



9th World Congress of Chemical Engineering

Incorporating 15th Asian Pacific Confederation of Chemical Engineering Congress

August 18-23, 2013 / Coex, Seoul, Korea

Chemical Engineering : Key to the Future



Congress Overview

The 9th World Congress of Chemical Engineering incorporating 15th Asian Pacific Confederation of Chemical Engineering Congress (WCCE9 & APCCHE2013), the largest congress in the field of chemical engineering, will be held from August 18 to 23, 2013 in Coex, Seoul, Korea.

Congress	9th World Congress of Chemical Engineering incorporating 15th Asian Pacific Confederation of Chemical Engineering Congress (WCCE9 & APCCHE2013)
Theme	Chemical Engineering: Key to the Future
Dates	August 18 - 23, 2013
Venue	Coex, Seoul, Korea
Hosted by	WCEC (World Chemical Engineering Council) APCCHE (Asian Pacific Confederation of Chemical Engineering)
Sponsored by	KICHe (Korean Institute of Chemical Engineers) KOFST (The Korean Federation of Science and Technology Societies)
Organized by	WCCE9 & APCCHE2013 Organizing Committee
Website	www.wcce9.org

Key Dates

Abstract Submission by	October 31, 2012
Acceptance Notice by	December 31, 2012
E-Registration Open	December, 2012
E-Hotel Reservation Open	December, 2012
Early Bird Registration by	February 28, 2013
Speaker Registration by	February 28, 2013
Extended Abstract Submission and Modification by	February 28, 2013
Hotel Reservation by	June 24, 2013
Session Schedule Notice by	Middle of July 2013



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Invitation



On behalf of the Organizing Committee, we are very pleased to invite you to the 9th World Congress of Chemical Engineering (WCCE9) to be held in Seoul, Korea from August 18 to 23, 2013. The Congress, on this occasion, also serves as the 15th Asian Pacific Confederation of Chemical Engineering Congress (APCChE2013). We have decided "Chemical Engineering: Key to the Future" as the central theme of the Congress.

The scientific program will provide an opportunity for participants to exchange new ideas and information on many important issues in chemical engineering. High-standard plenary and keynote lectures will be provided by outstanding scholars invited both from academia and industry. The Congress will be an occasion for the participants to make new acquaintance and strengthen friendship.

Seoul, the capital of Korea, is one of the most dynamic and safest cities in the world and has left a shining impression on public with its successful staging of the 1988 Summer Olympic, 2002 FIFA World Cup and G20 Summit in 2010. Excellent facilities and natural beauty combined with its 5000-year historical heritage will no doubt make Seoul an attractive place to visit, where the old and new coexist in harmony.

The Organizing Committee will endeavor to put together an exciting social program for delegates and accompanying persons so that they all can carry home good memories of the occasion in Korea.

We look forward to seeing you in Seoul in August 2013.

Hyun-Ku RHEE

Congress President
WCCE9 & APCChE2013

Organizations

Organizing Committee

President

Hyun-Ku RHEE
The Korean Academy of Science and Technology (KAST)

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Sang Heup MOON
Seoul National University

Co-chair

Hwayong KIM
Seoul National University

Program Committee

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Yonsei University

Finance Committee

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In-Sik NAM
POSTECH

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Chinho PARK
Yeungnam University

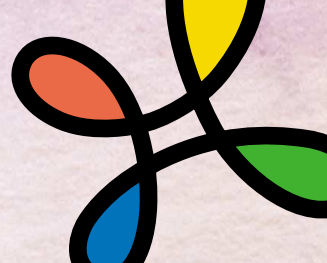
Public Relations Committee

Chair

Gio-bin LIM
The University of Suwon

Vice-Chair

Jae Hak JUNG
Yeungnam University



International Advisory Committee

As of July, 2012

Australia

Russell SCOTT

*Australian representative for Engineers Australia
IChemE (Aust) / RACI (Aust) / President IChemE*

Professor David WOOD

*Professorial Fellow, University of Melbourne
President of the Royal Australian Chemical Institute*

Canada

Roland ANDERSSON

Executive Director, Canadian Society for Chemical Engineering

China

Bo-Geng LI

Dean, Faculty of Engineering, Zhejiang University

Jinghai LI

Vice President, Chinese Academy of Sciences

Wenchuan WANG

Professor, Beijing University of Chemical Technology

Denmark

Rafiqul GANI

Professor, Technical University of Denmark - DTU

France

Jean-Pierre DAL PONT

President, The French Chemical Engineering Society (SFGP)

Philippe A. TANGUY

*Vice-President, International R&D programs,
Total S.A.*

Germany

Wolfgang ARLT

Professor, University of Erlangen

Willi MEIER

DECHEMA e.V.

Prof. Dr.-Ing. Jörg STEINBACH

President, TU Berlin

India

P. VIJAYARAGHAVAN

President, Indian Institute of Chemical Engineering (IIChE)

Italy

Enrico DRIOLI

ITM-CNR, Istituto per la Tecnologia delle Membrane

Japan

Kouichi MIURA

Professor, Kyoto University

Shin-ichi NAKAO

President, SCEJ 2010-2011

Singapore

Swee Cheng FOO

Chairman, 14th APCCHE Congress

Edwin KHEW

President, 14th APCCHE (2011-2012)

Vice President, Institution of Engrs, S'pore.

South Africa

Beki HLATSHWAYO

President, South African Institution of Chemical Engineers (SAIChE)

Spain

Carlos NEGRO

Professor, University Complutense of Madrid (UCM)

President, Spanish Association of Chemist (ANQUE)

Switzerland

Marco MAZZOTTI

ETH Zurich

Taiwan

Ho-Mu LIN

Chair Professor, National Taiwan University of Science and Technology

Thailand

Piyasan PRASERTHDAM

Professor, Chulalongkorn University

UK

Sir William WAKEHAM

Immediate Past President, IChemE

USA

Maria K. BURKA

2011 President, AIChE

Kyu Yong CHOI

Professor, University of Maryland

Arvind VARMA

Professor, Purdue University

Phillip WESTMORELAND

2013 AIChE President

Program at a Glance (Tentative)

	Aug. 18 (Sun.)	Aug. 19 (Mon.)	Aug. 20 (Tue.)	Aug. 21 (Wed.)	Aug. 22 (Thu.)	Aug. 23 (Fri.)
08:00		Opening Ceremony				
09:00		Plenary Lecture 2	Plenary Lecture 4	Plenary Lecture 6	Plenary Lecture 8	Plenary Lecture 10
10:00		Plenary Lecture 3	Plenary Lecture 5	Plenary Lecture 7	Plenary Lecture 9	Plenary Lecture 11
11:00		Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
12:00		Sessions	Sessions	Sessions	Sessions	Sessions
13:00		Sessions	Sessions	Sessions	Sessions	Sessions
14:00		Lunch	Lunch	Lunch	Lunch	
15:00		Sessions	Sessions	Sessions	Sessions	
16:00		Sessions	Sessions	Sessions	Sessions	
17:00		Coffee Break	Coffee Break	Coffee Break	Coffee Break	
18:00		Sessions	Sessions	Sessions	Sessions	
19:00	Plenary Lecture 1	Poster Session	Poster Session		Poster Session	
20:00	Welcome Reception			Gala Dinner		

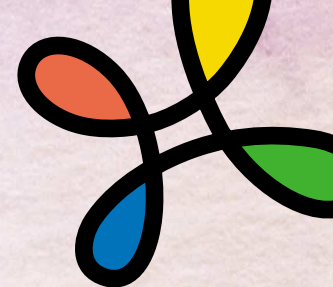
Registration Operating Hours

- August 18, 2013 12:00 - 20:00
- August 19 - 22, 2013 08:00 - 18:00
- August 23, 2013 08:00 - 12:00

Exhibitions (Hall D2)

- August 19 - 22, 2013 09:00 - 19:00
- August 23, 2013 09:00 - 12:00

- The exhibition hall is located in the room where poster sessions, coffee breaks are concurrently held.



Plenary Lectures

* Alphabetically ordered by last name
* 4 more speakers to be announced



Sustainable Chemical Engineering: Opportunities and Challenges

Adisa AZAPAGIC

Professor
School of Chemical Engineering and Analytical Science
The University of Manchester
UK



Chemical Engineering in Energy Efficiency for a Sustainable Energy

Dong-Soo HUR

Chairman and CEO of GS Caltex
Korea



Engineering Microbial Metabolism for Production of Advanced Hydrocarbon Fuels

Jay D KEASLING

Professor, University of California, Berkeley
Joint BioEnergy Institute (JBEI)
Synthetic Biology Engineering Research Center (SynBERC)
Lawrence Berkeley National Laboratory
USA



Chemical Engineering as a Bridge between Knowledge and Humanity

Hiroshi KOMIYAMA

Chairman of the Institute
Mitsubishi Research Institute, Inc. (MRI)
President Emeritus, The University of Tokyo
Japan



Bioeconomy Science - A Chemical Engineering Perspective

Wolfgang MARQUARDT

Professor
AVT-Process Systems Engineering
RWTH Aachen University
Chairman, German Council of Science and Humanities
Germany



Systems Engineering at the Nanoscale: Towards Molecular Factories, Synthetic Cells, and Adaptive Devices

George STEPHANOPOULOS

Professor
Department of Chemical Engineering
MIT
USA



Co-Opetition, Co-Innovation and the Role of Academic Research

Philippe A. TANGUY

Vice President, International R&D Programs
TOTAL S.A
France



Call for Abstracts

Academic / Industrial Program

The scientific committee of WCCE9 & APCCHE2013 welcomes abstract submission for oral and poster sessions. All abstracts presented at the congress will be published in the abstract book.

Abstracts received by **October 31, 2012** will be considered under the standard review procedure. Abstracts must be submitted to the official website. All authors accepted for presentation must register for the congress through the website before **February 28, 2013** in order to confirm their participation.

Important Dates

Abstract Submission by	October 31, 2012
Abstract Acceptance Notice by	December 31, 2012
Speaker Registration by	February 28, 2013
Extended Abstract Submission and Modification by	February 28, 2013
Session Schedule Notice by	Middle of July 2013

Submission Confirmation

An acknowledgement of an abstract(s) will automatically be sent to the presenting author and corresponding author by email upon online abstract submission. It is the responsibility of each individual to verify the acknowledgement and carefully review the abstract(s).

Abstract Acceptance Notice

All applicants will be notified of the outcome of their submission by e-mail, no later than **December 31, 2012**.

All author presenting either oral or poster session must complete early-registration online and remit the required registration fee by **February 28, 2013** in order to remain on the final program. No exceptions will be made.

Further details for accepted presentations will be sent by **Middle of July 2013**, indicating the time, session and location of the presentation.

Modification

You can review, modify or update your abstract(s) on My page on the website by **February 28, 2013**.

CV Submission

All speakers and moderators attending the session are required to submit their brief Curriculum Vitae. Please select 'CV Submission' menu on 'My page' and fill out your academic profile.

Guidelines for Abstract Submission

Step 1: Prepare abstract(s)

The title should be a maximum of 150 characters in lower case with a leading capital letter.

Authors' information: Presenting & corresponding authors' information including valid email addresses are required.

There can be no more than ten (10) authors per abstract.

Each abstract should be no more than 250 words.

Abstract should be written and presented in English.

Table, diagram and picture are not allowed.

Step 2: Log in to the official website (www.wcce9.org).

Step 3: Select the E-Submission tab from the Scientific / Industrial Program menu.

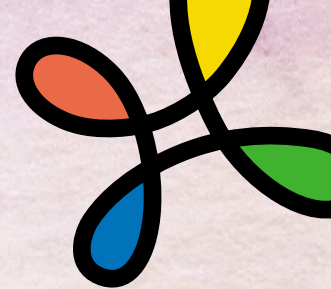
Step 4: Complete the author information.

Step 5: Complete the abstract details.

Step 6: Save or modify after review your abstract.

Step 7: Abstract submission acknowledgement will be automatically sent to you upon completed of E-submission.

Step 8: After the acceptance notice, upload the extended abstract (PDF format) by February 28, 2013.



Suggested Topics

Topic 1. Fundamentals in chemical engineering

This topical area is mostly on the principles of chemical and biological processes including thermodynamics, transport phenomena, kinetics, reaction engineering, process control and separation.

It also includes the papers dealing on chemical and biological engineering principles applied to other disciplines such as electronic materials processing. Theories on newly- introduced processes can be introduced as well as new interpretations on the theory of conventional chemical and biological engineering processes.

Topic 2. Sustainable development for the future society

This topical area covers papers that discuss significant research results in areas of energy and environmental technologies for our future society. Discussed topics can include major improvements in traditional fossil fuels such as heavy oil upgrading, utilization of bitumen and oilsand and coal. Renewable energy as well as green house gas prevention technologies is also included in the area as a major topic, which have the potentials of replacing the current ones for better economics and sustainability. In addition, the area can include the advanced environmental technologies that can bring higher energy efficiencies compared to the existing ones.

Topic 3. Research based on emerging technologies

This topical area is seeking papers related to emerging technologies in the realm of chemical engineering to solve critical future chemical problems. Such emerging technologies range from energy materials and processing, water treatment, biomaterials and biotechnology, nanotechnology, electronic materials and processing, and also fusion or interdisciplinary technologies combining all the existing chemical engineering principles.

Topic 4. Progress in current chemical technologies

This topical area seeks papers discussing advances in chemical technologies for traditional chemical industries like refining, petrochemicals, fine chemicals, steel, minerals, and foods. Discussed topics can include major improvements in traditional processing technologies as well as novel ones that can bring higher energy efficiencies and better environmentally friendliness in chemicals manufacturing compared to the existing ones. They also can include new materials and product formulations that have the potentials of replacing the current ones for better economics and sustainability.

Topic 5. Promotion of university-industry cooperation

This topical area is to provide a platform for the promotion of the cooperation between the academia and industry on their current interest and research experiences. The contributions of topics in industrial break-through technologies including not only emerging fields of nano, bio, energy, materials but also traditional ones of separation, reaction/catalysis, particulates would be welcome.

Topic 6. Chemical Engineering Education

The education session invites papers on all topics related to chemical engineering education. This includes enhanced teaching methods, curriculum developments, laboratory developments, tools, accreditation, assessment methods, and student and faculty developments.

Registration

Online registration at the official website www.wcce9.org will be available from **December 2012**. To receive an early bird discounted fees, please register no later than **February 28, 2013**.

Categories	Early Bird Registration by February 28, 2013	Advance Registration by June 30, 2013	Late Registration from July 1, 2013
Regular	US\$ 900	US\$ 1,000	US\$ 1,100
Student	US\$ 400	US\$ 450	US\$ 500

Registration Fee Covers:

- Regular: Access to all sessions, welcome reception, gala dinner, lunches, coffee breaks and a congress kit
- Student: Access to all sessions, welcome reception, lunches, coffee breaks and congress kit.

Cancellation and Refund Policy

Cancellation must be notified in writing to the Secretariat. Please refer to the following cut-off date for cancellation. All refunds will be made after congress for administrative reasons and bank charges will be deducted from the refund amount.

By June 30, 2013	US\$ 50.00 of processing fee will be deducted from the full amount
From July 1, 2013	No Refund

Accommodation

The Organizing Committee of WCCE9 & APCChE2013 offers various accommodation options nearby the venue with the discounted rates. In order to take advantage of such special rates, participants should make reservation through the On-line Hotel Reservation. Since rooms will be reserved on a first-come, first-served basis, we may be unable to provide rooms with the special rates quoted when rooms get fully booked. Therefore, early booking is highly recommended. On-line registration will be available from December 2012.

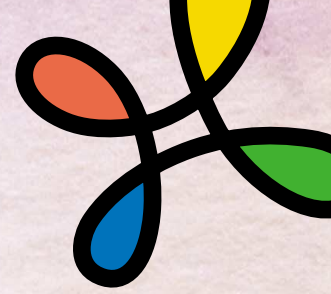
Hotel List

No.	Class	Hotel	Room Type	Room Rate (KRW)	VAT&SVC	Breakfast (KRW)	Distance to Venue
1	Super Deluxe ★★★★★	Intercontinental Seoul COEX	Superior Single	280,000	Excl. (10%, 11%)	Excl. 30,000 (10%, 11%)	venue
			Elite Single	315,000			
2	★★★★★	Imperial Palace Seoul	Superior	187,000	Excl. (10%, 11%)	Excl. 22,000 (10%, 11%)	15 min. by car
			Business	198,000			
			Deluxe	214,000			
3	Deluxe ★★★★	Hotel Riviera Seoul	Superior	154,000	Excl. (10%, 11%)	Excl. 21,000 (10%, 11%)	6 min. by car
4		Ramada Seoul	Superior	187,000	Excl. (10%, 11%)	Excl. 22,000 (10%, 11%)	6 min. by car
5		Hotel Ellui	Deluxe	130,000	Excl. (10%, 11%)	Excl. 15,000	10 min. by car
6		Mercure Seoul	Standard	160,000	Excl. (10%, 11%)	Excl. 18,000 (10%, 11%)	10 min. by car
			Superior	170,000			
7		First ★★★	IBIS Ambassador Seoul	Double/Twin	160,000	Excl. (10%)	Excl. 19,000 (10%)
8	Serviced Residence	Casaville Residence Samsung	Studio	87,000	Incl.	N/A	10 min. by car

Cancellation Policy

Any cancellations should be notified in writing to the Secretariat of **WCCE9 & APCChE 2013 Congress** at hotel@wcce9.org.

Cancellation received by June 24, 2013	No Penalty
Cancellation received from June 25 till July 17, 2013	50% of one night room rate will be charged to your credit card as a penalty
Cancellation received from July 18, 2013 or No show	One night room rate will be charged to your credit card as a penalty



Travel Information

International Access

Incheon International Airport, the primary gateway for most travellers from and to the Republic of Korea, which is located 52km west of downtown Seoul. The airport has been acknowledged as the "Best Airport World Wide" by the Airports Council International (ACI) in 2009. Incheon International Airport connects Seoul to 170 cities in 53 countries with 84 international airlines, providing more than 1,938 regular flights per week.

Estimated Travel Time

Asia	Tokyo 2hrs, Beijing 2hrs, Bangkok 6hrs, Singapore 6hrs, Delhi 9hrs
Europe	London 12hrs, Paris 12hrs, Rome 12hrs
North America	LA 12hrs, Vancouver 11hrs, New York 14hrs
Oceania	Sydney 10hrs, Auckland 11hrs



The Host City, Seoul

Modern Seoul

Seoul is modern. The city is fast-paced, wired, and tech-efficient to the teeth. It's also endowed with a dizzying wealth of cultural facilities where visitors can take in the creativity of Seoul's artists, learn about its history, or acquaint themselves with new cultural experiences.

Traditional Seoul

In 1392, Seoul was designated the capital of a new dynasty, Joseon, a period in Korean history that lasted until 1910. The traditional epicenter of Seoul was found in the Gwangwhamun district where palaces, shrines, and temples abound, along with traditional markets that are open 24h. Traditional Seoul is a fulfilling visit bringing visitors one step closer to the history of Korea.

Outdoor Seoul

Mountains. Parks. Rivers. Streams. Seoul is one of the world's largest cities but urbanization of Korea's capital has never meant abandonment of special areas dedicated to preservation of wildlife. For avid hikers and bikers, an excursion is never too far away. Because the following places such as Olympic Park, Seoul Land, Citizens' Forest will have visitors reconnect with nature.

Coex



Coex is a business and cultural hub located in the heart of Gangnam, Seoul's business district. It is a popular entertainment destination in Seoul for both domestic and foreign visitors, and welcomes an average of 150,000 people a day.

www.coex.co.kr



