

Agenda for the 12th Japan-Korea Joint Seminar on Space Environment Utilization Research

October 20 ~ 21, 2015
Yonsei University, International campus
85 Songdogwahak-ro, Yeonsu-gu, Incheon 21983, Korea

Chairs of the Seminar
Prof. Inho CHOI and Prof. Makoto ASASHIMA

October 20 (Day 1)

09:00 ~ 09:30

- **Seminar Registration**

09:30 ~ 09:40

- **Opening and Welcome Remarks**

Opening and Welcoming Remarks

Prof. Inho CHOI, Yonsei University

09:40 ~ 10:00

- **Seminar Perspectives**

09:40-09:50

Microgravity science research groups in Korea for potential collaborations with Japan

Prof. Inho CHOI, Yonsei University

09:50-10:00

ISS "KIBO" utilization research in Japan

Prof. Makoto ASHSHIMA, JSPS & University of Tokyo

10:00 ~ 10:30

- **Space Program Introduction**

Session Chair: Joohee LEE

10:00-10:15

Updates on Space Program Activities in KARI

Dr. Joohee LEE, KARI

10:15-10:30

The Latest Status of Space Utilization in Japan

Prof. Makoto ASHSHIMA and Mr. Yoshiya FUKUDA

10:30 ~ 10:50

- **Coffee Break**

10:50 ~ 11:50

- **Life Science, Molecular Biology & Biochemical Engineering (I)**

Session Chair: Jin LEE

10:50-11:10

Nutritional Approach to prevent unloading-mediated muscle atrophy

Prof. Takeshi NIKAWA, and Mr. Takayuki UCHIDA Tokushima University

Medical School

11:10-11:30

Hypergravity disrupts motor neuron development in *C. elegans*

Prof. Jin LEE, Yonsei University

11:30-11:50

Medaka Osteoclast in ISS

Dr. Akira KUDO, Tokyo Institute of Technology

11:50 ~ 13:00

- **Lunch Break**

- **Photo Time**

13:00 ~ 14:00

- **Life Science, Molecular Biology & Biochemical Engineering (II)**

Session Chair: Prof. Takeshi NIKAWA

13:00-13:20

Real-time observation of protein crystal growth under magnetic quasi-microgravity conditions

Dr. Akira NAKAMURA, University of Tokyo

13:20-13:40

Generation of pectin hydrogel in microfluidic device

Mr. Cheayeon KIM, Chungnam National University

13:40-14:00

BioAstronaut-1: A bio-science mission with CubeSat Platform Technology

Dr. Tae-Sung YOON, Korea Research Institute of Bioscience and Biotechnology

14:00 ~ 15:00

■ **Combustion**

Session Chair: Prof. Jeong PARK

14:00-14:20

Difference between Lewis-number-induced and Buoyancy-driven Self-excitations in Laminar lifted Coflow Jet Flames

Prof. Jeong PARK, Pukyong National University

14:20-14:40

Flammability limit of solid material in microgravity

Prof. Osamu FUJITA, Hokkaido University

14:40-15:00

Effect of inert substitutions on flame spread on a thin wire under reduced atmosphere pressures

Seul-Hyun PARK, Chosun University

Jae-Hyuk Choi, Korea Maritime & Ocean University

15:00 ~ 15:20

■ **Coffee Break**

15:20 ~ 16:40

■ **Material Science**

■ **Session Chair: Prof. Masahito WATANABE**

15:20-15:40

Density measurement of CaO-SiO₂-Al₂O₃ slag using the aerodynamic levitation method and structure analysis

Prof. Joonho LEE, Korea University

15:40-16:00

Measurements of interfacial energy between molten steel and oxides using electrostatic levitation furnace (ELF) in ISS

Prof. Masahito WATANABE, Gakushuin University

16:00-16:20

Microstructure of Rare-earth Oxide-doped YAG Glass-ceramics Prepared by Aerodynamic Levitation

Prof. Won Seung CHO, Inha University

16:20-16:40

Study of nucleation and growth from solutions using electrostatic levitation

Dr. Geun-Woo Lee, Korea Research Institute of Standards and Science

16:40-17:00

Future Role of Science and Technology

Dr. Yoshinori FUJUMORI, Information Systems International Inc.

17:00 ~ 17:20

- **Coffee Break**

17:20 ~ 17:40

- **Closing Comment / Seminar Summary**

Prof. Makoto ASHSHIMA and Mr. Yoshiya Fukuda

Prof. Inho CHOI, Yonsei University

18:00 ~ 20:30

- **Workshop Dinner**

October 21 (Day 2)

09:00 ~ 15:00

- **Seminar Summary & Discussion**
- **Workshop Tour**