The 11th 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 3rd 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 11th International Symposium on Carbon Saves the Earth - Novel Materials and Processes for Energy Devices and Environmental Protections and the 3rd KU-KIER Joint Symposium on Green Energy Processes and Materials will be held at Unzen Toyokan Hotel in Nagasaki province from November 10th to 12th, 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
    Associate professor Jin Miyawaki (IMCE, Kyushu University), 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

![Research and Education Center of Carbon Resources, Kyushu University](image)

**Important deadlines**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Submission of 200 words abstract</td>
<td>September 30th</td>
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<tr>
<td>Notification of acceptance/rejection</td>
<td>October 5th</td>
</tr>
<tr>
<td>Submission of Full proceeding submission</td>
<td>October 15th</td>
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</tbody>
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E-mail to 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. 10th, 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) 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\(^{th}\), 2013
Departure time from Fukuoka airport: 14:30
Hotel Toyokan (Unzen) ⇒ Fukuoka airport: November 13\(^{th}\), 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) 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
# Program (tentative)

**Day 1: November 11th, 2013 (Mon)**

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<thead>
<tr>
<th>Time</th>
<th>Presentation code</th>
<th>Presentation title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>08:45-09:00</td>
<td>Opening remark: Professor Junichiro Hayashi (Kyushu University), Professor Seong-Ho Yoon (Kyushu University), Professor Feiyu Kang (Tsinghua University), Prof. Doohwan Jung (KIER)</td>
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### Session 1-1 Chairperson: Prof. S.-H. Yoon

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<tbody>
<tr>
<td>09:00-09:45</td>
<td>Plenary 01</td>
<td></td>
<td>Prof. Yasutake Teraoka</td>
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<tr>
<td>09:45-10:15</td>
<td>Keynote 01</td>
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<td>China</td>
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<tr>
<td>10:15-10:45</td>
<td>Keynote 02</td>
<td></td>
<td>China</td>
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<tr>
<td>10:45-11:00</td>
<td>Coffee break 01</td>
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### Session 1-2 Chairperson: Prof. R. Fu

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<tr>
<td>11:00-11:30</td>
<td>Keynote 03</td>
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<td>11:30-12:00</td>
<td>Keynote 04</td>
<td></td>
<td>Japan</td>
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<tr>
<td>12:00-12:30</td>
<td>Keynote 05</td>
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<td>Korea</td>
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<tr>
<td>12:30-13:30</td>
<td>Lunch 01</td>
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### Session 2-1 Chairperson: Prof. K.S. Yang

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<tr>
<td>13:30-14:15</td>
<td>Plenary 02</td>
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<td>China</td>
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<td>14:15-14:45</td>
<td>Keynote 06</td>
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<td>14:45-15:15</td>
<td>Keynote 07</td>
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<td>China</td>
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<td>15:15-15:30</td>
<td>Group photo session 01</td>
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<tr>
<td>15:30-16:30</td>
<td>Poster session</td>
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<tr>
<td>16:30-16:45</td>
<td>Coffee break 02</td>
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### Session 2-2 Chairperson: Prof. F.Y. Kang

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<tr>
<td>16:45-17:30</td>
<td>Plenary 03</td>
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<td>17:30-18:00</td>
<td>Keynote 08</td>
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<td>Japan</td>
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<td>18:00-18:30</td>
<td>Keynote 09</td>
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<td>Korea</td>
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<tr>
<td>19:00-21:00</td>
<td>Banquet</td>
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### 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)

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<td>Plenary 04</td>
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<tr>
<td>09:45-10:15</td>
<td>Keynote 10</td>
<td>Korea</td>
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<tr>
<td>10:15-10:45</td>
<td>Keynote 11</td>
<td>Japan</td>
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<tr>
<td>10:45-11:00</td>
<td>Coffee break 03</td>
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#### Session 3-1 Chairperson: Prof. W. Qiao

- 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

#### Session 3-2 Chairperson: Dr. J. Miyawaki

- 13:30-14:00 Keynote 15 Japan
- 14:00-14:30 Keynote 16 Korea
- 14:30-15:00 Keynote 17 China

#### Session 4-1 Chairperson: Prof. J. Qui

- 15:20-15:30 Opening remark: Professor Junichiro Hayashi and Professor Doohwan Jung

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**Special session**

**The 3rd KU-KIER Joint Symposium on Green Energy System and Material**

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<tr>
<td>15:30-16:00</td>
<td>Keynote S01</td>
<td>Korea</td>
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<tr>
<td>16:00-16:30</td>
<td>Keynote S02</td>
<td>Japan</td>
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#### Special session 1 Chairperson: Professor J. Hayashi

- 16:30-17:00 Keynote S03 Korea
- 17:00-17:30 Keynote S04 Petroleum related Dr. Joo-II Park
- 17:30-17:45 Closing remark: Professor Isao Mochida
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
Dear Colleagues,

I am very pleased to invite you to the 11th 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
Invitation Letter for GEPM 2013

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

Dear Colleagues,

I am very pleased to invite you to the 3rd 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