

# arbon Saves the Earth

The 11<sup>th</sup> Japan-China-Korea
Joint Symposium on
Carbon Saves the Earth (CSE 2013)

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The 3<sup>rd</sup> KU-KIER (

Joint Symposium on

Green Energy Processes and Materials

November 10<sup>th</sup> - 12<sup>th</sup>, 2013 Unzen Kyushu Hotel, Japan

Supported by Research and Education Center of Carbon Resources, Kyushu University

## The 11<sup>th</sup> Japan-China-Korea Joint Symposium on Carbon Saves the Earth

## - Materials and Processes for New Energies and Environmental Protection -

November 10-12, 2013

Unzen Kyushu Hotel 320, Unzen, Obama Street, Unzen City, Nagasaki Prefecture 854-0697, Japan

# The 3<sup>rd</sup> KU-KIER Joint Symposium on Green Energy Processes and Materials

**November 12, 2013** 

Unzen Kyushu Hotel 320, Unzen, Obama Street, Unzen City, Nagasaki Prefecture 854-0697, Japan



Official websites:

http://carbon-saves-the-earth3.webnode.jp/ http://cr.cm.kyushu-u.ac.jp/eng/?p=717

#### Introduction

Dear Colleagues,

We are very pleased to announce that the 11<sup>th</sup> International Symposium on Carbon Saves the Earth - Novel Materials and Processes for Energy Devices and Environmental Protections and the 3<sup>rd</sup> KU-KIER Joint Symposium on Green Energy Processes and Materials will be held at Unzen Kyushu Hotel in Nagasaki province from November 10<sup>th</sup> to 12<sup>th</sup>, 2013, which are hosted by Research and Education Center of Carbon Resources, Kyushu University. The motivation and aim of the meeting are to foster the cooperation of science and engineering of materials and processes for energy saving, cleaning, storage and conversion, and also for environmental protection, where methods in one field are used for solving the problems of the other fields, and vice versa, having in mind the need to strengthen the fields which are "in between". The symposium covers areas that are included to

- (1) Conversions of carbon resources
- (2) Pyrolysis of carbon resources
- (3) Nano carbons including CNTs, CNFs, graphene and others
- (4) Porous materials for catalysis and adsorption
- (5) Graphites and their applications
- (6) Carbon fibers and their composites
- (7) Carbons for new energy science and engineering
- (8) Novel energy materials, devices and processes
- (9) Raw materials and precursors for carbons
- (10) Petroleum related science and engineering.

Other carbons related to energy and environment are, of course, always welcome.

For vitalizing our special symposium style, we continuously make an emphasis on plenary and keynote lectures combined with extended poster presentations.

We are really appreciative of your constant passions and supports.

November 6, 2013 Organizer, CSE2013 symposium

Seong-Ho Yoon

**Professor** 

Institute for Materials Chemistry and Engineering (IMCE), Kyushu University

#### **Organizers:**

Professor Seong-Ho Yoon (IMCE, Kyushu University), <u>yoon@cm.kyushu-u.ac.jp</u> Associate professor Jin Miyawaki (IMCE, Kyushu University), <u>miyawaki@cm.kyushu-u.ac.jp</u>

#### **Co-organizers:**

Professor Feiyu Kang (Tsinghua University, China) Professor Doohwan Jung (KIER, Korea)

#### **Supporting staffs:**

Professor Masahiro Usami

Mr. Yasuaki Shimizu

Dr. Taegon Kim

Dr. Jandee Kim

Dr. Jumi Yun

Dr. Yong Jiang

Mr. Yuzo Ohata

Mr. Byung-Jun Kim

Mr. Hyun-Sig Kil

Ms. Yujin Han

Mr. Koichiro Hata

Mr. Jianxiao Yang

Mr. Akinobu Imamura

Mr. Ryohei Miyamae

Mr. Shinnosuke Ikeyama

Mr. Kazunari Teshima

Mr. Jianxun Zhang

Ms. Chinami Morishima

Ms. Miho Nakano

Ms. Nanako Shiratori

#### **Supported by**

Research and Education Center of Carbon Resources, Kyushu University Kasuga, Fukuoka, 816-8580, Japan



#### **Important deadlines**

Submission of 200 words abstract:

Notification of acceptance/rejection:

Submission of Full proceeding submission:

Submission of Full proceeding submission:

September 30<sup>th</sup>, 2013

October 5<sup>th</sup>, 2013

E-mail to cse2013@cm.kyushu-u.ac.jp

Registration: October 20<sup>th</sup>, 2013

From the website: http://carbon-saves-the-earth3.webnode.jp/registration/

#### **Symposium place:**

Unzen Kyushu Hotel (雲仙・九州ホテル) 320, Unzen, Obama Street, Unzen City, Nagasaki Prefecture 854-0697, Japan http://www.kyushuhtl.co.jp/language/en/index.html

#### **Registration:**

This conference is open to everybody interested in Materials and Processes for New Energies and Environmental Protection.

Registration is required for all participants of the symposium. Please register from the following website.

http://carbon-saves-the-earth3.webnode.jp/registration/

#### **Registration fee:**

Regular participant: 300 US \$ or 30,000 Japanese Yen
 Student: 200 US \$ or 20000 Japanese Yen
 Accompanying person: 200 US \$ or 20,000 Japanese Yen

\* You can pay by cash only at the registration desk at Unzen Kyushu Hotel on Nov. 10<sup>th</sup>, 15:00-21:00.

(We are very sorry for your inconvenience that credit cards are NOT acceptable.)

- \* Registration fees for regular participants and students include the participation in all sessions, conference materials, lunches, coffee-breaks, welcome cocktail and banquet. Accompanying person fees include lunches, welcome cocktail and banquet.
- \* Accommodation fee is NOT included.

#### **Accommodation:**

Unzen Kyushu Hotel (雲仙・九州ホテル) 320, Unzen, Obama Street, Unzen City, Nagasaki Prefecture 854-0697, Japan http://www.kyushuhtl.co.jp/language/en/index.html

Please register from the following website.

http://carbon-saves-the-earth3.webnode.jp/registration/

#### Room rate:

Single room\*: 15,000 Japanese Yen per person per night
 Twin room: 13,000 Japanese Yen per person per night
 3 and more occupancy: 11,000 Japanese Yen per person per night

<sup>\*</sup> Basically, no single room is available. We are very sorry for your inconvenience.

<sup>\*</sup> For student participants and single-room lodgers, accommodation would be at different but neighbor hotel.

<sup>\*</sup> Free Wi-Fi service is available at rooms, lobbies, and restaurants, but not at the conference room.

#### **Shuttle bus services:**

Transportation will be available between the international terminal of Fukuoka airport (<a href="http://www.fuk-ab.co.jp/english/frame\_index.html">http://www.fuk-ab.co.jp/english/frame\_index.html</a>) and Unzen Kyushu Hotel (Unzen).

If you wish to use the shuttle bus services, please register from the following website. http://carbon-saves-the-earth3.webnode.jp/registration/

Fukuoka airport  $\Rightarrow$  Unzen Kyushu Hotel: November  $10^{th}$ , 2013

Departure time from Fukuoka airport: 14:30 and 15:30

Unzen Kyushu Hotel (Unzen) ⇒ Fukuoka airport: November 13<sup>th</sup>, 2013

Departure time from Unzen Kyushu Hotel: **08:30** Estimated time of arrival at Fukuoka airport: **12:00** 

#### Invitation letter for visa application:

If you need an invitation letter for your visa application, please send the following information to Professor Seong-Ho Yoon (cse2013@cm.kyushu-u.ac.jp) by email: your name and title, sex, date of birth, passport No., and nationality, affiliation and correspondence address.

If you have any questions, please contact to Dr. Jin Miyawaki.

E-mail: cse2013@cm.kyushu-u.ac.jp

Tel: +81-92-583-8857, +81-92-583-7896

Fax: +81-92-583-7897

# **Time Table**

The 11th International Symposium on CSE			The 3 <sup>rd</sup> KU-KIER Joint Symposium on GEPM
November 10 <sup>th</sup> (Sun.)	November 11 <sup>th</sup> (Mon.)	November 12 <sup>th</sup> (Tue.)	November 12 <sup>th</sup> (Tue.)
	Opening remark (08:45-09:00)		
	Greeting (09:00-09:10)	Session 3-1	
	Session 1-1 (09:10-10:55)	(09:00-10:45)	
	Coffee break 01 (10:55-11:10)	Coffee break 03 (10:45-11:00)	
	Session 1-2 (11:10-12:40)	Session 3-2 (11:00-12:30)	
	Lunch (12:40-13:40)	Lunch (12:30-13:30)	
	Session 2-1 (13:40-15:25)	Group photo 02 (13:30-13:45)	
	Group photo 01 (15:25-15:40)	Session 4-1 (13:45-15:15)	
	Poster session	Poster award ceremony and	
	(15:40-16:40)	Closing remark (15:15-15:30)	Opening remark (15:50-15:55)
	Coffee break 02 (16:40-16:55)		Special session 1 (15:55-16:55)
	Session 2-2 (16:55-17:55)		Special session 2 (16:55-17:55)
Welcome cocktail (19:30-21:30)	Banquet (19:00-21:00)		Closing remark (17:55-18:00)

## Venue

## November 10<sup>th</sup>

- 1. 15:00-21:00 : Registration at the desk on 1<sup>st</sup> floor in Kyushu Hotel.
- 2. 19:30-21:30 : Dinner and Welcome cocktail in Cocktail room on 2<sup>nd</sup> floor in Kyushu Hotel.

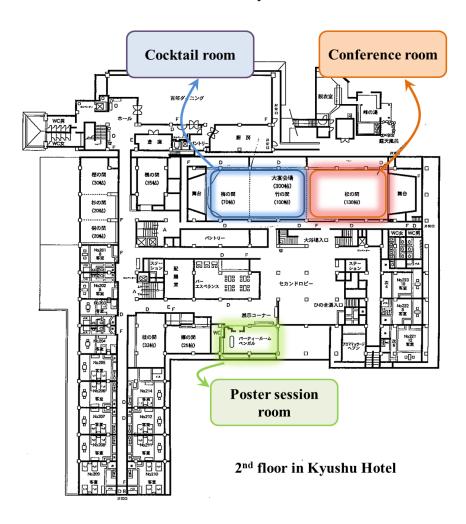
## November 11<sup>th</sup>

- 1. 08:45-17:55 : All lectures will presented in Conference room on 2<sup>nd</sup> floor in Kyushu Hotel.
- 2. Lunch & Banquet: in Cocktail room on 2<sup>nd</sup> floor in Kyushu Hotel.
- 3. 15:40-16:40 (Poster session): in Poster session room on 2<sup>nd</sup> floor in Kyushu Hotel.

### November 12<sup>th</sup>

- 1. 09:00-18:00 : all lectures will presented in Conference room on 2<sup>nd</sup> floor in Kyushu Hotel.
- 2. Place for lunch will be announced later.

## Conference Hall on 2<sup>nd</sup> floor in Kyushu Hotel



## **Presentation Guide**

#### **Equipment**

- 1. A projector with a laptop will be installed for projection of your Power Point file.
  - Speakers shall submit his/her Power Point file during the registration, not just before lecture.
  - Power Point file version: Microsoft Office 2002/2003/2007/2010/2013.
- 2. Laser pointer will be provided.
- 3. Poster panel with tape. Any pins may not be used to attach a poster paper on the panel.

#### Plenary and Keynote

- 1. Abbreviation of lectures
  - Plenary lecture  $\rightarrow$  PL, Keynote lecture  $\rightarrow$  KN and Poster presentation  $\rightarrow$  PP
- 2. Presentation timescale
  - PL: 45 min including Q&A (alarm sound at 35, 40 and 45 min)
  - KN: 30 min including Q&A (alarm sound at 20, 25 and 30 min)
- 3. Chairperson will lead lectures.

#### Poster presentation

- 1. Poster size:  $80 \text{ cm} \times 120 \text{ cm}$
- 2. Presenters shall attach his/her poster paper on the panel in Poster session room on 2<sup>nd</sup> floor in Kyushu Hotel (See the previous page) from 9:00, Nov. 11<sup>th</sup> to 12:00, Nov. 12<sup>th</sup>.
- 3. Official poster session from 15:40, Nov. 11<sup>th</sup> to 16:40, Nov. 11<sup>th</sup>.
- 4. Poster award ceremony will be held at 15:15, Nov. 12<sup>th</sup>.

# Program

	Day 1:	November 10 <sup>th</sup> , 2013 (Sun)
19:30-21:30	Welcome cocktail	

		Day 2: November 11 <sup>th</sup> , 2013 (Mon)	
- Novel N		ernational Symposium on Carbon Saves Processes for Energy Devices and Environ	
Time	Presentation code	Presentation title	Lecturer
08:45-09:00		rk: Professor Seong-Ho YOON (Kyushu Uhua University), Prof. Doohwan JUNG (K	• • • • • • • • • • • • • • • • • • • •
09:00-09:10	Greeting: Prof	Sessor Isao MOCHIDA (Kyushu Universi	ty)
Session 1-1. C	Chairperson: Pro	ofessor SH. YOON (J)	
09:10-09:55	PL01	Carbon Researches in an Inorganic Materials Chemistry Laboratory	Professor Yasutake TERAOKA (J)
09:55-10:25	KN01	Heteroatom-doped Mesoporous Carbon as Efficient Oxygen Reduction Catalyst: Structural Effect	Professor Jong-Sung YU (K)
10:25-10:55	KN02	Design, Preparation and Electrochemical Properties of Novel Ordered Mesoporous Carbons	Professor Dingcai WU (C)
10:55-11:10	Coffee break (	)1	
Session 1-2. C	Chairperson: Pro	ofessor Ruowen FU (C)	
11:10-11:40	KN03	Optimized Electrode Structure for Fuel Cells	Professor Yung-Eun SUNG (K)
11:40-12:10	KN04	Introductions of Tokai Carbon and Tokai Carbon's Self-Dispersible Carbon Black "Aqua-Black®" as a New Colorant Agent	Mr. Shigemi TODA (J)
12:10-12:40	KN05	Reactivity of Heat Treated Coal and Char Gasification in Air Atmospheres  Dr. Tae-Jun PARK (K)	
12:40-13:40 Lunch 01			
Session 2-1. Chairperson: Professor Kap Seung YANG (K)			
13:40-14:25	PL02	Fabrication and Properties of Graphene Monolith	Professor Jieshan QIU (C)
14:25-14:55	KN06	Adsorption Cooling Cum Desalination Cycles	Professor Bidyut Baran SAHA (J)
14:55-15:25	KN07	Rational Design of Graphene-based Hybrids for Energy Storage Applications	Professor Linjie ZHI (C)
15:25-15:40	15:25-15:40 Group photo session 01		

15:40-16:40	Poster session		
16:40-16:55	Coffee break 02		
Session 2-2. Chairperson: Professor Feiyu KANG (C)			
16:55-17:25	KN08 Current Status of Air Pollution inside a Vehicle Dr. Takaaki and Air Purification Technology Using the Contact of Air Flow and ACF inside a Vehicle (J)		
17:25-17:55	KN09	Quinoline Insoluble-free Isotropic Pitch for Carbon Fiber	Mr. Sang Wook PARK (K)
19:00-21:00	Banquet		

Day 3: November 12 <sup>th</sup> , 2013 (Tue)				
Time	Presentation code	Presentation title	Lecturer	
Session 3-1.	Chairperson: Pro	ofessor Jong-Sung YU (K)		
09:00-09:45	PL03	Rheological Characterization of Isotropic and Anisotropic Pitches	Professor Byung Chul KIM (K)	
09:45-10:15	KN10	Structure Controlled Porous Carbon for Energy Storage and Conversion	Professor An-Hui LU (C)	
10:15-10:45	KN11	Nitrogen-enriched Mesoporous Carbons for Environmental Protection and Energy Storage	Prof. Donghui LONG (C)	
10:45-11:00	Coffee break (	03		
Session 3-2. C	Chairperson: Pro	ofessor Jieshan QIU (C)		
11:00-11:30	KN12	Carbon Industry for the Future	Mr. Ryo KUROKAWA (J)	
11:30-12:00	KN13	Preparation of Nanosegregated Pt Alloy Catalysts Using Noncovalent Functionalization of Graphitized Carbon	Professor Hansung KIM (K)	
12:00-12:30	KN14	A New Method to Evaluate Orientation Distribution of Carbon Fiber Using HRTEM	Professor Lianlong HE (C)	
12:30-13:30				
13:30-13:45	13:30-13:45 Group photo session 02			
Session 4-1. C	Session 4-1. Chairperson: Dr. Jin MIYAWAKI (J)			
13:45-14:15	KN15	High Performance Asymmetric Supercapacitors by Using Electrospun Carbon/MnO <sub>2</sub> Nanofiber and Graphitic Porous Carbon Feiyu KANG (C)		
14:15-14:45	KN16	Petroleum Pitch Based Carbon Fibers from Electospinning and their Applications to Electrodes		
14:45-15:15	KN17	Optimization of the Energy Density of Carbon-based Supercapacitors	Professor Feng LI (C)	

Poster award ceremony and Closing remark: Professor Seong-Ho YOON (Kyushu University), Professor Feiyu KANG (Tsinghua University), Prof. Kap Seung YANG (Chonnam national University)

- Plenary lectures (3 cases)
  - Japan (1 case), China (1 case), Korea (1 case), 45 min including 5 min question time
- Keynote lectures (17 cases), 30 min including 5 min question time Japan (4 cases), China (7 cases), Korea (6 cases)
- Poster presentations (25–45 cases)
  Japan (10 cases), China (10–20 cases), Korea (10–20 cases)

Special session The 3 <sup>rd</sup> KU-KIER Joint Symposium on Green Energy Processes and Materials			
15:50-15:55	Opening remark: Professor Doohwan JUNG		
Special session	n 1 Chairperson	n: Professor Doohwan JUNG (K)	
15:55-16:25	KN18 Production of Metallurgical Coke from Lignite and Biomass Professor Jun-ichiro HAYASHI (J)		
16:25-16:55	KN19	Combustion Development and Deployment of CFBC Boiler in Korea	Dr. Dowon SHUN (K)
Special session	n 2 Chairperson	n: Professor Jun-ichiro HAYASHI (J)	
16:55-17:25	KN20	Performance of Natural Cellulose Fibers containing Alkaline Earth Metals as Catalytic Supports for Hydrogen Production	Dr. Hee-yeon KIM (K)
17:25-17:55	KN21	Characteristics of Low-value Petroleum Fractions	Dr. Joo-II PARK (J)
17:55-18:00 Closing remark: Professor Jun-ichiro HAYASHI			

- Keynote lectures (4 cases), 30 min including 5 min question time KU, Japan (2 cases), KIER, Korea (2 cases)
- Abbreviation of lectures

Plenary lecture: PL, Keynote lecture: KN and Poster presentation: PP

# **Poster session**

Presentation code	Presenter	Title
PP01	Songlin ZUO (College of Chemical Engineering, Nanjing Forestry University, China)	Secondary Reactions of Pyrolysis Volatiles from Wood Sawdust
PP02	Seung-Min HWANG (The Faculty of Co-op, Hoseo University, Korea)	Analysis of GHGs Reduction Potential using LEAP Model from Power-Generating Facilities
PP03	Kutub UDDIN (Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Japan)	Adsorption of Ethanol onto Carbon Based Adsorbents
PP04	Dong-Hyun PECK (Korea Institute of Energy Research, KIER, Korea)	Performance of a 20W Direct Methanol Fuel Cell Stack With the Bipolar Plates Using Plastic and Metal Materials
PP05	Jitong WANG (State Key Laboratory of Chemical Engineering, East China University of Science and Technology, China)	Mesoporous Carbon-Supported Solid Amine Sorbents for Low-Temperature Carbon Dioxide Capture
PP06	Jin-Young JUNG (Department of Applied Chemistry and Biological Engineering, Chungnam National University, Korea)	Effect on Water Vapor Adsorption Capacity of Thermally Fluorinated Carbon Molecular sieves
PP07	Yu-Jin HAN (Institute for Materials Chemistry and Engineering, Kyushu University)	Electrochemical Properties of Coal Tar Pitch-Coated Graphites as Anode Materials for Li-Ion Batteries
PP08	Doo Won KIM (Department of Polymer Engineering, Chonnam National University, Korea)	Mercury Iion Adsorption on Activated Carbon and Activated Carbon Fiber in Aqueous Solution
PP09	Chang YU (School of Chemical Engineering, Dalian University of Technology, China)	Carbon Nanohybrids for High Performance Supercapacitors
PP10	Jiyoung KIM (Advanced Energy Technology, University of Science & Technology, Korea)	The Effects of Surface Treatment of Activated Carbon on Capacitive Deionization
PP11	Koichiro HATA (Institute for Materials Chemistry and Engineering, Kyushu University)	Elucidation of Surface Properties of Carbon Blacks by Solid-State NMR Using Water Molecule as a Surface Probe

Presentation code	Presenter	Title
PP12	Dayoung LEE (Department of Applied Chemistry and Biological Engineering, Chungnam National University, Korea)	Preparation and EDLC Performance of Activated Carbon Nanofibers by Physicochemical Activation
PP13	Ruowen FU (School of Chemistry and Chemical Engineering, Sun Yat Sen University, China)	Studies on the Binders for Supercapacitor Electrodes
PP14	Ji Sun IM (Division of Green Chemistry & Engineering, Korea Research Institute of Chemical Technology, KRICT, Korea)	Soft Carbon Derived from Pitch for Anode of Lithium Ion Battery
PP15	Yuzo OHATA (Institute for Materials Chemistry and Engineering, Kyushu University)	Control of Closed Pore Structure in Carbon Materials Derived from Different Pitch Precursors
PP16	Ayu Tyas Utami NUGRAHENNY (University of Science and Technology, UST, KIER, Korea)	The Application of Carbon Black as Conductive Material for Capacitive Deionization
PP17	Xianying QIN (Engineering Laboratory for Functionalized Carbon Materials and Key Laboratory of Thermal Management Engineering and Materials, Tsinghua University, China)	Hierarchical Spherical Si/C@C Composite as Anode Material for Lithium-Ion Batteries
PP18	Ji-Hyun KIM (Department of Applied Chemistry and Biological Engineering, Chungnam National University, Korea)	The Electrochemical Performance of an Enzymatic Glucose Biosensor Electrode Using Mesoporous Activated Carbon Fiber by K2CO3 Activation
PP19	Hyun-Sig KIL (Institute for Materials Chemistry and Engineering, Kyushu University)	Influence of Surface Functional Groups on Ethanol Adsorption Behavior in Activated Carbons for Adsorption Heat Pump Application
PP20	Seon Ho LEE (University of Science and Technology, UST, KIER, Korea)	Pore Control of Activated Carbon by Selective Catalytic Gasification and Growth of Carbon Nanofibers
PP21	Zheng-Hong HUANG (School of Materials Science and Engineering Tsinghua University, China)	Electrospun Carbon Nanofiber Webs from Phenolic Resin for High-Efficiency Capacitive Deionization

Presentation code	Presenter	Title
PP22	Koo-Seung CHUNG (Korea Institute of Energy Research, KIER, Korea)	Corrosion Properties and Cell Performance of CrN, TiCrN Coated Stainless Steel 430
PP23	Jian-Xiao YANG (Institute for Materials Chemistry and Engineering, Kyushu University)	Preparation of Spinnable Isotropic Pitch Through the co-Carbonization of Bio-residue with Ethylene Bottom Oil
PP24	Dong-Ryul SHIN (Korea Institute of Energy Research, KIER, Korea)	Operating Characteristics of a Tubular Direct Carbon Fuel Cell Based on a General Anode Support Solid Oxide Fuel Cell
PP25	Lingping KONG (State Key Laboratory of Chemical Engineering, East China University of Science and Technology, China)	Active Edge-enriched T-Nb <sub>2</sub> O <sub>5</sub> with Li <sup>+</sup> Intercalation Pseudocapacitive
PP26	Dong-Hyun PECK (Korea Institute of Energy Research, KIER, Korea)	Preparation of Silica Doped and Undoped Pt-Ru/Carbon Catalysts from Rice Husks, and Their Performance for Direct Methanol Fuel Cells
PP27	Taegon KIM (Institute for Materials Chemistry and Engineering, Kyushu University)	Analysis on Metal Species of Kuwait Atmospheric Residues
PP28	Yumi OH (Yonsei University, KIER, Korea)	Improved Performance Using Tungsten Carbide/Carbon Nanofiber Based Anode Catalysts for Alkaline Direct Ethanol Fuel Cells
PP29	Fugen SUN (State Key Laboratory of Chemical Engineering, East China University of Science and Technology, China)	Bottom-Up Catalytic Approach towards Nitrogen-Enriched Mesoporous Carbons/ Sulfur Composites for Superior Li-S Cathodes
PP30	Se-jun PARK (Department of Chemical and Biomolecular Enginneering, Yonsei University, Korea)	Modification of Carbon Electrode for Redox Flow Battery (RFB)
PP31	Taegon KIM (Institute for Materials Chemistry and Engineering, Kyushu University)	GC-AED Analysis on (Alkyl)Benzenes in Hydrocracked LCO
PP32	Hyeoung-su KIM (The specialized graduate school of Hydrogen & Fuel cells, Yonsei University, Korea)	Development of Nitrogen Doped Hybrid Carbon as Support for High Temperature PEMFC Cathode Catalyst

Presentation code	Presenter	Title
PP33	Jingtang ZHENG (State of Key Laboratory of Heavy Oil Processing, China University of Petroleum, China)	Synthesis and Characterization of 3D Ordered Multimodal Porous Carbons and Coating TiO <sub>2</sub> Nanoparticles into the Surface as a Photocatalys
PP34	Yongil CHO (Department of Chemical and Biomolecular Enginneering, Yonsei University, Korea)	Synthesis and Electrochemical Behaviors of Hybrid Carbon (ACF/Graphene) as Supports by Microwave-Irradiation Method for Polymer Exchange Membrane Fuel Cells
PP35	Taegon KIM (Institute for Materials Chemistry and Engineering, Kyushu University)	Introduction to Nano-Gate of TCNF as a Structural Defect
PP36	Ulziidelger BYAMBASUREN (Department of Chemical and Biomolecular Enginneering, Yonsei University, Korea)	B, P and N Doping Effects of Mesoporous Carbons on the Oxygen Reduction Reaction in PEMFC
PP37	Xiaomin WANG (College of Materials Science and Engineering, Taiyuan University of Technology, China)	Influence of the Resistance Performance of Graphene Film by Vacuum Treatment
PP38	Dong Hun LEE (Department of Polymer Engineering, Chonnam National University, Korea)	Preparation of Mesophase Pitch Based Carbon Fibers from Fluidized Catalytic Cracking Decant Oils
PP39	Chanmin LEE (Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Japan)	Nanofibrous Ag-CeO <sub>2</sub> Catalyst for Diesel Soot Combustion
PP40	Jandee KIM (Department of Chemistry, Chungnam National University, Korea)	New Method of Preparing Monoatomic Pt Islands on Au(111) Using Irreversible Adsorption of Pt and Selective Adsorption of CO to Pt
PP41	Ying ZHOU (School of Chemical Engineering, Dalian University of Technology, China)	Synthesis of B, N Co-doped Porous Carbon from Asphaltene
PP42	Yonggang WANG (School of Chemical and Environmental Engineering, China University of Mine, China)	Selective Extraction of Compounds from Low Temperature Coal Tar