

Abstracts of
The CJK2011 Meeting
Conjugated with
the Workshop of China-Japan-Korea (CJK)
A3 Foresight International Cooperation
Key Project



Abstracts of The CJK2011 Meeting

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Additional copies of this Abstracts are available from

The CJK2011 Meeting Committee
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Co-Chair's Welcome

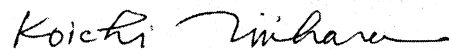
Dear The CJK2011 Meeting Attendee:

I am delighted to welcome you to The CJK2011 Meeting in Niigata. On behalf of the Organizing Committees, I hope this symposium will provide an exciting forum for all of us to learn about the latest developments in our commonly interested fields

The CJK2011 Meeting has received 19 presentation titles from China, Japan and Korea. I hope that researchers on ceramics get together and yield a new route of research for the next decade.

Finally, I would like to take this opportunity to thank Prof. Z. F. Wuhan University of Technology and Prof. S. W. Lee, Sun Moon University of their dedicated efforts to organize this meeting.

Sincerely,



Koichi Niihara
Co-chair
The CJK2011 Meeting
President
Nagaoka University of Technology

The CJK2011 Meeting

Conjugated with the Workshop of China-Japan-Korea (CJK) A3 Foresight International Cooperation Key Project

SYMPOSIUM PERIOD AND VENUE

June 3(Fri) - 5(Sun), 2011
Toki Messe, Niigata Convention Center
Niigata, Japan

SCOPE OF SYMPOSIUM

Preparing a network of human resources and laboratory facilities for materials science among China, Japan and Korea and developing long term projects together through each government.

ORGANIZING COMMITTEE

Co-chairs:

K. Ishizaki, Nagaoka University of Technology, Japan
K. Niihara, Nagaoka University of Technology, Japan

S. W. Lee, Sun Moon University, Korea
Z. Fu, Wuhan University of Technology, China

Members:

J. Hojo, Kyushu University, Japan
T. Sekino, Tohoku University, Japan
S. Zhou, Advanced Technology & Materials Co. Ltd.,
China
X. Zheng, Shanghai Institute of Ceramics, China
H. S. Kin, Inha University, Korea
Y. H. Kim, KICET, Korea

M. Anpo, Osaka Prefecture University, Japan
X. Wang, Changchun Institute of Applied Chemistry,
China
J.-F. Yang, Xi'an Jiatong University, China
S. Y. Park, Kangnung National University, Korea
B. Y. Hur, Gyeongsang National University, Korea
W. Y. Kim, KITECH, Korea

Secretariat:

H. Wang, Wuhan University of Technology, China
T. Nakayama, Nagaoka University of Technology, Japan
K. Matsumaru, Nagaoka University of Technology, Japan
K. Watanabe, Nagaoka University of Technology, Japan

S.-H. Kim, Sun Moon Univeristy, Korea
H. Suematsu, Nagaoka University of Technology, Japan
M. Nanko, Nagaoka University of Technology, Japan

TOPICS of THE CJK2011 MEETING

R & D Clustering on Eco-materials among China, Japan, and Korea

LANGUAGE

English will be the official language during the Meeting.

SPONSORS:

Japan Society for the Promotion of Science
Korea Science and Engineering Foundation
National Natural Science Foundation of China

Nagaoka University of Technology, Japan
Sun Moon University, Korea
Wuhan University of Technology, China

OFFICIAL WEB SITE

<http://etigo.nagaokaut.ac.jp/foresight/top.html>

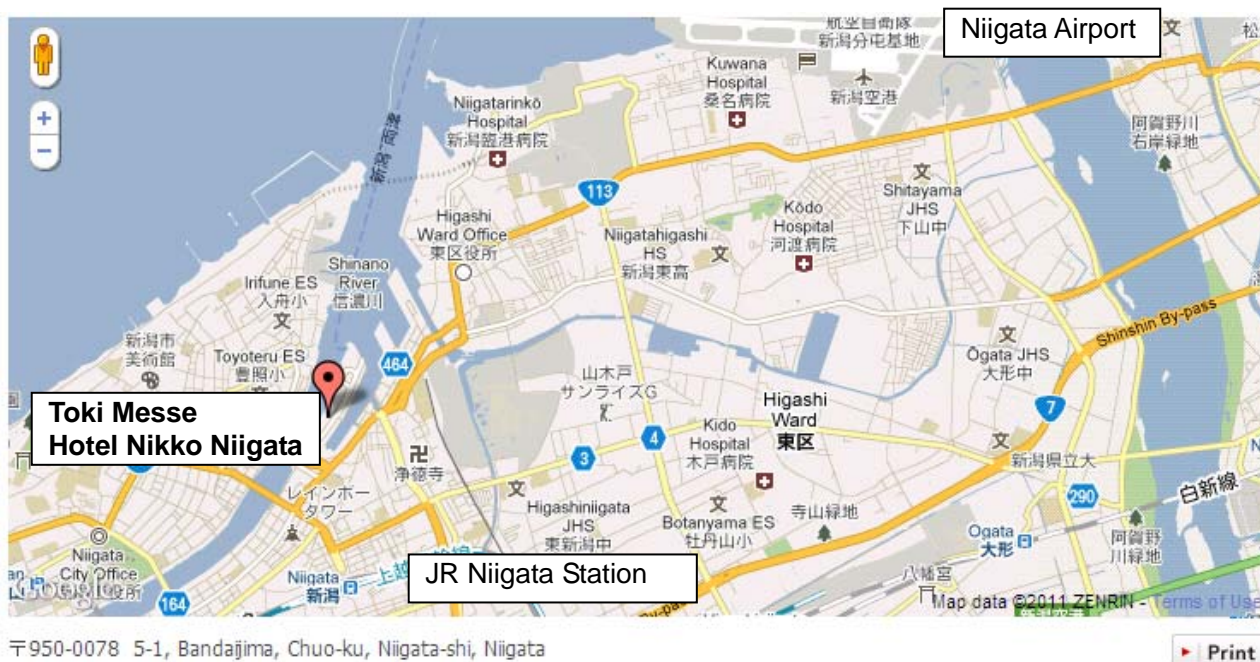
MAILING ADDRESS TO SECRETARIAT

suematsu@etigo.nagaokaut.ac.jp

ACCOMODATIONS

Hotel Nikko Niigata, which is located in downtown Niigata and adjacent to Toki Messe, Niigata Convention Center, have been reserved for the Meeting participants.

Hotel Nikko Niigata ; <http://www.hotelnikkoniigata.jp/>



MEETING VENUE

The Meeting will be held in Room 306 and 307, Toki Messe, Niigata Convention Center adjacent to Hotel Nikko Niigata, Japan.

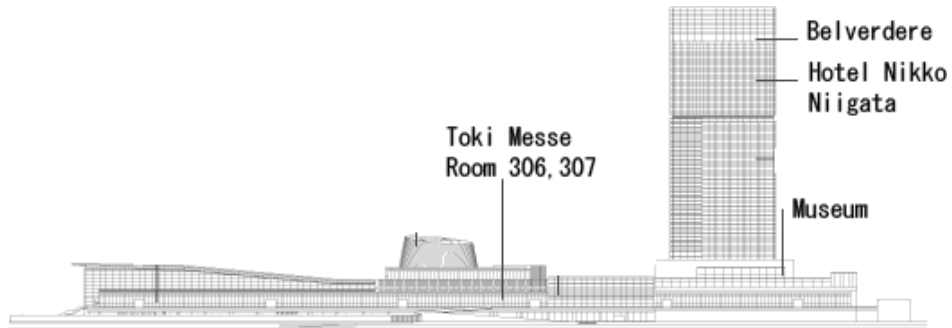


Fig.1 Toki Messe and Hotel Nikko Niigata

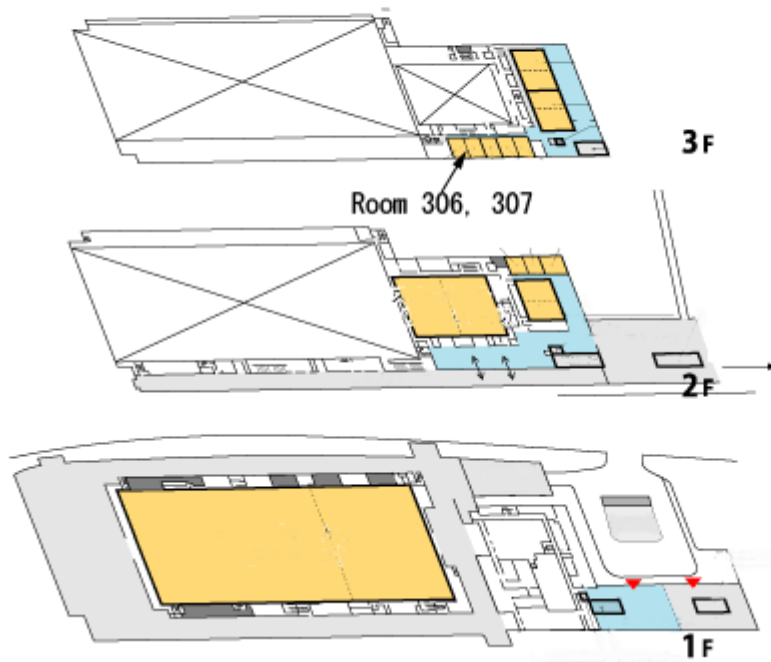


Fig. 2 Floors in Toki Messe

General Information

Registration and Information

Registration and Information Desk will operate at the following place and time.

Jun. 4	Room 306 and 307, Toki Messe	12:00-17:00
Jun. 5	Room 306 and 307, Toki Messe	8:30-12:00

Reception

Jun. 3	Toh-Lee, 3 rd Floor, Hotel Nikko Nagaoka	20:00-22:00
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Banquet

Jun. 4	Japanese Restaurant Hananome, downtown	18:00-20:00
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Transportation

Transportation from Niigata Airport to Hotel Nikko Niigata is arranged for those who have requested secretaries with arrival date and time. Estimated time will be approximately 10 min.

You can also take courtesy shuttle busses from/to JR Niigata Station. The time table and the bus stop are shown below.

Table 1 Time table of courtesy shuttle busses to/from JR Niigata Station

TO JR Niigata Station → From Hotel Nikko Niigata (Fare: Free of charge)			TO Hotel Nikko Niigata → From JR Niigata Station (Fare: Free of charge)			
Morning Departures		Afternoon Departures	Morning Departures		Afternoon Departures	
6:10 ⇒	6:20	12:10 ⇒	12:20	06:00 →	06:10	
6:40 ⇒	6:50	13:40 ⇒	13:50	06:30 →	06:40	
7:10 ⇒	7:20	14:40 ⇒	14:50	07:00 →	07:10	
7:40 ⇒	7:50	16:40 ⇒	16:50	07:30 →	07:40	
8:10 ⇒	8:20	18:40 ⇒	18:50	08:00 →	08:10	
8:30 ⇒	8:40	19:10 ⇒	19:20	08:20 →	08:30	
8:50 ⇒	9:00	19:40 ⇒	19:50	08:40 →	08:50	
9:10 ⇒	9:20	20:10 ⇒	20:20	09:00 →	09:10	
9:40 ⇒	9:50	20:40 ⇒	20:50	09:30 →	09:40	
10:10 ⇒	10:20	21:10 ⇒	21:20	10:00 →	10:10	
10:40 ⇒	10:50	21:40 ⇒	21:50	10:30 →	10:40	
11:10 ⇒	11:20	22:10 ⇒	22:20	11:00 →	11:10	
11:40 ⇒	11:50	22:40 ⇒	22:50	11:30 →	11:40	
-		23:10 ⇒	23:20	-		
					23:00 ⇒	23:10

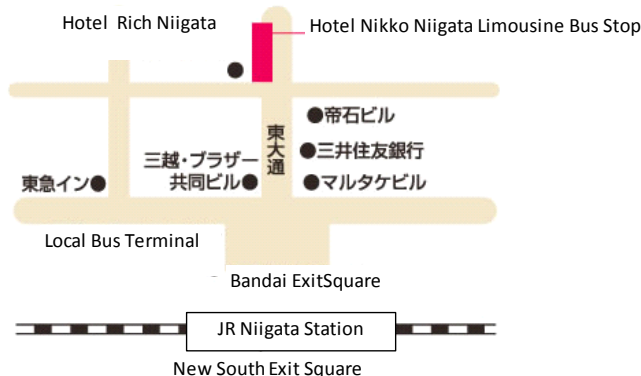


Fig. 3 Courtesy shuttle bus stop at JR Niigata Station

Local Climate

Average temperature at Niigata in June was 20.4 °C.

PROGRAM

Saturday, June 4, 2011

Room 306-307, 3rd Floor, Toki Messe

Chair: S. W. Lee, Sun Moon University, Korea

13:00-13:10

Opening Address

K. Ishizaki

Nagaoka University of Technology, Japan

13:10-13:30

I-1 Bio-ceramic Coating by CVD Routes (*Invited*)

T. Goto

Tohoku University, Japan

13:30-13:50

I-2 Comparison of Doping Limits among V-doped TiO₂ Nano-powders Prepared Sonochemically from Various Vanadium Compounds (*Invited*)

A. Y. Choi and C. H. Han

Sun Moon University, Korea

13:50-14:10

Break

14:10-14:30

I-3 (*Invited*)

Z. Fu

Wuhan University of Technology, China

14:30-14:50

I-4 (*Invited*)

Y. Wang

Wuhan University of Technology, China

14:50-15:10

I-5 Nest-like Structures of Sr Doped Bi₂WO₆: Synthesis and Enhanced Photocatalytic Properties (*Invited*)

W. Wang, Z. Fu, H. Wang, Y. Wang and Y. Liu

Wuhan University of Technology, China

15:10-15:30

Break

Chair: K. Ishizaki, Nagaoka University of Technology, Japan

15:30-15:50

I-6 Uniformly Porous MgTi₂O₅ with Narrow Pore-Size Distribution: *In Situ* Processing, Microstructure and Potential Applications (*Invited*)

Y. Suzuki

University of Tsukuba, Japan

15:50-16:10

O-1 **Effect of TiO₂ on Mechanical Properties and Thermal Shock Resistance of Al₂O₃-15wt.%ZrO₂-h-BN Composites**
H. H. Lee, S. –H. Kim, B. Joshi and S. W. Lee
Sun Moon University, Korea

16:10-16:30

I-7 **Oxidation Behavior of Silicon Boride Ceramics at High Temperature (*Invited*)**
J. Matsushita, Y. R. Uhm*, C. K. Rhee*, S. W. Lee** and K. Niihara***
Tokai University, Japan, *KAERI, Korea, **Sun Moon University, Korea,
***Nagaoka University of Technology, Japan

16:30-16:50

O-2 **Effect of Charged Electric Energy on the Formation of Alumina Nanoparticles in Pulsed Wire Discharge**
S. Ishihara, Y. Shikoda*, H. Suematsu, T. Nakayama, T. Suzuki and K. Niihara
Nagaoka University of Technology, Japan, *East Japan Railway Company, Japan

16:50-17:10

I-8 **Nano Fabrication of Functional Materials and Energy Conversion Materials (*Invited*)**
J.-W. Yoon
Dankook University, Korea

17:10-17:30

I-9 **Mg²⁺ Stabilized Sialon Translucent Ceramics Prepared by Hot Pressing (*Invited*)**
H. Wang, Z. Yang, Z. Fu, W. Wang, S. W. Lee* and K. Niihara**
Wuhan University of Technology, China, *Sun Moon University, Korea,
**Nagaoka University of Technology, Japan

18:00-20:00

Banquet, Japanese Restaurant Hananome

Sunday, June 5, 2011

Room 306-307, 3rd Floor, Toki Messe

Chair: Z. Fu, Wuhan University of Technology, China

9:00-9:20

I-10 **Fabrication of Transparent Polycrystalline Silicon Nitride Polycrystalline Ceramics (*Invited*)**
B. Joshi, Z. Fu*, K. Niihara** and S. W. Lee
Sun Moon University, Korea, *Wuhan University of Technology, China
**Nagaoka University of Technology, Japan

9:20-9:40

I-11 **Energy Transfer and Luminescence Characteristics in Sm-doped TiO₂ Nanotubes (*Invited*)**
T. Sekino, D. J. Park* and S. Tanaka
Tohoku University, Japan, *Sun Moon University, Korea

9:40-10:00

O-3 **High Strength Porous Borosilicate Glass by Hot Isostatic Pressing**
B. Wang, K. Matsumaru, J. Yang* and K. Ishizaki
Nagaoka University of Technology, Japan, *Xi'an Jiaotong University, China

10:00-10:20 **Break**

10:20-10:40

O-4 **Fabrication of Thermal Management Materials via Self-assembly of Boron Nitride Nanosheets in Polysiloxane**
H. B. Cho , T. Nakayama, T. Suzuki, S. Tanaka, W. Jiang, H. Suematsu, H. D. Kim* and K. Niihara
Nagaoka University of Technology, Japan, *KITECH, Korea

10:40-11:00

O-5 **Bonding Material of SiC / ZrW₂O₈ for Near Zero Thermal Expanding Porous Ceramics**
A. Poowancum, K. Matsumaru and K. Ishizaki
Nagaoka University of Technology, Japan

11:00-11:20 **Break**

Chair: **T. Nakayama, Nagaoka University of Technology, Japan**

11:20-11:40

I-12 **Sono/Photo Synergy Effect Using TiO₂-coated Fibers and High Frequency Ultrasound of 2.4 MHz (Invited)**
N. Enomoto, T. Miyajima, M. Inada, Y. Tanaka and J. Hojo
Kyushu University, Japan

11:40-12:00

O-6 **Effects of Sulfides on the Dry Sliding Wear Behaviors of Al₂O₃-ZrO₂ Composites**
S.-H. Kim, S.-P. Hannula* and S. W. Lee
Sun Moon University, Korea, *Aalto University, Finland

12:00-12:20

O-7 **Ultrasonic Electrodeposition and Characterization of Ni-SiC Nanocomposite Coatings**
G. Gyawali, D. Woo* and S. W. Lee
Sun Moon University, Korea, *Korea Institute of Construction Materials, Korea

13:30-

Excursion (Tohoku Electric Power Co. Ltd.)

Program on China-Japan-Korea (CJK)

A3 Foresight International Cooperation Key Project on 2011 (CJK2011)

at TOKI Messe, Niigata Convention Center to be held on June 3rd to 5th, 2011.

June 3, 2011		June 4, 2011		June 5, 2011	
20:00~	Reception	13:00	K. Ishizaki, Nagaoka Univ. Tech., Japan	9:00	S. W. Lee, Sun Moon Univ., Korea
		13:10	T. Goto, Tohoku Univ., Japan	9:20	T. Sekino, Tohoku Univ., Japan
		13:30	C. H. Han, Sun Moon Univ. Korea	9:40	B. Wang, Nagaoka Univ. Tech., Japan
		13:50	Break	10:00	Break
		14:10	Z. Fu, Wuhan Univ. Tech., China	10:20	H. B. Cho, Nagaoka Univ. Tech., Japan
		14:30	Y. Wang, Wuhan Univ. Tech., China	10:40	A. Poowancum, Nagaoka Univ. Tech., Japan
		14:50	W. Wang, Wuhan Univ. Tech., China	11:00	Break
		15:10	Break	11:20	N. Enomoto, Kyushu Univ., Japan
		15:30	Y. Suzuki, Univ. Tsukuba, Japan	11:40	S. H. Kim, Sun Moon Univ., Korea
		15:50	H. H. Lee, Sun Moon Univ., Korea	12:00	G. Gyawali, Sun Moon Univ., Korea
		16:10	J. Matsushita, Tokai Univ., Japan	13:30	Excursion (Tohoku Electric Power Plant)
		16:30	S. Ishihara, Nagaoka Univ. of Tech., Japan		
		16:50	J. W. Yoon, Dankook University, Korea		
		17:10	H. Wang, Wuhan Univ. Tech., China		
		18:00	Banquet		