

# **The 3rd Japan-China Workshop on Material Science in Space**

## **Organized by**

Department of Materials Engineering Science, Osaka University

## **Co-organized by**

ISAS/JAXA, Chines Academy of Science, RIE., Shizuoka University,  
Okinawa Chemical Engineers Society

The 1st Japan-China Workshop on Material Science in Space was successfully held in Feb. 2013 in Shizuoka University in Japan. The 2nd China-Japan Workshop on Material Science in Space was successfully held in Dec. 2014 in Jinan, Shandong Province, China. Now you are invited to attend the 3rd Japan-China Workshop on Material Science in Space, to be held during 26th-28th, March 2016 in University of the Ryukyus, Japan. The aim of the meeting is to discuss the detail of the Microgravity experiments and exchange information. We believe the collaborative research project will be promoted. We look forward to welcoming our friends.

### **Date: March 25th – 28th, 2016**

- March 25th (Reception)
- March 26th - March 28th (Meeting and Lab Tour)

Place: Meeting Room of the Researcher Exchange Facility 50th Anniversary Memorial Hall,  
University of the Ryukyus, 1 Senbaru, Nishihara-cho, Nakagami-gun, Okinawa, JAPAN

**Registration Fee** (includes Banquet) : ¥20,000 (Japanese Yen)

### **Contact**

3<sup>rd</sup> JCWMSS Organizing Committee

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# Program

Date: March 25th – 28th, 2016

Place: Meeting Room of the Researcher Exchange Facility 50th Anniversary Memorial Hall,  
University of the Ryukyus, 1 Senbaru, Nishihara-cho, Nakagami-gun, Okinawa, JAPAN

## March 25th

19:00 - 20:00 Registration

## March 26th

9:00- Registration

**Chairperson T. Nosoko (Univ. of Ryukyus)**

10:00 - 10:10 Welcome & Opening Remarks

Y. Okano (Osaka Univ.)

J. Yu (Shanghai Institute of Ceramics, CAS)

10:10 - 10:40 Japanese Material Research under Microgravity

Y. Inatomi (ISAS, JAXA)

10:40 - 11:10 Preliminary design of high temperature rack for Chinese space station

Y. Liu (Shanghai Institute of Ceramics, CAS)

11:10 - 13:30 Lunch Break

**Chairperson X. Luo (Institute of Metal Research, CAS)**

13:30 - 14:00 Material Research Using Containerless Processing in China

J. Yu (Shanghai Institute of Ceramics, CAS)

14:00 - 14:30 Semiconductor Crystal Growth Experiments under Microgravity

Y. Hayakawa (Research Institute of Electronics, Shizuoka Univ.)

14:30 - 15:00 Fabricating Optical Silica Glasses Derived from SBA-15 powders by SPS

L. Wang, W. Jiang (Donghua University)

15:00 - 15:20 Break

**Chairperson Y. Hayakawa (Research Institute of Electronics, Shizuoka Univ.)**

15:20 - 15:50 Solidification of Monosized Cu-based Metallic Core-shell-structured Microspheres under Reduced Gravity

J. Li (Institute of Process Engineering, CAS)

15:50 - 16:20 Structural Relaxation of Alloy Melts and Glass Formation by Containerless Method

M.X. Pan, B. Wang, P. Wen, W. Wang (Institute of Physics, CAS)

16:20 - 16:50 S-520 Sounding Rocket Experiments for Nucleation and Crystal Growth

Y. Inatomi (ISAS, JAXA)

16:50 - 17:20 Study of Formation Mechanism of the Earth and Moon by Materials Science

X.J. Liu (Xiamen University, China)

## **March 27th**

- Chairperson** **X. Zhang (Institute of Semiconductors, CAS)**
- 9:00 - 9:30 Progress in the Growth, Laser Performance and Application of Self-frequency Doubling Crystal  
J. Wang (Shandong University, China)
- 9:30 - 10:00 Numerical Simulation of InGaSb Crystal Growth in International Space Station  
X. Jin (Osaka Univ.)
- 10:00 - 10:30 Ultrasensitive imaging method  
G. Zhai (National Space Science Center, CAS)
- 10:30 - 11:00 Effect of Microgravity on Solidification Behavior of Nickel-based Alloys Containing Al, Ti, W and Ta  
X. Luo (Institute of Metal Research, CAS)
- 11:00 - 11:30 Effects of Thermal and Solutal Marangoni Convections on Flow Patterns in a Liquid Bridge  
H. Minakuchi (Univ. of the Ryukyus)
- 11:30 - 12:00 Fabrication of Bioactive Glasses using Containerless Processing Technology  
J. Chang (Shanghai Institute of Ceramics, CAS)
- 12:00 - 12:30 Numerical Simulation of Marangoni convection in International Space Station  
Y. Okano (Osaka Univ.)
- 12:30- 12:40 Closing Remarks  
Y. Hayakawa (Research Institute of Electronics, Shizuoka Univ.)  
Y. Liu (Shanghai Institute of Ceramics, CAS)
- 12:40- 14:00 Break
- 14:30- 16:00 Laboratory Tour at Univ. of the Ryukyus
- 17:00 - 19:00 Banquet

## **March 28th**

- 10:00 - 17:00 Group meetings for future collaboration  
Visiting to Marine Inst., Univ. of the Ryukyus