



**FUKUOKA**

# **J-K Ceramics 38 Program Book**

©ACROS Fukuoka

**The 38th International Japan-Korea Seminar on Ceramics**

**October 31st – November 3rd, 2024  
ACROS Fukuoka, Fukuoka, Japan**

**Organized by the Organizing Committee of the International Japan-Korea Seminar  
on Ceramics**





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## Committees | Advisors

### The Organizing Committee of the International Japan-Korea Seminar on Ceramics

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##### **Vice Chair**

Nobuhito IMANAKA, Osaka University, Professor Emeritus

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Masasuke TAKATA, Japan Fine Ceramics Center, Executive Director

Jun AKEDO, National Institute of Advanced Industrial Science and Technology, Prime Senior Researcher

Rintaro AOYAGI, National Institute of Advanced Industrial Science and Technology, Senior Researcher

Kentaro SHINODA, National Institute of Advanced Industrial Science and Technology, Leader, Advanced Functional Surface Group

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Nobuhiro MATSUSHITA, Institute of Science Tokyo, Professor

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Takayoshi KATASE, Institute of Science Tokyo, Associate Professor

Yoshiyuki SUGAHARA, Waseda University, Professor

Shinobu FUJIWARA, Keio University, Professor

Jun-ichi TATAMI, Yokohama National University, Professor

Takashi YAMAMOTO, National Defense Academy of Japan, Professor Emeritus

Naoki WAKIYA, Shizuoka University, Professor

Hiroyuki MUTO, Toyohashi University of Technology, Professor

Hiroshi ITAHARA, Toyota Central R&D Labs., Inc., Senior Researcher

Chikara OHTSUKI, Nagoya University, Professor

Shinobu HASHIMOTO, Nagoya Institute of Technology, Professor

Koichiro FUKUDA, Nagoya Institute of Technology, Professor



Hiroataka MAEDA, Nagoya Institute of Technology, Professor  
Tadachika NAKAYAMA, Nagaoka University of Technology, Professor  
Katsuhisa TANAKA, Kyoto University, Professor  
Tohru SUGAHARA, Kyoto Institute of Technology, Professor  
Tohru SEKINO, Osaka University, Professor  
Tomoyo GOTO, Osaka University, Associate Professor  
Naoyoshi NUNOTANI, Osaka University, Assistant Professor  
Yoko SUYAMA, Research Institute for Inorganic Materials (RIIM), Director  
Toshiyuki MASUI, Tottori University, Professor  
Tokuro NAMBA, Okayama University, Professor  
Yasuhiko BENINO, Okayama University, Associate Professor  
Kei INUMARU, Hiroshima University, Professor  
Michitaka OHTAKI, Kyushu University, Professor  
Byung koog JANG, Kyushu University, Visiting Professor  
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Yuki SHIROSAKI, Kyushu Institute of Technology, Associate Professor  
Naotaka SAKAMOTO, Fukuoka Industrial Technology Center, Team Leader  
Yasushi IWAISAKO, Nippon Tungsten Co., Ltd., R&D Center, General Manager  
Sachiko FURUTA, Saga Ceramics Research Laboratory, Director  
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Kai KAMADA, Nagasaki University, Associate Professor

**Advisor**

Tetsuya KAMEYAMA, National Institute of Advanced Industrial Science and Technology, Honorary Researcher



## **KOREA side**

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### **Vice Chair**

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### **Committee Members**

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Woo Seok CHO, President of Korean Ceramic Society, KICET, Senior Researcher

Yong Ho CHOA, Hanyang University, Professor

Jo Woong HA, Inocera Co. President

Byung Dong HAHN, Korea Institute of Materials Science, Senior Researcher

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Hyun Suk KIM, Dongguk University, Professor

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Myong Ho KIM, Changwon National University, Professor Emeritus

Suk Young KIM, Youngnam University, Professor Emeritus

Do Kyun KWON, Korea Aerospace University, Professor

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Hyun Kwon LEE, Kumho National Institute of Technology, Professor

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Kee Sung LEE, Kookmin University, Professor

Kyu Hyung LEE, Yonsei University, Professor



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Sung Min LEE, Korea Institute of Ceramic Engineering and Technology, Vice President  
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Hyung Ho PARK, Yonsei University, Professor  
Sang Yeup PARK, Gangneung-Wonju National University, Professor  
Young Jo PARK, Korea Institute of Materials Science, Senior Researcher  
Jae Chul PYUN, Yonsei University, Professor  
Sung Soo Ryu, Korea Institute of Ceramic Engineering and Technology, Senior Researcher  
Pung Keun SONG, Pusan National University, Professor  
Sang Im YOO, Seoul National University, Professor  
Dang Hyok YOON, Yeungnam University, Professor  
Hui Suk YUN, Korea Institute of Materials Science, Senior Researcher

**Advisors**

Jun Young LEE, The Federation of Korea Ceramic Associations, Chairman  
Soon Ja PARK, Seoul National University, Professor Emeritus Committee



## Steering Committee of the 38th International Japan-Korea Seminar on Ceramics

### Chair

Michitaka OHTAKI, Kyushu University, Professor

### Committee Members

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Hajime HOJO, Kyushu University, Associate Professor

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Satoko TAKASE, Kyushu Institute of Technology, Assistant Professor

Naotaka SAKAMOTO, Fukuoka Industrial Technology Center, Team Leader

Masayoshi YUASA, Kinki University, Professor

Hirotaaka FUJIMORI, Yamaguchi University, Associate Professor

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Shintaro IDA, Kumamoto University, Professor

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Morito AKIYAMA, National Institute of Advanced Industrial Science and Technology, Senior Researcher

Masato UEHARA, National Institute of Advanced Industrial Science and Technology, Senior Researcher

Kai KAMADA, Nagasaki University, Associate Professor

Yuji OKUYAMA, Miyazaki University, Professor

Soichiro SAMEJIMA, Kagoshima University, Associate Professor

Kenichi SODEYAMA, Kagoshima Industrial Technology Center, Senior Researcher



## Financial Supports and Sponsors

The organizing committee would like to thank the foundations below for their financial supports, and companies as exhibitors at the event for their cooperation to this conference.

### Financial Supports

- Fukuoka Convention & Visitors Bureau



- Tokyo Ohka Foundation for The Promotion of Science and Technology



### Exhibitors

- Microtrac BEL JAPAN, Inc.



- Verder Scientific Co., Ltd.





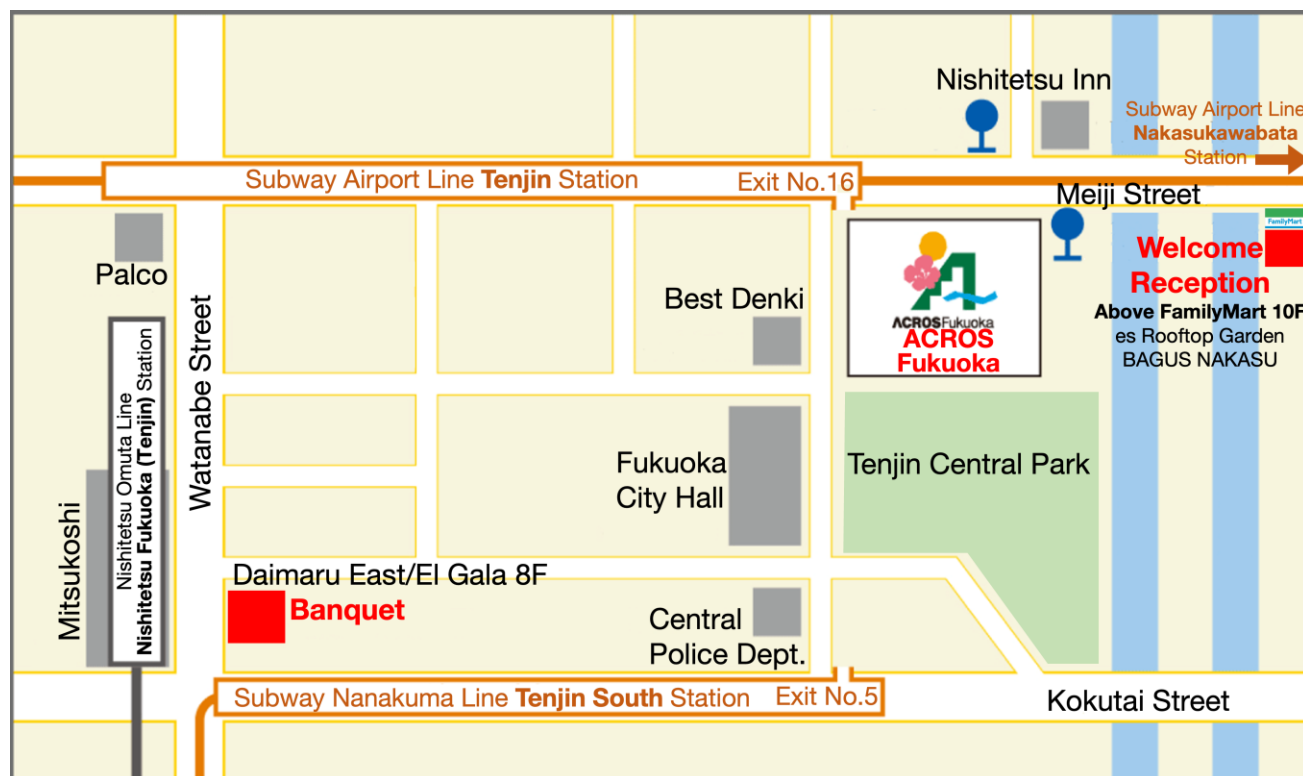
## Conference Venue

### ACROS Fukuoka

1-1-1 Tenjin, Chuo-ku, Fukuoka, Fukuoka 810-0001, JAPAN

<https://www.acros.or.jp/english/>

J-K Ceramics 38 will be held at ACROS Fukuoka located at Tenjin, the heart of Fukuoka City. It is just 11 minutes by subway from Fukuoka International Airport (Domestic Terminal) to Tenjin station, from which you can reach the venue in 5 minutes by walk.



Please refer to the website below for the access to ACROS Fukuoka.

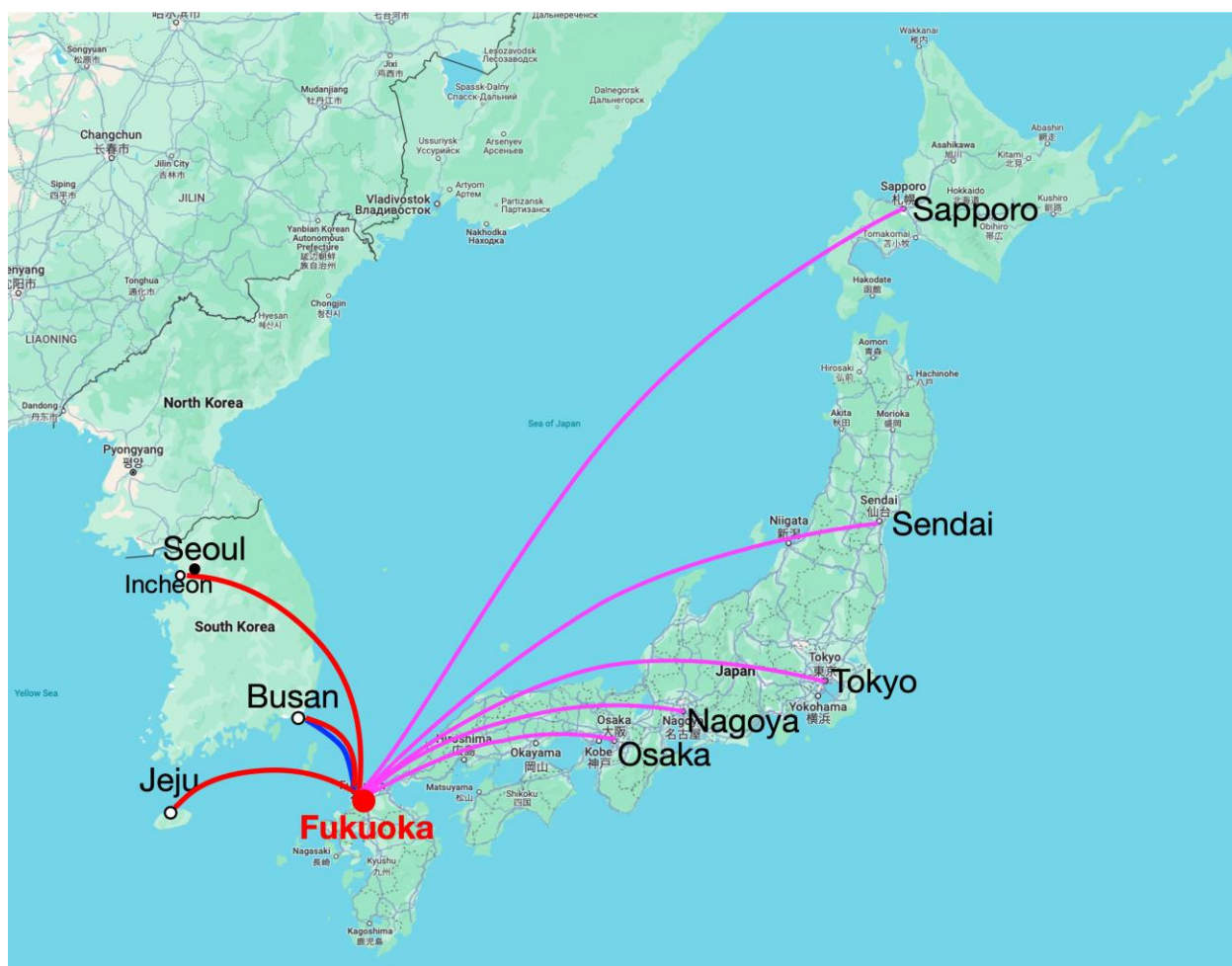
<https://www.acros.or.jp/english/access/>



## Access

### Travel to Fukuoka

Kyushu Island is located in the southwest of Japan and has the longest cultural ties to mainland Asia. Fukuoka City is located in the north of Kyushu Island and the largest city in Kyushu with population of over 1.6 million. Fukuoka City is very conveniently connected to other major cities in Japan by trains, long-distance buses, and airlines. The entranceway to Fukuoka is, first of all, Fukuoka International Airport (FUK), which offers links to numerous cities in Japan, and 23 major cities overseas. Seoul is just 85 minutes away, and Shanghai can be reached in 100 minutes. Tokyo is a 90-minute flight, and Osaka 65 minutes. Furthermore, a big advantage of Fukuoka is that it takes only 10 minutes to reach the center of Fukuoka City from the airport using the subway system.



By land, visitors can reach Fukuoka by expressway or Japan Railways (usually written as JR) particularly Shinkansen, bullet trains you may say. Hakata Station located at the center of Fukuoka City is the main hub for Shinkansen and intercity express trains as well as local trains and subway. Hakata Port, which is very close to Fukuoka City downtown, welcomes 2 million travelers a year. This port serves as a terminal for the jet foil, which links Fukuoka to Pusan with a journey time of approximately 3 hours.

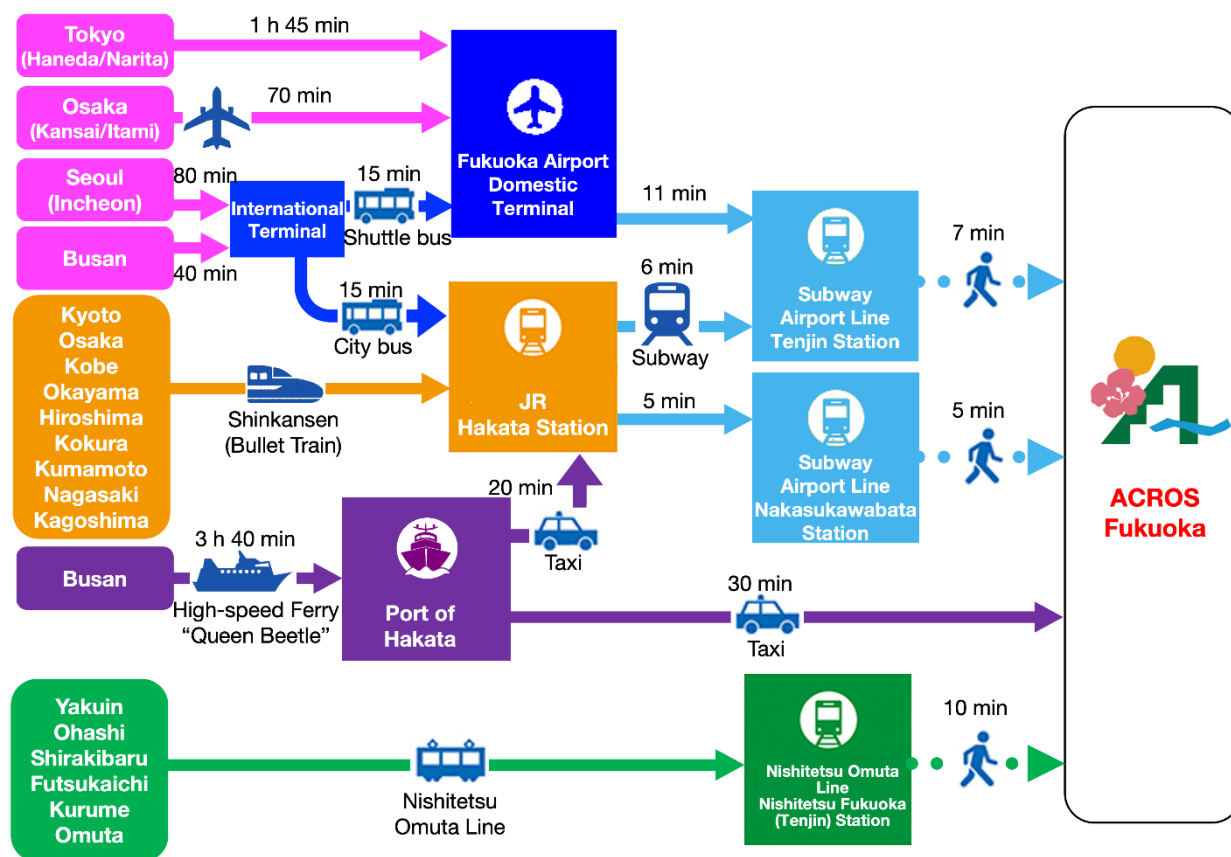


### Transportation from Fukuoka Airport

Fukuoka Airport is very conveniently located to come to the center of Fukuoka City (i.e. JR Hakata Station or Nishitetsu Tenjin Station) by subway or a taxi. Note that the international and domestic terminals are separated (on the other side across the runway), and the shuttle bus between these two terminals is available every 10–15 minutes free of charge. You can easily find the subway Fukuoka-kuko (Airport) Station right beneath the domestic terminal.

With the subway system, Hakata Station is the second from Fukuoka Airport and it takes only 5 minutes. Furthermore, Tenjin Station is the third station from Hakata Station and it takes another 6 minutes. Local and express (long-distance) buses are available from both Hakata and Tenjin stations.

From the international terminal to the central area of Fukuoka City, taking a taxi is a convenient and recommendable option, particularly when you have large luggage. Although the journey time depends on the traffic, it takes normally about 10–15 minutes, and the taxi fare is about 1,500–2,000 JPY.



Useful links:

Fukuoka Airport: <https://www.fukuoka-airport.jp/en/>

Fukuoka City Subway: <https://subway.city.fukuoka.lg.jp/eng/>

Port of Hakata: <https://www.city.fukuoka.lg.jp/kowan/somu/hakata-port/e-index.html>

Fukuoka City Official Tourist Guide: <https://gofukuoka.jp/>



## General Information

### Program

October 31st (Thu) Registration, Welcome Reception

November 1st (Fri) Registration, Opening Ceremony, Plenary Lectures, Oral Sessions, Poster Session, Banquet

November 2nd (Sat) Registration, Plenary Lectures, Oral Sessions, Closing and Award Ceremony

November 3rd (Sun) Excursion (River boat cruise at Yanagawa city with lunch)

### Social Events

**Welcome Reception** \*Included in the registration fees.

Date and time: 18:00–20:00, Thursday, October 31st, 2024

Place: es Rooftop Garden BAGUS NAKASU

Prato NAKASU 10F, 4-6-12 Nakasu, Hakata-ku, Fukuoka

(3 min walk from ACROS Fukuoka. See the venue map at Travel Information.)

Phone: 092-263-7520

**Banquet** \*On-site purchase available.

Date and time: 18:00–20:00, Friday, November 1st, 2024

Place: TKP El Gala Hall

Daimaru East/El Gala (another entrance) 8F, 1-4-2 Tenjin, Chuo-ku, Fukuoka

(7 min walk from ACROS Fukuoka, See the venue map at Travel Information.)

**Excursion** \*Advanced purchase only.

Date and time: 9:00–16:00, Sunday, November 3rd, 2024

Destination: A day trip to Yanagawa River Boat Cruise: Immerse yourself in the historic atmosphere of this Edo Period castle town.

A coach (bus) will take you to the historic City of Yanagawa, which is sometimes called the "Venice of Kyushu" for its hundreds of kilometers of canals built to provide irrigation to the city. Today, the canals serve as a peaceful and picturesque way to tour the city.

The fee includes: a round-trip coach transportation from/to Tenjin area; reserved river boat cruise; lunch after the boat cruise (at around 13:00 pm) in a traditional Japanese restaurant.

Capacity: max 50 (first-come first-served basis)

Details will be informed later to those who have booked the Excursion.

A link to Area Guide

<https://www.crossroadfukuoka.jp/en/experience/12901>



## **Special Event in association with J-K Ceramics 38**

### **Exhibition and Sale of Traditional Ceramic Crafts in Fukuoka Prefecture**

The “Takumi Gallery” in ACROS Fukuoka, the venue of the Conference, will be used to introduce the works and initiatives of traditional ceramic industries (crafts) in Fukuoka Prefecture, as well as to exhibit and sell products related to J-K Ceramics 38, with the aim of conveying the appeal of these products more clearly to participants and visitors.

**Date:** October 30 (Wed.) - November 4 (Mon.), 2024 (including the entire event period of J-K Ceramics 38)

**Location:** Takumi Gallery (2F, ACROS Fukuoka)

The “Takumi (匠) Gallery” is a space with the concept of a place to connect traditional crafts of Fukuoka Prefecture to the future. Coincidentally, the 61st Hakata Doll Artists Association Exhibition is scheduled to be held at the Takumi Gallery (1st floor) during this period. You can also see this exhibition.

#### **Participating companies:**

Onimaru Sessan (鬼丸雪山) Pottery, and several other potteries representing Takatori ware (高取焼).

Takatori ware is one of the special crafts designated by the governor of Fukuoka Prefecture.

#### **Special notes**

1. At the Session E of the Conference, the Fukuoka Industrial Technology Center will give an oral presentation on the low-temperature firing clay developed jointly with the Takatori Pottery. The Exhibition and Sale of Takatori wares include works made with this special clay.
2. The “Takumi Gallery” (2nd floor) is located next to the Poster Session venue (Cultural Gallery).



A product made with the low-temperature firing clay

#### **Contact:**

Dr. Naotaka SAKAMOTO, Ceramic Materials Team, Chemistry Division, Fukuoka Industrial Technology Center  
3-2-1 Kamikoga, Chikushino, Fukuoka 818-8540, Japan

E-mail: [sakamoto@fitc.pref.fukuoka.jp](mailto:sakamoto@fitc.pref.fukuoka.jp)



### **On-site Registration fees**

Registration (10/31–):	<b>Regular</b> 60,000 JPY, <b>Student</b> 30,000 JPY
Accompanying Person:	15,000 JPY
Banquet:	10,000 JPY

Only on-line payment by credit cards will be accepted.

To register you to the conference, please first create your account on the official website.

### **Oral Presentations**

Please check the dates and times of your presentations on the scientific program. You can use your own PC for the presentation. Connection via HDMI cable is available. If you want to use a special connector, e.g. Type C, please bring your own converter to HDMI.

Duration of oral presentations including question and discussion:

Plenary lectures: 40 minutes

Keynote lectures: 20 minutes

Invited talks: 15 minutes

Contributed talks: 12 minutes

### **Poster Presentations**

The Poster session will be held from 16:30 to 17:30 on Friday, November 1st, at Cultural Gallery on the 2<sup>nd</sup> floor of ACROS Fukuoka.

All posters should be put up not later than 14:00 on Friday. The size of the poster panels is 240 cm (height) x 120 cm (width), and comfortably accommodates posters in A0 or even B0 portrait format.

Posters can be fixed on the poster boards using the fixing material provided at the poster area. No liability will be assumed for non-removed posters after the Poster Session!

The authors are kindly asked to be present in the vicinity of their posters during the poster session in order to answer questions that interested viewers may have.

### **Internet**

Free Wifi is available on the 4th – 7th floors of ACROS Fukuoka.

SSID: ACROS Fukuoka Free Wi-Fi

No password.

Please note that it is unavailable at the Poster Session on the 2nd floor.



## Lunch Map

### Restaurants near ACROS Fukuoka

## Restaurants near Acros Fukuoka

1-1-1, Tenjin, Chuo, Fukuoka 810-0001, Fukuoka Prefecture

[Read Reviews of Acros Fukuoka](#)



### Aji no Masafuku Acros

#31 of 520 Restaurants in Tenjin

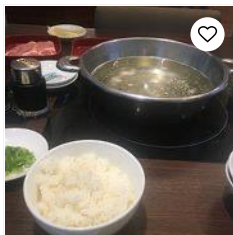
●●●●○ 28 reviews

1-1-1 Acros Fukuoka B2F  
0 miles from Acros Fukuoka

"Good combination meal" 08/10/2013

"魚が美味しい、行列の定食屋さん" 01/31/2020

Cuisines: Japanese, Diner



### Shabushabu Dining Mk Acros Fukuoka

#240 of 520 Restaurants in Tenjin

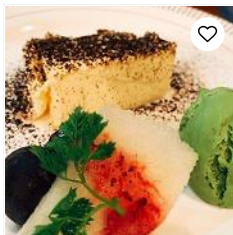
●●●●○ 14 reviews

1-1-1 Acros Fukuoka B2  
0 miles from Acros Fukuoka

"Good value for money" 02/04/2019

"安くてお腹いっぱい" 11/19/2019

Cuisines: Japanese



### Wine Shokudo Michelle

#395 of 520 Restaurants in Tenjin

●●●●○ 6 reviews

1-1-1 Acros Fukuoka B2F  
0 miles from Acros Fukuoka

"スタッフのかんじが悪いコスバ悪い"

07/06/2019

"アクロス福岡の地下にあるイタリアンレストランです"

12/15/2017

Cuisines: Italian, Soups



### Kikutakekohido

#100 of 520 Restaurants in Tenjin

●●●●○ 15 reviews

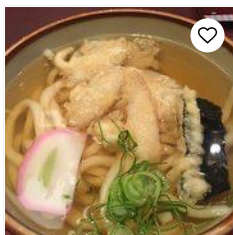
1-1-1  
0 miles from Acros Fukuoka

"落ち着けるお店" 10/11/2019

"アクロスの地下にある、いい雰囲気のカフェ"

07/10/2019

Cuisines: Cafe



### Kineya Fukuoka Across

#254 of 520 Restaurants in Tenjin

●●●●○ 7 reviews

1-1-1 Acros Fukuoka B2F  
0 miles from Acros Fukuoka

"かつ丼がお得" 01/29/2020

"うどん屋" 07/01/2019

Cuisines: Japanese

### Map of Acros Fukuoka

[Things to Do \(112\)](#) [Hotels \(12\)](#) [Restaurants \(744\)](#)



### Hotels travelers are raving about...



#### Nishitetsu Inn Fukuoka

●●●●○ 98 Reviews

Tenjin, Chuo

[Read reviews](#)



#### Fukuoka Floral Inn Nishinakasu

●●●●○ 174 Reviews

Chuo, Fukuoka

[Read reviews](#)



#### Hakata Excel Hotel Tokyu

●●●●○ 590 Reviews

Nakasu, Hakata

[Read reviews](#)

[All hotels in Tenjin \(12\)](#)

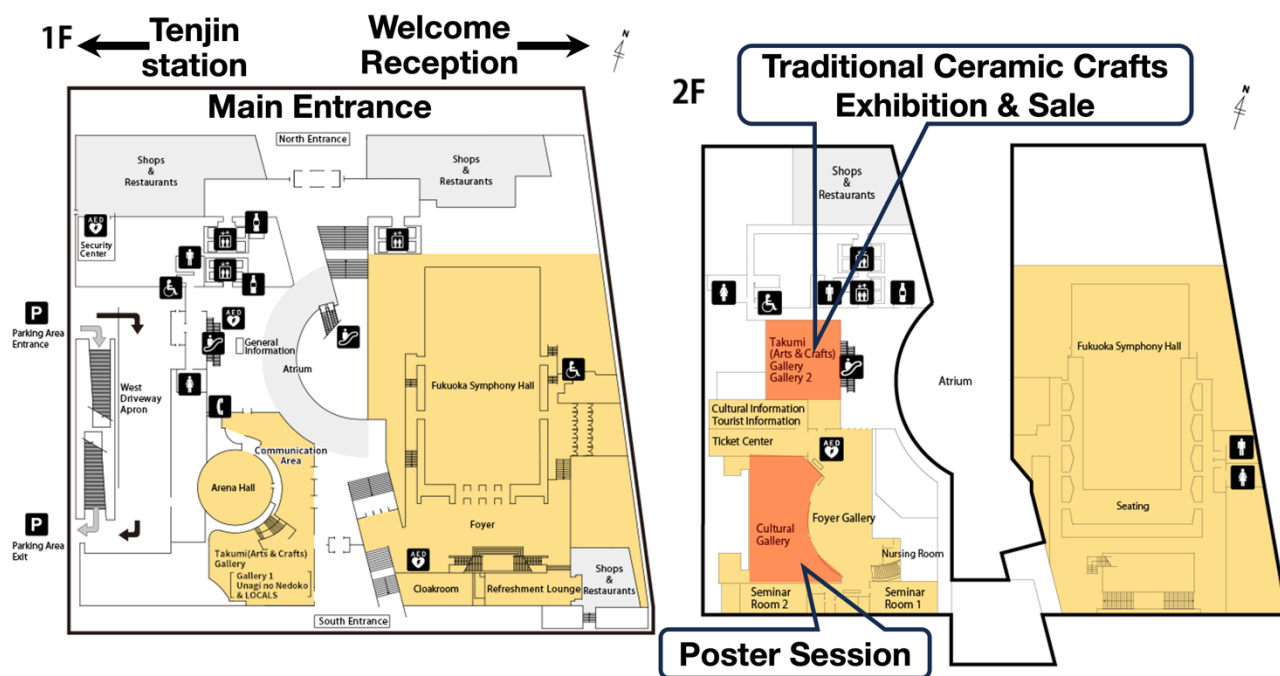


You can find more on the web!

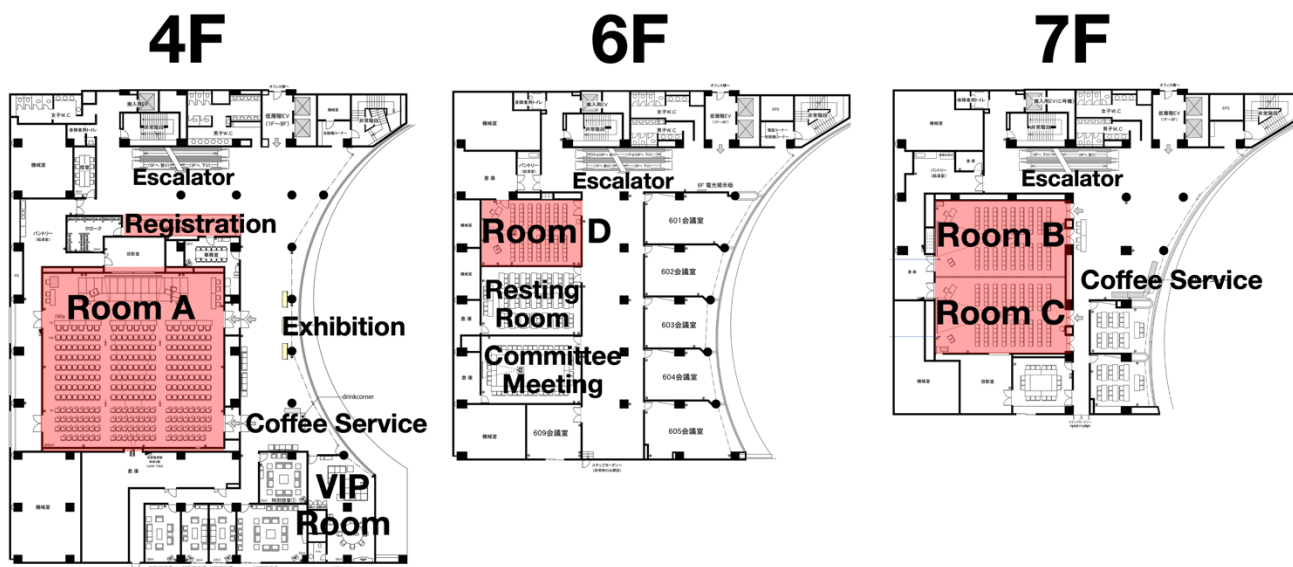


## Floor Map: Session Rooms, Exhibition, and Poster Board Map

# ACROS Fukuoka Floor Plan

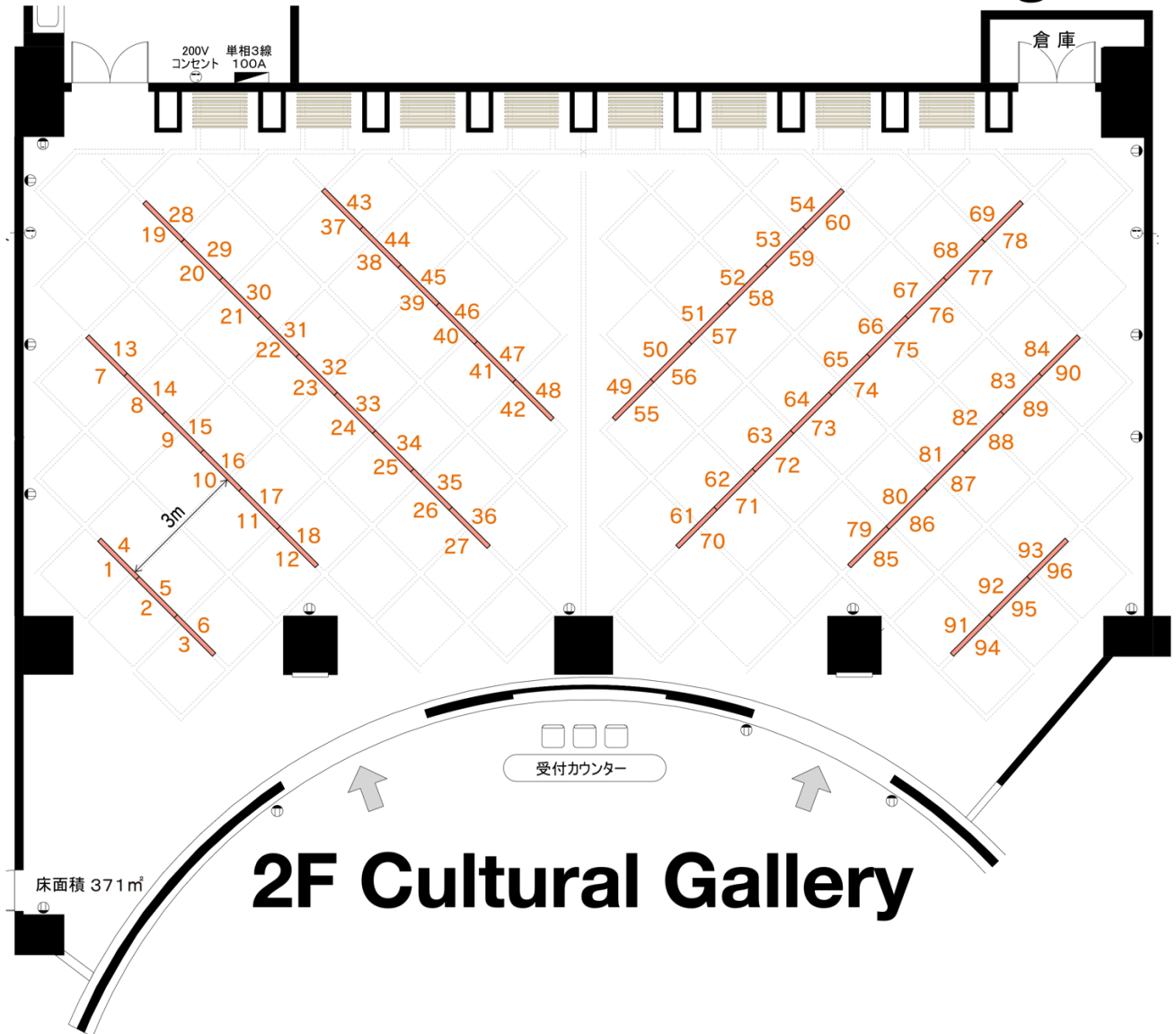


## Session Rooms





# Poster Board Numbering





# Banquet



18:00–20:00, Friday, November 1st, 2024

## TKP El Gala Hall

Daimaru East/El Gala (another entrance) 8F, 1-4-2 Tenjin, Chuo-ku, Fukuoka



## Schedule

### Program at a Glance

	Day 0 (October 31, Thu.)	Day 1 (November 1, Fri.)	Day 2 (November 2, Sat.)	Day 3 (November 3, Sun.)
8:00		Registration	Registration	Excursion
9:00		Opening & Plenary	Plenary	
10:00		Group Photo		
11:00		Oral Sessions	Oral Sessions	
12:00		Lunch on your own	Lunch on your own	
13:00	Registration	Oral Sessions	Oral Sessions	
14:00				
15:00				
16:00		Poster Session		
17:00			Closing & Awarding	
18:00	Welcome Reception	Banquet		
19:00				
20:00				

### Session Schedule

Day 1 (November 1, Fri.)						Day 2 (November 2, Sat.)				
	Room A	Room B	Room C	Room D	Cultural Gallery	Room A	Room B	Room C	Room D	
8:00	Registration					Registration				
9:00	Opening & Plenary					Plenary				
10:00										
11:00	Session A	Session D	Session C	Session F		Session A	Session B	Session G	Session E	
12:00	Lunch on your own					Lunch on your own				
13:00					Poster Mounting					
14:00	Session A	Session D	Session C	Session F		Session A	Session B	Session C	Session E	
15:00										
16:00										
17:00					Poster Session	Closing & Awarding				
18:00										



## Scientific Session Topics and Session Chairs

### **A. Ceramics for Renewable and Sustainable Energy**

Prof. Toshiyuki MASUI, Tottori University  
Prof. Shu YIN, Tohoku University  
Prof. Nobuhito IMANAKA, Osaka University  
Assist. Prof. Naoyoshi NUNOTANI, Osaka University  
Prof. Hae Jin HWANG, Inha University  
Prof. Ho Won JANG, Seoul National University  
Dr. Tae Ho SHIN, Korea Institute of Ceramic Engineering and Technology

**A-1.** Secondary Battery Materials and Related Technologies

**A-2.** Energy Materials and Related Technologies

### **B. Electroceramics and Applications**

Prof. Naoki WAKIYA, Shizuoka University  
Prof. Tomoya OHNO, Kitami Institute of Technology  
Assoc. Prof. Shintaro YASUI, Institute of Science Tokyo  
Prof. Katsuhisa TANAKA, Kyoto University  
Prof. Kyu Hyoung LEE, Yonsei University  
Prof. Se-Yun KIM, Gyeongsang National University  
Prof. Weon Ho SHIN, Kwangwoon University

**B-1.** Electronic, Magnetic, and Optical Materials

**B-2.** Sensor Materials & Semiconductors

### **C. Engineering Ceramics**

Prof. Junichi TATAMI, Yokohama National University  
Dr. Tetsuo UCHIKOSHI, National Institute for Materials Science  
Prof. Katsumi YOSHIDA, Institute of Science Tokyo  
Dr. Teiichi KIMURA, Japan Fine Ceramics Center  
Dr. Yoon Suk OH, Korea Institute of Ceramic Engineering and Technology  
Dr. Young Jo PARK, Korea Institute of Materials Science  
Prof. Dang Hyok YOON, Yeungnam University

**C-1.** Structural and Engineering Materials

**C-2.** Materials Processing and Additive Manufacturing



#### **D. Bio and Environmental Ceramics, Glass Science**

Prof. Yoshiyuki SUGAHARA, Waseda University

Prof. Chikara OHTSUKI, Nagoya University

Assoc. Prof. Yasuhiko BENINO, Okayama University

Dr. Hui Suk YUN, Korea Institute of Materials Science

Prof. Yong Gyu CHOI, Korea Aerospace University

Dr. Jin-Hyung LEE, Korea Institute of Ceramic Engineering and Technology

**D-1.** Bio and Environment Materials

**D-2.** Glass Science

#### **E. Basic Science of Ceramics**

Prof. Shinobu HASHIMOTO, Nagoya Institute of Technology

Prof. Tohru SEKINO, Osaka University

Assoc. Prof. Tomoyo GOTO, Osaka University

Prof. Tadachika NAKAYAMA, Nagaoka University of Technology

Prof. Kyoung-Seok MOON, Gyeongsang National University

Prof. Sang-Chae JEON, Changwon National University

Prof. Hak-Sung LEE, Dong-A University

**E-1.** Basic Science of Ceramics

**E-2.** Cement, Traditional Ceramics, and Refractory Materials

**E-3.** Virtual Engineering and Education

#### **F. Nanomaterials and Thin Films**

Prof. Minoru OSADA, Nagoya University

Dr. Kentaro SHINODA, National Institute of Advanced Industrial Science and Technology

Dr. Satoshi KITAOKA, Japan Fine Ceramics Center

Dr. Jun AKEDO, National Institute of Advanced Industrial Science and Technology

Prof. Hyun Suk KIM, Dongguk University

Dr. Jong-young KIM, Korea Institute of Ceramic Engineering and Technology

Prof. Sang-Baek PARK, Chungnam National University

Prof. Ji-Won JUNG, Konkuk University

**F-1.** Nanomaterials and Nanotechnology

**F-2.** Thin Films and Coatings

#### **G. Special Symposium: Academy of Ceramic R&D Experts**

Prof. Gye Seok AN, Kyonggi University



## Scientific Program

### Day 1 (Friday, November 1st)

Opening, Appreciation Ceremony, Plenary Lecture (Day 1, Morning)		Room A
Chair: Michitaka OHTAKI		
08:30–08:40	Welcome Address <u>Hisao SUZUKI</u> , Shizuoka University, Conference Chair	
08:40–08:50	Welcome Address <u>Byong Ho KIM</u> , Korea University, Conference Chair	
08:50–08:55	Appreciation Ceremony	
<b>1PL-01</b> 08:55–09:35	<u>[Plenary]</u> Large-scale growth and integration of high-quality 2D materials for "Science of 2.5D Materials" <u>Hiroki AGO</u> , Kyushu University	
09:35–09:45	Group Photo	



**★: Candidates for Young Best Oral Presentation Award**

Session A: Ceramics for Renewable and Sustainable Energy (Day 1, Morning)		Room A
Chair: Ryohei OKA & Byungseo BAE		
1SA-01 10:00–10:20	<b>[Keynote]</b> Negatively charged platinum nanoparticles on dititanium oxide electride for ultra-durable electrocatalytic oxygen reduction <b>HyukSu HAN</b> , Sung Wng KIM	
1SA-02 10:20–10:35	<b>[Invited]</b> Removal of Sr <sup>2+</sup> from Water of Seaweed-Like Sodium Titanate Mat and Its Upcycling into Photocatalyst <b>Tomoyo GOTO</b> , Yoshifumi KONDO, Tohru SEKINO	
1SA-03 ★ 10:35–10:50	<b>[Invited]</b> Tailored BiVO <sub>4</sub> /In <sub>2</sub> O <sub>3</sub> Nanostructures with Boosted Charge Separation Ability Toward Unassisted Water Splitting <b>Mi Gyoung LEE</b>	
1SA-04 ★ 10:50–11:05	<b>[Invited]</b> Concentrated Solar Light Photoelectrochemical Hydrogen Evolution <b>Wan Jae DONG</b> , Zetian MI	
Chair: Tomoyo GOTO & Mi Gyoung LEE		
1SA-05 11:05–11:20	<b>[Invited]</b> Development of High-Performance Cathode for Na-ion Batteries <b>Jongsoon KIM</b>	
1SA-06 11:20–11:35	<b>[Invited]</b> Novel Environmentally Friendly Inorganic Black Pigments for Energy-Saving Material <b>Byungseo BAE</b> , Yeon-Bin CHOI, Suhui KIM	
1SA-07 11:35–11:50	<b>[Invited]</b> Structural Analysis and Electronic State Calculation of Near-Infrared Reflective Black Ca <sub>2</sub> (Mn,Ti)O <sub>4</sub> Pigments <b>Ryohei OKA</b> , Tomokatsu HAYAKAWA	
1SA-08 11:50–12:02	Synthesis and Characterization of Novel Inorganic Pearl-effect Pigments Based on Platelike Phosphates Particles Qiuyu CHENG, Ayahisa OKAWA, Takuya HASEGAWA, <b>Shu YIN</b>	
Lunch		



**★: Candidates for Young Best Oral Presentation Award**

Session A: Ceramics for Renewable and Sustainable Energy (Day 1, Afternoon)		Room A
Chair: Naoyoshi NUNOTANI & HyukSu HAN		
1SA-09 13:00–13:12	The variation in ionic conductivity according to crystallization of oxyhalide glass ceramic solid electrolyte for all-solid-state batteries <u>Tae Wook KANG</u> , Young Ji PARK, Sun Woog KIM	
1SA-10 ★ 13:12–13:24	Oxide-Ion Conductivity in Doped Bismuth Gallate Oxide, Bi <sub>2</sub> Ga <sub>4</sub> O <sub>9</sub> <u>Maksymilian KLUCZNY</u> , Jun Tae SONG, Motonori WATANABE, Aleksandar STAYKOV, Tatsumi ISHIHARA	
1SA-11 13:24–13:36	Optimizing Li-ion Flux with 2D TiO <sub>x</sub> Nanosheets for Enhanced Performance in Anodeless Lithium Metal Batteries <u>Donghyoung KIM</u> , Hee Jung PARK, Hyung Mo JEONG	
1SA-12 13:36–13:48	Synthesis and Photocatalytic of LaTiO <sub>2</sub> N Using Titanium Oxide Nanosheet/La <sup>3+</sup> Hybrids As a Precursor <u>Xiong TAO</u> , Tatsuki TSUGAWA, Kazuto HATAKEYAMA, Shintaro IDA	
1SA-13 13:48–14:00	Effect of pH buffers on release of hydrogen and ammonia during catalytic ammonia borane hydrolysis reaction <u>Hitoshi INOKAWA</u> , Hiroki TAKATA	
Chair: Shintaro IDA & Jae-ha MYUNG		
1SA-14 14:00–14:15	<u>[Invited]</u> Development of Novel Ni/Sr <sub>3</sub> Fe <sub>2</sub> O <sub>7-δ</sub> /α-Al <sub>2</sub> O <sub>3</sub> Catalyst for Hydrogen Production from Ammonia Decomposition <u>Sun Woog KIM</u> , Tae Wook KANG, Yeon-Bin CHOI, Byung Seo BAE	
1SA-15 14:15–14:30	<u>[Invited]</u> Boosting the performance and durability of direct ammonia-fueled solid oxide fuel cells Keejung KIM, Dong Woo JOH, Hye-Sung KIM, Tak-Hyoung LIM, Seok-Joo PARK, Rak-Hyun SONG, <u>Jong-Eun HONG</u>	
1SA-16 14:30–14:45	<u>[Invited]</u> Tuning the materials towards higher reaction selectivity: Towards sustainable energy <u>Hyunah KIM</u>	
14:45–15:00	Break	



Chair: Shu YIN & Sun Woog KIM	
<b>1SA-17</b> 15:00–15:15	<b>[Invited]</b> Preparation of Proton-Conducting Nanosheet Electrolyte for Fuel Cells <u>Shintaro IDA</u>
<b>1SA-18</b> 15:15–15:30	<b>[Invited]</b> Sustainable Processing of Nano-related Material by Non-equilibrium Reactor in Solid-liquid system <u>Yamato HAYASHI</u>
<b>1SA-19 ★</b> 15:30–15:45	<b>[Invited]</b> Understanding Growth Mechanism in Exsolved Nano-catalysts for Energy Conversions <u>Jae-ha MYUNG</u>
Chair: Yamato HAYASHI & Hyunah KIM	
<b>1SA-20</b> 15:45–16:00	<b>[Invited]</b> Development of high-performance thermoelectric materials using high-pressure technology <u>Chihiro SEKINE</u> , Yuttana MONA, Sora OZAKI, Kouta AWAJI, Amran HOSSAIN, Keiki TAKEDA, Yukihiro KAWAMURA, Hirotada GOTO
<b>1SA-21</b> 16:00–16:15	<b>[Invited]</b> Magnetocaloric properties of Gd substituted EuS <u>Kazuhei WAKIYA</u> , Toshihiro KUZUYA, Hiroyuki SUZUKI, Shoma KOBAYASHI, Ibuki MATSUO, Masahito YOSHIZAWA, Yoshiki NAKANISHI
<b>1SA-22</b> 16:15–16:30	<b>[Invited]</b> Upcycling of End-of-Life Vehicle waste glass <u>Toshihiro KUZUYA</u> , Tatsumi NAGANUMA, Hisayoshi MATSUSHIMA, Ken SAWADA, Naoya SAWAGUCHI, Akira SATO



**★: Candidates for Young Best Oral Presentation Award**

Session D: Bio and Environmental Ceramics, Glass Science (Day 1, Morning)		Room B
Chair: Hye Sun LEE & Kunio ISHIKAWA		
1SD-01 10:00–10:20	<b>[Keynote]</b> Carbonate apatite cement <b><u>Kunio ISHIKAWA</u></b>	
1SD-02 10:20–10:35	<b>[Invited]</b> Apatite Formation on Zirconium Metal Subjected to Anodic Oxidation in Fluoride Solution <b><u>Toshiki MIYAZAKI</u></b> , Masaki NOGUCHI, Jin NAKAMURA	
1SD-03 10:35–10:50	<b>[Invited]</b> Maximum Content of Magnesium in Hydroxyapatite and Characteristics Variation with the Substitution in High Temperature Region <b><u>Hirotaka FUJIMORI</u></b> , Yoichi MORI, Koji IOKU	
1SD-04 10:50–11:05	<b>[Invited]</b> Characterization of chitosan–siloxane hydrogels reinforced by nanofibers <b><u>Yuki SHIROSAKI</u></b> , Rea OKUYAMA, Daiki YASUI, Hiiragi KISHIMURA, Naohiko MAEDA	
1SD-05 11:05–11:17	AC-Electrophoretic Deposition of Alumina-Chitosan Nanofiber Composites on Stainless Steel for Orthodontics <b><u>Tomohiko YOSHIOKA</u></b> , Yumi YOSHIKI, Takuya KATAOKA, Eiji Fujii, Kanji TSURU, Satoshi HAYAKAWA	
1SD-06 11:17–11:32	<b>[Invited]</b> Development of Fluoride-Releasing Resin modified glass ionomer(RMGI) for the Prevention of Dental Caries Jun Seop LEE, <b><u>Hye Sun LEE</u></b>	
1SD-07 11:32–11:47	<b>[Invited]</b> Biofunctionalization of Layered Phosphates through Organic Modification <b><u>Jin NAKAMURA</u></b>	
1SD-08 ★ 11:47–11:59	Antibacterial membranes composed of PMMA and exfoliated α-zirconium phosphate nanosheets <b><u>Jooho JUNG</u></b> , Marin EGUCHI, Kai KAMADA	
1SD-09 ★ 11:59–12:11	Preparation of semi-homogeneous catalyst using single and double-layered hexaniobate and porphyrins <b><u>Yusuke HARADA</u></b> , Mitsuhiko MORISUE, Kanji SAITO, Yoshiyuki SUGAHARA	
	Lunch	



★: Candidates for Young Best Oral Presentation Award

Session D: Bio and Environmental Ceramics, Glass Science (Day 1, Afternoon)		Room B
Chair: Woon Jin CHUNG & Hirokazu MASAI		
<b>1SD-10</b> 13:00–13:20	<p><b>[Keynote]</b> CsPb(Br/I)<sub>3</sub> Perovskite Nanocrystal Embedded Glasses for Robust Color Converter with Wide Color Gamut</p> <p><b>Woon Jin CHUNG</b>, Hyan-a KIM, Pham Thi THUY, Devarajulu GELIJA</p>	
<b>1SD-11</b> ★ 13:20–13:32	<p>Glass Composition Dependence of Nanostructure and Upconversion Luminescence Properties in Er<sup>3+</sup>-doped nanocrystal glasses</p> <p><b>M. SAKAMOTO</b>, K. SHINOZAKI</p>	
<b>1SD-12</b> 10:32–13:44	<p>Electric field ion emission from sharpened superionic conductive glasses and those cellular activity and antibacterial property</p> <p>Yusuke DAIKO, Daigo ITO, Moeka MATSUYAMA, Mayuka AKIYAMA</p>	
<b>1SD-13</b> ★ 13:44–13:56	<p>Vitrification of sodium ion conductive Na<sub>3</sub>Zr<sub>2</sub>Si<sub>2</sub>PO<sub>12</sub> prepared by laser-based powder bed fusion process</p> <p><b>Chihiro FUJII</b>, Tsuyoshi HONMA, Mario AFFATIGATO</p>	
<b>1SD-14</b> ★ 13:56–14:08	<p>Pelletization Behaviors of Na<sub>2</sub>CO<sub>3</sub>, CaCO<sub>3</sub> and SiO<sub>2</sub> Powders</p> <p><b>Eun Chan PARK</b>, Yong Gyu CHOI</p>	
<b>1SD-15</b> ★ 14:08–14:20	<p>Adhesion of Single-Crystalline Silicon and Ge-Ga-Te Glass</p> <p><b>Ju Seong LEE</b>, Il Jung YOON, Yong Gyu CHOI</p>	
<b>1SD-16</b> 14:20–14:32	<p>Structural Modeling of Bismuth-Based Glasses by Using Density Functional Theory and Molecular Dynamics Simulations</p> <p><b>Luo YANG</b>, Yasuhiko BENINO, Tokuro NANBA, Shinichi SAKIDA</p>	
<b>1SD-17</b> 14:32–14:47	<p><b>[Invited]</b> Structure-Property Relationships in Zinc Phosphate Glasses</p> <p><b>Hirokazu MASAI</b></p>	
14:47–15:02	Break	



Chair: Jin Hyung LEE & Hirotaka FUJIMORI	
<b>1SD-18</b> 15:02–15:17	<p><b>[Invited]</b> Li<sub>4</sub>SiO<sub>4</sub> modified silica porous glass and its CO<sub>2</sub> capture property</p> <p><b><u>Miki INADA</u></b>, Su-Hyun BAEK</p>
<b>1SD-19</b> 15:17–15:29	<p>The impact of aluminosilicate-based mineral additive upon bagasse ash properties</p> <p><b><u>Jin Hyung LEE</u></b>, Ji Yeon PARK</p>
<b>1SD-20 ★</b> 15:29–15:41	<p>Evolution of CuCoFe Prussian Blue Analogues with Open Nanoframe Architectures for Enhanced Capacitive Deionization</p> <p><b><u>Yanna GUO</u></b>, Zeqiu CHEN, Dong JIANG, Yulin LI, Wenyang ZHANG, Kazuya KOZUMI, Yunqing KANG, Yusuke YAMAUCHI, Yoshiyuki SUGAHARA</p>
<b>1SD-21 ★</b> 15:41–15:53	<p>Construction of Fe-doped Boron Nitride as Electrocatalyst for Oxygen Reduction Reaction</p> <p><b><u>Kazuya KOZUMI</u></b>, Yanna GUO, Samuel BERNARD, Masashi MIYAKAWA, Takashi TANIGUCHI, Yoshiyuki SUGAHARA</p>
<b>1SD-22 ★</b> 15:53–16:05	<p>Electrochemical hydrolysis of Kenaf particles to glucose using TiO<sub>2</sub>-IrO<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub> Electrodes for green Saccharification</p> <p><b><u>Ji Yeon PARK</u></b>, Hyojung PARK, Byungseung JEON, Byoung In SANG, Jin Hyung LEE</p>
<b>1SD-23 ★</b> 16:05–16:17	<p>Composition refinement of modified activated carbon derived from banana peel for improved adsorption efficiency of hazardous metal ions in water</p> <p><b><u>TRAN Thi Thanh Van</u></b>, Osamu NAKAGOE, Hideaki SANO, Shuji TANABE, Kai KAMADA</p>
<b>1SD-24 ★</b> 16:17–16:29	<p>Composite of graphene and core-shell MOF derived cobalt-embedded hierarchical porous carbon for supercapacitor</p> <p><b><u>Weiming WANG</u></b>, Wenyang ZHANG, Yusuke YAMAUCHI, Yoshiyuki SUGAHARA</p>



**★: Candidates for Young Best Oral Presentation Award**

Session C: Engineering Ceramics (Day 1, Morning)		Room C
Chair: Yoon-Suk OH & Junichi TATAMI		
1SC-01 10:00–10:20	<b>[Keynote]</b> Modification of Al <sub>2</sub> O <sub>3</sub> Powder Surface by Hydroxyl Ion Adsorption to Achieve a Low Aqueous Slurry Viscosity with Reproducibility Eun Chae YOU, <b><u>Dang-Hyok YOON</u></b>	
1SC-02 10:20–10:35	<b>[Invited]</b> Crack Healing in 8YSZ Polycrystals under Strong Electric Field <b><u>Koji MORITA</u></b> , Daisuke TERADA, Tomoharu TOKUNAGA, Takahisa YAMAMOTO, Hidehiro YOSHIDA	
1SC-03 10:35–10:50	<b>[Invited]</b> Designing Magnesium Oxide Fillers for Thermal Interface Materials with Superior Thermal Conductivity and Enhanced Thixotropic Properties <b><u>Young Kook MOON</u></b> , Jong-Jin CHOI, Byung-Dong HAHN, Hyun-Ae CHA, Cheol-Woo AHN	
1SC-04 ★ 10:50–11:02	Effect of Alternating Current (AC) Field on High Temperature Flexural Deformation of Zirconia Ceramics <b><u>Kamarul Aiman Bin SHARIFFUDDIN</u></b> , Hiroshi MASUDA, Hidehiro YOSHIDA	
1SC-05 ★ 11:02–11:14	Reaction Controlled Effects of (Yb <sub>x</sub> Sc <sub>1-x</sub> ) <sub>2</sub> Si <sub>2</sub> O <sub>7</sub> Solid Solution against CMAS Corrosion for EBC application <b><u>Min-Soo NAM</u></b> , Jin-Kwon KIM, Sahn NAHM, Seongwon KIM	
1SC-06 ★ 11:14–11:26	Thermal stability and phase transition of (Y, Gd, Yb) <sub>5</sub> O <sub>4</sub> F <sub>7</sub> <b><u>Taketo SAWAKI</u></b> , Shun NARITA, Anna GUBAREVICH, Katsumi YOSHIDA, Kento MATSUKURA, Yoshiaki TAZAKI	
1SC-07 ★ 11:26–11:38	Off-stoichiometric effect on the fracture and deformation behavior of (Ti, Mo)C <sub>x</sub> <b><u>Shuntaro IDA</u></b> , Eri NAKAGAWA, Viola PAUL, Takahito OHMURA, Kyosuke YOSHIMI	
1SC-08 ★ 11:38–11:50	Optimization of Various Parameters for the Joining of SiC via Si-C Reaction Bonding <b><u>Sebin PARK</u></b> , Sooyeon JOO, Dang-Hyok YOON	
	Lunch	



★: Candidates for Young Best Oral Presentation Award

Session C: Engineering Ceramics (Day 1, Afternoon)		Room C
Chair: Young-Jo PARK & Tetsuo UCHIKOSHI		
1SC-09 13:00–13:20	<b>[Keynote]</b> High-temperature Mass Transport at Grain Boundaries in Oxide Ceramics Excited by Flash Event <b>Hidehiro YOSHIDA</b> , Ying YANG, Hiroshi MASUDA, Koji MORITA, Takahisa YAMAMOTO	
1SC-10 13:20–13:35	<b>[Invited]</b> Sintering of nanocrystalline zirconia via nanoparticle gel-casting <b>Michiyuki YOSHIDA</b>	
1SC-11 ★ 13:35–13:47	Surface reaction of zirconia coating with different Y <sub>2</sub> O <sub>3</sub> content prepared by AD method during sliding test <b>Ryoto TAKIZAWA</b> , Katsumi YOSHIDA	
13:47–13:59	Break	
1SC-12 ★ 13:59–14:11	Deposition Behavior Analysis of YSZ Under High Power EB-PVD Coating Processes <b>Gye Won LEE</b> , Tae-Jun PARK, Jong-il KIM, In-Hwan LEE, Yoon-suk OH	
1SC-13 ★ 14:11–14:23	Synthesis of B <sub>6</sub> Si Ceramics by Induction Heating <b>Daisuke KAWAI</b> , Anna GUBAREVICH, Katsumi YOSHIDA	
1SC-14 ★ 14:23–14:35	Synthesis of High-Purity Fine AlN Powder for Heat Dissipation Through Process Optimization <b>Sang-Min LEE</b> , Dang-Hyok YOON	
1SC-15 14:35–14:50	<b>[Invited]</b> 3D Visualization of heterogeneous microstructures and defects in ceramics by using synchrotron X-ray multiscale CT <b>Gaku OKUMA</b> , Fumihiro WAKAI	
14:50–15:00	Break	
Poster Pitch (3min short presentation for each poster and 1min break for changing presenter)		
Chair: Dang-Hyok YOON & Junichi TATAMI		
15:00–15:04	<b>(PS40)</b> h-BN Nanoparticle-Induced Fracture Strength Enhancement in Cordierite Ceramics <b>Jong Hyun LEE</b> <i>et al.</i>	
15:04–15:08	<b>(PS41)</b> Influence of Aging Treatments on the CHA-type Zeolite Synthesis and Insights into the Properties of Aluminosilicate Precursors <b>Yukie OKADA</b> <i>et al.</i>	



15:08–15:12	<b>(PS42)</b> Enhancing Thermal Conductivity of Polymer Composites through Hydroxylation of Hexagonal-Boron Nitride <b><u>Hoseong SON</u></b> <i>et al.</i>
15:12–15:16	<b>(PS43)</b> Synthesis of $\text{Mg}(\text{OH})_2$ and $5\text{Mg}(\text{OH})_2 \cdot \text{MgSO}_4 \cdot 3\text{H}_2\text{O}$ from brine for flame retardant <b><u>Kim JIYEON</u></b> <i>et al.</i>
15:16–15:20	<b>(PS44)</b> Influence of operating parameters on process performance in rotary cross-flow filtration of nanoparticles <b><u>Peidong HU</u></b> <i>et al.</i>
15:20–15:24	<b>(PS45)</b> Mechanical properties of single crystals and bicrystals of 8mol% $\text{Y}_2\text{O}_3$ stabilized $\text{ZrO}_2$ measured using microcantilever beam specimens <b><u>Mayuko MURAMOTO</u></b> <i>et al.</i>
15:24–15:28	<b>(PS46)</b> Synthesis and Surface Properties of $\alpha\text{-Si}_3\text{N}_4$ <b><u>Kim JIYEON</u></b> <i>et al.</i>
15:28–15:32	<b>(PS47)</b> Optimal design and self-healing behavior of multi-layered environmental coating layers and evaluation of mechanical properties <b><u>Jae Won SHIN</u></b> <i>et al.</i>
15:32–15:36	<b>(PS48)</b> Preparation of Silicon Nitride Ceramics by Spray Freeze Granulation Drying Using Mixed Solvents of tert-butyl alcohol and cyclohexane <b><u>Riko YAMAZAKI</u></b> <i>et al.</i>
15:36–15:40	<b>(PS49)</b> <i>Operando</i> OCT observation of $\text{SiO}_2$ slurry during drying process -Effect of degree of saponification of PVA on internal structural change- <b><u>Hiromasa KURODA</u></b> <i>et al.</i>
15:40–15:44	<b>(PS50)</b> Thermo-mechanical behavior of $\text{Y}_3(\text{Nb}_{1-x}\text{Ta}_x)\text{O}_7$ as a next-generation thermal barrier coating material depending on the cation ratio <b><u>Min-Gyu KIM</u></b> <i>et al.</i>



**★: Candidates for Young Best Oral Presentation Award**

Session F: Nanomaterials and Thin Films (Day 1, Morning)		Room D
Chair: Satoshi KITAOKA & Hyun-Suk KIM		
1SF-01 10:00–10:20	<b>[Keynote]</b> Polymer-Based High-k Dielectrics for Thin-Film Transistor Applications Seong Cheol JANG, Gunoh LEE, Kyung Jin LEE, <u>Hyun-Suk KIM</u>	
1SF-02 10:20–10:32	Anti-plasma and Corrosion for Robust-Mechanical Al/Al <sub>2</sub> O <sub>3</sub> /Y <sub>2</sub> O <sub>3</sub> Multilayer Substrate <u>Jong-Soo BYEON</u> , Ji Min KIM, Ji Young PARK , Yong-Ho CHOA	
1SF-03 10:32–10:44	Enhanced Polarization and Dielectric Properties of Epoxy Resin-impregnated Barium Titanate Film Produced by MF Method <u>Muneyasu SUZUKI</u> , Kouki MATSUNAGA, Masanori HAYASE	
Chair: Kentaro SHINODA & Satoshi KITAOKA		
1SF-04 10:44–10:59	<b>[Invited]</b> Current status of understanding RTIC phenomenon in AD Process and future prospects for application development <u>Jun AKEDO</u> , Yasuhito MATSUBAYASHI, Taku GOTO, Takashi NAGOSHI, Hiroki TSUDA	
1SF-05 10:59–11:11	Control of Infrared Optics by Localized Surface Plasmon of Ag Nanoparticles Dispersed in Semiconducting $\beta$ -FeSi <sub>2</sub> <u>Yoshiki OKUHARA</u> , Ryusei KAMIDE, Daisaku YOKOE, Tomohiro KUROYAMA	
1SF-06 ★ 11:11–11:23	Effects of Annealing Temperatures on Mist-Spin-Sprayed Cu-Ni-Co-O Thin Films: Structural, Morphological, and Electrical Properties <u>Nam DINH THE</u> , Yuta KUBOTA, Nobuhiro MATSUSHITA	
Chair: Hyun-Suk KIM & Kentaro SHINODA		
1SF-07 11:23–11:38	<b>[Invited]</b> Thermochemical design of environmental barrier coatings to mitigate against CMAS attack <u>Satoshi KITAOKA</u> , MakotoTANAKA, Noki KAWSHIMA, Soma HASHIMOTO, Taichi ITO, Naoki YAMAZAKI, Kohei DOI, Takeshi NAKAMURA	
1SF-08 11:38–11:53	<b>[Invited]</b> Water adsorption-induced changes in in-plane stress of sol-gel-derived ceramic and glass oxide coatings <u>Hiromitsu KOZUKA</u> , Yuma OHTA, Yuki NISHIMURA, Sosuke KITANO, Yuto MIYASHITA	
1SF-09 11:53–12:05	Effect of Heat Treatment on Oxide Ceramic Coatings Deposited by Hybrid Aerosol Deposition <u>Kentaro SHINODA</u> , Mohammed SHAHIEN, Takashi NAGOSHI, Masato SUZUKI	
	Lunch	



**★: Candidates for Young Best Oral Presentation Award**

Session F: Nanomaterials and Thin Films (Day 1, Afternoon)		Room D
Chair: Minoru OSADA & In CHUNG		
1SF-10 13:30–13:50	[Keynote] Preparation of Pore-Free Graphene Oxide Membranes and Their Functions <u>Shintaro IDA</u>	
1SF-11 13:50–14:05	[Invited] Organization of Monodisperse Nanosheets Into Columnar Nanofibers <u>Nobuyoshi MIYAMOTO</u> , Hiroyuki IWANO, Hiroyuki NONAKA	
Chair: In CHUNG & Minoru OSADA		
1SF-12 14:05–14:17	Co-doped Fe <sub>3</sub> O <sub>4</sub> Nanoparticle Calcined by Ultra-thin FeCo(OH) <sub>x</sub> Precursor on N-Doped Graphene as Robust Oxygen Electrocatalyst <u>Sunglun KWON</u> , Jong Hyeon LEE	
1SF-13 ★ 14:17–14:29	Synthesis and exfoliation of layered perovskites RbBi <sub>2-x</sub> La <sub>x</sub> Ti <sub>2</sub> NbO <sub>10</sub> <u>Keita NISHIBASHI</u> , Makoto KOBAYASHI, Eisuke YAMAMOTO, Minoru OSADA	
1SF-14 14:29–14:41	Design Rule of Multi-dimensional III-V based Ternary Materials <u>Jong-Young Kim</u>	
14:41–14:56	Break	
Chair: Jong-Young KIM & Nobuyoshi MIYAMOTO		
1SF-15 14:56–15:11	[Invited] Atomic-Resolution Lattice Engineering for Ultrahigh Performance Thermoelectric Materials <u>In CHUNG</u>	
1SF-16 15:11–15:23	Electrochemical Impedance Spectroscopy Study of Flow-Electrode Capacitive Deionization Cells <u>Chung-Yul YOO</u>	
1SF-17 15:23–15:35	Tailored synthesis of single-crystalline Ce <sub>1-x</sub> Gd <sub>x</sub> O <sub>2-δ</sub> nanosheets with controlled gadolinium content <u>Kentaro ITO</u> , Eisuke YAMAMOTO, Makoto KOBAYASHI, Minoru OSADA	
Chair: Nobuyoshi MIYAMOTO & Jong-Young KIM		
1SF-18 15:35–15:47	Dual ionic pathways in binary metal-organic frameworks enable stable operation of Li-metal batteries <u>Sangbaek PARK</u>	
1SF-19 15:47–16:02	[Invited] Tailored Synthesis and Applications of Ceramic Nanosheets <u>Minoru OSADA</u>	



**★: Candidates for Young Best Poster Presentation Award**

Poster Session (Day 1, Afternoon)		Cultural Gallery
16:30–17:30		
PSA-01 ★	New purple inorganic pigment based on $\text{Zn}_3\text{Mo}_2\text{O}_9$ <u>Seiji MIMIDA</u> , Shota KATO, Kazuki YAMAGUCHI, Toshiyuki MASUI	
PSA-02 ★	New Inorganic Purple Pigments with $\text{Ni}^{2+}$ as a Coloring Source <u>Runa NAKAO</u> , Mizuki SAEGUSA, Kazuki YAMAGUCHI, Toshiyuki MASUI	
PSA-03 ★	Strongly correlated electron system $\text{NiWO}_4$ : A new family of materials for triboelectrics using inherent Coulombic repulsion <u>SangJeong PARK</u> , Gi Hyeon HAN, Woo Seong JEONG, Seung Yong LEE, Kyu Hyoung LEE	
PSA-04	Change in Microstructure of Ni-YSZ Anode Subjected to Ammonia Fuel in Direct Ammonia Solid Oxide Fuel Cells (DA-SOFCs) <u>Sanghaw LEE</u> , Hae-Jin HWANG	
PSA-05	Fabrication of Inorganic-Organic Hybrid Solid Electrolytes Using Electrospinning <u>Yoonha JEONG</u> , Haejin HWANG	
PSA-06	Fabrication of W-Doped LLZO Solid-State Electrolytes with $\text{Li}_3\text{BO}_3$ Interlayer using Tape Casting Process <u>Gyuri LEE</u> , Haejin HWANG	
PSA-07 ★	One-pot synthesis of CNFs/AgNPs in $\text{H}_2\text{O}$ using ultrasound <u>Madoka YOSHIKAWA</u> , Yamato HAYASHI, Jun FUKUSHIMA, Hirotsugu TAKIZAWA	
PSA-08 ★	Synthesis of Sn-based alloy nanoparticles by ultrasound irradiation and investigation of liquid-phase growth process <u>Takaharu NAKAJIMA</u> , Yamato HAYASHI, Jun FUKUSHIMA, Hirotsugu TAKIZAWA	
PSA-09	Inorganic LiF-rich Protective Layer for High Energy Density Silicon Anodes <u>Chanho LEE</u> , Jinhyung KIM, Dongsoo LEE	
PSA-10	Design of Highly Stable GDC Buffer Layer via RF Sputtering to Enhance the Stability and Performance of SOFCs <u>Somi LEE</u> , Yo Han KIM, Hyeongwon JEONG, Bo-Ram WON, Dayoung PARK, Jae-ha MYUNG	



<b>PSA-11</b> ★	1D Perovskite Nanofibers with Nanoparticle Decoration via Exsolution for Highly Active Electrode of Solid Oxide Cells <u>Yeeun KIM</u> , Bo-Ram WON, Yo Han KIM, Hyeongwon JEONG, Dayoung PARK, Jae-ha MYUNG
<b>PSA-12</b>	Boosting Ammonia Decomposition and Power Density in DA-SOFCs via Ni Exsolution Catalysts Layer <u>Wonjun JANG</u> , Jonghyun KIM, Jun-Young PARK, So Yeon PARK, Jae-ha MYUNG
<b>PSA-13</b> ★	Boosting the Catalytic Activity of Electrodes via Gradient Anode Functional Layers in Protonic Ceramic Fuel Cells <u>Jun-Young PARK</u> , Jonghyun KIM, Wonjun JANG, So Yeon PARK, Jae-ha MYUNG
<b>PSA-14</b>	Nano-structured Anode Functional Layer for High Performance in Thin-Film Solid Oxide Fuel Cells at Low Temperatures <u>Dahyun HAN</u> , Yo Han KIM, Hyeongwon JEONG, Bo-Ram WON, Dayoung PARK, Jae-ha MYUNG
<b>PSA-15</b>	Improving Nickel-Based Catalysts for Dry Reforming of Methane: Effects of Cobalt Doping on Carbon Coking <u>So Yeon PARK</u> , Yo Han KIM, Jun-Young PARK, Wonjun JANG, Jae-ha MYUNG
<b>PSA-16</b>	Design of Ni-exsolved Nanoparticles on BZCYYb as Anode Functional Layer for high-Performance Protonic Ceramic Fuel Cells <u>Jonghyun KIM</u> , Dayoung PARK, Jun-Young PARK, Wonjun JANG, So Yeon PARK, Jae-ha Myung
<b>PSA-17</b> ★	Enhancing Thermoelectric Performance of Perovskite Oxides: The Role of Multiferroic Phase in Strontium Titanate-Bismuth Ferrite Composites <u>Yonas SHASHO</u> , Woo Hyun KIM, Thi Thanh TRAN, Woo Hyun NAM, Jung Young CHO, Soonil LEE
<b>PSA-18</b>	Dual-Ion Battery using Sodium Bis(fluorosulfonyl)imide for Electrolyte <u>Ryusei KUNISAKI</u> , Jun Tae SONG, Motonori WATANABE, Miki INADA, Tatsumi ISHIHARA
<b>PSA-19</b> ★	Preparation of highly oriented dense $\text{Nd}_4\text{Ni}_3\text{O}_{10}$ ceramics from magnetically oriented $\text{Nd}_2\text{NiO}_4$ and $\text{NiO}$ <u>Shunsuke AOKI</u> , Kota IINO, Anna NAGAI, Motohide MATSUDA
<b>PSA-20</b> ★	Cross sectional observation for microstructural changes of electrodes of lead-acid battery by chemical formation <u>Asahi TAKAHASHI</u> , Takahiko KAWAGUCHI, Naoki WAKIYA, Naonori SAKAMOTO



<b>PSA-21</b> ★	Regulation of built-in electric fields at dichalcogenide heterojunction interfaces through metal defect engineering for efficient pH universal hydrogen and electric energy generation <u>Benzhi WANG</u> , Hyung Mo JEONG
<b>PSA-22</b> ★	Enhancing conductivity of TiO <sub>2</sub> nanosheet as anode material for Li-ion batteries by decorating metal nanoparticles on TiO <sub>2</sub> nanosheets <u>Sol HAN</u> , Jeong Yun HWANG, Kyu Hyoung LEE
<b>PSB-23</b> ★	Enhanced gas sensing performance of ZnO-CeO <sub>2</sub> heterostructure using ultra-sonification <u>Jeong Ho LEE</u> , Soo Jee DO, Min Young KIM, Kyu Hyoung LEE
<b>PSB-24</b> ★	Effect of Molecular Design of Precursor Molecules for Low-Temperature Processing of Lithium Ion Conductors <u>Gabriel Seiti CARVALHEIRO SAKAMOTO</u> , Jeevan Kumar PADARTI, Shigeto HIRAI, Takeshi MATSUDA, Tomoya OHNO
<b>PSB-25</b>	Enhancing Sinterability and Conductivity of LiTa <sub>2</sub> PO <sub>8</sub> Ceramics by Coating with MgO Sintering Aid <u>Taiki TANAKA</u> , Jeevan Kumar PADARTI, Shigeto HIRAI, Takeshi MATSUDA, Tomoya OHNO
<b>PSB-26</b>	Integration of Li Salt and Ceramics Fillers in PEO Solid Polymer Electrolytes on Optimizing Performance <u>Miao LIU</u> , Jeevan Kumar PADARTI, Shigeto HIRAI, Takeshi MATSUDA, Tomoya OHNO
<b>PSB-27</b> ★	Surfactant-free hydrothermal synthesis of CeO <sub>2</sub> nanoparticles: Simultaneous morphology and cation charge control for enhanced room-temperature gas sensing <u>Soo Jee DO</u> , Min Young KIM, Kyu Hyoung LEE
<b>PSB-28</b>	Near-infrared Phosphors: Luminescence Properties of Chromium-doped Ca <sub>5</sub> Ga <sub>6</sub> O <sub>14</sub> :Cr <sup>4+</sup> <u>Aunsaya EKSATIT</u> , Takayuki NAKANISHI, Yukinori KOYAMA, Naoto HIROSAKI, Takashi TAKEDA, Koji MORITA, Jumpei UEDA
<b>PSB-29</b> ★	Exfoliation of PbTiO <sub>3</sub> /SrTiO <sub>3</sub> Artificial Superlattice Films with Vortex Polarization <u>Kohei TAKAHASHI</u> , Shinya KONDO, Toshiya MURAI, Rai KOU, Takanori NAGASAKI, Tomoaki YAMADA
<b>PSB-30</b>	Composition dependence of energy storage performance in PMN-PT thin films prepared by Chemical Solution Deposition <u>Takashi ARAI</u> , Haruto MURAKAMI, Hisao SUZUKI



<b>PSB-31 ★</b>	Site-selective Doping of $\text{Eu}^{3+}$ and Photoluminescence from $\text{Eu}^{3+}$ in Strontium Stannate Phosphors <u>Keigo NAKAMURA</u> , Kazushige UEDA
<b>PSB-32 ★</b>	Giant Piezoelectricity of Transparent PZT Thin Films from Molecular Designed CSD Precursors <u>Takashi ARAI</u> , Kazuto YOSHIDA, Hisao SUZUKI, Desheng FU
<b>PSB-33 ★</b>	Towards High-performance Strontium Ferrite: Innovations in Powder and Thin Film <u>Siyuan WANG</u> , Jingwu ZHENG, Wei CAI, Liang QIAO, Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA, Shenglei CHE
<b>PSB-34 ★</b>	Preparation and electrical properties of epitaxially grown pyrochlore structure oxide $(\text{Ca}_{0.4}\text{Ce}_{0.6})_2\text{Sn}_2\text{O}_7$ thin films on Si(001) substrate <u>Kyoji NOTAKI</u> , Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA
<b>PSB-35 ★</b>	Orientation control of $\text{VO}_2$ thin film on glass substrate using $\text{Cd}_x\text{Mg}_{1-x}\text{O}$ buffer layer <u>Sota TOTSUKA</u> , Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA
<b>PSB-36 ★</b>	Preparation of Fe, Cu and Mo doped $\text{TiO}_2$ thin films by on-site controlled hydrolysis <u>S. H. D. P. WIJEKOON</u> , Masaru SHIMOMURA, Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA
<b>PSB-37 ★</b>	Preparation of $(\text{La,Sr})\text{CoO}_3$ thin film on Si(001) with spontaneously formed superlattice prepared by Dynamic Aurora PLD method <u>Suzuki AKANE</u> , Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA
<b>PSB-38 ★</b>	The influence of the substrates on crystallinity and morphology of epitaxial grown anatase $\text{TiO}_2$ by a solvothermal method <u>Kosuke ONO</u> , Masaru SHIMOMURA, Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA
<b>PSB-39 ★</b>	Preparation of LLZTO epitaxial thin film of Li-ion Solid Electrolyte by flux method and its exfoliation from substrate <u>Mayu MORIYA</u> , Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA
<b>PSC-40</b>	h-BN Nanoparticle-Induced Fracture Strength Enhancement in Cordierite Ceramics <u>Jong Hyun LEE</u> , Chul Oh PARK, Hyun Min PARK, Kyu Hyung LEE



<b>PSC-41 ★</b>	<p>Influence of Aging Treatments on the CHA-type Zeolite Synthesis and Insights into the Properties of Aluminosilicate Precursors</p> <p><u>Yukie OKADA</u>, Yuki SADA, Shoko MIYAGI, Hiroki YAMADA, Koji OHARA, Yutaka YANABA, Masato YOSHIOKA, Tomoya ISHIKAWA, Yusuke NARAKI, Tsuneji SANO, Tatsuya OKUBO, Raquel SIMANCAS, Toru WAKIHARA</p>
<b>PSC-42</b>	<p>Enhancing Thermal Conductivity of Polymer Composites through Hydroxylation of Hexagonal-Boron Nitride</p> <p><u>Hoseong SON</u>, Hyung Jin MUN, Yong-Ho CHOA</p>
<b>PSC-43</b>	<p>Synthesis of <math>Mg(OH)_2</math> and <math>5Mg(OH)_2 \cdot MgSO_4 \cdot 3H_2O</math> from brine for flame retardant</p> <p><u>Kim JIYEON</u>, Yoon YOUNGJO, Kim YOOJIN</p>
<b>PSC-44 ★</b>	<p>Influence of operating parameters on process performance in rotary cross-flow filtration of nanoparticles</p> <p><u>Peidong HU</u>, Arata SUZUKI, Zhigang HAO, Kenta IYOKI, Tatsuya OKUBO, Toru WAKIHARA</p>
<b>PSC-45 ★</b>	<p>Mechanical properties of single crystals and bicrystals of 8mol% <math>Y_2O_3</math> stabilized <math>ZrO_2</math> measured using microcantilever beam specimens</p> <p><u>Mayuko MURAMOTO</u>, Junichi TATAMI, Motoyuki IJIMA, Tatsuki OHIJI, Tsukaho YAHAGI, Takuma TAKAHASHI, Daichi MINAMI, Hiromi NAKANO</p>
<b>PSC-46</b>	<p>Synthesis and Surface Properties of <math>\alpha</math>-<math>Si_3N_4</math></p> <p><u>Kim JIYEON</u>, Yoon YOUNGJO, Kim YOOJIN</p>
<b>PSC-47</b>	<p>Optimal design and self-healing behavior of multi-layered environmental coating layers and evaluation of mechanical properties</p> <p><u>Jae Won SHIN</u>, Jae Yeon AHN, Dong Heon LEE, Kee Sung LEE</p>
<b>PSC-48 ★</b>	<p>Preparation of Silicon Nitride Ceramics by Spray Freeze Granulation Drying Using Mixed Solvents of <i>tert</i>-butyl alcohol and cyclohexane</p> <p><u>Riko YAMAZAKI</u>, Junichi TATAMI, Motoyuki IJIMA, Shinya KAWAGUCHI, Naoki KONDO</p>
<b>PSC-49 ★</b>	<p><i>Operando</i> OCT observation of <math>SiO_2</math> slurry during drying process -Effect of degree of saponification of PVA on internal structural change-</p> <p><u>Hiromasa KURODA</u>, Junichi TATAMI, Motoyuki IJIMA, Takuma TAKAHASHI</p>
<b>PSC-50</b>	<p>Thermo-mechanical behavior of <math>Y_3(Nb_{1-x}Ta_x)O_7</math> as a next-generation thermal barrier coating material depending on the cation ratio</p> <p><u>Min-Gyu KIM</u>, Jeong Geun PARK, Janghyeok PYEON, Jeong Hun SON, Byungil YANG, SeungCheol YANG, Yeon-Gil JUNG</p>



<b>PSD-51</b> ★	CO <sub>2</sub> mineralization using fly ash with amine <u>Masato KATSUYAMA</u> , Masanori TAKEMOTO, Yasuo YONEZAWA, Tatsuya OKUBO, Toru WAKIHARA
<b>PSD-52</b> ★	Lead-Free Perovskite Nanocrystal Embedded Glass Containing Mn <sup>2+</sup> and Tb <sup>3+</sup> for Visible Conversion Materials <u>Hyun ah KIM</u> , Woon Jin CHUNG
<b>PSD-53</b> ★	Glass Ceramics Based on CaO-ZnO-B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> (B <sub>2</sub> O <sub>3</sub> =15 mol%) System for Low Temperature SOEC Sealing Materials <u>Tae Ryoung KIM</u> , Jiwoo LEE, Woon Jin CHUNG
<b>PSD-54</b>	Chemical Strengthening Properties and Mechanical Properties of Alumino-boro Silicate Glasses with Fixed ratio of Al <sub>2</sub> O <sub>3</sub> /Na <sub>2</sub> O <u>Jin Wook JANG</u> , Kyeong Dae PARK, Seo Yoon LEE, Woon Jin CHUNG
<b>PSD-55</b> ★	Synthesis of size-controlled spherical silica particles from rice husk <u>Su Yeon HA</u> , Byoung In SANG, Hye Seon LEE, Byeong Seung JEON, Jin Hyung LEE
<b>PSD-56</b> ★	Synthesis of precipitated calcium carbonate (PCC) from oyster shell waste using three organic acids: Characterization and comparison studies <u>Sang Heon LEE</u> , Hyun Sik KIM, Hye Seon LEE, Byeong Seung JEON, Jin Hyeong LEE
<b>PSD-57</b> ★	Effects of Synthetic Conditions in Hydrothermal Method on Hydroxyapatite Morphology and Lead Removal Properties <u>Yuma AMEMIYA</u> , Tomoyo GOTO, Yoshifumi KONDO, Yeongjun SEO, Sung Hun CHO, Tohru SEKINO
<b>PSD-58</b>	Introduction of Glass Recycling Case Studies by Local Public Technology Centers in Japan <u>Naotaka SAKAMOTO</u> , Hiroyuki INANO, Taigo TAKAISHI, Minoru TANAKA
<b>PSD-59</b>	Effect of ZnO Content on the Structural Characteristics and Crystallization Behavior of Glass-Ceramics <u>Youna LIM</u> , Kangduk KIM
<b>PSD-60</b>	Comparison of bioresorption and biomineralization in calcined and uncalcined hydroxyapatite Woo Young JANG, <u>Jeong Ho CHANG</u>



<b>PSD-61</b>	In vitro Calcium Phosphate Mineralization System of Uncalcined Hydroxyapatite Composites Using Biodegradable Poly-L-lactic acid Woo Young JANG, <u>Jeong Ho CHANG</u>
<b>PSE-62 ★</b>	Preparation of Translucent Silicalite-1 Bulk Ceramics by Spark Plasma Sintering <u>Yoshiaki ITO</u> , Masanori TAKEMOTO, Yuka YOSHIHARA, Shiori ODAGIRI, Yuta SHUSEKI, Kenta IYOKI, Tatsuya OKUBO, Atsunobu MASUNO, Toru WAKIHARA
<b>PSE-63</b>	Fabrication of dual-phase oxygen separation membrane composed of YSZ and stainless steel by spark plasma sintering process <u>Aunsaya EKSATIT</u> , Kento ISHII, Kiyoshi KOBAYASHI, Koji MORITA, Tohru S. SUZUKI, Tetsuo UCHIKOSHI
<b>PSE-64 ★</b>	Multiphysics modeling for Physical Vapor Transport of SiC crystal growth considering the partial pressure of vapor species <u>Woon-Hyeon JEONG</u> , Jae-Hyeon PARK, Yunji SHIN, Seong-Min JEONG
<b>PSE-65 ★</b>	Multiphysics simulation based on a Kinetic Model of Surface Chemisorption in the ALD of HfO <sub>2</sub> Films for Reactor optimization <u>Nhat-Minh PHUNG</u> , Soonil LEE, Seong-Min JEONG
<b>PSE-66</b>	Effects of Metal dopable Graphitic Carbon Nitride Nanosheets on the Sintering and Properties of Yttria-Stabilized Zirconia Microbeads <u>DongWon KIM</u> , Eun-Jeong KIM, Kyoung-Seok MOON
<b>PSE-67</b>	Sintering behavior and mechanical properties of BNNT-reinforced ZrB <sub>2</sub> – SiC composite <u>Seungyun LEE</u> , Byeongho AHN, Hunsu LEE, Hyeondeok JEONG, Hoo-Jeong LEE, Sung-Soo RYU
<b>PSE-68</b>	Production of pottery with kiln effects using the strong reduction technique "Ibushi" <u>Naotaka SAKAMOTO</u>
<b>PSE-69 ★</b>	Corrosion resistance of Li <sup>+</sup> cathode materials of a mullite sagger containing anorthite (CaO-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> ) glass-ceramics <u>Sujin WOO</u> , Kangduk KIM
<b>PSE-70</b>	Corrosion resistance behavior of a LiAlO <sub>2</sub> -based sagger for calcination of Li-ion battery cathode materials <u>Nayoung HAM</u> , Kangduk KIM



<b>PSE-71 ★</b>	<p>Lithium corrosion resistance behavior of a <math>\text{MgAl}_2\text{O}_4</math> saggar manufactured using <math>\text{Li}_2\text{O}</math>-<math>\text{MgO}</math>-<math>\text{Al}_2\text{O}_3</math>-<math>\text{SiO}_2</math>-<math>\text{B}_2\text{O}_3</math> and <math>\text{Na}_2\text{O}</math>-<math>\text{CaO}</math>-<math>\text{Al}_2\text{O}_3</math>-<math>\text{SiO}_2</math>-<math>\text{B}_2\text{O}_3</math> based liquid phase sintering additives</p> <p><u>ChangHae OH</u>, Kangduk KIM</p>
<b>PSE-72</b>	<p>Ambient Synthesis and Physico-Chemical Properties of Porous Silica Powders for Thermal Insulation Applications</p> <p><u>Jeong-Gu YEO</u>, So Yeon HEO, Jin-Seok LEE</p>
<b>PSF-73</b>	<p>Fabrication and Electrical properties of Ferroelectric Organic Transistor with P(VDF-TrFE)/CEP/Si Structures</p> <p><u>Chungchun HYUN</u>, Shihyun AHN, Min Gee Kim KIM, Byung Eun PARK</p>
<b>PSF-74 ★</b>	<p>Highly Stable Conductive Transparent Electrode based on Ag@Au Coreshell Nanowires for Advanced Flexible Electronic Devices</p> <p><u>Jae-Ho KIM</u>, Gwang-Myeong GO, Yong-Ho CHOA</p>
<b>PSF-75 ★</b>	<p>Fabrication of multi-component nanocomposite ion exchange membranes using impregnation process of dispersion solutions</p> <p><u>Yeongseo KIM</u>, Woohyun CHOI, Min-Gyu KIM, Jeong Geun PARK, Yeon-Gil JUNG, SeungCheol YANG</p>
<b>PSF-76</b>	<p>Changes of surface electric-resistivity and surface hardness of <math>\text{Al}_2\text{O}_3</math>-ceramic systems by polycarbosilane coating</p> <p>Jong Yeol JUNG, June Beom CHOI, In Woong KIM, Myung Hwan KIM, <u>Seung Woo BAIK</u></p>
<b>PSF-77</b>	<p>Laser-irradiated coffee waste-derived green anode materials for lithium-ion batteries</p> <p><u>Si Eun PARK</u>, Mee Ree KIM, Tongmei JING, Han Ku NAM, Sangbaek PARK, Young-Jin KIM</p>
<b>PSF-78</b>	<p>Evaluation of Adhesion Strength and Mechanical Properties of YSZ Thermal Barrier Coating Layer under Mechanical Stress</p> <p><u>Jae Yeon AHN</u>, Kee Sung LEE, Kee Keun KIM, Chung Ryeol LEE, Jinhyeng KIM</p>
<b>PSF-79</b>	<p>Solution-processed NiO-ZnO p-n Junction Thin Films for Enhanced Photocatalytic Performance</p> <p><u>LO Tuan SON</u>, Yuta KUBOTA, Nobuhiro MATSUSHITA</p>
<b>PSF-80</b>	<p>AZO Thin Films for Transparent Electrodes Achieved Through Optimized FTS Sputtering</p> <p><u>Hyesung OH</u>, Jihyeong KIM, Jeongsoo HONG</p>



<b>PSF-81</b>	High-Performance Self-Powered Deep Ultraviolet Photodetector with $\text{Ag}_2\text{O}/\beta\text{-Ga}_2\text{O}_3$ Heterojunction <u>Hyesung OH</u> , Jihyeong KIM, Jeongsoo HONG
<b>PSF-82</b>	Optimization of Sn-Doped $\beta\text{-Ga}_2\text{O}_3$ Thin Film Properties through Thickness Control with RF sputtering <u>Jihyeong KIM</u> , Hyesung OH, Jeongsoo HONG
<b>PSF-83</b>	Enhanced Deep Ultraviolet Self-Powered Photodetector with Fermi Level Control Using p-NiO/i- $\beta\text{-Ga}_2\text{O}_3$ /n- $\beta\text{-Ga}_2\text{O}_3$ Layer <u>Jihyeong KIM</u> , Hyesung OH, Jeongsoo HONG
<b>PSF-84 ★</b>	High Temperature Water Vapor Absorption and Structural Change of Cage Structure Crystal $12\text{CaO} \cdot 7\text{Al}_2\text{O}_3$ <u>Takuma YONEMURA</u> , Takahiko KAWAGUCHI, Naoki WAKIYA, Naonori SAKAMOTO
<b>PSF-85 ★</b>	Preparation of $\text{Y}_2\text{O}_3\text{-Y}_x\text{O}_y\text{F}_z$ coating layer through reaction of $\text{Y}_2\text{O}_3\text{-YF}_3$ <u>Jiwon CHOI</u> , Daegun KIM, Hyewon SEOK, Kangduk KIM
<b>PSF-86 ★</b>	Enhanced Detection of VOCs by ZnO and Mechanistic Study Based on Function Group Variations <u>Haeun CHOA</u> , Hyojin CHOI, Minyoung KIM, Nosang MYUNG, Kyu Hyung LEE
<b>PSG-87</b>	Enhanced Photoluminescence and White Light Emission in $\text{Ce}^{3+}$ -Alloyed $\text{Cs}_3\text{TbCl}_6$ Nanocrystals for Advanced Lighting Applications <u>Min Ji KIM</u> , Tuhin SAMANTA, Won Bin IM
<b>PSG-88</b>	The Emission Color Tuning by Local Distortion in Lead-Free Zero-Dimensional Metal Halide Nanocrystals <u>San Ha CHOI</u> , Tuhin SAMANTA, Won Bin IM
<b>PSG-89 ★</b>	Dual Emissions in Manganese-Doped 2D Hybrid Perovskite Nanoplatelets: Highly Luminescent Properties Controlled by Modulating Layer Thickness <u>Tae Hyun PARK</u> , Won Bin IM
<b>PSA-90</b>	Development of spinel structure catalysts for methane decomposition with high sulfur resistance <u>Seon Tae KIM</u> , Tae Wook KANG, Do Yun KIM, Sun Woog KIM



<b>PSA-91</b>	Mixed Oxide and Chloride Conductivity in doped $\text{PbBiO}_2\text{Cl}$ <u>Kotaro NAITO</u> , Kluczny Maksymilian PAWEL, Jun Tae SONG, Motonori WATANABE, Miki INADA, Tasumi ISHIHARA
<b>PSG-92</b>	Reduction Sintering Behavior of $\text{K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ -based Dielectrics for Automotive MLCC Applications Under Various Oxygen Partial Pressures <u>Gyeongmi HWANG</u> , Songah HA, Hongwoo PARK, Ju-Hyeon LEE, Wook JO, Soonil LEE
<b>PSG-93</b> ★	Lithium Reactivity of Refractory Materials for Box Saggers Used in the Heat Treatment of Li-based Materials <u>Songah HA</u> , Gyeongmi HWANG, Jeongwon LEE, Dongbaek KIM, Soonil LEE
<b>PSF-94</b>	Combined experimental and molecular simulation study of ZIF-8 and ZIF-67 for liquid olefin/paraffin separation <u>Sungbin JO</u> , Chung-Yul YOO
<b>PSE-95</b>	Development of Non-oxide Protection Tube Materials for Continuous Temperature of Glass melting Process <u>Keonhee CHO</u> , Jong-Young Kim, Junghun Kim



## **Day 2 (Saturday, November 2nd)**

Plenary Lecture (Day 2, Morning)		Room A
Chair: Michitaka OHTAKI		
<b>2PL-01</b> 09:00–09:40	<b>[Plenary]</b> Recent research works for nanogenerator-based mechanical energy harvesting and self-charging power units Swathi IPPILI, Venkatraju JELLA, <b><u>Soon-Gil YOON</u></b> , Chungnam National University	



**★: Candidates for Young Best Oral Presentation Award**

Session A: Ceramics for Renewable and Sustainable Energy (Day 2, Morning)		Room A
Chair: Toshiyuki MASUI & Tae Ho SHIN		
2SA-01 10:00–10:20	<b>[Keynote]</b> Particle Aggregate of Perovskite-type Oxide Catalyst Prepared by Decomposition of Heteronuclear Metal Cyano Complex Precursor <b>Hidenori YAHIRO</b> , Noa YAMAGUCHI, Riko OGATA, Hiroyuki YAMAURA, Syuhei YAMAGUCHI	
2SA-02 ★ 10:20–10:35	<b>[Invited]</b> Rivalrous and Synergistic Effects of Downsizing RuO <sub>2</sub> and Coarsening NiO Composite Oxide Catalyst for Li-CO <sub>2</sub> Batteries Dae-Kwon BOO, Huiju KIM, Yongju KIM, Won-Hee RYU, <b>Ji-Won JUNG</b>	
2SA-03 10:35–10:50	<b>[Invited]</b> Development of an Active Material-CNT-Binder Composite for Dry Processing in Lithium-ion Batteries <b>Jung-Keun YOO</b>	
2SA-04 ★ 10:50–11:05	<b>[Invited]</b> Tetraphosphide anode materials for high energy density sodium-ion batteries <b>Kyeong-Ho KIM</b>	
2SA-05 ★ 11:05–11:17	Development of Porous Silicon(Si) Anode from Mesoporous Silica(SiO <sub>2</sub> ) Aerogel through Magnesiothermic Reduction for Lithium-Ion Batteries <b>Pratik S. KAPADNIS</b> , Kyungsun KIM, Haejin HWANG	
Chair: Hidenori YAHIRO & Kyeong-Ho KIM		
2SA-06 11:17–11:29	Selective reduction method for metal support SOFC using YSZ film prepared by WIP process <b>Niki NAKAGAWA</b> , Jun Tae SONG, Motonori WATANABE, Miki INADA, Tatsumi ISHIHARA	
2SA-07 11:29–11:41	Metal Support Protonic Ceramic Fuel Cells using Cathode Functional Layer of La <sub>1-x</sub> Sr <sub>x</sub> ScO <sub>3</sub> (LSS, x=0.1-0.25) for high power density <b>Hyo-Young KIM</b> , Motonori WATANABE, Jun Tae SONG, Miki INADA, Tatsumi ISHIHARA	
2SA-08 11:41–11:53	Boosting the Stability and Performance of SOFCs: An Extra Role of Oxygen Reservoir Capacity using La-Doped CeO <sub>2-δ</sub> Interlayer Technology <b>Xuan Dong NGUYEN</b> , Hyung Tae LIM, Tae Ho SHIN	
2SA-09 ★ 11:53–12:05	Electronic and Optical Properties and Defect Investigation of MASnX <sub>3</sub> (X = Cl, Br, and I) Perovskite Structures as Solar Cell Absorber <b>Qing WANG</b> , Aimi HIRATSUKA, Satoshi IKUBO	
	Lunch	



**★: Candidates for Young Best Oral Presentation Award**

Session A: Ceramics for Renewable and Sustainable Energy (Day 2, Afternoon)		Room A
Chair: Yoshiteru ITAGAKI & Haejin HWANG		
2SA-10 13:00–13:12	Fabrication of Rocksalt Structure of ZnO using Severe Plastic Deformation under High Pressure and DFT Calculation <u>Yongpeng TANG</u> , Qing WANG, Kaveh EDALATI, Satoshi IIKUBO	
2SA-11 ★ 13:12–13:24	Synergistic Role of ZnO and PTFE Binder in Advanced Energy Harvesting and Storage Systems <u>Swathi IPPILI</u> , Venkatraju JELLA, Subhashree BEHERA, Hyun-Suk KIM, Soon-Gil YOON	
2SA-12 13:24–13:36	Cu–S-based thermoelectric materials with a disordered atomic arrangement <u>Koichiro SUEKUNI</u> , Shota HIRAYAMA, Yuta SHIMIZU, Eiji NISHIBORI, Hikaru SAITO, Philipp SAUERSCHNIG, Michihiro OHTA, Michitaka OHTAKI	
2SA-13 ★ 13:36–13:48	Advanced Transfer Length Method for Refined Measurement of Specific Contact Resistivity at the Interface between Bismuth Telluride Thermoelectric Semiconductor and Metals <u>Akihiro KATSURA</u> , Maki TSURUMOTO, Yukiko HIROSE, Daniele MICUCCI, Takashi SATO, Eiji IWASE, Tohru SUGAHARA	
13:48–14:00	Break	
Chair: Pil Gyu CHOI & Tae Ho SHIN		
2SA-14 14:00–14:15	<u>[Invited]</u> Color Controllable Inorganic Pigments with Ce <sup>3+</sup> as a Color Source <u>Kazuki YAMAGUCHI</u> , Yusuke SHOBU, Ryohei OKA, Toshiyuki MASUI	
2SA-15 14:15–14:30	<u>[Invited]</u> Composite Cathodes with a Sacrificial Salt and an Anion Acceptor for Na-ion Batteries <u>Shigeto OKADA</u> , Seiko FUJIWARA, Masato ITO	
2SA-16 ★ 14:30–14:45	<u>[Invited]</u> Characteristics for low-temperature sintering porcelain <u>Yushi NAKAMIZO</u> , Atsunori SHIRAISHI	
14:45–15:00	Break	



Chair: Kenji TODA & YongJoo KIM	
<b>2SA-17</b> 15:00–15:15	<p><b>[Invited]</b> Materials Design of Novel Rare Earth-Activated Inorganic Phosphors for White LED Applications</p> <p><b><u>Yasushi SATO</u></b></p>
<b>2SA-18</b> 15:15–15:30	<p><b>[Invited]</b> Hydrogen Incorporation in Calcium-based Anti-perovskite Nitride Ceramics</p> <p><b><u>Yoshinobu NAKAMURA</u></b></p>
<b>2SA-19</b> 15:30–15:45	<p><b>[Invited]</b> New Strategies for Achieving High-Performance in Solid Oxide Electrochemical Devices @ KICET: Extra-Role of Doped CeO<sub>2-δ</sub> for “Oxygen Provider” at High-Current Loading</p> <p>Xuan Dong NGUYEN, Sang Won LEE, Hye Young KIM, <b><u>Tae Ho SHIN</u></b></p>
<b>2SA-20</b> 15:45–16:00	<p><b>[Invited]</b> Thermally-Endurable Toluene-Combustion Catalyst Based on Apatite-type Lanthanum Silicate</p> <p><b><u>Naoyoshi NUNOTANI</u></b>, Kenjiro KAKIHANA, Shinji TAMURA, Nobuhito IMANAKA</p>
Chair: Kazuki YAMAGUCHI	
<b>2SA-21</b> 16:00–16:15	<p><b>[Invited]</b> Low Temperature Synthesis of Cathode Materials using the Water-Assisted Solid-State Reaction Method</p> <p><b><u>Kenji TODA</u></b></p>
<b>2SA-22</b> 16:15–16:30	<p><b>[Invited]</b> VOC detection using SmFeO<sub>3</sub> p-type semiconducting perovskite oxides</p> <p><b><u>Yoshiteru ITAGAKI</u></b></p>
<b>2SA-23</b> 16:30–16:45	<p><b>[Invited]</b> Enhanced Sensor Materials for Gas Discrimination with Machine Learning Algorithm</p> <p><b><u>Pil Gyu CHOI</u></b></p>
<b>2SA-24</b> 16:45–17:00	<p><b>[Invited]</b> Active learning approach in designing entropy alloy nanocatalyst</p> <p><b><u>YongJoo KIM</u></b></p>



**★: Candidates for Young Best Oral Presentation Award**

Session B: Electroceramics and Applications (Day 2, Morning)		Room B
Chair: Naoki WAKIYA & Weon Ho SHIN		
2SB-01 10:00–10:15	<b>[Invited]</b> Magnetic Metal-Ceramics Nano-granular Films Prepared by Sputtering and Novel Tunnel Magneto-Dielectric Effect <b><u>Hiroshi MASUMOTO</u></b>	
2SB-02 10:15–10:30	<b>[Invited]</b> Disorder-Induced Ferro- and Ferrimagnetism in Transition Metal Oxide <b><u>Katsuhisa TANAKA</u></b>	
2SB-03 10:30–10:45	<b>[Invited]</b> Ferromagnetic Properties of MgFe <sub>2</sub> O <sub>4</sub> Thin Films prepared by Metal Organic Decomposition Technique <b><u>Nobuyasu ADACHI</u></b> , Tatsuya KONDO	
2SB-04 10:45–11:00	<b>[Invited]</b> The role of hydrogen in the electromagnetic properties of oxide ceramics <b><u>Joonho BANG</u></b>	
11:00–11:15	Break	
Chair: Yuji MASUBICHI & Se-Yun KIM		
2SB-05 11:15–11:30	<b>[Invited]</b> Boron Nitride Decorated Erbium Vanadate (ErVO <sub>4</sub> ) Composite for Electrochemical Detection of Nitrofurazone Balasubramanian AKILA, Tata Sanjay Kanna SHARMA, Subramanian SAKTHINATHAN, Jayasmita JANA, Mary GEORGE, <b><u>Te-Wei CHIU</u></b> , Won Mook CHOI	
2SB-06 ★ 11:30–11:42	Highly stable CsPb(Br/I) <sub>3</sub> perovskite nanocrystals embedded in borosilicate glass with pure red emission for w-LED display applications <b><u>Devarajulu GELIJA</u></b> , Hyun-ah KIM, Woon Jin CHUNG	
2SB-07 ★ 11:42–11:54	Synthesis and structural analysis of precursors for Si-doped C12A7:F <sup>−</sup> <b><u>Kanta TAKIISHI</u></b> , Jun Tae SONG, Motonori WATANABE, Miki INADA, Tatsumi ISHIHARA	
	Lunch	



**★: Candidates for Young Best Oral Presentation Award**

Session B: Electroceramics and Applications (Day 2, Afternoon)		Room B
Chair: Tomoaki YAMADA & Seung Yong LEE		
2SB-08 13:00–13:15	<b>[Invited]</b> Vanadium in strongly correlated electron system $\text{Ni}_{1-x}\text{V}_x\text{WO}_4$ : Paradoxically boosted deNO <sub>x</sub> reaction under SO <sub>x</sub> environment via modulating electron correlation <b><u>Seung Yong LEE</u></b> , Si Hoon JEONG, Gi Hyun PARK, Kyu Hyoung LEE	
2SB-09 13:15–13:30	<b>[Invited]</b> Ultraviolet photodetectors based on $\beta\text{-Ga}_2\text{O}_3$ Jihyung KIM, Yusup JUNG, Sinsu KYUNG, Yuta KUBOTA, Nobuhiro MATSUSHITA, <b><u>Jeongsoo HONG</u></b>	
2SB-10 ★ 13:30–13:42	Temperature-Tuned Charge Enhancement in Metal–Organic Polyhedra-Based Triboelectric Nanogenerator <b><u>Venkatraju JELLA</u></b> , Swathi IPPILI, Soon-Gil YOON	
2SB-11 ★ 13:42–13:54	2D oxides for functional electronic devices <b><u>Min Sup CHOI</u></b>	
2SB-12 13:54–14:09	<b>[Invited]</b> Low Temperature Synthesis of Layered Cathode Active Materials <b><u>Masaki MATSUI</u></b>	
2SB-13 ★ 14:09–14:21	Enhancement of Energy Density in Antiferroelectric $\text{PbZrO}_3$ Thin Film system Fabricated by Chemical Solution Deposition <b><u>Takashi ARAI</u></b> , Patil Rasika GAJANAN, Hisao SUZUKI, Desheng FU	
14:21–14:51	Break	
Chair: Yuji NOGUCHI & Kyu Hyoung LEE		
2SB-14 14:51–15:06	<b>[Invited]</b> Electro-optic Response in Ferroelectric Thin Films: From Classical to Emerging Materials <b><u>Tomoaki YAMADA</u></b>	
2SB-15 ★ 15:06–15:18	Intrinsic Ferroelectricity in PZT Thin Films <b><u>Takashi ARAI</u></b> , Seiji SOGEN, Kyoji NOTAKI, Takahiko KAWAGUCHI, Naonori SAKAMOTO, Naoki WAKIYA, Hisao SUZUKI, Desheng FU	
2SB-16 ★ 15:18–15:30	Tuning Electromechanical Properties of Lead-free BF-BT Ceramics Through A/B-site Engineering <b><u>Muhammad AAMIR</u></b> , Jung Hyun LEE, Hong-woo PARK, Myong-Ho KIM, Soonil LEE	



<b>2SB-17</b> ★ 15:30–15:42	Synthesis of tetragonal $\text{Ba}_{(1-x)}\text{Sr}_x\text{TiO}_3$ from $\text{Ba}_{1-(1/2)y}\text{TiO}_{3-y}(\text{OH})_y$ tetragonal nanorods as precursor <u>Kanta IWAKIRI</u> , Miki INADA
15:42–15:57	<b>Break</b>
<b>Chair: Tomoya OHNO &amp; Seung Yong LEE</b>	
<b>2SB-18</b> 15:57–16:17	<b>[Keynote]</b> NBT-Based Textured Piezoelectric Ceramics and Multilayer Piezoelectric Actuator <u>Haibo ZHANG</u>
<b>2SB-19</b> 16:17–16:32	<b>[Invited]</b> Average cubic $\text{BaTaO}_2\text{N}$ crystal structure formed by nanoscale domains with <i>cis</i> - $\text{TaO}_4\text{N}_2$ polar nanoregions <u>Yuji MASUBUCHI</u>
<b>2SB-20</b> 16:32–16:47	<b>[Invited]</b> Chemically Processed Lead-free Piezoelectric Nanomaterials and Their Piezo-Photocatalytic Properties <u>Dinghua BAO</u>
<b>2SB-21</b> 16:47–17:02	<b>[Invited]</b> Defect-polarization interactions in ferroelectric $\text{BaTiO}_3$ and $\text{BiFeO}_3$ <u>Yuji NOGUCHI</u> , Hiroki MATSUO



**★: Candidates for Young Best Oral Presentation Award**

Session G: Special Symposium: Academy of Ceramic R&D Experts (Day 2, Morning)		Room C
Chair: JiWan Kim & SungWook Mhin		
<b>2SG-01</b> ★ 10:00–10:20	Low Temperature Sealing Materials Based on CaO-ZnO-B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> Glass Ceramics System for Solid Oxide Electrolyzer Cells <b><u>Tae Ryoung KIM</u></b> , Woon Jin CHUNG	
<b>2SG-02</b> ★ 10:20–10:40	Hydrophobic Surface Modification of MgO for Application as Heat-Dissipating Filler in thermal management interfaces <b><u>Seyoung PARK</u></b> , Hayun JEON, Jiwan KIM, Sungwook MHIN	
<b>2SG-03</b> ★ 10:40–11:00	Valence State of Ti in TiO <sub>2</sub> -SiO <sub>2</sub> Glass Synthesized via Vapor-phase Axial Deposition Technique <b><u>Sang Woo PARK</u></b> , Sang Yeol SHIN, Yong Gyu CHOI	
<b>2SG-04</b> ★ 11:00–11:20	Gadolinium-alloyed Cerium-based Metal Halide Nanocrystals for Ultraviolet Photodetector <b><u>Jeong Wan MIN</u></b> , Min Ji KIM, Won Bin IM	
<b>2SG-05</b> ★ 11:20–11:40	Enhancement of Densification and Hardness of 8YSZ with CSP Pre-Treatment: Synergistic Effects of Fe <sub>2</sub> O <sub>3</sub> Additive and Y(NO <sub>3</sub> ) <sub>3</sub> Solvent <b><u>Sung-Hyun KIM</u></b> , Jong-Won WOO, Sang-Min HONG, Jong-Won KIM, Sang-Chae JEON	
<b>2SG-06</b> 11:40–12:00	Reduction behavior of refractory exposed in high temperature hydrogen <b><u>Jong-Won WOO</u></b> , Sung-Hyun KIM, Jong-Won KIM, Sang-Min HONG, Eun-Hee KIM, Rae-Hyeong PARK, Sang-Bae CHOI, Hyeon-Oh SONG, Kee-Deok YANG, Sang-Chae JEON	



**★: Candidates for Young Best Oral Presentation Award**

Session C: Engineering Ceramics (Day 2, Afternoon)		Room C
Chair: Dang-Hyok YOON & Katsumi YOSHIDA		
<b>2SC-01</b> 13:00–13:15	<p><b>[Invited]</b> Nanoparticle Engineering to Enhance Planarity and Manage Defects in Chemical Mechanical Planarization (CMP) for Advanced Semiconductor Processes</p> <p><b>Ungyu PAIK</b>, Taeseup SONG, Yeon-gil JUNG, Je-hyun LEE, Jeong-gu YEO, Joonhyeok PARK, Jaeik KIM, Insung HWANG, Jiwoon KIM, Ganggyu LEE, Minsung KIM, Seungmin HAN, Jooheon SUN, Myungjoo WOO</p>	
<b>2SC-02</b> 13:15–13:30	<p><b>[Invited]</b> Design of low-binder photocurable suspension for manufacturing ceramic components through DLP printing and rapid firing</p> <p><b>Motoyuki IJIMA</b>, Yoshihiko YAMANOI, Sayaka YAMADA, Junichi TATAMI</p>	
<b>2SC-03</b> 13:30–13:45	<p><b>[Invited]</b> Fabrication of carbon with complex geometries through the carbonization of 3D printed polymer</p> <p><b>Jong-il KIM</b>, Hyeondeok JEONG, Seongwon KIM</p>	
<b>2SC-04</b> ★ 13:45–13:57	<p>Effects of MgO Additive Converted from Various Precursors on the Slurry Rheology and Sintering Properties of Alumina</p> <p><b>Eun Chae YOU</b>, Dang-Hyok YOON</p>	
<b>2SC-05</b> ★ 13:57–14:09	<p>Formation of hydroxyapatite particles with hierarchical structure in modified biomimetic solution</p> <p><b>Wanyu DONG</b>, Yuko MATSUKAWA, Kazumasa SUZUKI, Chikara OHTSUKI</p>	
<b>2SC-06</b> ★ 14:09–14:21	<p>Fabrication of Three-Dimensional Carbon Fiber Reinforced Zirconia Composites</p> <p><b>Aunsaya EKSATIT</b>, Masako UEMATSU, Kento ISHII, Koji MORITA, Tohru S. SUZUKI, Tetsuo UCHIKOSHI</p>	
<b>2SC-07</b> 14:21–14:33	<p>Enhancing Lithium-Ion Battery Manufacturing through slurry analysis using Impedance Spectroscopy</p> <p><b>Jeevan Kumar PADARTI</b>, Kaito FUKAMIZU, Hisao SUZUKI, Shigeto HIRAI, Takeshi MATSUDA, Tomoya OHNO</p>	
<b>2SC-08</b> 14:33–14:45	<p>Optimization of Ca Additive and HIP Condition in Fabrication of the Transparent MgAl<sub>2</sub>O<sub>4</sub> Ceramics</p> <p><b>Ha-Neul KIM</b>, Seon-Yeong KIM, Jae-Wook LEE, Ho-Jin MA, Young-Jo PARK, Jae-Woong KO</p>	
14:45–15:00	Break	



Chair: Jong-il KIM & Teiichi KIMURA	
<b>2SC-09</b> 15:00–15:15	<b>[Invited]</b> Crystal structure analysis of multicomponent $R_2\text{TiO}_5$ <b><u>Makoto TANAKA</u></b> , Takafumi OGAWA, Taishi ITO, Kei NAKAYAMA, Naoki KAWASHIMA, Takeharu KATO, Satoshi KITAOKA
<b>2SC-10</b> 15:15–15:30	<b>[Invited]</b> Enhanced thermal conductivity and mechanical strength in $\text{Si}_3\text{N}_4$ via nitriding control <b><u>Yuki NAKASHIMA</u></b> , You ZHOU, Kiyoshi HIRAO, Tatsuki OHJI, Manabu FUKUSHIMA
<b>2SC-11</b> 15:30–15:45	<b>[Invited]</b> Deformation-resistant carbides and borides with superior hardness, toughness, and flexural strength up to 2000 °C. <b><u>Oleg VASYLKIV</u></b>
<b>2SC-12</b> 15:45–16:00	<b>[Invited]</b> Development of high heat-resistant carbon fiber reinforced plastic by application of thermal barrier coating <b><u>Hyeondeok JEONG</u></b> , Emine BAKAN, Daniel MACK, Nemutlu BATUHAN, Heejin KIM, Kandasamy PRAVEEN, Min Wook LEE
<b>2SC-13</b> 16:00–16:12	Optimization of SiC/C Filler Tape for SiC Joining via Reaction Bonding Technique <b><u>Sooyeon JOO</u></b> , Sebin PARK, Dang-Hyok YOON
<b>2SC-14</b> 16:12–16:24	Formation of $\text{Ti}_3\text{SiC}_2$ interphase for $\text{SiC}_f/\text{SiC}$ composites by electrophoretic deposition method and their mechanical properties <b><u>Katsumi YOSHIDA</u></b> , Mizuki SUEDA, Anna GUBAREVICH, Masaki KOTANI
<b>2SC-15</b> 16:24–16:36	Investigations on the Reticulated Porous Ceramics for Environmental and Military applications <b><u>Jang-Hoon HA</u></b> , Hong-Joo LEE, Jongman LEE, In-Hyuck SONG
<b>2SC-16</b> 16:36–16:48	Designing of Hierarchically Porous Bulk Zeolite as Interior Wall Cladding Materials <b><u>Masako UEMATSU</u></b> , Kento ISHII, Sadaki SAMITSU, Teiichi KIMURA, Tetsuo UCHIKOSHI
<b>2SC-17</b> 16:48–17:00	Mechanical properties of textured alumina prepared by colloidal processing in a magnetic field <b><u>Tohru S. SUZUKI</u></b> , Koji Morita, Byung-Nam KIM
<b>2SC-18</b> 17:00–17:12	Mechanical properties of grain boundaries in 10 mol% yttria stabilized zirconia bicrystals <b><u>Junichi TATAMI</u></b> , Mayuko MURAMOTO, Motoyuki IJIMA, Tatsuki OHJI, Bin FENG, Yuichi IKUHARA, Daichi MINAMI, Takuma TAKAHASHI, Tsukaho YAHAGI, Hiromi NAKANO



**★: Candidates for Young Best Oral Presentation Award**

Session E: Basic Science of Ceramics (Day 2, Morning)		Room D
Chair: Shinobu HASHIMOTO & Kyoung-Seok MOON		
2SE-01 ★ 10:00–10:15	<b>[Invited]</b> Synthesis and sintering aid effect of $\text{La}_2\text{Zr}_{1.4}\text{Ta}_{0.6}\text{O}_7/\text{Li}_{6.4}\text{La}_3\text{Zr}_{1.4}\text{Ta}_{0.6}\text{O}_{12}$ composite nanoparticle in garnet-type solid-state electrolyte <b>Teruaki FUCHIGAMI</b> , Hayato YAMAMOTO, Naoto TANIBATA, Sawao HONDA, Masanobu NAKAYAMA, Ken-ichi KAKIMOTO	
2SE-02 ★ 10:15–10:27	Reinforced Aluminum Nitride Ceramics: Enhancing Thermal and Mechanical Properties with AlN Whiskers and BN Nanotubes <b>Byeongho AHN</b> , Yewon SEO, Jangsoo KIM, Dageyeong LEE, Sung-Soo RYU	
2SE-03 10:27–10:39	Utilizing unused resources in traditional pottery making <b>Naotaka SAKAMOTO</b>	
10:39–10:54	Break	
Chair: Tadachika NAKAYAMA & Yeongjun Seo		
2SE-04 ★ 10:54–11:09	<b>[Invited]</b> Photosynthesis of Hydrogen Peroxide over Defective Hf-based Metal-Organic Frameworks with Ni cocatalysts <b>Yoshifumi KONDO</b> , Kotaro HONDA, Yasutaka KUWAHARA, Kohsuke MORI, Tohru SEKINO, Hiromi YAMASHITA	
2SE-05 11:09–11:24	<b>[Invited]</b> Design of the process for the preparation of bioactive phosphate glasses without heat treatment <b>Sungho LEE</b>	
2SE-06 ★ 11:24–11:36	Effect of particle size distribution in cold sintering of amorphous silica <b>Keitaro YAMAGUCHI</b> , Masato NAKANISHI, Shinobu HASHIMOTO	
2SE-07 11:36–11:51	<b>[Invited]</b> Fabrication of Ceramic Insulation Materials for Reusable TPS Applications <b>Seongwon KIM</b> , Min-Soo NAM, Yoon-Suk OH, Sahn NAHM, Jaesung SHIN, Hyeonjun KIM, Bum-Seok OH	
	Lunch	



**★: Candidates for Young Best Oral Presentation Award**

Session E: Basic Science of Ceramics (Day 2, Afternoon)		Room D
Chair: Tohru SEKINO & Byeongho AHN		
2SE-08 13:00–13:12	Proposal of new eco-friendly removal of iron impurities from pottery stone <u>Hiroaki KATSUKI</u> , Jae-Hwan PEE, Masahiro KUGISHIMA, Nobuaki KAMOCHI	
2SE-09 13:12–13:27	<u>[Invited]</u> Quantitative evaluation for crystallization behavior of zeolite beta from dried gel precursor prepared from organic structure-directing agents <u>Sawao HONDA</u> , Shinobu HASHIMOTO, Yuji IWAMOTO	
2SE-10 ★ 13:27–13:42	<u>[Invited]</u> Cold Sintering Process of Bulk Zeolite Li-ABW and Ion Removal Characteristics <u>Yeongjun SEO</u> , Yuma AMEMIYA, Tomoyo GOTO, Yoshifumi KONDO, Sunghun CHO, Tohru SEKINO	
13:42–14:14	Break	
Chair: Tomoyo GOTO & Sang-Chae JEON		
2SE-11 14:14–14:26	Influence of ammonium salt solution and pH on the hydrothermal synthesis of boehmite <u>Soichiro SAMESHIMA</u> , Shun OGATA, Yuta KURAHARA	
2SE-12 ★ 14:26–14:38	Preparation of porous materials derived from rice husks using hydrothermal treatment under acidic conditions <u>Sayaka SUGIE</u> , Hirotaka MAEDA	
2SE-13 14:38–14:50	Exploring Activation Barriers in Dry Reforming with Ni Nanoparticles on CeO <sub>2</sub> : A Combined Experimental and DFT Study <u>Takaya FUJISAKI</u> , Yuta TSUJI, Phuc Hoan TU, Tin Chanh Duc DOAN, David S. Rivera ROCABADO, Aleksandar Tsekov STAYKOV, Keiji YASHIRO, Yusuke SHIRATORI	
14:50–15:05	Break	
Chair: Teruaki FUCHIGAMI & Joonho BANG		
2SE-14 15:05–15:25	<u>[Keynote]</u> Near room temperature consolidation of ceramic materials using the acid-base reaction and its process optimization by machine learning <u>Yuki YAMAGUCHI</u>	
2SE-15 15:25–15:40	<u>[Invited]</u> Modeling of Crystal Growths for Semiconductor Applications <u>Seong-Min JEONG</u>	



<b>2SE-16</b> ★ 15:40–15:52	Prediction of Intermediate Products in the Solid-State Synthesis of Cubic $\beta$ -KSbF <sub>4</sub> Using Density Functional Theory <u>Taku SAKAI</u> , Tom ICHIBHA, Kenta HONGO, Ryo MAEZONO
<b>2SE-17</b> 15:52–16:04	Materials Structure Search Using Genetic Algorithm <u>Ryo MAEZONO</u>



Award Ceremony, Closing Remarks, and Farewell (Day 2, Afternoon)		Room A
Chair: Michitaka OHTAKI		
17:30–17:50	Young Best Oral/Poster Presentation Award Ceremony	
17:50–17:55	Invitation to K-J Ceramics 39 in 2025 <u>Soon-Gil YOON</u> , Chungnam National University, Korea	
17:55–18:00	Closing Remarks <u>Hisao SUZUKI</u> , Shizuoka University, Conference Chair	



**Program Book**

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