

**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**

Hotel Toyokan  
128, Unzen, Obama-machi, Unzen-shi, Nagasaki 854-0698, Japan

**The 3<sup>rd</sup> KU-KIER Joint Symposium on Green Energy Processes and Materials  
November 12, 2013**

Hotel Toyokan  
128, Unzen, Obama-machi, Unzen-shi, Nagasaki 854-0698, Japan



Official websites:

<http://carbon-saves-the-earth3.webnode.jp/>

<http://cr.cm.kyushu-u.ac.jp/eng/?p=717>

## Preface

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 Toyokan 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.

September 25, 2010  
Organizer, CSE2013 symposium



---

Seong-Ho Yoon  
Professor  
Institute for Materials Chemistry  
and Engineering (IMCE),  
Kyushu University

**Organizers:**

Professor Seong-Ho Yoon (IMCE, Kyushu University), [yoon@cm.kyushu-u.ac.jp](mailto:yoon@cm.kyushu-u.ac.jp)  
Associate professor Jin Miyawaki (IMCE, Kyushu University), [miyawaki@cm.kyushu-u.ac.jp](mailto:miyawaki@cm.kyushu-u.ac.jp)

**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:	September 30 <sup>th</sup>
Notification of acceptance/rejection:	October 5 <sup>th</sup>
Submission of Full proceeding submission:	October 15 <sup>th</sup>

E-mail to [cse2013@cm.kyushu-u.ac.jp](mailto:cse2013@cm.kyushu-u.ac.jp)

**Symposium place:**

Hotel Toyokan (東洋館)

128 Unzen, Obama-machi, Unzen-shi, Nagasaki, 854-0698, Japan

<http://www.toyokan.com/>

**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 20,000 Japanese Yen
- Accompanying person : 200 US \$ or 20,000 Japanese Yen

\* You can pay by cash only at the registration desk Hotel Toyokan 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:**

Hotel Toyokan (東洋館), <http://www.toyokan.com/>

128 Unzen, Obama-machi, Unzen-shi, Nagasaki, 854-0698, Japan

Please register from the following website.

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

**Room rate:**

- 4-6 occupancy: 12,000 Japanese Yen per person per night
- Double occupancy: 15,000 Japanese Yen per person per night

\* Basically, no single room is available.

(We can negotiate with our travel agency on behalf of you if you desire to stay by yourself, but cannot guarantee. We are very sorry for your inconvenience.)

\* Free Wi-Fi service is available only at hotel lobby.

**Shuttle bus services:**

Transportation will be available between the international terminal of Fukuoka airport ([http://www.fuk-ab.co.jp/english/frame\\_index.html](http://www.fuk-ab.co.jp/english/frame_index.html)) and Hotel Toyokan (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 ⇒ Hotel Toyokan: November 10<sup>th</sup>, 2013**

Departure time from Fukuoka airport: **14:30**

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

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](mailto: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](mailto:cse2013@cm.kyushu-u.ac.jp)

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

Fax: +81-92-583-7897

**Program (tentative)**

Day 1: November 11 <sup>th</sup> , 2013 (Mon)			
Time	Presentation code	Presentation title	Presenter
08:45-09:00	Opening remark: Professor Junichiro Hayashi (Kyushu University), Professor Seong-Ho Yoon (Kyushu University), Professor Feiyu Kang (Tsinghua University), Prof. Doohwan Jung (KIER)		
<b>Session 1-1</b> Chairperson: Prof. S.-H. Yoon			
09:00-09:45	Plenary 01		Prof. Yasutake Teraoka
09:45-10:15	Keynote 01		China
10:15-10:45	Keynote 02		China
10:45-11:00	Coffee break 01		
<b>Session 1-2</b> Chairperson: Prof. R. Fu			
11:00-11:30	Keynote 03		Korea
11:30-12:00	Keynote 04		Japan
12:00-12:30	Keynote 05		Korea
12:30-13:30	Lunch 01		
<b>Session 2-1</b> Chairperson: Prof. K.S. Yang			
13:30-14:15	Plenary 02		China
14:15-14:45	Keynote 06		Japan
14:45-15:15	Keynote 07		China
15:15-15:30	Group photo session 01		
15:30-16:30	Poster session		
16:30-16:45	Coffee break 02		
<b>Session 2-2</b> Chairperson: Prof. F.Y. Kang			
16:45-17:30	Plenary 03		Korea
17:30-18:00	Keynote 08		Japan
18:00-18:30	Keynote 09		Korea
19:00-21:00	Banquet		

Day 2: November 12 <sup>th</sup> , 2013 (Tue)			
Time	Presentation code	Presentation title	Presenter
<b>Session 3-1</b> Chairperson: Prof. W. Qiao			
09:00-09:45	Plenary 04		?
09:45-10:15	Keynote 10		Korea
10:15-10:45	Keynote 11		Japan
10:45-11:00	Coffee break 03		
<b>Session 3-2</b> Chairperson: Dr. J. Miyawaki			
11:00-11:30	Keynote 12		China
11:30-12:00	Keynote 13		Korea
12:00-12:30	Keynote 14		China
12:15-13:15	Lunch 02		
13:15-13:30	Group photo session 02		
<b>Session 4-1</b> Chairperson: Prof. J. Qui			
13:30-14:00	Keynote 15		Japan
14:00-14:30	Keynote 16		Korea
14:30-15:00	Keynote 17		China

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

Special session			
<b>The 3<sup>rd</sup> KU-KIER Joint Symposium on Green Energy System and Material</b>			
15:20-15:30	Opening remark: Professor Junichiro Hayashi and Professor Doohwan Jung		
<b>Special session 1</b> Chairperson: Professor J. Hayashi			
15:30-16:00	Keynote S01		Korea
16:00-16:30	Keynote S02		Japan
<b>Special session 2</b> Chairperson: Prof. D.H. Jung			
16:30-17:00	Keynote S03		Korea
17:00-17:30	Keynote S04	Petroleum related	Dr. Joo-Il Park
17:30-17:45	Closing remark: Professor Isao Mochida		

[Attached 1] Format of 200 words abstract

## **Carbon nanofibers**

Seong-Ho YOON\*

IMCE, Kyushu University,  
Kasuga, Fukuoka, 816-8580, Japan  
yoon@cm.kyushu-u.ac.jp

### **Abstract**

The electrospinning is a feasible technology to make nano-composite materials through blending with various ingredients, such as polymer, metal or ceramics. The compositing technology is one of the convenient methods to create optimum size of pores to fit in the molecules and ions to enhance storage efficiency or to functionalize the surface. In this study, the compositing technology was used for enhancing the energy storage efficiency, elevating efficiency of gas adsorption and activity of photo-catalysis. The energy density of the electrode of the supercapacitor from the carbon nano-composite was ranged 35-91Wh/kg at the power density of 100 kW/kg-3.5kW/kg, respectively.

Keywords: Electrospinning, Carbon nano-composite, Energy





# KYUSHU UNIVERSITY

Institute for Materials Chemistry and Engineering  
Kyushu University, 6-1 Kasugakoen, Kasuga, Fukuoka, 816-8580, Japan

*Professor Seong-Ho Yoon*

E-mail : yoon@cm.kyushu-u.ac.jp / Phone : +81-92-583-7959

*Invitation letter of*  
**“The 11<sup>th</sup> Three Countries Joint Symposium on Carbon Saves the Earth”**  
**(The CSE2013)**

Dear Colleagues,

I am very pleased to invite you to the 11<sup>th</sup> three countries joint symposium on ‘Carbon Saves the Earth (CSE 2013) – Carbon Materials for Energy Devices and Environmental Protection -’ to be held at Unzen Toyokan Hotel in Obama-machi, Nagasaki, Japan from 10th to 12th of November 2013 which is hosted by the Research and Education Center of Carbon Resources of Kyushu University.

Unchangingly, the aim of the symposium is to increase the cooperation of three countries’ carbon specialists on carbon technology for high efficient energy consuming, saving, storing, and conversion, and also for environmental protections, where methods of one field are used for 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 an area such as (1) New forms of carbons: synthesis, tailoring of structure and nanotexture, functionalization, (2) Fundamentals and applications of adsorption, (3) Porous, activated carbons and other related materials, (4) Super capacitors, lithium batteries, fuel cells and other advanced batteries, (5) Gas and heat storage, solar energy conversion, (6) Environmental impact, trapping of organic and inorganic compounds, (7) Biological and health applications of carbons, (8) Catalysts and catalyst supports, (9) Applications in micro electron, (10) High efficient utilization of coal (including CCT) and cokes, and (11) Deep desulfurization, denitrogenation, and de-metallization of petroleum. In this year, we determined the Li-ion battery and super capacitor as keywords, High utilization of coal, petroleum and solar energy should be continuous keyword because their high efficient utilizations and environmental protection will be very important as years go by. Other carbons related to energy and environment are, of course, always welcome.

September 25, 2013

Seong-Ho Yoon

Professor, Institute for Materials Chemistry and Engineering, Kyushu University

Professor, Vice manager of the Research and Education Center of Carbon Resources

Organizer



# KYUSHU UNIVERSITY

Institute for Materials Chemistry and Engineering  
Kyushu University, 6-1 Kasugakoen, Kasuga, Fukuoka, 816-8580, Japan

*Professor Seong-Ho Yoon*

E-mail : yoon@cm.kyushu-u.ac.jp / Phone : +81-92-583-7959

*Invitation letter of*  
**“The 3<sup>rd</sup> KU-KIER Joint Symposium on Green Energy Processes and Materials” (The 3<sup>rd</sup> GEPM 2013)**

Dear Colleagues,

I am very pleased to invite you to the **3<sup>rd</sup> KU-KIER Joint Symposium on Green Energy Processes and Materials** to be held at Unzen Toyokan Hotel in Obama-machi, Nagasaki, Japan at 12th of November 2013 which is hosted by the Research and Education Center of Carbon Resources of Kyushu University.

The aim of this symposium is to increase the cooperation of the specialists in Kyushu University (Research and Education Center of Carbon Resources) and Korea Institute of Energy Research on Green Energy Processes and Materials.

The symposium covers whole subjects which contain the area of Green Energy related Processes and Materials. High utilization of coal, petroleum, gas, fuel cell and solar energy should be major keyword because their high efficient utilizations and environmental protection will be very important as years go by. Other Green Energy related areas, of course, always welcome.

September 25, 2013

---

Seong-Ho Yoon

Professor, Vice manager of the Research and Education Center of Carbon Resources  
Organizer