyeol JO, Sun-Joon MIN
Hanyang University, Korea
- P-NT-047** Enhancing photoluminescence of Eu³⁺/SiO₂ thin film with silane coupling agents
Song Yi KIM^{1,2}, Jihee CHOI^{1,2}, Cheol-Hong CHEON², Joon Soo HAN¹
¹Korea Institute of Science and Technology, ²Korea University, Korea
- P-NT-048** Synthesis of metal oxide nanoparticles embedded in a porous carbon matrix and their lithium ion storage properties
You Na KO, Hae Jin KIM
Korea Basic Science Institute, Korea
- P-NT-049** Highly graphitized nitrogen-doped hollow core mesoporous shell carbon: role of Fe for energy conversion and storage system
Min Young SONG, Hae Jin KIM
Korea Basic Science Institute, Korea
- P-NT-050** Coordinative amphiphilic siRNA transporters
Eun-Kyoung BANG, Gyochang KEUM
Korea Institute of Science and Technology, Korea
- P-NT-051** Synthesis of azetidine-3-carboxylic acid derivatives as novel S1P1 agonist
Jieon LEE^{1,2}, Jeongeun LEE¹, Hyunah CHOO^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-NT-052** Synthesis of biphenyl-3-ylmethylamine derivatives as 5-HT₇ receptor modulators
Soyeon LEE^{1,2}, Youngjae KIM^{1,3}, Hyunah CHOO^{1,4}
¹Korea Institute of Science and Technology, ²Korea University, ³Yonsei University, ⁴Korea University of Science and Technology, Korea
- P-NT-053** The current status of 28 GHz electron cyclotron resonance ion source for VIBA at KBSI
Mi-Sook WON, Jin Yong PARK, Byoung-Seob LEE, Seong Jun KIM, Jung-Woo OK, Jang-Hee YOON, Jonggi HONG
Korea Basic Science Institute, Korea
- P-NT-054** Quantitative monitoring spectral redistribution of plasmonic coupling modes with structural transition of trimeric nanostructures
Haemi LEE¹, Jung-Hoon LEE², Jwa-Min NAM², Yung Doug SUH¹
¹Korea Research Institute of Chemical Technology, ²Seoul National University, Korea
- P-NT-055** Organic semiconductor properties of fluorinated conducting polymer
Ahra YI, Sangmin CHAE, Ina JEONG, Hongsuk SUH, Hyojung KIM
Pusan National University, Korea
- P-NT-056** Advanced spectroscopic investigation of the high-valent cobalt-oxo complex
Yujeong KIM^{1,2}, Yoo Kyung GO¹, Wonwoo NAM², Sun Hee KIM^{1,2}
¹Korea Basic Science Institute, ²Ewha Womans University, Korea
- P-NT-057** Multi-technique EPR study of Cu-Aβ-inhibitor ternary complex
Sugyeong HONG^{1,2}, Yoo Kyung GO², Mi Hee LIM³, Sun Hee KIM²
¹Ewha Womans University, ²Korea Basic Science Institute, ³Ulsan National Institute of Science and Technology, Korea
- P-NT-058** Effect of co-contaminants on benzene biodegradation in the soil
Hyunji KIM, Seulki JEONG, Hosub LEE, Hyeon YOON
Korea Basic Science Institute, Korea
- P-NT-059** Analytical methods of benzene, toluene, ethylbenzene and xylenes (BTEX) in contaminated soils
A-Ri SEO, Seulki JEONG, Hye-On YOON
Korea Basic Science Institute, Korea
- P-NT-060** Fabrication of nanowire-based nonviral vector for effective delivery of DNA into stem cells
KkotChoRong PARK^{1,2}, Bongsoo KIM¹, Taejoon KANG²
¹Korea Advanced Institute of Science and Technology, ²Korea Research Institute of Bioscience and Biotechnology, Korea
- P-NT-061** Discovery of novel N9-cis-cyclobutylpurine analogues as cyclin-dependent kinase (CDK) inhibitors
Yerin JANG¹, Miyoun YOO¹, Joo-Youn LEE¹, Chi Hoon PARK^{1,2}, Jong Yeon HWANG^{1,2}, Jae Du HA¹
¹Korea Research Institute of Chemical Technology, ²University of Science & Technology, Korea
- P-NT-062** Development of selective 5-HT_{2c} PET radioligands for brain imaging
JuHyeon KIM^{1,2}, Areum JUNG³, Sun-Joon MIN³
¹Korea Institute of Science and Technology, ²Korea University, ³Hanyang University, Korea
- P-NT-063** Lipotoxicity of well-controlled linoleic acid nanoparticles
Se-Hwa KIM, Eun-Soo LEE
Korea Research Institute of Standards and Science, Korea
- P-NT-064** Stacking-sequence optimization of Au-doped graphene with graphene oxide for flexible transparent electrodes
Su Jin LEE^{1,2}, Yi Rang LIM¹, Seulgi JI¹, Seong Ku KIM¹, Yoeheung YOON¹, WooSeok SONG¹, Sung MYUNG¹, Jongsun LIM¹, Ki-Seok AN¹, Jin-Seong PARK², Sun Sook LEE¹
¹Korea Research Institute of Chemical Technology, ²Hanyang University, Korea
- P-NT-065** Induced target degradation of anaplastic lymphoma kinase (ALK) by target degraducers (TDs)
Ahra GO, Dong Ho LEE, Chi-Hoon PARK, Chung Hyo KANG, Chong Ock LEE, Jae Du HA, Jong Yeon HWANG
Korea Research Institute of Chemical Technology, Korea
- P-NT-066** Cisplatin-mediated formation of chitosan nanoparticles with attenuated viscosity and pH-sensitive drug release
Ji-Yeong KWON, Yeojin KIM, Sang-Min LEE
The Catholic University of Korea, Korea
- P-NT-067** Research on synthesis of nanoparticles with biodegradable polymers
Cho-long JUNG, Seung-Chul PARK, Youngdo JUNG, Hyuneui LIM
Korea Institute of Machinery & Materials, Korea
- P-NT-068** Dispersion behavior of surface modified zirconia with silane coupling agent in organic solvent
Hee-Seon LEE^{1,2}, Hyung Mi LIM¹
¹Korea Institute of Ceramic Engineering & Technology, ²Gyoungsang University, Korea
- P-NT-069** Tailoring of reduced graphene oxide by controlled flash annealing in 'In-line' solution process
Geonhee LEE^{1,2}, Soosang CHAE¹, Seulgi JI¹, Dowon JEONG¹, Sun Sook LEE¹, Sungsu PARK², Jeong-O LEE¹
¹Korea Research Institute of Chemical Technology, ²Sungkyunkwan University, Korea
- P-NT-070** Study on reactor for production of rutile TiO₂ nanoparticles
Seonghee LEE, Byeongjun JEON, Junghoon SHIN, Chonggun CHOI, Donghoon SHIN
Kookmin University, Korea
- P-NT-071** Copper-catalyzed hydroboration reaction
Won Jun JANG, Jaesook YUN
Sungkyunkwan University, Korea
- P-NT-072** Ultra-thin organometallic polymer memristor
Du Won JEONG, Soo Sang CHAE, Geonhee LEE, Jeong-O LEE
Korea Research Institute of Chemical Technology, Korea
- P-NT-073** One-step electrochemical fabrication of high quality graphene
Yeon Ju KWON^{1,2}, Youn KIM¹, Ho Seok PARK², Jae Uk LEE¹
¹Korea Research Institute of Chemical Technology, ²Sungkyunkwan University, Korea

- P-NT-074 Machine learning prediction of double perovskite bandgaps**
Jino IM¹, SeongWon LEE², Tae-Wook KO², Hyun Woo KIM¹, YunKyong HYON², Hyunju CHANG¹
¹Korea Research Institute of Chemical Technology, ²National Institute for Mathematical Sciences, Korea
- P-NT-075 Realization of high aspect ratio YZO nanorods via controlling the thickness of seed layer**
Narinder KAUR, Sejoon LEE, Deuk Young KIM
Dongguk University, Korea
- P-NT-076 Solution-processed lead sulfide quantum dot inks solar cells**
Hyekyoung CHOI^{1,2}, Sam S. YOON³, Sohee JEONG^{1,2}
¹Korea Institute of Machinery & Materials, ²Korea University of Science and Technology, ³Korea University, Korea
- P-NT-077 Pt-catalyzed methane oxidation to methyl bisulfate**
Huyen-Tran DANG^{1,2}, He-won LEE^{1,2}, Dabon LEE³, Jieon LEE¹, Hyunah CHOO¹, Soonhyuk HONG³, Honggon KIM^{1,2}, Hyunjoo LEE^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, ³Seoul National University, Korea
- P-NT-078 Synthesis of propylene carbonate from CO₂ and propylene oxide using ion exchange resin-supported zinc compound**
Shinhye CHO^{1,2}, Hewon LEE^{1,2}, Honggon KIM^{1,2}, Jungho JAE^{1,2}, Hyunjoo LEE^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-NT-079 The β -amyloid protein increases RhoA activity by SHIP2-mediated reduction of ARAP3 level**
Haenim LEE, Kyoung Mi SIM, Jeongmin JU, Ae Nim PAE, Jihye SEONG
Korea Institute of Science and Technology, Korea
- P-NT-080 Metabolomic analysis of persistent organic pollutants exposure in human plasma**
Seoyoung JANG^{1,2}, Geum-Sook HWANG^{1,2}
¹Korea Basic Science Institute, ²Ewha Womans University, Korea
- P-NT-081 Color tunable ultrasmall upconversion nanophosphors**
A-Ra HONG^{1,2}, Su Yeon KIM¹, So-Hye CHO¹, Kwangyeol LEE², Ho Seong JANG¹
¹Korea Institute of Science and Technology, ²Korea University, Korea
- P-NT-082 Study on impurity depth profiling of the steel by secondary ion mass spectrometry**
Mirang BYOEN, JungWoo OK, Min Ji KANG, Jun Ki KIM, TaeEun HONG
Korea Basic Science Institute, Korea
- P-NT-083 Synthesis of methyl N-phenyl carbamate from aniline and dimethyl carbonate using zinc imidazole framework-7**
Deliana DAHNUM^{1,2}, Jungho JAE^{1,2}, Honggon KIM^{1,2}, Hyunjoo LEE^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-NT-084 Design and synthesis of N-alkyl-carbazole derivatives as novel 5-HT₇R antagonists**
Rina KWAG¹, Youngjae KIM^{1,2}, Miyoung YEOM¹, Hyunah CHOO^{1,3}
¹Korea Institute of Science and Technology, ²Yonsei University, ³Korea University of Science and Technology, Korea
- P-NT-085 Fabrication of gold nano slits using crack lithography**
Sejeong Won¹, Hyun-June JUNG², Do Van LAM¹, Kwang-Seop KIM¹, Hak-Joo LEE², Jae-Hyun KIM¹
¹Korea Institute of Machinery & Materials, ²Center for Advanced Meta-Materials, Korea

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- P-ST-001 Classification of croplands through fusion of optical and SAR time series data**
Seonyoung PARK, Jungho IM
Ulsan National Institute of Science and Technology, Korea
- P-ST-002 Different chemical and dynamical environments in two high mass star forming regions, G19.61-0.23 and G75.78+0.34**
Giseon BAEK¹, Jeong-Eun LEE¹, Se-Hyung CHO², Youngjoo YUN²
¹Kyung Hee University, ²Korea Astronomy and Space Science Institute, Korea

- P-ST-003 Verification of a short arc optical observation strategy of the OWL-Net with the actual observation**
Jin CHOI^{1,2}, Jung Hyun JO^{1,2}, Kyoung-Min ROH¹, Hong-Suh YIM¹, Eun-Jung CHOI¹, Sungki CHO¹
¹Korea Astronomy and Space Science Institute, ²University of Science and Technology, Korea
- P-ST-004 LEO & GEO satellite conjunction analysis and collision avoidance strategies**
Junho LEE^{1,3}, Won-Gil KIM^{1,2}, Yoola HWANG², Byoung-Sun LEE^{1,2}, Daewon CHUNG^{1,3}
¹University of Science & Technology, ²Electronics and Telecommunications Research Institute, ³Korea Aerospace Research Institute, Korea
- P-ST-005 A study on the water-hammering type astronomical clock in the middle of the Joseon Dynasty**
Seon Young HAM^{1,2}, Sang Hyuk KIM^{2,3}, Yong Sam LEE¹
¹Chungbuk National University, ²Korea Astronomy and Space Science Institute, ³Korea University of Science & Technology, Korea
- P-ST-006 Prediction of the next rising position of unknown LEO satellite using one-way doppler measurements**
Won-Gil KIM^{1,2}, Junho LEE^{1,3}, Yoola HWANG², Byoung-Sun LEE^{2,1}
¹University of Science and Technology, ²Electronics and Telecommunications Research Institute, ³Korea Aerospace Research Institute, Korea
- P-ST-007 Optimization of a model to predict the solid soluble content of apples using hyperspectral data**
Ahram SONG, Woohyeon JEON, Yongil KIM
Seoul National University, Korea
- P-ST-008 Estimation of polarimetric orientation angle using optical images over urban area for disaster-induced damage detection**
Minyoung JUNG¹, Junho YEOM², Yongil KIM¹
¹Seoul National University, Korea, ²Texas A&M University Corpus Christi, USA
- P-ST-009 A study on the function and role of King Sejong era's Ganui around Huguk-hwan and Jeongguk-hwan**
Min-Soo LEE¹, Junhyeok JEON¹, Sang Hyuk KIM², Byeong-Hee MIHN², Sun Young Ham¹, Yong Sam LEE¹
¹Chungbuk National University, ²Korea Astronomy & Space Science Institute, Korea
- P-ST-010 Line feature-based image registration for the integration of optic and radar earth observation satellite data**
Junho YEOM¹, Minyoung JUNG², Yongil KIM²
¹Texas A&M University Corpus Christi, USA, ²Seoul National University, Korea
- P-ST-011 A study on object-based building extraction method using UAV imagery**
Hyejin KIM, Yongil KIM
Seoul National University, Korea
- P-ST-012 Turbulent properties in two different star-forming regions: the OMC 1-4 and L1688 regions**
Hyeong-Sik YUN¹, Jeong-Eun LEE¹, Yunhee CHOI¹, Seokho LEE¹, Minho CHOI², Hyunwoo KANG², Kenichi TATEMATSU³, Stella S. R. OFFNER⁴, Brandt A. L. GACHES⁴, Mark H. HEYER⁴, Neal J. EVANS II⁵, Yao-Lun YANG⁵
¹Kyung Hee University, Korea, ²Korea Astronomy and Space Science Institute, Korea, ³National Astronomical Observatory of Japan, Japan, ⁴University of Massachusetts Amherst, USA, ⁵University of Texas at Austin, USA
- P-ST-013 Evidence for episodic accretion in class i source IRAS 16316-1540**
Sung-Yoon YOON, Jeong-Eun LEE, Seokho LEE, Sunkyoung PARK
Kyung Hee University, Korea
- P-ST-014 Detection of sub-mm variability in a YSO (IC 53) in Serpens main**
Hyunju YOO^{1,2}, Jeong-Eun LEE², Doug JOHNSTONE³, Steve MAIRS⁴, Gregory HERCZEG⁵, Sung-Ju KANG⁶, Miju KANG⁶, Jungyeon CHO¹
¹Chungnam National University, Korea, ²Kyung Hee University, Korea, ³National Research Council, Canada, ⁴University of Victoria, Canada, ⁵Kavli Institute for Astronomy and Astrophysics, China, ⁶Korea Astronomy and Space Science Institute, Korea

- P-ST-015** Reentry prediction simulation of Tiangong-1 using STK and DRAMA
Siwoo KIM^{1,2}, Eunjung CHOI², Sungki CHO², Jaemyung Ahn¹
¹Korea Advanced Institute of Science and Technology, ²Korea Astronomy and Space Science Institute, Korea
- P-ST-016** Transition of combustion instability with swirl flow
Sulha LEE, SongEe HAN, Ji-Eun KIM, Min-Jeong YOO, Ji-Hye KIM, Changjin LEE
Konkuk University, Korea
- P-ST-017** Area-based image registration for multispectral satellite images in urban area
Yeji KIM, Yongil KIM
Seoul National University, Korea
- P-ST-018** Estimating ground-level particulate matter (PM) concentration using satellite-derived aerosol optical depth (AOD)
Seohui PARK, Minso SHIN, Jungho IM
Ulsan National Institute of Science and Technology, Korea
- P-ST-019** Analysis of crop phenology observed by the GOCI time-series images
Hwa-Seon LEE, Kyu-Sung LEE
Inha University, Korea
- P-ST-020** Phase transition of the arctic oceanic change using multi-satellite measurements
Hyuna KIM^{1,2}, Jinku PARK², Young Baek SON¹
¹Korea Institute of Ocean Science and Technology, ²Pusan National University, Korea
- P-ST-021** Altitudinal variation of the vertical plasma drift measured by the C/NOFS satellite
Jong-Min CHOI^{1,2}, Young-Sil KWAK¹, Jaeheung PARK¹, Hyosub KIL¹, Yong Ha KIM²
¹Korea Astronomy and Space Science Institute, ²Chung-nam National University, ³The Johns Hopkins University Applied Physics Laboratory Laurel, USA
- P-ST-022** Application of convolution neural networks for deep-space navigation system in harsh conditions
Jae-Hyuk KIM, Sang-Young PARK, Eunji LEE, Minsik KIM
Yonsei University, Korea
- P-ST-023** Risk analysis for types of reusable launch vehicle recovery
Hyojung AHN^{1,2}
¹Korea Aerospace Research Institute, ²Korea Advance Institute of Science and Technology, Korea
- P-ST-024** Signature of chemical differentiation in orion complex: lambda Orionis, Orion A and Orion B
Hee-Weon YI¹, Jeong-Eun LEE¹, Tie LIU², Kee-Tae KIM²
¹Kyung Hee University, ²Korea Astronomy Science Institute, Korea
- P-ST-025** High-resolution optical and near-infrared spectra of 2MASS J06593158-0405277
Sunkyoung PARK¹, Jeong-Eun LEE¹, Tae-Soo PYO², Hyun-Il SUNG³, Sang-Gak LEE⁴, Won Seok KANG⁴, Tae Seog YOON⁵, Won-Kee PARK³
¹Kyung Hee University, Korea, ²National Astronomical Observatory of Japan, USA, ³Korea Astronomy and Space Science Institute, Korea, ⁴National Youth Space Center, Korea, ⁵Kyungpook National University, Korea
- P-ST-026** Analysis of marine hazardous noxious substance optical characterization for satellite-based remote sensing detection
Jae Jin PARK¹, Kyung Ae PARK¹, Min Sun LEE¹, Moon Jin LEE², Deuk Jae CHO²
¹Seoul National University, ²Korea Research Institute of Ships and Ocean engineering, Korea
- P-ST-027** Validation of satellite-observed sea surface temperature, sea surface wind, and significant wave height with ieodo ocean research station measurements
Hye-Jin WOO¹, Doyoung CHOI¹, Kyung-Ae PARK¹, Joo-Young LEE², Do-Seong BYUN², Eunil LEE²
¹Seoul National University, ²Korea Hydrographic and Oceanographic Agency, Korea
- P-ST-028** Retrieval and validation of high resolution sea surface temperature using Landsat 8 satellite data
Jae-Cheol JANG, Kyung-Ae PARK
Seoul National University, Korea
- P-ST-029** Long-term land use change around Siheung-si from 1988 to 2016
Jae-Cheol JANG, Ye-Won YOON, Kyung-Ae PARK
Seoul National University, Korea
- P-ST-030** Characteristics of sea surface temperature errors in the Northwest Pacific using microwave satellites
Hee-Young KIM, Kyung-Ae PARK
Seoul National University, Korea
- P-ST-031** Comparisons of estimated sea ice concentration derived from SSMIS and Landsat 8 OLI/TIRS
Jae-Cheol JANG, Ji-Hyun LEE, Kyung-Ae PARK
Seoul National University, Korea
- P-ST-032** Comparison of hybrid and multi-band sea surface temperature retrieval algorithms using geostationary satellite data
Hye-Jin WOO, Kyung-Ae PARK
Seoul National University, Korea
- P-ST-033** Spatial and temporal variation of significant wave height using satellite altimeter data and its potential impact on marine ecosystem in the East/Japan Sea
Hye-Jin WOO, Kyung-Ae PARK
Seoul National University, Korea
- P-ST-034** Development of flight software validation tool
Su-Hyun PARK
Korea Aerospace Research Institute, Korea
- P-ST-035** Activities for space weather in Korea
Roksoon KIM^{1,2}, Sujin KIM^{1,2}, Kyungsuk CHO^{1,2}, Youngdeuk PARK¹
¹Korea Astronomy and Space Science Institute, ²University of Science and Technology, Korea
- P-ST-036** Development of integrated departure/arrival management system
Hyounkyoung KIM, Daekeun JEON, Yeonju EUN, Myeongsook JEONG, Eun-Mi OH
Korea Aerospace Research Institute, Korea
- P-ST-037** The GEO-KOMPSAT-2A ground system development
Hyun-Su LIM, In-Hoi KOO
Korea Aerospace Research Institute, Korea
- P-ST-038** Solar cycle variation of microwave polar brightening and EUV coronal hole observed by Nobeyama Radioheliograph and SDO/AIA
Sujin KIM^{1,2}, Jong-Yeop PARK^{1,3}, Yeon-Han KIM^{1,2}
¹Korea Astronomy and Space Science Institute, ²University of Science and Technology, ³Kyung Hee University, Korea
- P-ST-039** Tropical ionization trough seen by Swarm satellites
Woo Kyoung LEE¹, Hyosub KIL², Larry J. PAXTON²
¹Korea Astronomy and Space Science Institute, Korea, ²Johns Hopkins University Applied Physics Laboratory, USA
- P-ST-040** Development of complex test-program for launch-vehicle
Seok-Hee LIM, Gyu-Sik CHO, Kie -Joo CHO
Korea Aerospace Research Institute, Korea
- P-ST-041** Flight dynamics subsystem core platform software development of geostationary satellite ground control system
Yoola HWANG, Byoung-Sun LEE
Electronics and Telecommunications Research Institute, Korea
- P-ST-042** National space situational awareness initiative
Eun Jung CHOI, Sungki CHO, Jang-Hyun PARK, Jung Hyun JO
Korea Astronomy and Space Science Institute, Korea
- P-ST-043** Research of hydroxyl/water ice on lunar surface for IR
Haingja SEO¹, Young-Jun CHOI^{1,7}, Eunjin CHO^{1,2}, Woong-Seob JEONG¹, Bongkon MOON¹, Sung-Joon PARK¹, Dae-Hee LEE¹, Jeonghyun PYO¹, Seung Kwan KIM^{3,7}, Seong Je PARK⁴, Geon-Hee KIM⁵, Kyungin KANG⁶
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- P-ST-044** **KPLO on-board orbit generation algorithms**
Jo Ryeong YIM, Young-Rok KIM, Jonghee BAE, Young-Joo SONG, Bang-Yeop KIM
 Korea Aerospace Research Institute, Korea
- P-ST-045** **Assessment of space projects of Korea aerospace research institute**
Nammi CHOE
 Korea Aerospace Research Institute, Korea
- P-ST-046** **Enhanced explicit guidance of space launch vehicles with time-varying thrust profiles**
Eun-Jung SONG, Sang-bum CHO, Byung-Chan SUN
 Korea Aerospace Research Institute, Korea
- P-ST-047** **Occurrence climatology of E-region field-aligned irregularities in the middle latitudes as observed by the Daejeon 40.8 MHz coherent scatter radar in Korea**
Young-Sil KWAK^{1,2}, Tae-Yong YANG³, Hyosub KIL⁴, Jong-Min CHOI^{1,5}, Jeaheung PARK^{1,2}, Jaejin LEE^{1,2}
¹Korea Astronomy and Space Science Institute, Korea, ²University of Science and Technology, Korea, ³Korea Polar Research Institute, Korea, ⁴The Johns Hopkins University, USA, ⁵Chungnam National University, Korea
- P-ST-048** **Water Resource management system using KOMPSAT-series imagery and 3D geospatial information technology**
Myung-Hee JO¹, Hyeon-Cheol PARK², Kyeong-Hwan CHOI², Hyeoung-Wook CHOI², Soo-young CHOI², Yun-Jae CHOUNG²
¹Kyungpook National University, ²Research Institute of Spatial Information Technology Research Geo C&I Co., Ltd., Korea
- P-ST-049** **Spacecraft magnetic field control**
Taeyoun KIM, Jaewoong JANG, Kyungduk JANG, Changeun LEE
 Korea Aerospace Research Institute, Korea
- P-ST-050** **Observation of a large-scale quasi-circular secondary ribbon developed in association with successive flares and a halo CME**
Eun-Kyung LIM¹, Vasyli YURCHYSHYN², Pankaj KUMAR^{1,3}, Kyuhyoun CHO⁴, C.W. JIANG⁵, Sujin KIM¹, Heesu YANG¹, Jongchul CHAE⁴, Kyung-Suk CHO¹
¹Korea Astronomy and Space Science Institute, Korea, ²BBSO, NJIT, USA, ³GSFC, NASA, USA, ⁴Seoul National University, Korea
- P-ST-051** **Application of multidisciplinary performance analysis to development of a regeneratively cooled upper stage rocket engine thrust chamber**
Miok JOH, Seong-Ku KIM, Hwan Seok CHOI
 Korea Aerospace Research Institute, Korea
- P-ST-052** **The molecular gas budget in the central area of cool-core vs. non cool-core clusters**
Aeree CHUNG¹, Junhyun BAEK^{1,2}, Min S. YUN³, Bongwon SOHN², Taehyun JUNG², Evangelia TREMOU⁴
¹Yonsei University, Korea, ²Korea Astronomy and Space Science Institute, Korea, ³University of Massachusetts, USA, ⁴Michigan State University, USA
- P-ST-053** **Design of TC&R subsystem for the LEO satellite**
Kiho KWON, YoungSu YOUN
 Korea Aerospace Research Institute
- P-ST-054** **Satellites anomalous behavior estimation through statistical features of telemetry and fuzzy reasoning**
Seung-Eun YANG, Soo-Yeon KANG
 Korea Aerospace Research Institute, Korea
- P-ST-055** **A conceptual study on the power characteristics of a High-efficient hybrid system for unmanned aerial vehicle**
Bohwa LEE, KeunBae KIM
 Korea Aerospace Research Institute, Korea
- P-ST-056** **Satellite electrical interface test configuration setup and test result of geo-synchronous orbit satellite electrical test bed**
Nayoung LEE¹, Sungsoo JANG¹, Jaedong CHOI¹, SangRyool LEE¹, Taejin CHUNG²
¹Korea Aerospace Research Institute, ²Korea Advanced Institute Research and Technology, Korea

- P-ST-057** **Study on CCAM of launch vehicle upper stage using LOX vent**
Jiyoung CHOI, Byung-Chan SUN
 Korea Aerospace Research Institute, Korea
- P-ST-058** **Development process of the optical cryogenic liquid/vapor sensor for the launch vehicle**
Sangwoon JEON, Seokhee LIM, Kiejoo CHO
 Korea Aerospace Research Institute, Korea
- P-ST-059** **S-band telemetry downlink design for geo-synchronous orbit satellite operation**
Nayoung LEE¹, Seorim LEE¹, Hyelyn HAN², Sang Ryool LEE¹
¹Korea Aerospace Research Institute, ²SYSCORE, Korea
- P-ST-060** **Analysis of the first LOI maneuver with respect to the pointing uncertainty**
Jonghee BAE, Young-Joo SONG, Young-Rok KIM, Bangeop KIM
 Korea Aerospace Research Institute, Korea
- P-ST-061** **Performance analysis of the intercooler for multi-stage turbocharger of HALE UAV**
Yang-Ji LEE, Dong-Ho RHEE, Byoung-Jun LIM
 Korea Aerospace Research Institute, Korea
- P-ST-062** **Operational concept for trajectory-based services between ATSU and aircraft in integrated manned/unmanned airspace**
Eun-Mi OH, Yeonju EUN, Sungkweon HONG, Daekeun JEON
 Korea Aerospace Research Institute, Korea
- P-ST-063** **A study of the Hongae-tongheon-ui (渾蓋通憲儀) of Nam Byeong-cheol (南秉哲)**
Sang Hyuk KIM^{1,4}, Kyoung Uk NAM^{2,5}, Byeong-Hee MIHN^{1,4}, Seon Young HAM^{1,3}
¹Korea Astronomy and Space Science Institute, ²Gwacheon National Science Museum, ³Chungbuk National University, ⁴Korea University of Science & Technology, ⁵Seoul National University, Korea
- P-ST-064** **ETB Tests of GK2A KSEM EQM and FM Models**
Kyoung-Wook JIN¹, Na-Young LEE¹, Yee-Jin CHEON¹, Koon-Ho YANG¹, Jiwon YUN², Jongho SEON²
¹Korea Aerospace Research Institute, ²Kyung Hee University, Korea
- P-ST-065** **Satellite corrosion monitoring for safe storage**
Seo-yoon LEE¹, Myung-jin BAEK¹, Tae-hoon KIM²
¹Korea Aerospace Research Institute, ²Korea Aerospace Industries, Korea
- P-ST-066** **Introduction to the turbopump FMEA for liquid rocket engines**
Min-Joo PARK, Chang-Ho CHOI
 Korea Aerospace Research Institute, Korea
- P-ST-067** **Concept of spacecraft bus operation of Korea pathfinder lunar orbiter**
Moon-Jin JEON, Jo Ryeong YIM, Seong-Bin LIM
 Korea Aerospace Research Institute, Korea
- P-ST-068** **A multi-wavelength study of the small pre- and protostellar group, L1251B**
Yunhee CHOI¹, Jeong-Eun LEE¹, Edwin A. BERGIN², Geoffrey A. BLAKE³, Abraham C. A. BOOGERT⁴, James DI FRANCESCO^{5,6}, Neal J. EVANS II⁷, Klaus M. PONTOPPIDAN⁸, Annelia I. SARGENT³
¹Kyung Hee University, Korea, ²University of Michigan, USA, ³California Institute of Technology, USA, ⁴NASA Ames Research Center, USA, ⁵National Research Council, Canada, ⁶University of Victoria, Canada, ⁷University of Texas at Austin, USA, ⁸Space Telescope Science Institute, USA
- P-ST-069** **A study of the flight software related spacecraft accidents**
Dong-Seok CHAE, Su-Hyun PARK
 Korea Aerospace Research Institute, Korea
- P-ST-070** **Correction for the parallax errors between two satellites to validate the cloud detection**
Hye-Won KIM, Jong-Min YEOM, Sun-Hee WOO
 Korea Aerospace Research Institute, Korea
- P-ST-071** **Parallel processing system of wavelength calibration for GEO-KOMPSAT-2 GEMS**
Jinhyung PARK, Dai-ho KO, Hyun-su LIM
 Korea Aerospace Research Institute, Korea

- P-ST-072** Development of LINK LP for the QB50 project
Go Woon NA¹, Kyoung Wook MIN²
¹Kyung Hee University, ²Korea Advanced Institute of Science and Technology, Korea
- P-ST-073** A case study on the earned value application for space launch vehicle program
Hyoyoung LEE, Ilsang YOO
Korea Aerospace Research Institute, Korea
- P-ST-074** Speckle polarimetry of the moon
Chae Kyung SIM¹, Sungsoo S. KIM¹, Il-Hoon KIM¹, Minsup JEONG², Kilho BAEK¹, Sukbeom HONG¹, Bo-Young SONG¹, Young-Jun CHOI²
¹Kyung Hee Univeisity, ²Korea Astronomy and Space Science Institute, Korea
- P-ST-075** A design and implementation of common condition checker
Hyun-Kyu SHIN, Su-Hyun PARK
Korea Aerospace Research Institute, Korea
- P-ST-076** Trade off study for design of propulsion system valve drive electronics of lunar exploration satellite
Sangrok LEE, Hui-Kyung KIM, Seong-Bin LIM
Korea Aerospace Research Institute, Korea
- P-ST-077** Software architecture concept for reconfiguration unit in GEO & LEO satellites
Hyeon-Jin JEON, Yun-Ki LEE, Su-Hyun PARK
Korea Aerospace Research Institute, Korea
- P-ST-078** Photometric variations of geostationary earth orbit satellites
Dong-Goo ROH¹, Jin CHOI^{1,2}, Jung-Hyun JO^{1,2}, Eun-Jung CHOI¹
¹Korea Astronomy and Space Science Institute, ²University of Science and Technology, Korea
- P-ST-079** Effect of dynamic process noise on lunar orbiter orbit determination using sequential estimation technique
Young-Rok KIM¹, Eun Seo PARK², Young-Joo SONG¹, Jonghee BAE¹, Jo Ryeong, YIM¹, Bang-Yeop KIM¹
¹Korea Aerospace Research Institute, ²Korea Astronomy and Space Science Institute, Korea

Poster Session III

17:50-19:00, September 1 (Fri), 2017

Lobby (B2 & 4F), Serve Room II (B2)

ST (Space Technology)-2

- P-ST-080** Star tracker support structure design in GEO-KOMPSAT-2
Nayoung LEE, Chang Ho KIM, Jae Dong CHOI, Sang-Ryool LEE, Jong Seok PARK
Korea Aerospace Research Institute, Korea
- P-ST-081** Study on the assessment of the welded joints in the bellows
Yeonhee JUNG¹, Jang-Kyu KIM², Joon-Tae YOO¹
¹Korea Aerospace Research Institute, ²Doowon Heavy Industrial, Korea
- P-ST-082** Advanced test approach for confirmation of new solar array regulator design
Joo-Ho PARK, Dong-Chul CHAE, Jeong-Hwan YANG, Yun-Goo HUH, Tae-Youn KIM
Korea Aerospace Research Institute, Korea
- P-ST-083** The instrumentation and analysis technique for spectral airglow temperature imager
Ji Eun KIM¹, Jeong-Han KIM¹, Geonhwa JEE¹, Changsup LEE¹, Yong Ha KIM²
¹Korea Polar Research Institute, ²Chungnam National University, Korea
- P-ST-084** Analog multiplexer with a high impedance characteristic for the cold redundant operation
Joo Ho WON, Nayoung LEE
Korea Aerospace Research Institute, Korea
- P-ST-085** Introduction to launch vehicle development schedule management and study of schedule health check plan
Yun-Kyoung SEO, Byung-Chan KWON, Il-Sang YOO
Korea Aerospace Research Institute, Korea

- P-ST-086** Constant voltage mode using MPPT for LEO satellites with unregulated power bus
Heesung PARK, Seoyoon LEE
Korea Aerospace Research Institute, Korea
- P-ST-087** Stability analysis and experiment of solar array regulator for LEO satellites
Heesung PARK, Seoyoon LEE
Korea Aerospace Research Institute, Korea
- P-ST-088** Taxi time prediction using departure queue length
Myeongsook JEONG, Yeonju EUN, Daekeun JEON
Korea Aerospace Research Institute, Korea
- P-ST-089** Development of science data management subsystem for the Korean first lunar exploration
Joo Hyeon KIM, Yeonju CHOI, Bang-Yeop KIM
Korea Aerospace Research Institute, Korea
- P-ST-090** Direct trajectory recovery options for the 1st lunar orbit insertion maneuver failure
Young-Joo SONG, Jonghee BAE, Young-Rok KIM, Jo Ryeong YIM, Bang-Yeop KIM
Korea Aerospace Research Institute, Korea
- P-ST-091** Design on fault-management system of electrical power system for geo-stationary satellite
Jeong-Eon PARK, Ja-Chun KOO, Na-Young LEE, Jin-Beak JANG
Korea Aerospace Research Institute, Korea
- P-ST-092** Development of GMTI algorithm
So-Yeon KIM¹, Sang-Ho YOON¹, Hyun-Ik SHIN¹, Jaehyuk YOUN²
¹Agency for Defense Development, ²LIG Nex1Co., Ltd., Korea
- P-ST-093** Video streaming system based on delay tolerant network in space communication
Kyung-rak LEE^{1,2}, Sinae JI¹, Jin-Ho JO¹, Byoung-Sun LEE¹
¹Electronics and Telecommunications Research Institute, ²Hanyang University, Korea
- P-ST-094** Current status of dynamic system simulator for KPLO
Seunghee SON, Hoonhee LEE
Korea Aerospace Research Institute, Korea
- P-ST-095** Remote sensing based disaster management: international charter on space and major disasters and KOMPSAT application
Hyun-Ok KIM
Korea Aerospace Research Institute, Korea
- P-ST-096** Development status of the pyrostarter for liquid rocket engines
Jesun JANG¹, Eunji PARK²
¹Korea Aerospace Research Institute, ²Hanwha, Korea
- P-ST-097** The ignition system of 75 ton-class liquid rocket engine for KSLV-II
Junsu JEON, Jesun JANG, Jungho LEE, Jaeyoung PARK, Chaehyoung KIM, Seunghan KIM, Yeoungmin HAN
Korea Aerospace Research Institute, Korea
- P-ST-098** Operational results of the Moon images through COMS during 7 years
Eun-Bin PARK, Sun-Hee WOO
Korea Aerospace Research Institute, Korea
- P-ST-099** Development of geostationary satellite antenna station
Durk-Jong PARK¹, Dong-No JEE², Yong-Kyun PARK³, Myung-Deug KIM⁴, Sung-Kwon CHO⁵, Hyo-Suk LIM¹
¹Korea Aerospace Research Institute, ²KTsat, ³Satellite RF Technologies, ⁴High Gain Antenna, ⁵Spacelink, Korea
- P-ST-100** Ethernet interface for satellite image data receiving
Durk-Jong PARK, Hyo-Suk LIM
Korea Aerospace Research Institute, Korea
- P-ST-101** Review of pressure control method of propellant tank of liquid rocket
Gyu Sik CHO, Seok Hee LIM
Korea Aerospace Research Institute, Korea

P-ST-102 Influence of high ionospheric activity on dual-frequency SBASYoun-Jeong HEO, Jong-Yeon CHOI, Gi-Wook NAM

Korea Aerospace Research Institute, Korea

P-ST-103 Comparison of lunar thermal environment conditions for thermal design of lunar orbiter and landerHui-Kyung KIM^{1,2}, Dong-Young REW¹¹Korea Aerospace Research Institute, ²University of Science and Technology, Korea**BT (Biotechnology)****P-BT-001 In vitro three dimensional vascularized skin on a chip**Tae Hee KIM^{1, 5}, Jeong Eun LEE², Ju Hee LEE³, Min Jeong KIM⁴, Eun Chae JEONG⁴, Youngmee JUNG⁵¹Korea University, ²Chung-ang University, ³Konkuk University, ⁴Dongduk Women's University, ⁵Korea Institute of Science and Technology, Korea**P-BT-002 Crystal structure of ginseng major latex-like protein 151 and its proposed lysophosphatidic acid-binding mechanism**Sun-Hye CHOI¹, Myoung-Ki HONG¹, Hyeon-Joong KIM¹, Nayeon RYOO², Hyewon RHIM², Seung-Yeol NAH¹, Lin-Woo KANG¹¹Konkuk University, ²Korea Institute of Science and Technology, Korea**P-BT-003 Alpha-naphthoflavone induces apoptosis through endoplasmic reticulum stress via reactive oxygen species and extracellular Ca²⁺ influx in HT22 hippocampal neuronal cells**Ah-Ran YU¹, Eui-Ju YEO², Insug KANG¹¹Kyung Hee University, ²Gachon University, Korea**P-BT-004 Synthesis and biological evaluation of the novel SHIP2 inhibitors for the treatment of alzheimer's disease**Ji Woong LIM^{1,3}, Seo Yoon CHOI^{1,2}, Dong Hoi KIM¹, Jae Wook LEE¹, Sang Min LIM¹, Jae Yeol LEE³, Ae Nim PAE¹¹Korea Institute of Science and Technology ²Yonsei University, ⁴Kyung Hee University, Korea**P-BT-005 Synthesis of novel tau aggregation inhibitors for the treatment of alzheimer's disease**Ha Eun LEE¹, Sung Su LIM¹, Yun Kyung KIM^{1,2}, Sang Min LIM^{1,2}, Ae Nim PAE^{1,2}¹Korea Institute of Science and Technology, ²University of Science and Technology, Korea**P-BT-006 Ribosome biogenesis protein NOP53 is essential to maintain stemness in human embryonic stem cells**Young Hyun CHE, Su Haeng SUNG, Yong Jun KIM

Kyung Hee University, Korea

P-BT-007 Small molecules drive human fibroblasts into induced neural crest cells through SOX10 mediated pathwaysYoung Hyun CHE, Su Haeng SUNG, Yong Jun KIM

Kyung Hee University, Korea

P-BT-008 SynCAM1 mediates axon-axon interaction in motor neuron formationDong-Keun LEE, Mi-Ryoung SONG,

Gwangju Institute of Science and Technology, Korea

P-BT-009 Isolation of a BTEX-degrading bacterium, rhodococcus sp. 24, From a freshwater and optimization of biodegradation conditionsHyun Mi JIN, Hye Kyeong KANG, Byung Gon RYU, Kyung Min CHOI, Sang Chul JEONG

Nakdonggang National Institute of Biological Resources, Korea

P-BT-010 Regulation of aromatase gene by kruppel-like factor 4 and early growth response 2 during ovulation in ratPu-Reum YUN, Sang-Young CHUN, Jae-IL PARK

Chonnam National University, Korea

P-BT-011 Differential roles of reticular thalamic neuronal types in processing nociceptive signalsYeowool HUH, Jeiwon CHO

Catholic Kwandong University, Korea

P-BT-012 TAZ keeps testicular structure and function against agingMi Gyeong JEONG, Hyuna SONG, Ji Hyun SHIN, Hana JEONG, Hyo Kyeong KIM, Eun Sook HWANG

Ewha Womans University, Korea

P-BT-013 Pharmacological promotion of regulatory T cell developmentHee Yeon WON, Sera OH, Ji Hyun SHIN, Hana JEONG, Eun Sook HWANG

Ewha Womans University, Korea

P-BT-014 Transcriptional control of steroidogenesis in the testisGibbeum LEE, Ji- Hyun SHIN, Eun Sook HWANG

Ewha Womans University, Korea

P-BT-015 Modulation of lung pathophysiology by WWTR1Hyo Kyeong KIM, Hana JEONG, Eun Sook HWANG

Ewha Womans University, Korea

P-BT-016 Effect of tremella fuciformis as a nutrient supplement for individuals with subjective cognitive impairmentSuji L. LEE, Shinwon PARK, Soonhyun BAN, In Kyoon LYOO, Jieun E. KIM, Sujung YOON

Ewha Womans University, Korea

P-BT-017 Chiral recognition of amino acids with optically active crown ethers by CE-MSSul LEE^{1,2}, Ji-Hyun LEE^{1,2}, Su-Jin KIM^{1,2}, Yun-Cheol Na^{1,2}¹Korea Basic Science Institute, ²Ewha Womans University, Korea**P-BT-018 Redox regulation of redox sensitive protein in its structure and function**In-Kang SONG, Jae-Jin LEE, Kong-Joo LEE

Ewha Womans University, Korea

P-BT-019 Proteomic analysis of hippocampus in chronic restraint stress mouse model of depression ascertains the role of cysteine oxidative modifications in neuroprotection from oxidative damage.Jung-Eun CHOI, Hyun Jung KIM, Jin-Hwan CHO, Jae-Jin LEE, Kong-Joo LEE

Ewha Womans University, Korea

P-BT-020 Natural compound that depletes ATP and inhibits cancer cell proliferationJi-Wan SUH, Jae-Jin LEE, Kong-Joo LEE

Ewha Womans University, Korea

P-BT-021 Biochemical analysis of novel heat shock proteinA Young PARK, Yeon-Seung PARK, Hee-Jung KIM, Kong-Joo LEE

Ewha Womans University, Korea

P-BT-022 Attentional control over the salience network as compensatory strategies in chronic centralized painJungyoon KIM, Eun NAMGUNG, Tammy D. KIM, Jinsol KIM, In Kyoon LYOO, Sujung YOON

Ewha Womans University, Korea

P-BT-023 The role of frequency and distress of different traumatic experiences in PTSD among firefightersShinwon PARK¹, Jiyoung MA², HyeonSeok S. JEONG³, Ilhyang KANG¹, Han Byul CHO⁴, Suji L. LEE¹, Sujung YOON¹, Haejin HONG¹, Jungyoon KIM¹, Eunji HA¹, Hyung Kyung KIM³, In Kyoon LYOO¹, Jieun E. KIM¹¹Ewha Womans University, Korea, ²Seoul National University, Korea, ³The Catholic University of Korea, Korea, ⁴University of Utah, USA, ⁵Kyung Hee University School of Medicine, Korea**P-BT-024 Topological effects on the stability of human telomeric, g-quadruplexes by molecular dynamics simulations and solvation thermodynamics analyses**Jinkeong LEE, Sihyun HAM

Sookmyung Women's University, Korea

P-BT-025 A comparison investigation on the binding affinity between cHLH/HDM2 and stapled p53/HDM2Haeri IM, Sihyun HAM

Sookmyung Women's University, Korea

P-BT-026 Estimating cell depth from multi-focus microscope imagesYea-Jun CHOI¹, Dong-Woo LEE², Myoung-Hee KIM³, Soo-Mi CHOI¹¹Sejong University, ²Konyang University, ³Ewha Womans University, Korea

- P-BT-027** Aggregation-prone characteristics of tau protein in water: a computational study
Huong T. D. BUI, Sihyun HAM
 Sookmyung Women's University, Korea
- P-BT-028** Assessment of high-fat diet-induced alzheimer's disease in outbred mice using touchscreen-based automated battery system
Saeram LEE, Youn Jae KANG, Eosu KIM, Ho Taek SONG, ChulHoon KIM, Jong Eun LEE
 Yonsei University, Korea
- P-BT-029** Continuous sorting of human mesenchymal stem cells by microfluidic chip filtration
 Heekyung JUNG^{1,2}, Chang Jae SHIM^{1,2}, Heesoo JEON¹, Myung-Suk CHUN², Mi-Sook CHANG¹
¹Seoul National University, ²Korea Institute of Science and Technology, Korea
- P-BT-030** A comprehensive proteomics analysis for *Streptococcus equi* subspecies *equi* Se071780 to antigen discovery and vaccine development
Sangmi JUN^{1,2,3}, Hayoung LEE^{1,3}, Yoon-Sun Yi^{1,4}, Sang-Yeop LEE^{1,2}, Edmond C. PARK^{1,2,3}, Hyun-Joo RO^{1,2,3}, Seung Il KIM^{1,2,3}
¹Korea Basic Science Institute, ²Korea Research Institute of Chemical Technology, ³University of Science and Technology, ⁴Chungnam University, Korea
- P-BT-031** Global N-glycoproteome analysis in the course of human neural stem cell differentiation
 Min-Young SONG, Da Kyeong PARK, Hyun Kyeong LEE, Gun Wook PARK, Ju Yeon LEE, Jin Young KIM, Jong Shin YOO, Young Hye KIM
 Korea Basic Science Institute, Korea
- P-BT-032** Interaction between HuNoV and concanavalin a using a hydrogen/deuterium exchange mass spectrometry
Ah Young KI, Hee-chung CHUNG, Se-Young CHO, Joseph KWON
 Korea Basic Science Institute, Korea
- P-BT-033** Crystal structure of the EnvZ periplasmic domain with CHAPS
Eunha HWANG¹, Hae-Kap CHEONG¹, Young Ho JEON², Chaejoon CHEONG³
¹Korea Basic Science Institute, ²Korea University, Korea
- P-BT-034** Anti-cancer drug targeting of aurora kinase C in breast cancer cells
Eun Hee HAN^{1,2,3}
¹Korea Basic Science Institute, ²Korean Research of Bioscience and Biotechnology, ³Korea University of Science and Technology, Korea
- P-BT-035** Alteration of urinary metabolic profiling in membranous nephropathy
Jin Seong HYEON¹, Hyung Ah JO², Dong Ki KIM², Geum Sook HWANG¹
¹Korea Basic Science Institute, ²Seoul National University Hospital, Korea
- P-BT-036** Analysis of flavonoids using liquid chromatographic technique
Joo Hee CHUNG
 Korea Basic Science Institute, Korea
- P-BT-037** Probiotics-induced amelioration of obesity related lipid metabolism in high fat diet induced obese rat model
Ha-Yung CHUNG¹, Joo-Hyun SHIN², Joong-Su LEE², Jae-Gu SEO², Myung-Hee NAM¹
¹Korea Basic Science Institute, ²Cell Biotech Co., Ltd., Korea
- P-BT-038** The experimental autoimmune myocarditis in rat activates the autophagy and apoptosis
 Seung-Min CHOI^{1,2}, Hee-Jung KIM¹, Ha-Yung CHUNG¹, Jong-Bok SEO¹
¹Korea Basic Science Institute, ²Korea University, Korea
- P-BT-039** Lipidomic profiling in heart tissue of mice fed atherogenic diet
Sunhee JUNG^{1,2}, Miso NAM^{1,2}, Do Hyun RYU², Geum-Sook HWANG^{1,3}
¹Korea Basic Science Institute, ²Sungkyunkwan University, ³Ewha Womans University, Korea
- P-BT-040** A metabolomics-driven approach reveals metabolic responses and mechanisms in the rat heart following myocardial infarction
Miso NAM^{1,2}, Sunhee JUNG^{1,2}, Do Hyun RYU², Geum-Sook HWANG^{1,3}
¹Korea Basic Science Institute, ²Sungkyunkwan University, ³Ewha Womans University, Korea
- P-BT-041** Crystal structures reveal a new and novel foxo1 binding site within the human glucose-6-phosphatase catalytic subunit 1 gene promoter
Eun Hee HAN^{1,2,3}
¹Korea Basic Science Institute, ²Korean Research of Bioscience and Biotechnology, ³Korea University of Science and Technology, Korea
- P-BT-042** Photothermal-modulated drug delivery and magnetic relaxation based on collagen/poly(γ -glutamic acid) hydrogel
 Sun-Hee CHO¹, Kwan Soo HONG^{2,3}, Jee-Hyun CHO^{2,3}, Yong Taik LIM¹
¹Sungkyunkwan University, ²Korea Basic Science Institute, ³Korea Research Institute of Bioscience and Biotechnology, Korea
- P-BT-043** Structural and biochemical studies of peptidoglycan-associated lipoprotein from *Acinetobacter baumannii*
Saeyoung LEE^{1,2}, Kwon Joo YEO^{1,2}, Eunha HWANG¹, In-Geol CHOI³, Hye-Yeon KIM^{1,4,5}
¹Korea Basic Science Institute, ²Korea University, ³Korea University Graduate School, ⁴University of Science and Technology, ⁵Korea Research Institute of Chemical Technology, Korea
- P-BT-044** Patterns of functional connectivity of the basal ganglia in healthy subjects: an ultra-high resolution [18F]FDG PET/MRI study
Jeong-Hee KIM^{1,2}, Young-Don SON³, Chang-Hyun OH^{1,2}, Chulhyun LEE¹
¹Korea Basic Science Institute, ²Korea University, ³Gachon University, Korea
- P-BT-045** Cyclin Y-mediated transcript profiling reveals several important functional pathways controlled by Cyclin Y in hippocampal neurons
 I-Seul JOE¹, Jong-Hwan KIM^{2,3}, Hanna KIM¹, Jung-Hwa HONG^{1,4}, Eunsil CHO^{1,3}, Mirang KIM^{2,3}, Mikyung PARK^{1,3}
¹Korea Institute of Science and Technology, ²Korea Research Institute of Bioscience and Biotechnology, ³Korea University of Science and Technology, ⁴Korea University, Korea
- P-BT-046** Enhancement of the autophagic flux in cortical primary astrocytes is induced by gintonin
Ataur RAHMAN¹, Hyewhon RHIM^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-BT-047** O-GlcNAcylation modulates physiological properties of neurons in the hippocampus
 Hongik HWANG¹, Yoonjeong CHO^{1,2}, Pann-Ghill SUH³, Hyewhon RHIM^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, ³Ulsan National Institute of Science and Technology, Korea
- P-BT-048** Phospholipase C-B1 in the medial prefrontal cortex is responsible for social dominance and working memory
Misun SEO¹, Hea-Young KOH¹, Hyewhon RHIM^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-BT-049** Three-dimensional culture platform for reconstruction of a hippocampal neural network
 So Hyun KIM¹, Sun-Kyoung IM¹, Soo-Jin OH¹, Sohyeon JEONG^{1,2}, Eui-Sung YOON^{1,2}, C. Justin LEE^{1,2,3}, Nakwon CHOI^{1,2}, Eun-Mi HUR^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, ³Korea University, Korea
- P-BT-050** Effect of microtubule stabilization by epothilone B depends on the type and age of neurons
Eun-Hae JANG^{1,2}, Aeri SIM^{1,2}, Sun-Kyoung IM¹, Eun-Mi HUR^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-BT-051** Functional characterization of resting and adenovirus-induced reactive astrocytes in three-dimensional culture
 Junsung WOO¹, Sun-Kyoung IM¹, So-Young JUN^{1,2}, Heejung CHUN¹, Soon-Young JUNG¹, Soo-Jin OH¹, Nakwon CHOI^{1,2}, C. Justin LEE^{1,2}, Eun-Mi HUR^{1,2}
¹Korea Institute of Science and Technology, ²Korea University of Science and Technology, Korea
- P-BT-052** USP15 regulates dynamic protein-protein interactions of the spliceosome through deubiquitination of PRP31
 Tanuza DAS, Joon Kyu PARK, Jinyoung PARK, Eunice EunKyeong KIM, Eun Joo SONG
 Korea Institute of Science and Technology, Korea

- P-BT-053** **The role of Pak4 in HIF-1 α accumulation in cancer cells**
Hyunju KIM¹, So Yeon KIM^{1,2}, Eun Gyeong YANG^{1,2}
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AHN, Se Jin	P-YS-056	BIST, Ganesh	P-YS-014	CHO, Eunjin	P-YS-040	CHOI, Byoung Gun	P-IT-014	CHOI, Seungki	P-ET-001	CHUNG, Taejin	P-ST-056
AHN, Se Jin	P-YS-075	BISWAS, Foti Bushon	P-YS-030	CHO, Eunsil	P-BT-045	CHOI, Chang-Ho	P-NT-007	CHOI, Seung-Min	P-BT-038	CHYNYBEKOVA, Kanygul	P-IT-026
AHN, Se Jin	P-YS-076	BLAKE, Donald.R	P-ET-040	CHO, Eun-Sun	P-IT-025	CHOI, Chi-Won	P-ST-066	CHOI, Soo Im	P-BT-096	DAHNUM, Deliana	P-NT-083
AHN, SeJin	P-YS-061	BLAKE, Geoffrey A.	P-ST-068	CHO, Eun-Wie	P-BT-117	CHOI, CHOnggun	P-YS-048	CHOI, Soo-Mi	O-IT-06	DANG, Huyen-Tran	P-NT-077
AHN, Seung Joon	P-YS-031	BOLORMAA, Erdenebolor	P-BS-001	CHO, Eun-Wie	P-BT-118	CHOI, Dong-Young	P-NT-070	CHOI, Soo-Mi	P-BT-026	DAS, Tanuza	P-BT-052
AHN, Seung Kyu	P-YS-061	BOO, Hee-Ock	P-ET-047	CHO, Eunyoung	P-IT-019	CHOI, Doyoung	P-YS-016	CHOI, Su Ryun	P-IT-023	DHAKAL, Sarita	P-YS-007
AHN, Seung Kyu	P-YS-075	BOOGERT, Abraham C. A.	P-ST-068	CHO, Gyu Sik	P-ST-101	CHOI, Eun Jung	P-ST-027	CHOI, Su Ryun	P-IT-024	DHANDAPANI, Vignesh	P-BT-083
AHN, Seung Kyu	P-YS-076	BUI, Huong T. D.	P-BT-027	CHO, Gyu-Sik	P-ST-040	CHOI, Eunjung	P-ST-042	CHOI, Soo-Mi	P-IT-026	DHANDAPANI, Vignesh	P-BT-084
AHN, Suhyun	P-YS-034	BYEON, Hye-Hyeon	P-BT-064	CHO, H. J.	P-BT-076	CHOI, Eun-Jung	P-ST-015	CHOI, Soo-Mi	P-ST-048	DINH, Hang Thuy	P-YS-047
AHN, Yun Gyong	P-ET-045	BYOEN, Mirang	P-NT-082	CHO, Han Byul	P-BT-023	CHOI, Eun-Jung	P-ST-003	CHOI, Soo-young	P-BT-083	DINH, Mai Thi Ngoc	P-YS-047
ALABSI, Mohammed	P-YS-027	BYUN, Do-Seong	P-ST-027	CHO, Hyeyoung	P-IT-027	CHOI, Eun-Sil	P-ST-078	CHOI, Su Ryun	P-BT-084	DUGARJAV, Otgontsetseg	P-BS-004
ALABSI, Mohammed	P-YS-028	BYUN, Ji Young	P-NT-020	CHO, Hyeyoung	P-IT-028	CHOI, Eun-Young	P-BS-011	CHOI, Su Ryun	P-BT-085	DUONG, Dinh Thi Thuy	P-NT-025
Abdulhakim		BYUN, Sang Kyung	P-BT-078	CHO, Hyeyoung	P-IT-038	CHOI, Eun-Young	O-E3T-06	CHOI, Sun Yeong	P-ET-039	ELKAMHAWY, Ahmed	P-NT-024
AN, Hyunjin	P-ET-037	CASSARDO, Claudio	P-YS-063	CHO, Hyunyul	P-IT-005	CHOI, Ga-Hyun	P-ET-028	CHOI, Sun-Hye	P-BT-002	EO, Young Joo	P-YS-056
AN, Jooneun	P-ET-066	CASSELL, Justine	PL-02	CHO, Jee-Hyun	P-BT-042	CHOI, Ga-Hyun	P-ET-020	CHOI, Sun-Mi	P-BT-105	EO, Young-Joo	P-YS-061
AN, Ki-Seok	P-NT-064	CHAE, Dong-Chul	P-ST-082	CHO, Jeiwon	P-BT-011	CHOI, Go-Eun	P-ET-026	CHOI, Sun-Mi	P-BT-106	EO, Young-Joo	P-YS-075
AN, Tae Hyeon	P-BT-078	CHAE, Dong-Seok	P-IT-033	CHO, Jihoon	P-ST-069	CHOI, Hwan Seok	P-YS-036	CHOI, Sun-mi	P-PC-005	EO, Young-Joo	P-YS-076
AN, YoungJin	P-IT-030	CHAE, Jongchul	P-ST-050	CHO, Jin-Hwan	P-BT-019	CHOI, Hyekyoung	P-NT-076	CHOI, Sunyeong	P-ET-038	EOM, Ki-Hyeon	P-ET-010
ARYAL, Susmita	P-YS-032	CHAE, Sangmin	P-NT-055	CHO, Jun Sik	P-YS-075	CHOI, Hyeoung-Wook	P-ST-048	CHOI, Won Jin	P-NT-015	EOM, Mi Kyung	P-BT-066
AUNG, Sandar	P-YS-045	CHAE, Sieun	P-NT-015	CHO, Jun Sik	P-YS-076	CHOI, In-Geol	P-BT-043	CHOI, Won Jun	P-NT-016	EUN, Yeonju	P-ST-036
AUNG, Wah Wah	P-YS-045	CHAE, Soo Sang	P-NT-015	CHO, Jungyeon	P-ST-014	CHOI, Insung	P-IT-031	CHOI, Won Jun	P-NT-043	EUN, Yeonju	P-ST-062
AYE, Kay Thi	P-YS-045	CHAE, Soo Sang	P-NT-072	CHO, Kie -Joo	P-ST-040	CHOI, Jae Dong	P-ST-048	CHOI, Woochul	P-ET-033	EUN, Yeonju	P-ST-088
BAATAR, Battsengel	P-YS-005	CHAE, Soosang	P-NT-069	CHO, Kiejoo	P-ST-058	CHOI, Jaedong	P-BT-043	CHOI, Yea-Jun	P-BT-026	EVANS II, Neal J.	P-ST-012
BAE, Gwi-Nam	O-E3T-01	CHANG, Gap Soo	O-NT-02	CHO, KiSeok	P-IT-036	CHOI, JANG-Gi	P-IT-031	CHOI, Yeonju	P-ST-089	EVANS II, Neal J.	P-ST-068
BAE, Hee-Kyoung	P-NT-026	CHANG, Hye-Min	P-IT-016	CHO, Kyuhyoun	P-ST-050	CHOI, Jeong-hee	P-YS-036	CHOI, Young-Jun	P-IT-031	FADONUGBO, Julien	P-NT-021
BAE, Jonghee	P-ST-044	CHANG, Hye-Min	P-IT-017	CHO, Kyu-Jin	S-FS-05	CHOI, Jihee	P-PC-005	CHOI, Young-Jun	P-ST-043	FRANCESCO, James DI	P-ST-068
BAE, Jonghee	P-ST-060	CHANG, Hyunju	P-NT-015	CHO, Kyungsuk	P-ST-035	CHOI, Jin	P-NT-047	CHOI, Young-Jun	P-ST-074	GACHES, Brandt A. L.	P-ST-012
BAE, Jonghee	P-ST-079	CHANG, Hyunju	P-NT-074	CHO, Kyung-Suk	P-ST-050	CHOI, Jaedong	P-ST-003	CHOI, Young-Jun	P-YS-040	GALLAGHER, John C.	P-IT-012
BAE, Jonghee	P-ST-090	CHANG, Ki Soo	P-NT-013	CHO, MiSeon	P-ET-069	CHOI, JANG-Gi	P-ST-078	CHOI, Young-Jun	P-ST-012	GANORKAR, Shraddha P.	P-YS-037
BAE, Jong-Seong	P-ET-054	CHANG, Limseok	P-ET-036	CHO, Sang-bum	P-ST-046	CHOI, Jeong-hee	P-BT-103	CHOI, Yunhee	P-ST-068	GARDNER, Amy Diann	P-YS-044
BAE, Jong-Seong	P-ET-056	CHANG, Minhee	P-BS-005	CHO, Se-Hyung	P-ST-002	CHOI, Jin	P-PC-005	CHOI, Yunhee	P-ET-054	GAUTAM, Jaya	P-YS-049
BAE, Kwang-Hee	P-BT-079	CHANG, Mi-Sook	O-BT-02	CHO, Seogju	P-ET-030	CHOI, Jiyeon	P-NT-047	CHOI, Yunju	P-ET-056	GL, Junsu	P-ET-032
BAE, Kwang-Hee	P-BT-079	CHANG, Mi-Sook	P-BT-029	CHO, Seogju	P-ET-032	CHOI, Jiyoun	P-ST-003	CHOI, Yunju	P-ET-024	GIRI, Sharmila	O-YS-03
BAE, Pankee	P-BT-089	CHANG, Sae Jung	P-ET-046	CHO, Se-Young	P-BT-032	CHOI, Jong Min	P-ST-057	CHOI, -Gahyun	P-BS-002	GO, Ahra	P-NT-065
BAE, Young-Kyung	P-BT-097	CHE, Young Hyun	P-BT-006	CHO, Shinhye	P-NT-078	CHOI, Jong-Min	P-BT-089	CHOIDORJ, Otgonchimeg	P-NT-032	GO, Yoo Kyung	P-NT-056
BAEK, Giseon	P-ST-002	CHE, Young Hyun	P-BT-007	CHO, So-Hye	P-NT-016	CHOI, Jong-Min	P-ST-021	CHONG, Youhoon	P-NT-033	GO, Yoo Kyung	P-NT-057
BAEK, Hea-Ja	P-BS-010	CHEN, Hsuan-Yi	P-YS-002	CHO, So-Hye	P-NT-025	CHOI, Jong-Min	P-ST-047	CHONG, Youhoon	P-NT-034	GO, Yun Young	P-BT-114
BAEK, Joo Hyun	P-IT-018	CHEON, Cheol-Hong	P-NT-047	CHO, So-Hye	P-NT-043	CHOI, Jong-Yeon	P-ST-102	CHOO, Hyunah	P-NT-051	GOKHALE, Shubha	S-FS-02
BAEK, Junhyun	P-ST-052	CHEON, Dong Huey	P-BT-063	CHO, So-Hye	P-NT-081	CHOI, Joon Sig	P-NT-013	CHOO, Hyunah	P-NT-052	GOTWALS, Lucy	P-IT-012
BAEK, Kilho	P-ST-074	CHEON, SHINhye	P-BT-114	CHO, Sungki	P-ST-003	CHOI, Joonsung	P-IT-018	CHOO, Hyunah	P-NT-077	GOYAL, Deepika	P-NT-028
						Choi, Joon-Sung	P-IT-016	CHOO, Hyunah	P-NT-084	GU, Ming-Yao	P-BT-058
						CHOI, Jun Seok	P-IT-017	CHOUNG, Yun-Jae	P-ST-048	GU, Y.	P-BT-035
						CHOI, Jung Kyun	P-ET-029	CHUN, Heejung	P-BT-051	GUENTHER, Alex	P-ET-037
							P-BT-073	CHUN, Hyen-Mi	O-E3T-07	GUIM, Hwanuk	P-NT-036

GUK, Kyeonghye	P-BT-089	HONG, J.	P-NT-035	HWANG, Yun Jeong	P-NT-029	JEON, Jaeheung	P-BT-080	JO, Injae	P-IT-031	JUNG, Sung-Hee	P-BT-095
GUK, Kyeonghye	P-BT-090	HONG, Jeongyoo	P-YS-038	HWANG, Yun Jeong	P-NT-030	JEON, Junhyeok	P-ST-009	JO, Jin-Ho	P-ST-093	JUNG, Sunhee	P-BT-039
GURUNG, Pallavi	P-YS-050	HONG, Jonggi	P-NT-053	HWANG, Yun Jeong	P-NT-045	JEON, Junsu	P-ST-097	JO, Jinwoo	P-IT-004	JUNG, Sunhee	P-BT-040
GWAK, Jihye	P-YS-056	HONG, Jung-ha	P-IT-032	HYEON, Jin Seong	P-BT-035	JEON, Moon-Jin	P-ST-067	JO, Jung Hyun	O-ST-02	JUNG, Taehyun	P-ST-052
GWAK, Jihye	P-YS-061	HONG, Jung-Hwa	P-BT-045	HYON, YunKyong	P-NT-074	JEON, Sangwoon	P-ST-058	JO, Jung Hyun	P-ST-003	JUNG, Won Hoon	P-BT-091
GWAK, Jihye	P-YS-074	HONG, Kwan Soo	P-BT-042	HYUNG, Sujin	P-BT-054	JEON, So Hyeon	P-ET-045	JO, Jung Hyun	P-ST-042	JUNG, Wondea	P-ET-038
GWAK, Jihye	P-YS-075	HONG, Moonju	P-BT-112	IM, Haeri	P-BT-025	JEON, Sohyang	P-IT-008	JO, Jung-Hyun	P-ST-078	JUNG, Woosik	P-ET-062
GWAK, Jihye	P-YS-076	HONG, Myoung-Ki	P-BT-002	IM, Hyo Been	P-ET-048	JEON, Woohyeon	P-ST-007	JO, Kyubong	P-BT-063	JUNG, Yeon Su	P-IT-021
GWAK, Migyeong	P-IT-040	HONG, Sanggi	P-IT-012	IM, Jino	P-NT-074	JEON, Young Ho	P-BT-033	JO, Myung-Hee	P-ST-048	JUNG, Yeonhee	P-ST-081
GWEON, Gahgene	O-IT-04	HONG, Seulgi	P-ET-066	IM, Jungho	P-ST-001	JEONG, Chan Bae	P-NT-013	JO, Yejin	P-IT-037	JUNG, Youngdo	P-NT-067
HA, Donghee	P-IT-010	HONG, Soonhyuk	P-BT-077	IM, Jungho	P-NT-077	JEONG, Dowon	P-ST-069	JO, Yejin	P-IT-042	JUNG, Youngim	P-IT-027
HA, Eunji	P-BT-023	HONG, Sugyeong	P-NT-057	IM, Sun-Kyoung	P-BT-049	JEONG, Du Won	P-NT-072	JOE, I-Seul	P-BT-045	JUNG, Youngim	P-IT-028
HA, Jae Du	P-NT-061	HONG, Sukbeom	P-ST-074	IM, Sun-Kyoung	P-BT-050	JEONG, Euh Duck	P-ET-054	JOE, Woojin	P-IT-006	JUNG, Youngim	P-IT-038
HA, Jae Du	P-NT-065	HONG, Sungeun	P-YS-025	IM, Sun-Kyoung	P-BT-051	JEONG, Euh Duck	P-ET-056	JOH, Minsu	P-ET-050	JUNG, Youngim	P-IT-039
HA, Jae-Du	P-BT-113	HONG, Sungkweon	P-ST-062	IM, Woobin	P-YS-025	JEONG, Eun Chae	P-BT-001	JOH, Minsu	P-ET-066	JUNG, Youngmee	P-BT-001
HA, JANGho	P-BT-080	HONG, TaeEun	P-NT-082	IN, Sehwan	P-ET-070	JEONG, Hana	P-BT-012	JOH, Miok	P-ST-051	JUNG, Young-Sik	P-BT-113
HA, Jeongssoo	P-IT-011	HONG, Yeonsun	P-NT-017	ISLAM, Jahowa	P-YS-057	JEONG, Hana	P-BT-013	JOHNSTONE, Doug	P-ST-014	JUNG, Young-Sik	P-BT-115
HAHN, Sun Hwa	S-LS-03	HONG, Yeon-sun	P-BT-060	ISLAM, Shahinul	P-NT-042	JEONG, Hana	P-BT-015	JORRY, Victoria	P-YS-009	JUNG, Yu Kyoung	P-BT-113
HAM, Seon Young	P-ST-005	HONG, Yong-Geun	P-IT-032	ISOZAKI, Tatsuhiko	P-YS-046	JEONG, Hee Jin	P-BT-059	JOUNG, Seokin	P-PC-002	KADAYAT, Tara Man	P-YS-050
HAM, Seon Young	P-ST-063	HONG, Young-Pyo	P-IT-022	JADHAV, Yashashree	P-YS-021	JEONG, HyeonSeok S.	P-BT-023	JU, Byeong-Kwon	P-NT-016	KADONOSONO, Tetsuya	P-YS-046
HAM, Sihyun	P-BT-024	HUANG, Min	P-NT-027	JAЕ, Jungho	P-NT-078	JEONG, Ina	P-NT-055	JU, Jeongmin	P-NT-079	KAH, Dongha	P-ET-001
HAM, Sihyun	P-BT-025	HUH, Seong	P-NT-003	JAЕ, Jungho	P-NT-083	JEONG, J.	P-BT-076	JU, SHINyeong	P-BT-063	KAMALOVA, Albina	P-YS-024
HAM, Sihyun	P-BT-027	HUH, Yeowool	P-BT-011	JAFFE, Peter R.	P-ET-058	JEONG, Jei-Hyun	P-YS-053	JUN, Sangmi	P-BT-030	KANG, Chung Hyo	P-NT-065
HAM, Sun Young	P-ST-009	HUONG, Do Thi Viet	P-YS-054	JANG, Dongmin	P-ET-066	JEONG, Jeong Hyeon	P-BT-056	JUN, So-Young	P-BT-051	KANG, Ha-Sung	P-ET-072
HAN, Ahrim	P-ET-041	HUR, Eun-Mi	P-BT-049	JANG, Eun-Hae	P-BT-050	JEONG, Ji-Ho	P-NT-004	JUN, -Sangmi	P-YS-048	KANG, Hye Kyeong	P-BT-009
HAN, Baek Soo	P-BT-078	HUR, Eun-Mi	P-BT-050	JANG, Gilsoo	P-YS-067	JEONG, Ji-Ho	P-NT-005	JUNG, Areum	P-NT-062	KANG, Hye Sung	O-ST-04
HAN, Enna	P-BT-075	HUR, Eun-Mi	P-BT-051	JANG, Gwi-sook	P-BT-013	JEONG, Ji-Seon	P-BT-099	JUNG, Cho-Long	P-NT-067	KANG, Hyosoo	P-IT-041
HAN, Eun Hee	P-BT-034	HUR, Eun-Mi	P-BT-054	JANG, Ho Seong	P-NT-081	JEONG, Kyusung	P-BT-061	JUNG, Gayoung	P-NT-001	KANG, Hyun Sup	P-BT-078
HAN, Eun Hee	P-BT-041	HUR, Sun-Kyong	P-ET-019	JANG, Jae-Cheol	P-ST-028	JEONG, Mi Gyeong	P-BT-012	JUNG, Gooyoung	P-BT-111	KANG, Hyunwoo	P-ST-012
HAN, Eunsook	P-IT-029	HUSEYNOVA, Gunel	P-ET-015	JANG, Jae-Cheol	P-ST-029	JEONG, Minsup	P-ST-074	JUNG, Heekyung	P-BT-029	KANG, Hyun-Wook	S-FS-04
HAN, Hong Sik	P-BT-115	HUSSAIN, Mariam	P-YS-063	JANG, Jae-Cheol	P-ST-031	JEONG, Myeongsok	P-ST-036	JUNG, Hyejin	P-NT-012	KANG, Ilhyang	P-BT-023
HAN, Hyelyn	P-ST-059	HUYEN, Hoang Thi Bich	P-YS-070	JANG, Jaewoong	P-ST-049	JEONG, Myeongsok	P-ST-088	JUNG, Hyejin	P-NT-029	KANG, Insug	P-BT-003
HAN, Jeongran	P-BT-097	HWANG, Eun Sook	P-BT-012	JANG, Jesun	P-ST-096	JEONG, Nam-Joo	P-BT-112	JUNG, Hyejin	P-NT-030	KANG, Ji Hwan	P-ET-060
HAN, Joon Soo	P-NT-047	HWANG, Eun Sook	P-BT-013	JANG, Jesun	P-ST-097	JEONG, Sang Chul	P-BT-009	JUNG, Hyunji	P-IT-006	KANG, Ji-Sun	P-ET-050
HAN, Mijeong	P-ET-073	HWANG, Eun Sook	P-BT-014	JANG, Jin-Beak	P-ST-091	JEONG, Seulki	P-ET-042	JUNG, Hyunji	P-IT-025	KANG, Kyungin	P-ST-043
HAN, Oc Hee	P-NT-031	HWANG, Eun Sook	P-BT-015	JANG, Jiyoung	P-BT-080	JEONG, Seulki	P-NT-038	JUNG, Hyun-June	P-NT-085	KANG, Lin-Woo	P-BT-002
HAN, SongEe	P-ST-016	HWANG, Eunha	P-BT-033	JANG, Junhyuk	P-ET-002	JEONG, Seulki	P-NT-039	JUNG, Hyunsook	P-ET-001	KANG, Mi-Jeong	P-YS-013
HAN, Soo Bong	P-BT-113	HWANG, Eunha	P-BT-043	JANG, Kyungduk	P-ST-049	JEONG, Seulki	P-NT-058	JUNG, Hyunsook	P-NT-002	KANG, Miju	P-ST-014
HAN, Soo Bong	P-BT-115	HWANG, Geum Sook	P-BT-035	JANG, Mee	P-ET-006	JEONG, Seulki	P-NT-059	JUNG, J. A.	P-PC-001	KANG, Min Ji	P-NT-082
HAN, Sueji	P-BT-099	HWANG, Geum-Sook	P-BT-039	JANG, Mihue	P-BT-060	JEONG, Sohee	P-NT-076	JUNG, Jae Ung	PL-01	KANG, Mun Ja	P-ET-006
HAN, Wha-Jin	O-YS-02	HWANG, Geum-Sook	P-BT-040	JANG, Seoyoung	P-NT-080	JEONG, Sohyeon	P-BT-049	JUNG, Jaeyeon	O-IT-02	KANG, Sanghee	P-ET-067
HAN, Wha-Jin	P-PC-009	HWANG, Geum-Sook	P-BT-077	JANG, Seung-Cheol	P-ET-039	JEONG, Sol	P-YS-053	JUNG, Jeeyoun	P-BT-112	KANG, Soo-Yeon	P-ST-054
HAN, Yeoungmin	P-ST-097	HWANG, Geum-Sook	P-NT-080	JANG, Seunghun	P-NT-015	JEONG, Soo-Jin	P-BT-109	JUNG, Jee-Yun	P-NT-021	KANG, Suk-Jong	P-IT-016
HAN, Young-Soo	P-ET-043	HWANG, Hae Won	P-NT-001	JANG, Soojeong	P-YS-039	JEONG, Tae Cheon	P-YS-013	JUNG, Jingsang	P-ET-033	KANG, Suk-Yun	P-BT-102
HANH, Tran Thi Bao	P-IT-003	HWANG, Hae-Chul	P-NT-026	JANG, Sungsoo	P-ST-056	JEONG, Tae-Cheon	P-YS-050	JUNG, Jinsang	P-ET-030	KANG, Sung-Ju	P-ST-014
HÄNSEL, Christian	P-YS-072	HWANG, Hai-Min	P-BT-117	JANG, Won Jun	P-NT-071	JEONG, Woong-Seob	P-ST-043	JUNG, Jinsang	P-ET-031	KANG, T. J.	P-BT-076
HEO, Chang-Kyu	P-BT-118	HWANG, Hai-Min	P-BT-118	JANG, Yerin	P-NT-061	JEONG, Youngjin	P-YS-034	JUNG, Jinsang	P-ET-032	KANG, Taejoon	P-BT-089
HEO, Dong-hyun	P-ET-028	HWANG, Hongik	P-BT-047	JANG, Yu Jin	P-ET-055	JI, S.-H.	P-ET-016	JUNG, Jinsang	P-ET-040	KANG, Taejoon	P-NT-060
HEO, Jaeyeong	P-YS-062	HWANG, Inwoo	P-IT-043	JEE, Dong-No	P-ST-099	JI, Seulgi	P-NT-064	JUNG, Juang	P-PC-003	KANG, WonSeok	P-ST-025
HEO, Youn-Jeong	P-ST-102	HWANG, Jong Yeon	P-NT-061	JEE, Geonhwa	P-ST-083	JI, Seulgi	P-NT-069	JUNG, Jungkyo	P-ET-007	KANG, Yong Tae	P-YS-065
HERCZEG, Gregory	P-ST-014	HWANG, Jong Yeon	P-NT-065	JEE, Michael Shincheon	P-NT-030	JI, Sinae	P-ST-093	JUNG, Juyeon	P-BT-089	KANG, YongHeack	P-YS-069
HEYER, Mark H.	P-ST-012	HWANG, Meejeong	P-ET-062	JEON, Byeongjun	P-NT-070	JI, Young-Yong	P-ET-014	JUNG, Juyeon	P-BT-090	KANG, Yong-Heack	P-YS-066
HO, Chang-Hoi	P-BT-005	HWANG, Seung-On	P-ET-074	JEON, Daekeun	P-ST-036	JIANG, C.W.	P-ST-050	JUNG, Kyung-Sook	P-BT-117	KANG, Yong-Heack	P-YS-067
HO, Chang-Hoi	P-ET-019	HWANG, Seulki	P-BT-089	JEON, Daekeun	P-ST-062	JIN, HeeJeong	P-BT-110	JUNG, Minyoung	P-ST-008	KANG, Yongku	P-ET-073
HO, Chang-Hoi	P-ET-022	HWANG, Sun-Mi	P-YS-057	JEON, Daekeun	P-ST-088	JIN, Hyun Mi	P-BT-009	JUNG, Minyoung	P-ST-010	KANG, Youn Jae	P-BT-028
HOANG, Gia Ngoc Tu	P-YS-080	HWANG, Yeryeong	P-YS-023	JEON, Haneol	P-ET-036	JIN, Jong Sung	P-NT-037	JUNG, S.	P-ET-016	KANG, Yu-Jin	P-YS-082
HONG, A-Ra	P-NT-081	HWANG, Yoola	P-ST-004	JEON, Heesoo	P-BT-029	JIN, Kyoung-Wook	P-ST-064	JUNG, S.	P-NT-035	KANGA, Marlene	PL-03
HONG, Chang Pyo	P-BT-083	HWANG, Yoola	P-ST-006	JEON, Hyeon-Jin	P-ST-077	JIN, Young-Hee	P-BT-103	JUNG, S.	P-NT-041	KANTH, Sanjeev K.	P-YS-031
HONG, Haejin	P-BT-023	HWANG, Yoola	P-ST-041	JEON, Hyokyung	P-ET-059	JO, Hanbyeol	P-NT-046	JUNG, Soon-Young	P-BT-051	KATAOKA, Naoya	P-YS-046
HONG, Ik-Seon	P-YS-040	HWANG, Yun Jeong	P-NT-012	JEON, Hyokyung	P-NT-018	JO, Hyung Ah	P-BT-035	JUNG, So-Young	P-BT-105	KATAYAMA, Seiji	P-ET-052

KATILA, Nikita	P-YS-016	KIM, Dong Hoi	P-BT-004	KIM, Hyeon-Min	P-ET-069	KIM, Ji sun	P-ET-059	KIM, Kyung Mo	P-ET-020	KIM, So Yeon	P-BT-053
KATILA, Pramila	P-YS-008	KIM, Dong Hwan	P-YS-075	KIM, HyeRan	P-BT-081	KIM, Ji-Eun	P-ST-016	KIM, Kyunghun	P-ET-050	KIM, So Yeon	P-NT-008
KATILA, Pramila	P-YS-014	KIM, Dong Ki	P-BT-035	KIM, HyeRan	P-BT-082	KIM, Jieun E.	P-BT-016	KIM, Kyung-Mo	P-ET-026	KIM, So Young	S-FS-01
KAUR, Narinder	P-NT-075	KIM, Dong-Gyun	S-WI-01	KIM, HyeRan	P-BT-083	KIM, Jieun E.	P-BT-023	KIM, Meehyein	P-BT-114	KIM, So-Jeong	P-ET-043
KAZUNOBU, Tsutsui	P-YS-054	Kim, Dong-Hyun	P-IT-024	KIM, HyeRan	P-BT-086	KIM, Ji-Hye	P-ST-016	KIM, Mi Eon	P-ET-060	KIM, Song Yi	P-NT-047
KEUM, Gyochang	P-NT-050	KIM, Dong-Ik	P-NT-036	KIM, Hye-Won	P-ST-070	KIM, Jihyun	P-IT-014	KIM, Mi Kyoung	P-NT-032	KIM, Soo Min	P-NT-022
KEY, J.H.	P-YS-032	Kim, Dong-Jin	P-ET-009	KIM, Hye-Yeon	P-BT-043	KIM, Jihyun	P-IT-045	KIM, Mi Kyoung	P-NT-033	KIM, Soo Phil	P-BT-102
KHADBAATAR, Munkhtsooj	P-BS-003	Kim, Dong-Jin	P-ET-010	KIM, Hyo Kyeong	P-BT-012	KIM, Jin Ha	S-FS-03	KIM, Mi Kyoung	P-NT-034	KIM, Soojung	P-BT-059
KHADBAATAR, Munkhtsooj	P-YS-004	KIM, Dongok	P-ET-007	KIM, Hyo Kyeong	P-BT-015	KIM, Jin Joo	P-ET-018	KIM, Mi Kyung	P-IT-021	KIM, Sook-Kyung	P-BT-098
KHAKUREL, Amrita	P-YS-003	KIM, Dong-Seon	P-BT-111	KIM, Hyojung	P-IT-020	KIM, Jin Joo	P-NT-007	KIM, Mijin	P-BT-080	KIM, Soon-Hee	P-BT-112
KHAN, Adnan Mujahid	P-YS-022	KIM, Dong-soo	P-PC-006	KIM, Hyojung	P-PC-006	KIM, Jin Young	P-BT-031	KIM, Mikyung	P-NT-011	KIM, So-Yeon	P-ST-092
KHAN, Nabeel Ali	P-YS-018	KIM, Dongwon	P-ET-061	KIM, Hyojung	P-NT-055	KIM, Jinhan	O-ST-03	KIM, Min Jeong	P-BT-001	KIM, Su Yeon	P-NT-081
KHAN, Shoab A.	P-YS-018	KIM, Dong-Wuk	P-ET-069	KIM, Hyoungchul	P-YS-035	KIM, Jinhee	S-FS-06	KIM, Min Ju	P-BT-062	KIM, Su-duk	P-YS-068
KHO, YoungLIM	P-ET-045	KIM, Doyoung	P-NT-039	KIM, Hyounkyoung	P-ST-036	KIM, Jin-Koo	P-BS-010	KIM, Min Young	P-NT-010	KIM, Suhyeon	P-BS-007
KHURELBAATAR, Erdenechuluun	P-YS-004	Kim, Duk-jin	P-ET-007	KIM, Hyun Goo	O-E3T-02	KIM, Jinsol	P-BT-022	KIM, Minjoo	P-IT-034	KIM, Sujin	P-IT-013
KI, Ah Young	P-BT-032	KIM, E. K.	P-BT-076	KIM, Hyun Jo	P-PC-003	KIM, Jinwoo	P-BT-113	KIM, MinJoo	P-YS-069	KIM, Sujin	P-ST-035
KIL, Hyosub	P-ST-021	KIM, Ee Eul	O-ST-05	KIM, Hyun Jung	P-BT-019	KIM, Jinwook	P-IT-007	KIM, Minsung	P-IT-013	KIM, Sujin	P-ST-038
KIL, Hyosub	P-ST-039	KIM, Eosu	P-BT-028	KIM, Hyun Mee	P-ET-021	KIM, Jin-Young	P-YS-066	KIM, Mirang	P-BT-045	KIM, Sujin	P-ST-050
KIL, Hyosub	P-ST-047	KIM, EunHye	P-YS-003	KIM, Hyun Mee	P-ET-025	KIM, Ji-Sun	P-NT-004	KIM, Myeongja	P-ET-068	KIM, Sujin	P-YS-039
KIM, Ae-Ran	P-BT-105	KIM, Eunice EunKyeong	P-BT-052	KIM, Hyun Sook	P-PC-003	KIM, Ji-Sun	P-NT-005	KIM, Myoung-Hee	P-BT-026	KIM, Su-Jin	P-BT-017
KIM, Aeyung	P-BT-101	KIM, Eunice EunKyeong	P-BT-059	KIM, Hyun Woo	P-NT-074	KIM, JiWon	P-NT-031	KIM, Myung Sook	P-BS-008	KIM, Sun Hee	P-NT-056
KIM, Bangyeop	P-ST-060	KIM, Eunjin	P-BT-070	KIM, Hyuna	P-ST-020	KIM, Jiyoung	P-BT-110	KIM, Myung-Deug	P-ST-099	KIM, Sun Hee	P-NT-057
KIM, Bang-Yeop	P-ST-044	KIM, Eunsun	P-IT-044	KIM, Hyun-Bi	P-BT-081	KIM, JongGyu	P-YS-069	KIM, Myungsu	P-ET-062	KIM, Sun Hwa	P-BT-062
KIM, Bang-Yeop	P-ST-079	KIM, Gahae	P-ET-051	KIM, Hyun-Bi	P-BT-082	KIM, Jong-Hwan	P-BT-045	KIM, Myung-Sunny	P-BT-112	KIM, Sunggil	P-BT-085
KIM, Bang-Yeop	P-ST-089	KIM, Gahae	P-ET-053	KIM, Hyun-Bi	P-BT-086	KIM, Jong-Shik	P-BT-066	KIM, Nam-Soon	P-BT-117	KIM, Sunghun	P-NT-002
KIM, Bang-Yeop	P-ST-090	KIM, Gahae	P-ET-057	KIM, Hyunbin	P-NT-027	KIM, Jong-Shik	P-BT-067	KIM, Roksoon	P-ST-035	KIM, Sungil	P-IT-045
KIM, Bo-Hyun	P-IT-024	KIM, Gahae	P-ET-063	KIM, Hyun-Chul	P-NT-003	KIM, Jong-Shik	P-BT-068	KIM, Rok-Soon	P-YS-039	KIM, Sung-Jin	P-NT-003
KIM, Bo-Kyung	P-BT-077	KIM, Gahae	P-ET-068	KIM, Hyung Kyung	P-BT-023	KIM, Jongtae	P-ET-071	KIM, Saewung	P-ET-037	KIM, Sungsoo S.	P-ST-074
KIM, Bongsoo	P-NT-060	KIM, Gayoun	P-IT-025	KIM, Hyungguk	P-BT-093	KIM, Joo Hyeon	P-ST-089	KIM, Saewung	P-ET-040	KIM, Sungsoo S.	P-YS-042
KIM, Bu-Yeo	P-BT-109	KIM, Gayoung	P-ET-044	KIM, HyungGoo	P-YS-069	KIM, Joo-Ae	P-ET-034	KIM, Sang Hoon	P-NT-020	KIM, Sung-Woo	P-ET-010
KIM, ByeongJeong	P-IT-046	KIM, Gayoung	P-IT-012	KIM, Hyun-Goo	P-YS-066	KIM, Joo-Ae	P-ET-035	KIM, Sang Hyuk	P-ST-005	KIM, Sung-Wook	P-ET-028
KIM, Byung-Hoon	P-ET-017	KIM, Geon-Hee	P-ST-043	KIM, Hyun-Goo	P-YS-067	KIM, Joo-Ae	P-ET-036	KIM, Sang Hyuk	P-ST-009	KIM, Syeun	P-YS-038
KIM, Byung-Kook	P-YS-035	KIM, Geon-Hwa	P-YS-048	KIM, Hyun-goo	P-YS-068	KIM, Joo-Ae	P-ET-037	KIM, Sang Hyuk	P-ST-063	KIM, Tae Hee	P-BT-001
KIM, Cha Young	P-BT-086	KIM, Geunyoung	P-IT-013	KIM, Hyunji	P-NT-058	KIM, Joo-Ae	P-ET-040	KIM, Sang Hyun	P-ET-042	KIM, Taeho	P-IT-015
KIM, Chaehyoung	P-ST-097	KIM, Gha-Young	P-ET-002	KIM, Hyunju	P-BT-053	KIM, Joongbaek	P-IT-039	KIM, Sang Wan	P-ET-041	KIM, Taeho	P-IT-030
KIM, Chang Ho	P-ST-080	KIM, H. J.	P-PC-001	KIM, Hyunjung	P-ET-021	KIM, JuHyeon	P-NT-062	KIM, Sang-Heon	P-BT-059	KIM, Taeho	P-IT-033
KIM, Chang Ki	P-YS-066	KIM, H. S.	P-PC-001	KIM, Hyun-Ok	P-ST-095	KIM, Jun Ki	P-NT-082	KIM, Sang-Kyung	P-YS-057	KIM, Tae-hoon	P-ST-065
KIM, Chang Ki	P-YS-067	KIM, Hae Jin	P-NT-048	KIM, HyunSeok	P-ET-037	KIM, Jung Sun	P-PC-008	KIM, Sangwoo	P-ET-031	KIM, Taeyoun	P-ST-049
KIM, Chang Ki	P-YS-068	KIM, Hae Jin	P-NT-049	KIM, Hyunsoon	P-BT-080	KIM, Jung-Ae	P-YS-050	KIM, Sangwoo	P-ET-035	KIM, Tammy D.	P-BT-022
KIM, Chang Soo	P-YS-052	KIM, Haeun	P-IT-008	KIM, Hyun-Soon	P-BT-086	KIM, Jungdong	P-NT-043	KIM, Se-Hwa	P-NT-063	KIM, Wan Doo	P-BT-094
KIM, CHOnsaeng	P-BT-113	KIM, Hanna	P-BT-045	KIM, I. C.	P-PC-001	KIM, Jungyoon	P-BT-022	KIM, SeHyun	P-ET-025	KIM, Won Kon	P-BT-079
KIM, ChulHoon	P-BT-028	KIM, Ha-yang	P-YS-068	KIM, Il-Hoon	P-ST-074	KIM, Jungyoon	P-BT-023	KIM, Seokyeol	P-IT-005	KIM, Won Kon	P-BT-079
KIM, D.H.	P-ET-071	KIM, Hee-Jung	P-BT-021	KIM, In Chul	P-PC-003	KIM, Kee-Tae	P-ST-024	KIM, Seong Ho	P-NT-008	KIM, Won-Gil	P-ST-004
KIM, Dae-Duk	P-YS-010	KIM, Hee-Jung	P-BT-038	KIM, In Gyu	P-BT-096	KIM, KeunBae	P-ST-055	KIM, Seong Jun	P-NT-053	KIM, Won-Gil	P-ST-006
KIM, Dae-Duk	P-YS-012	KIM, Heeyeon	P-ET-027	KIM, Inhyub	P-BT-077	KIM, Ki Taek	P-YS-012	KIM, Seong Ku	P-NT-064	KIM, Wonsu	P-ET-050
KIM, Dae-Shin	P-BT-066	KIM, Hee-Young	P-ST-030	KIM, In-San	P-NT-017	KIM, Ki Young	P-BT-091	KIM, Seong-Ku	P-ST-051	KIM, Woong	P-BT-064
KIM, Dae-Shin	P-BT-067	KIM, Heongyeom	P-IT-012	KIM, Jae-Hyuk	P-ST-022	KIM, Kihwan	P-YS-075	KIM, Seongyeon	P-BT-093	KIM, Woong	P-NT-045
KIM, Dae-Shin	P-BT-068	KIM, Honggon	P-NT-077	KIM, Jae-Hyun	P-NT-085	KIM, Kihwan	P-YS-076	KIM, Seung Il	P-BT-030	KIM, Yean Hee	P-YS-007
KIM, Daesoo	P-BT-057	KIM, Honggon	P-NT-078	KIM, Jaemoo	P-BT-072	KIM, KIMin	P-IT-001	KIM, Seung Il	P-YS-048	KIM, Year	P-ET-068
KIM, Dae-Soo	P-BT-117	KIM, Honggon	P-NT-083	KIM, JANG-Kyu	P-ST-081	KIM, Kimoon	O-NT-01	KIM, Seung Kwan	P-ST-043	KIM, Yeji	P-ST-017
KIM, Dae-Wook	P-YS-031	KIM, Ho-Seob	P-YS-031	KIM, Jee-Hoon	P-YS-015	KIM, Ki-Taek	P-YS-010	KIM, Seung Min	P-BT-059	KIM, Yeojin	P-NT-066
KIM, Dai-Jin	P-BT-063	KIM, Huijeong	P-ET-030	KIM, Jeong	P-ET-072	KIM, Kiyoung	P-NT-006	KIM, Seung Min	P-BT-060	KIM, Yeo-Jin	P-ET-072
KIM, Deugsoo	P-ET-032	KIM, Huijeong	P-ET-031	KIM, Jeong Ah	P-NT-014	KIM, Kwang Kyu	P-BT-065	KIM, Seunghan	P-ST-097	KIM, Yeon-Han	P-ST-038
KIM, Deugsoo	P-ET-040	KIM, Huijeong	P-ET-032	KIM, Jeong Yul	P-BT-096	KIM, Kwang Kyu	P-BT-066	KIM, Seunghwan	P-ET-038	KIM, Yeon-Sook	P-BT-114
KIM, Deuk Young	P-NT-075	KIM, Huijeong	P-ET-033	KIM, Jeong-Han	P-ST-083	KIM, Kwang Kyu	P-BT-067	KIM, Seung-Hyung	P-BT-111	KIM, Yera	P-ET-051
KIM, Dohee	P-BT-056	KIM, Hui-Kyung	P-ST-076	KIM, Jeong-Hee	P-BT-044	KIM, Kwang Kyu	P-BT-068	KIM, SHIN Hye	P-BT-100	KIM, Yera	P-ET-053
KIM, Dong Ha	P-ET-055	KIM, Hui-Kyung	P-ST-103	KIM, Jeongjin	P-BT-057	KIM, Kwang Kyu	P-BT-069	KIM, Shinyoung	P-YS-067	KIM, Yera	P-ET-057
KIM, Dong Ha	P-NT-044	KIM, Hwan Mook	P-BT-077	KIM, Jeongkwon	P-BT-100	KIM, Kwang-Seop	P-NT-085	KIM, Si-Wan	O-E3T-03	KIM, Yera	P-ET-063
KIM, Dong Ho	P-ET-029	KIM, Hyejin	P-ST-011	KIM, Jhoon	P-ET-074	KIM, Kwihoon	P-IT-032	KIM, Siwoo	P-ST-015	KIM, Yochan	P-ET-038
		KIM, Hyeon-Joong	P-BT-002	KIM, Ji Eun	P-ST-083	KIM, Kyun Eun	P-BT-115	KIM, So Hyun	P-BT-049	KIM, Yong Doo	P-ET-060

KIM, Yong Ha	P-ST-021	KOO, Kee Young	P-ET-048	LEE, CHONG-Kyo	P-BT-113	LEE, Hyungjin	P-IT-013	LEE, JiSeok	P-ET-055	LEE, Meehye	P-ET-040
KIM, Yong Ha	P-ST-083	KOO, Youn-Seo	P-ET-019	LEE, Chul Wee	P-YS-059	LEE, Hyunjo	P-NT-077	LEE, Jisu	P-IT-034	LEE, Meng-Lun	P-YS-058
KIM, Yong Jun	O-BT-05	KOOK, Geon	P-IT-021	LEE, Chulhyun	P-BT-044	LEE, Hyunjo	P-NT-078	LEE, Jong Eun	P-BT-028	LEE, Mi Jung	P-ET-015
KIM, Yong Jun	P-BT-006	KOOK, Geon	P-NT-011	LEE, Da som	P-BT-078	LEE, Hyunjo	P-NT-083	LEE, Jong-Ho	P-YS-035	LEE, Min Sun	P-ST-026
KIM, Yong Jun	P-BT-007	KOSODO, Yoichi	O-BT-04	LEE, Dabon	P-NT-077	LEE, Hyunjo J.	P-BT-093	LEE, Jong-Sook	P-YS-015	Lee, Min-Ku	P-ET-017
KIM, Yong Pyo	P-ET-045	KOTOV, Dmytro	P-NT-025	LEE, Dae-Hee	P-NT-043	LEE, Hyunjo J.	P-IT-020	LEE, Jong-Sook	P-YS-071	LEE, Min-Soo	P-ST-009
KIM, Yongae	P-NT-004	KU, Keun Bon	P-BT-114	LEE, Deok Hyun	P-ET-020	LEE, Hyunjo J.	P-IT-021	LEE, Jong-Sook	P-YS-073	LEE, Mi-Young	P-BT-107
KIM, Yongae	P-NT-005	KUCHIMARU, Takahiro	P-YS-046	LEE, Deukhee	P-YS-019	LEE, Hyunjo J.	P-NT-011	LEE, Joong-Su	P-BT-037	LEE, Moon Jin	P-ST-026
KIM, Yong-Guk	P-IT-003	KUMAR, Pankaj	P-ST-050	LEE, Do Nam	P-NT-003	LEE, lyn-Hyang	P-YS-023	LEE, Jooran	P-NT-013	LEE, Nayoung	P-ST-056
KIM, Yonghyeon	P-IT-045	KWAG, Rina	P-NT-084	LEE, Dong Ho	P-NT-065	LEE, lyn-Hyang	P-YS-051	LEE, Joowon	P-YS-042	LEE, Nayoung	P-ST-059
KIM, Yonghyun	P-ET-023	KWAK, Chaewon	P-BT-071	LEE, Dongjin	P-NT-023	LEE, lyn-Hyang	P-YS-082	LEE, Joo-Youn	P-BT-113	LEE, Nayoung	P-ST-080
KIM, Yongil	P-ET-023	KWAK, Hyunjo	P-ET-073	LEE, Dong-Joon	P-IT-022	LEE, J. -S	P-BT-076	LEE, Joo-Youn	P-NT-061	LEE, Nayoung	P-ST-084
KIM, Yongil	P-ST-007	KWAK, Young-Sil	P-ST-021	LEE, Dong-Keun	P-BT-008	LEE, Jae Uk	P-NT-073	LEE, Joo-Young	P-ST-027	LEE, Na-Young	P-ST-064
KIM, Yongil	P-ST-008	KWAK, Young-Sil	P-ST-047	LEE, Dong-Woo	P-BT-026	LEE, Jae Wook	P-BT-004	LEE, Ju Hee	P-BT-001	LEE, Na-Young	P-ST-091
KIM, Yongil	P-ST-010	KWEON, Jeehye	P-PC-009	LEE, Dongwook	P-NT-026	LEE, Jae Yeol	P-BT-004	LEE, Ju Yeon	P-BT-031	LEE, Pyung-Soo	P-ET-072
KIM, Yongil	P-ST-011	KWON, Byung-Chan	P-ST-085	LEE, Duck-Hyun	P-ET-026	LEE, Jaejin	P-ST-047	LEE, Ju-A	P-BT-112	LEE, Rana	P-PC-004
KIM, Yongil	P-ST-017	KWON, Guk Hyeon	P-ET-027	LEE, Eung-Seok	P-YS-008	LEE, Jae-Jin	P-BT-018	LEE, Jun Hee	P-BT-094	LEE, Rochelle	P-YS-033
KIM, Yoonju	P-BT-109	KWON, Hannah	P-ET-055	LEE, Eung-Seok	P-YS-014	LEE, Jae-Jin	P-BT-019	LEE, June-Key	P-YS-060	LEE, S. H.	P-PC-001
KIM, Youn	P-NT-073	KWON, Ick Chan	P-BT-062	LEE, Eung-Seok	P-YS-050	LEE, Jae-Jin	P-BT-020	LEE, Jung Kyoo	P-ET-056	LEE, Saeram	P-BT-028
KIM, Youn Sang	P-NT-015	KWON, Inae	P-ET-031	LEE, Eun-Hee	P-ET-009	LEE, Jae-Ok	P-YS-039	LEE, Jungho	P-ST-097	LEE, Saeyoung	P-BT-043
KIM, Young	P-ET-029	KWON, Inae	P-ET-035	LEE, Eun-Hee	P-ET-010	LEE, Jaeyong	P-IT-031	LEE, Jung-Hoon	P-NT-054	LEE, Sang Chul	P-BT-079
KIM, Young Chul	P-YS-031	KWON, Ji-Yeong	P-NT-066	LEE, Eunil	P-ST-027	LEE, Jeemin	P-PC-009	LEE, Jung-Sook	P-BT-065	LEE, Sang Ryool	P-ST-059
KIM, Young Heon	P-NT-010	KWON, Joseph	P-BT-032	LEE, Eunji	P-ST-022	LEE, Jei Ha	P-BT-096	LEE, Jung-Sook	P-BT-066	LEE, Sang-Gak	P-ST-025
KIM, Young Hwan	P-NT-014	KWON, Kiho	P-ST-053	LEE, Eunjik	P-YS-072	LEE, Jeong	P-ET-028	LEE, Jung-Sook	P-BT-067	LEE, Sanghee	P-IT-012
KIM, Young Hye	P-BT-031	KWON, Kyung-Hoon	P-PC-002	LEE, Eun-Soo	P-NT-063	LEE, Jeong Eun	P-BT-001	LEE, Jung-Sook	P-BT-068	LEE, Sangil	P-ET-060
KIM, Young-Dae	P-BT-073	KWON, O Sang	P-BT-102	LEE, Gangwoong	P-ET-030	LEE, Jeongeun	P-IT-011	LEE, Jung-Sook	P-BT-069	LEE, Sang-Kwon	P-ET-028
KIM, Youngjae	P-NT-052	KWON, Sunoh	P-BT-102	LEE, Gangwoong	P-ET-032	LEE, Jeongeun	P-IT-014	LEE, Jungwoon	P-BT-073	LEE, Sang-Min	P-NT-066
KIM, Youngjae	P-NT-084	KWON, Yeon Ju	P-NT-073	LEE, Gangwoong	P-ET-033	LEE, Jeongeun	P-NT-051	LEE, Jungwoon	P-BT-074	LEE, Sangrok	P-ST-076
KIM, Young-kuk	P-IT-029	KWON, Youjeong	P-BT-074	LEE, Geonhee	P-NT-069	LEE, Jeong-Eun	P-ST-002	LEE, Jungwoon	P-BT-075	LEE, SangRyool	P-ST-056
KIM, Youngmee	P-NT-003	KWON, Youngjoo	P-YS-014	LEE, Geonhee	P-NT-072	LEE, Jeong-Eun	P-ST-012	LEE, Junho	P-ST-004	LEE, Sang-Ryool	P-ST-080
KIM, Youngmi	P-ET-005	LAJ, Paolo	P-ET-035	LEE, Geun Woo	P-YS-037	LEE, Jeong-Eun	P-ST-013	LEE, Junho	P-ST-006	LEE, Sangsu	P-IT-006
KIM, Youngmin	P-IT-031	LAM, Do Van	P-NT-085	LEE, Gibbeum	P-BT-014	LEE, Jeong-Eun	P-ST-014	LEE, Juyeon	P-PC-005	LEE, Sang-Yeop	P-BT-030
KIM, Young-Rok	P-ST-044	LAN, Nguyen Thi	O-YS-01	LEE, Greem	P-ET-022	LEE, Jeong-Eun	P-ST-024	LEE, Keun Chul	P-BT-065	LEE, Sang-Yeop	P-YS-048
KIM, Young-Rok	P-ST-060	LATT, Aung Zaw	P-YS-045	LEE, Gyoung-Ja	P-ET-017	LEE, Jeong-Eun	P-ST-025	LEE, Keun Chul	P-BT-066	LEE, Sejoon	P-NT-075
KIM, Young-Rok	P-ST-079	LE, Mi Ja	S-LS-01	LEE, Ha Eun	P-BT-005	LEE, Jeong-Eun	P-ST-068	LEE, Keun Chul	P-BT-067	LEE, Seo Yeon	P-BT-083
KIM, Young-Rok	P-ST-090	LE, Minsun	P-IT-010	LEE, Haemi	P-NT-054	LEE, Jeonghyeon	P-IT-013	LEE, Keun Chul	P-BT-068	LEE, Seokho	P-ST-012
KIM, Youn-Tae	P-NT-038	LE, Thanh Ha	P-YS-078	LEE, Haenim	P-NT-079	LEE, Jeong-O	O-NT-04	LEE, Keun Chul	P-BT-069	LEE, Seokho	P-ST-013
KIM, Youn-Tae	P-NT-039	LE, Thanh Ha	P-YS-080	LEE, Ha-jin	P-ET-059	LEE, Jeong-O	P-NT-015	LEE, Ki-Won	P-YS-036	LEE, Seoksu	P-IT-025
KIM, Yu Jin	P-BT-109	LEE, Andrew	P-IT-015	LEE, Ha-Jin	P-NT-018	LEE, Jeong-O	P-NT-069	LEE, Kong Hoon	P-ET-029	LEE, Seonghee	P-NT-070
KIM, Yujeong	P-NT-056	LEE, B.D.	P-PC-001	LEE, Ha-jin	P-NT-042	LEE, Jeong-O	P-NT-072	LEE, Kong-Joo	P-BT-018	LEE, SeongWon	P-NT-074
KIM, Yujin	P-IT-035	LEE, BJ	P-NT-026	LEE, Hak-Joo	P-NT-085	LEE, Jeongsoon	P-ET-051	LEE, Kong-Joo	P-BT-019	LEE, Seorim	P-ST-059
KIM, Yun Kyung	P-BT-005	LEE, Bo Yoon	P-BT-054	LEE, Harim	P-YS-041	LEE, Jeongsoon	P-ET-053	LEE, Kong-Joo	P-BT-020	LEE, Seoyoon	P-ST-086
KIM, Yun Kyung	P-BT-056	LEE, Bohwa	P-ST-055	LEE, Hayoung	P-BT-030	LEE, Jeongsoon	P-ET-057	LEE, Kong-Joo	P-BT-021	LEE, Seoyoon	P-ST-087
KIM, YunJeong	P-IT-036	LEE, Byeongwook	P-BT-065	LEE, Hayoung	P-YS-048	LEE, Jeongsoon	P-ET-063	LEE, Kong-Joo	S-LS-02	LEE, Seo-yoon	P-ST-065
KIM, YunJeong	P-IT-046	LEE, Byeongwook	P-BT-069	LEE, Hee-Seon	P-NT-068	LEE, Jeongsoon	P-ET-068	LEE, Kwan Hyi	P-NT-023	LEE, Seung Mi	P-NT-010
KIM,-Jung	P-YS-049	LEE, Byoung-Seob	P-NT-053	LEE, Hewon	P-NT-078	LEE, Jeongyeo	P-BT-081	LEE, Kwang-Ryeol	P-NT-028	LEE, Seung Mi	P-NT-019
KIM,-Kyungmo	P-ET-024	LEE, Byoung-Sun	P-ST-004	LEE, He-won	P-NT-077	LEE, Jeongyeo	P-BT-082	LEE, Kwangyeol	P-NT-081	LEE, Seung Mi	P-NT-036
KO, Dai-ho	P-ST-071	LEE, Byoung-Sun	P-ST-006	LEE, Ho Cheol	P-YS-007	LEE, Jeongyeo	P-BT-083	LEE, Kyeong	P-BT-077	LEE, Seung Yeon	P-NT-045
KO, Hyunmin	P-IT-011	LEE, Byoung-Sun	P-ST-041	LEE, Hojun	P-ET-040	LEE, Jeongyeo	P-BT-086	LEE, Kyoung-Won	P-BT-112	LEE, Seung Yong	P-NT-016
KO, Suk-Hyung	P-BT-066	LEE, Byoung-Sun	P-ST-093	LEE, Hongsub	P-BT-077	LEE, Ji Eun	P-BT-063	LEE, Kyung Eun	P-BT-055	LEE, Seunghee	P-IT-007
KO, Suk-Hyung	P-BT-067	LEE, Byung Doo	P-PC-003	LEE, Hoon Jae	P-YS-028	LEE, Ji Youn	P-BT-092	LEE, Kyung-rak	P-ST-093	LEE, Seunghee	P-ET-074
KO, Suk-Hyung	P-BT-068	LEE, C. Justin	P-BT-049	LEE, Hoonhee	P-ST-094	LEE, Ji Youn	P-BT-098	LEE, Kyu-Sung	P-ST-019	LEE, Seung-Hee	O-BT-03
KO, Tae-Wook	P-NT-074	LEE, C. Justin	P-BT-051	LEE, Hosub	P-NT-038	LEE, Jieon	P-NT-051	LEE, Meehye	P-ET-030	LEE, SeungTaek	P-BT-063
KO, You Na	P-NT-048	LEE, Changeun	P-ST-049	LEE, Hosub	P-NT-058	LEE, Jieon	P-NT-077	LEE, Meehye	P-ET-031	LEE, Si Young	P-NT-029
KOH, Hea-Young	P-BT-048	LEE, Changjin	P-ST-016	LEE, Hungeun	P-ET-005	LEE, Ji-Hyun	P-BT-017	LEE, Meehye	P-ET-032	LEE, So Jin	P-BT-062
KOMURA, Shigeyuki	P-YS-002	LEE, Chang-Seop	P-YS-048	LEE, Hwa-Seon	P-ST-019	LEE, Ji-Hyun	P-ST-031	LEE, Meehye	P-ET-033	LEE, So Min	P-BT-112
KONDOH,-Shinae	P-YS-046	LEE, Changsup	P-ST-083	LEE, Hwashim	P-BT-116	LEE, Jinbok	P-ET-051	LEE, Meehye	P-ET-034	LEE, Sooyeon	P-IT-025
KOO, Hyunji	P-IT-022	LEE, Cheolju	P-BT-054	LEE, Hyojin	P-NT-023	LEE, Jinbok	P-ET-053	LEE, Meehye	P-ET-035	LEE, Soyeon	P-IT-019
KOO, In-Hoi	P-ST-037	LEE, Cheolju	P-BT-063	LEE, Hyoyoung	P-ST-073	LEE, Jinbok	P-ET-063	LEE, Meehye	P-ET-036	LEE, Soyeon	P-NT-052
KOO, Ja-Chun	P-ST-091	LEE, Chong Ock	P-NT-065	LEE, Hyun Kyeong	P-BT-031	LEE, Jinkeong	P-BT-024	LEE, Meehye	P-ET-037	LEE, So-Young	P-BT-095

LEE, Su Hee	P-BT-085	LIM, Hyuneui	P-BT-094	MINEGISHI, Misa	P-YS-046	NOH, Yong-Young	P-ET-015	PARK, Gee-yong	P-ET-013	PARK, Kyung-Ae	P-ST-027
LEE, Su Jeong	P-BT-094	LIM, Hyuneui	P-NT-067	MINKUS, Susanne	P-YS-072	NOH, Young-Hee	P-BT-081	PARK, Gu-Gon	P-YS-057	PARK, Kyung-Ae	P-ST-028
LEE, Su Jin	P-NT-064	LIM, Hyung Mi	P-NT-068	MOON, Bongkon	P-ST-043	NOH, Young-Hee	P-BT-082	PARK, Gu-Gon	P-YS-072	PARK, Kyung-Ae	P-ST-029
LEE, Su Kyoung	P-YS-065	LIM, Hyun-Su	P-ST-037	MOON, Dong Min	P-ET-053	NOH, Young-Hee	P-BT-086	PARK, Gun Wook	P-BT-031	PARK, Kyung-Ae	P-ST-030
LEE, Su Min	P-NT-037	LIM, Hyun-su	P-ST-071	MOON, Dongmin	P-ET-051	O, JANG Won	P-ET-027	PARK, Hee-Sook	P-BT-112	PARK, Kyung-Ae	P-ST-031
LEE, Suji L.	P-BT-016	LIM, Il-kwon	P-IT-042	MOON, Hee Sun	P-ET-058	OFFNER, Stella S. R.	P-ST-012	PARK, Heesung	P-ST-086	PARK, Kyung-Ae	P-ST-032
LEE, Suji L.	P-BT-023	LIM, Jae-Cheong	P-BT-095	MOON, Jihyun	P-YS-061	OGUR, E. O.	P-YS-055	PARK, Heesung	P-ST-087	PARK, Kyung-Ae	P-ST-033
LEE, Su-Jin	P-ET-052	LIM, Jeong Sik	P-ET-053	MOON, Jinseok	P-PC-005	OH, Alice	O-IT-03	PARK, Ho Seok	P-NT-073	PARK, Mikyoung	P-BT-045
LEE, Sul	P-BT-017	LIM, Jeongsik	P-ET-051	MOON, Ji-Young	P-BT-102	OH, C.-W	P-ET-016	PARK, Ho-Bum	P-ET-072	PARK, Min-Joo	P-ST-066
LEE, Sulha	P-ST-016	LIM, Jeongsik	P-ET-057	MOON, Joonhee	P-ET-049	OH, Chang-Hyun	P-BT-044	PARK, Hosik	P-ET-072	PARK, Minjung	P-PC-007
LEE, Sun Joo	S-WI-03	LIM, Ji Woong	P-BT-004	MOON, Kibeom	P-BT-080	OH, E.S.	P-YS-032	PARK, Hye Young	P-PC-008	PARK, Miyeon	P-ET-053
LEE, Sun Sook	P-NT-064	LIM, Jong-Myoung	P-ET-014	MOON, Yong Seon	P-YS-021	OH, Euitaek	P-IT-007	PARK, Hyeon-Cheol	P-ST-048	PARK, Miyeon	P-ET-057
LEE, Sun Sook	P-NT-069	LIM, Jongsun	P-NT-064	MOON, Yong-Jae	P-YS-039	OH, Eun-Mi	P-ST-036	PARK, HyunBae	P-NT-002	PARK, Miyeon	P-ET-063
LEE, Sung Ho	P-PC-003	LIM, Joy	P-BT-092	MOON, Yong-Jae	P-YS-041	OH, Eun-Mi	P-ST-062	PARK, Hyunju	P-ET-037	PARK, Miyeon	P-ET-068
Lee, Sung-Jai	P-ET-002	LIM, Jung Wook	P-ET-044	MUBARAK, Mahfuza	P-NT-042	OH, Eunsoon	P-NT-043	PARK, Jae Jin	P-ST-026	PARK, Myung-Sook	P-BS-005
LEE, Sungwoo	P-IT-021	LIM, Jung Wook	P-ET-065	MUHAMMAD, Shakil	P-YS-022	OH, HyeJin	P-YS-003	PARK, Jaeheung	P-ST-021	PARK, Pil-Hoon	P-YS-003
LEE, Sungwoo	P-NT-011	LIM, Kyo-Sun	P-ET-014	MUN, DongSeop	P-IT-041	OH, Hye-Ryun	P-ET-022	PARK, Jae-Il	P-BT-010	PARK, Pil-Hoon	P-YS-008
LEE, Sunmin	P-IT-008	LIM, Mi Hee	P-NT-057	MUTALEMWA, Lilian	P-YS-020	OH, Kyoung-Jin	P-BT-079	PARK, Jaeyoung	P-ST-097	PARK, Pil-Hoon	P-YS-011
LEE, Sun-Young	P-ET-054	LIM, Saehee	O-E3T-04	MYAT, Theingi Win	P-YS-045	OH, Sang Heon	P-BT-083	PARK, JANG-Hyun	P-ST-042	PARK, S.	P-NT-035
LEE, Sun-Young	P-ET-056	LIM, Saehee	P-ET-035	MYEKHLAI, Munkhshur	P-YS-005	OH, Sang Heon	P-BT-084	PARK, Jaeheung	P-ST-047	PARK, S.	P-NT-040
LEE, Tae Geol	P-BT-100	LIM, Sang Min	P-BT-004	MYUNG, Sung	P-BT-064	OH, Sang Heon	P-BT-085	PARK, Jeong-Eon	P-ST-091	PARK, S.	P-NT-041
LEE, Tae Ho	P-YS-007	LIM, Sang Min	P-BT-005	NA, Dong-hee	P-IT-008	OH, Seongyeol	P-IT-002	PARK, Ji Hye	P-ET-048	PARK, S.H.	P-ET-071
LEE, Tae Il	P-NT-015	LIM, Seok Hee	P-ST-101	NA, Go Woon	P-ST-072	OH, Sera	P-BT-013	PARK, Ji-Eun	P-BT-105	PARK, Sanghee	P-PC-009
LEE, W. S.	P-BT-076	LIM, Seokhee	P-ST-058	NA, Yoon-Ju	P-BT-091	OH, Seung Ja	P-BT-059	PARK, Ji-eun	P-PC-006	PARK, Sangjoon	P-IT-019
LEE, Wanno	P-ET-006	LIM, Seok-Hee	P-ST-040	NA, Yun-Cheol	P-BT-017	OH, Seung Ja	P-BT-060	PARK, Ji-eun	P-PC-007	PARK, Sangun	P-BT-080
LEE, Wanno	P-ET-014	LIM, Seong-Bin	P-ST-067	NADZRU, Najiha	P-YS-064	OH, Soo-Jin	P-BT-049	PARK, Jin Yong	P-NT-053	PARK, Sang-Young	P-ST-022
LEE, Woo Kyoung	P-ST-039	LIM, Seong-Bin	P-ST-076	NAH, Seung-Yeol	P-BT-002	OH, Soo-Jin	P-BT-051	PARK, Jinah	P-IT-001	PARK, Seohui	P-ST-018
LEE, Yang-Ji	P-ST-061	LIM, Sung Nam	P-NT-006	NAIK, Ravi	P-BT-077	OH, Tae-Sik	P-YS-031	PARK, Jinah	P-IT-005	PARK, Seok-Hee	P-YS-072
LEE, Yong Han	P-BS-007	LIM, Sung Su	P-BT-005	NAM, Eun Woo	P-YS-006	OH, Yuna	P-BT-055	PARK, Jinah	P-IT-015	PARK, Seon Ki	P-YS-063
LEE, Yong Sam	P-ST-005	LIM, Sungsu	P-BT-056	NAM, Eun Woo	P-YS-007	OH, -Sebeom	P-ET-024	PARK, Jinah	P-IT-030	PARK, Seong Je	P-ST-043
LEE, Yong Sam	P-ST-009	LIM, Won-Hee	P-BT-118	NAM, Gi-Wook	P-ST-102	OK, JungWoo	P-NT-082	PARK, Jinah	P-IT-033	PARK, Seonyoung	P-ST-001
LEE, Yong Sup	P-NT-024	LIM, Yi Rang	P-NT-064	NAM, Jwa-Min	P-NT-054	OK, Jung-Woo	P-NT-053	PARK, Jinah	P-IT-034	PARK, Seung-Chul	P-NT-067
LEE, Yonghun	P-IT-018	LIM, Yong Pyo	P-BT-083	NAM, Kyoung Uk	P-ST-063	OK, Myoung-Ryul	P-NT-001	PARK, Jinah	P-IT-043	PARK, Shinwon	P-BT-016
LEE, Yoo Jeong	P-ET-065	LIM, Yong Pyo	P-BT-084	NAM, Miso	P-BT-039	OLBRICH, Falk	P-YS-030	PARK, Jinhye	P-YS-041	PARK, SHINwon	P-BT-023
LEE, Young Hwa	P-NT-013	LIM, Yong Pyo	P-BT-085	NAM, Miso	P-BT-040	OSTRYSZ, Marlena	P-YS-074	PARK, Jinhyung	P-ST-071	PARK, SoHyun	P-ET-061
LEE, Young Jin	P-BT-115	LIM, Yong Taik	P-BT-042	NAM, Miso	P-BT-077	OTHMAN, Mazlan	O-ST-01	PARK, Jin-Ju	P-ET-017	PARK, So-Jung	O-NT-03
LEE, Young Soon	S-WI-05	LIU, Tie	P-BT-024	NAM, Myung-Hee	P-BT-037	PACK, Miyeon	P-ET-051	PARK, Jinku	P-ST-020	PARK, Song-Kyu	P-BT-077
LEE, Young-Su	P-NT-021	LIU, Yan	P-BT-105	NAM, Sangwoo	P-BT-114	PACK, YunSeong	P-ET-051	PARK, Jinkyun	P-ET-038	PARK, So-Young	P-BT-111
LEE, Yun-Ki	P-ST-077	LYOO, In Kyoon	P-BT-016	NAM, Seung-Eun	P-ET-072	PAE, Ae Nim	P-BT-004	PARK, Jin-Seong	P-NT-064	PARK, Su A	P-BT-094
LEE, Yurim	P-IT-014	LYOO, In Kyoon	P-BT-022	NAM, Wonwoo	P-NT-056	PAE, Ae Nim	P-BT-005	PARK, Jinyoung	P-BT-052	PARK, Suhyoung	P-BT-083
LEE, -Doekhyun	P-ET-024	LYOO, In Kyoon	P-BT-023	NAM, Yanghee	P-IT-035	PAE, Ae Nim	P-BT-061	PARK, Jisun	P-BT-080	PARK, Su-Hyun	P-ST-034
LI, Xiaonan	P-BT-083	MA, Jin Yeul	P-BT-101	NAMGUNG, Eun	P-BT-022	PAE, Ae Nim	P-NT-079	PARK, Jong Hyun	P-IT-013	PARK, Su-Hyun	P-ST-069
LIANG, Chia-Chun	P-YS-002	MA, Jin Yeul	P-BT-103	NAZEM, Nurul Islam	P-YS-079	PAIK, Sora	P-NT-024	PARK, Jong Seok	P-ST-080	PARK, Su-Hyun	P-ST-075
LIM, Byoeung-Jun	P-ST-061	MA, Jin Yeul	P-BT-104	NAZIBAH, Afrida	O-YS-04	PANG, Wenxing	P-BT-083	PARK, Jong-Chul	P-BT-054	PARK, Su-Hyun	P-ST-077
LIM, Chang Sung	P-PC-005	MA, Jiyoung	P-BT-023	NAZIBAH, Afrida	O-YS-05	PARK, A Young	P-BT-021	PARK, Jonghyun	P-BT-061	PARK, Sullha	P-IT-002
LIM, ChulSu	P-IT-036	MAGAR, Til Bahadur Thapa	P-YS-008	NDEDA, Rehema	P-YS-055	PARK, C.	P-NT-035	PARK, Jong-Yeop	P-ST-038	PARK, Sung Bum	P-BT-091
LIM, ChulSu	P-IT-037	MAGAR, Til Bahadur Thapa	P-YS-014	NEPAL, Mahesh Raj	P-YS-013	PARK, Changhee	P-IT-038	PARK, Jonwoo	P-YS-025	PARK, Sung-Joon	P-ST-043
LIM, ChulSu	P-IT-042	MAIRS, Steve	P-ST-014	NEYTS, Johan	P-BT-113	PARK, Chi Hoon	P-BT-061	PARK, Joo Hyung	P-YS-075	PARK, Sungsu	P-NT-069
LIM, ChulSu	P-IT-046	MALINDA, Vania	P-YS-019	NGUYEN, Dang Thanh	P-YS-015	PARK, Chi-Hoon	P-NT-065	PARK, Joo Hyung	P-YS-076	PARK, Sunkyoung	P-ST-013
LIM, Chungsun	P-NT-009	MAN, Tara	P-YS-008	NGUYEN, Dang Thanh	P-YS-073	PARK, Da Kyeong	P-BT-031	PARK, Joo-Ho	P-ST-082	PARK, Sunkyoung	P-ST-025
LIM, Donghyun	P-IT-012	MARUMO, R.	P-YS-055	NGUYEN, Minh Hong	P-YS-047	PARK, Dong-Soo	P-YS-015	PARK, Joon Kyu	P-BT-052	PARK, Unesik	P-IT-008
LIM, Eun-Kyung	P-BT-087	MIAO, Xinyang	P-BT-085	NGUYEN, Thao Kim Nu	P-YS-047	PARK, Durk-Jong	P-ST-099	PARK, Joon-Tae	P-BT-077	PARK, Wonah	P-ET-064
LIM, Eun-Kyung	P-BT-088	MIHN, Byeong-Hee	P-ST-009	NGUYEN, Thi Quyen	P-ST-071	PARK, Durk-Jong	P-ST-100	PARK, Juhan	P-ET-037	PARK, Won-Ik	P-IT-017
LIM, Eun-Kyung	P-BT-089	MIHN, Byeong-Hee	P-ST-063	NGUYEN, Thi Quynh Nhu	P-YS-078	PARK, Edmond C.	P-BT-030	PARK, Junghyun	P-ET-066	PARK, Won-Kee	P-ST-025
LIM, Eun-kyung	P-BT-090	MIHN, Byeong-Hee	P-YS-036	NGUYEN, Thi Quynh Nhu	P-YS-080	PARK, Edmond C.	P-YS-048	PARK, Kiduk	P-BT-061	PARK, YaeEun	P-BT-063
LIM, Eun-Kyung	P-ST-050	MIN, Byoung Koun	P-NT-045	NGUYEN, Trang Thi	P-YS-010	PARK, Eun Seo	P-ST-079	PARK, KkotChoRong	P-NT-060	PARK, Yeon-Seung	P-BT-021
LIM, Ho-Gon	P-ET-039	MIN, Byung Joo	S-LS-04	NIEHAUS, Thomas A.	P-NT-019	PARK, Eun-Bin	P-ST-098	PARK, Kwan-Seok	P-ET-069	PARK, Yong-Kyun	P-ST-099
LIM, Hye-Sun	P-BT-109	MIN, Kyoung Wook	P-ST-072	NINGOMBAM, Devarani Devi	P-YS-026	PARK, Eunji	P-ST-096	PARK, Kwi Deok	P-BT-059	PARK, You-In	P-ET-072
LIM, Hyo-Suk	P-ST-099	MIN, Sun-Joon	P-NT-046	NOBLE, Frazer Kingsley	P-YS-044	PARK, Eun-ji	P-BT-108	PARK, Kyoungju	O-IT-07	PARK, Youngdeuk	P-ST-035
LIM, Hyo-Suk	P-ST-100	MIN, Sun-Joon	P-NT-062	NOH, Yong-Young	P-ET-012	PARK, Eunju	P-IT-041	PARK, Kyung Ae	P-ST-026	PARK, Yunseong	P-ET-053

PARK, YunSeong	P-ET-057	SALA, Matthias	P-IT-035	SHIN, Ji- Hyun	P-BT-014	SONG, Mi-Ryoung	O-BT-01	WON, Hee Yeon	P-BT-013	YIM, Hong-Suh	P-ST-003
PARK, YunSeong	P-ET-063	SALIM, Rida	P-YS-018	SHIN, Jihye	P-BT-054	SONG, Mi-Ryoung	P-BT-008	WON, Joo Ho	P-ST-084	YIM, Jo Ryeong	P-ST-044
PARK, YunSeong	P-ET-068	SANG, Kwon O.	P-BT-105	SHIN, Jin Soo	P-BT-113	SONG, Shin Ae	P-NT-006	WON, Mi-Sook	P-NT-053	YIM, Jo Ryeong	P-ST-067
PATIL, Bebi	P-YS-034	SARGENT, Annelia I.	P-ST-068	SHIN, Joo-Hyun	P-BT-037	SONG, Tai Gil	P-IT-002	WON, Misun	P-BT-077	YIM, Jo Ryeong	P-ST-079
PATNAIK, Anushree Shivani	P-YS-029	SAUN, Seung-Bo	P-NT-031	SHIN, Junghoon	P-NT-070	SONG, Taigil	P-IT-041	WON, Sejeong	P-NT-085	YIM, Jo Ryeong	P-ST-090
PAUDEL, Sarita	P-YS-053	SAUNDERS, Gary W	P-BS-008	SHIN, Kwang-Soon	P-YS-045	SONG, WooSeok	P-NT-064	WOO, Hye-Jin	P-ST-027	YIM, Nam-Hui	P-BT-104
PAXTON, Larry J.	P-ST-039	SCHEERS, Els	P-BT-113	SHIN, Kyung-Min	P-BT-105	SONG, Young Sun	P-BS-010	WOO, Hye-Jin	P-ST-032	YIM, Seong A	P-ST-008
PHAM, Thuy Linh	P-YS-015	SCHROEDER, Jason R	P-ET-036	SHIN, Mee Nam	S-WI-02	SONG, Young-Joo	P-ST-044	WOO, Hye-Jin	P-ST-033	YOLAS, Birsen Irem	O-YS-06
PHAM, Thuy-Linh	P-YS-071	SEBUSANG, S. E. M.	P-YS-055	SHIN, Minso	P-ST-018	SONG, Young-Joo	P-ST-060	WOO, Jong-min	P-BT-108	YOO, Dongeun	P-NT-026
PIAO, Zhongyun	P-BT-083	SENARATHNA, Upekha	P-YS-077	SHIN, Sang Chul	P-BT-059	SONG, Young-Joo	P-ST-079	WOO, Junsung	P-BT-051	YOO, Ho Ryoung	P-BT-105
PONTOPPIDAN, Klaus M.	P-ST-068	Tharindi		SHIN, Seonhye	P-NT-032	SONG, Young-Joo	P-ST-090	WOO, Seonock	P-ET-003	YOO, Hoi-Jun	O-IT-01
POO, Haryoung	P-BT-070	SEO, A-Ri	P-NT-059	SHIN, Seulgi	P-BT-056	SUH, Hongsuk	P-NT-055	WOO, Seonock	P-ET-004	YOO, Hyunju	P-ST-014
POO, Haryoung	P-BT-071	SEO, Bok-Nam	P-BT-106	SHIN, Yong Kook	P-BT-067	SUH, In Seon	P-ET-034	WOO, Sun-Hee	P-ST-070	YOO, Ilsang	P-ST-073
POO, Haryoung	P-BT-072	SEO, Bongkuk	P-NT-009	SHIN, YongJu	P-IT-042	SUH, Inseon	P-ET-036	WOO, Sun-Hee	P-ST-098	YOO, Il-Sang	P-ST-085
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PUN, NirmalaTilija	P-YS-003	SEO, Jae-Gu	P-BT-037	SHINZATO, Sae	P-YS-081	SUH, Ji-Wan	P-BT-020	XU, Yong	P-ET-015	YOO, Jong Shin	P-BT-031
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YU, Yeong Jun	P-NT-014
YUK, Jin-Hee	P-ET-066
YUK, Seong-Su	P-YS-053
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YUN, H.	P-NT-040
YUN, Hyeong-Sik	P-ST-012
YUN, Jae Ho	P-YS-076
YUN, Jae Ho	P-YS-075
YUN, Jaesook	P-NT-071
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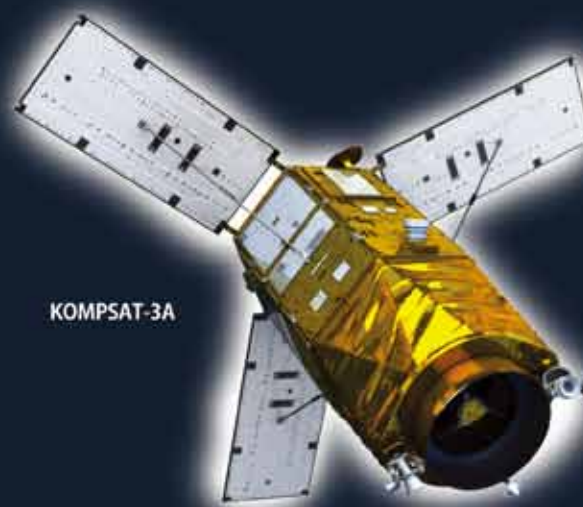


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