



Clay : from Natural Environments  
to Industrial Applications

- Session1 Earth Science
- Session2 Agriculture and Soil
- Session3 Physical Chemistry and Ceramics
- Session4 Construction and Civil Engineering
- Session5 Environmental and Energy
- Session6 Biology and Medicine

# Abstract Book

6-8 September 2012  
Ewha Womans University, Seoul, Korea



## Asian Clay Korean Committee

### Conference Chairs and Honorary Chairs

Conference Chair	Prof. Jin-Ho Choy	Ewha Womans University
Vice Chair	Prof. Jin-Yeon Hwang	Pusan National University
	Prof. Byung-Sei Jun	Kyungnam University
Honorary Chair	Prof. Si-Joong Kim	Former Ministry of Science and Technology Korea University
	Prof. Soo-Jin Kim	The National Academy of Sciences, Republic of Korea

### Session Chairs

General Secretary	Prof. Jin-Wook Kim	Yonsei University
	Prof. Hyen-Goo Cho	Gyeongsang National University
	Prof. Kyung-Ja Kim	Korea Institute of Ceramic Engineering and Technology
Earth Science	Prof. Young-Jae Lee	Korea University
Agriculture and Soil	Prof. Hyun Jung	Dongguk University
Physical Chemistry and Ceramics	Prof. Eung-Soo Kim	Kyonggi University
Construction and Civil Engineering	Dr. Jung-Yoon Choi	Korea Conformity Laboratories
Environmental and Energy	Prof. Hyoung-Jin Choi	Inha University
Biology and Medicine	Prof. Jae-Min Oh	Yonsei University

## Asian Clay Japanese Committee

General Secretary	Prof. Makoto Ogawa	Waseda University
	Prof. Tsutomu Sato	Hokkaido University
Earth Science	Dr. Tetsuichi Takagi	The National Institute of Advanced Industrial Science and Technology
Agriculture and Soil	Prof. Motoharu Kawano	Kagoshima University
Physical Chemistry and Ceramics	Prof. Jun Kawamate	Yamaguchi University
Construction and Civil Engineering	Dr. Satoru Miyoshi	Obayashi Cooperation
Environmental and Energy	Dr. Hirohisa Yamada	National Institute for Materials Science
Biology and Medicine	Prof. Sumio Aisawa	Iwate University

## The 2nd Asian Clay Conference

Thu, 6, September 2012		Fri, 7, September 2012		Sat, 8, September 2012	
11:00 ~ 12:00	Registration	09:30 ~ 09:40	Opening		
11:00 ~ 12:45	Meeting of CSSJ	09:40 ~ 10:20	PL-2		
13:00 ~ 13:15	Opening Address	10:20 ~ 10:30	Break		
13:15 ~ 13:55	PL-1	<b>Session 4</b>			
13:55 ~ 14:10	Break	10:30 ~ 10:50	IL-10		
<b>Session 1</b>		10:50 ~ 11:10	IL-11		
14:10 ~ 14:30	IL-1	11:10 ~ 11:30	IL-12		
14:30 ~ 14:50	IL-2	11:30 ~ 13:30	Poster (Post) Lunch		
14:50 ~ 15:10	IL-3	11:30 ~ 13:15	Meeting of CSSJ		
15:10 ~ 15:20	Break	<b>Session 5</b>			
<b>Session 2</b>		13:30 ~ 13:50	IL-13		
15:20 ~ 15:40	IL-4	13:50 ~ 14:10	IL-14		
15:40 ~ 16:00	IL-5	14:10 ~ 14:30	IL-15		
16:00 ~ 16:20	IL-6	14:30 ~ 14:40	Break		
16:20 ~ 16:30	Break	<b>Session 6</b>			
<b>Session 3</b>		14:40 ~ 15:00	IL-16		
16:30 ~ 16:50	IL-7	15:00 ~ 15:20	IL-17		
16:50 ~ 17:10	IL-8	15:20 ~ 15:40	IL-18		
17:10 ~ 17:30	IL-9	15:40 ~ 16:00	IL-19		
17:30 ~ 17:40	Closing Remark	16:00 ~ 16:10	Closing Remark		
	International Advisory Board Meeting	16:10 ~ 17:30	Poster Session		
17:40 ~		17:30 ~	Banquet		



Seoul City Tour  
(Separately)

## Thu, 6 , September 2012

<b>Opening Address</b>	13:00 ~ 13:15	<p><b>Opening Remark</b>  <b>Prof. Jin-Ho Choy</b>            Center for Intelligent Nano Bio Materials / Ewha Womans University</p> <p><b>Welcoming Address</b>  <b>President Sun-Uk Kim</b>            Ewha Womans University</p> <p><b>Congratulatory Address</b>  <b>Director of Natural Sciences Division, Soo-Jin Kim</b>            The National Academy of Sciences, Republic of Korea</p> <p><b>President Se-Won Chang</b>            The Mineralogical Society of Korea</p>
<b>Plenary Lecture</b>	13:15 ~ 13:55	<p><b>Prof. Eduardo Ruiz-Hitzky</b>            Materials Science Institute of Madrid (ICMM), CSIC, Spain            Past-President of the Spanish Clay Society  <i>Title: Designing advanced materials from clay minerals</i></p>
<b>Break</b>		
<b>Session 1 Earth Science</b>	14:10 ~ 14:30	<p><b>Prof. Qinfu Liu</b>            China University of Mining &amp; Technology, China  <i>Title: Ammonium illite in coal-bearing strata of China and nitrogen isotopic geochemistry</i></p>
(Chair) Prof. Young-Jae Lee, Dr. Tetsuichi Takagi	14:30 ~ 14:50	<p><b>Prof. Hailiang Dong</b>            Miami University, USA  <i>Title: Clay Mineral – Microbe Interactions and Implications for Heavy Metal Remediation</i></p>
	14:50 ~ 15:10	<p><b>Prof. Zhifei Liu</b>            Tongji University, China  <i>Title: Climatic, tectonic, and lithological controls on formation of clay minerals surrounding the South China Sea</i></p>
<b>Break</b>		
<b>Session 2 Agriculture and Soil</b>	15:20 ~ 15:40	<p><b>Prof. Motoharu Kawano</b>            Kagoshima University, Japan  <i>Title: Enhancement of dissolution rate of amorphous silica by interaction with heterocyclic compounds</i></p>
(Chair) Prof. Hyun Jung, Prof. Motoharu Kawano	15:40 ~ 16:00	<p><b>Dr. Yong-Hee Moon</b>            National Institute of Agricultural Science and Technology, Korea  <i>Title: The Relation between Total Sulfur and Chinese cabbage Stunt in Potential Acid Sulfate Soils</i></p>
	16:00 ~ 16:20	<p><b>Prof. Hyun-Joong Kim</b>            Seoul National University, Korea  <i>Title: Nano-Materials for Pressure Sensitive Adhesives</i></p>
<b>Break</b>		
<b>Session 3 Physical Chemistry and Ceramic</b>	16:30 ~ 16:50	<p><b>Prof. Min Wei</b>            Beijing University of Chemical Technology, China  <i>Title: Assembly of Photofunctional Anions/Layered Double Hydroxide Ultrathin Films: Experimental and Theoretical Investigations</i></p>
(Chair) Prof. Eung-Soo Kim, Prof. Jun Kawamate	16:50 ~ 17:10	<p><b>Dr. Pilar Aranda</b>            Instituto de Ciencia de Materiales de Madrid, CSIC, Spain  <i>Title: A colloidal pathway to nanoparticles-clay heterostructures</i></p>
	17:10 ~ 17:30	<p><b>Prof. Nithima Khaorapapong</b>            Khon Kaen University, Thailand  <i>Title: Preparation of semiconductor-clay hybrids and their properties</i></p>
<b>Closing</b>	17:30 ~ 17:40	<p><b>Closing Remark</b>  <b>Prof. Jin-Ho Choy</b>            Center for Intelligent Nano Bio Materials / Ewha Womans University</p>

## Fri, 7, September 2012

<b>Opening</b>	09:30 ~ 09:40	<b>Opening</b>
<b>Plenary Lecture</b>	09:40 ~ 10:20	<b>Prof. Atsuyuki Inoue</b> Chiba University, Japan President of Clay Science Society of Japan <i>Title: Formation and Transformation of Halloysite during Weathering</i>
Break		
<b>Session 4 Construction and Civil Engineering</b>  (Chair) Dr. Jung-Yoon Choi, Dr. Satoru Miyoshi	10:30 ~ 10:50	<b>Dr. Horst Hintze-Bruening</b> BASF Coatings GmbH, Germany <i>Title: Layered Nanoparticle Based Organic Coatings</i>
	10:50 ~ 11:10	<b>Dr. Satoru Miyoshi</b> Obayashi Corporation, Japan <i>Title: Experimental Study on Physical Properties of Chemically Altered Compacted Bentonite in Radioactive Waste Repository</i>
	11:10 ~ 11:30	<b>Prof. Seng-Kwan Choi</b> Ulster University, UK <i>Title: Development on structural fire engineering</i>
<b>Lunch</b>	11:30 ~ 13:30	<b>Poster (Post) / Lunch</b>
<b>Session 5 Environmental and Energy</b>  (Chair) Prof. Hyoung-Jin Choi, Prof. Hirohisa Yamada	13:30 ~ 13:50	<b>Prof. Tsutomu Sato</b> Hokkaido University, Japan <i>Title: Decontamination of Radioactive Cesium from the Disaster at Fukushima Dai-ichi Nuclear Power Plant</i>
	13:50 ~ 14:10	<b>Prof. Sang-Eon Park</b> Inha University, Korea <i>Title: CO<sub>2</sub> Activation and Harnessing over Functionalized Nanocatalysts</i>
	14:10 ~ 14:30	<b>Prof. Makoto Ogawa</b> Waseda University, Japan <i>Title: Organic-inorganic hybrids based on ultrathin oxide layers -Designed nanostructures for molecular recognition</i>
Break		
<b>Session 6 Biology and Medicine</b>  (Chair) Prof. Jae-Min Oh, Prof. Sumio Aisawa	14:40 ~ 15:00	<b>Prof. Atsushi Takahara</b> Kyushu University, Japan <i>Title: Preparation and Characterization of Polymer Nanohybrids from Aluminosilicate Nanotubes</i>
	15:00 ~ 15:20	<b>Prof. Youjun Deng</b> Texas A&M University, USA <i>Title: Selecting and Modifying Smectites for Aflatoxin Detoxification</i>
	15:20 ~ 15:40	<b>Prof. Soo-Jin Choi</b> Seoul Women's University, Korea <i>Title: Toxicological effects of clay minerals vitro and in vivo</i>
	15:40 ~ 16:00	<b>Dr. Jui Chakraborty</b> Central Glass and Ceramic Research Institute, India <i>Title: Anionic nanoclay in drug delivery: what's in fate?</i>
<b>Closing</b>	16:00 ~ 16:10	<b>Prof. Jin-Ho Choy</b> Center for Intelligent Nano Bio Materials / Ewha Womans University
<b>POSTER Session</b>	16:10 ~ 17:30	<b>Poster Presentation</b>
<b>Dinner</b>	17:30 ~	<b>BANQUET</b>

# Registration

## Registration Desk-On-Site Information

Person who participates in the conference on the day, Please find the registration desk which will be located in the LG Convention Hall in Ewha Womans University. The staff will serve for queries and late registrations.

## Registration

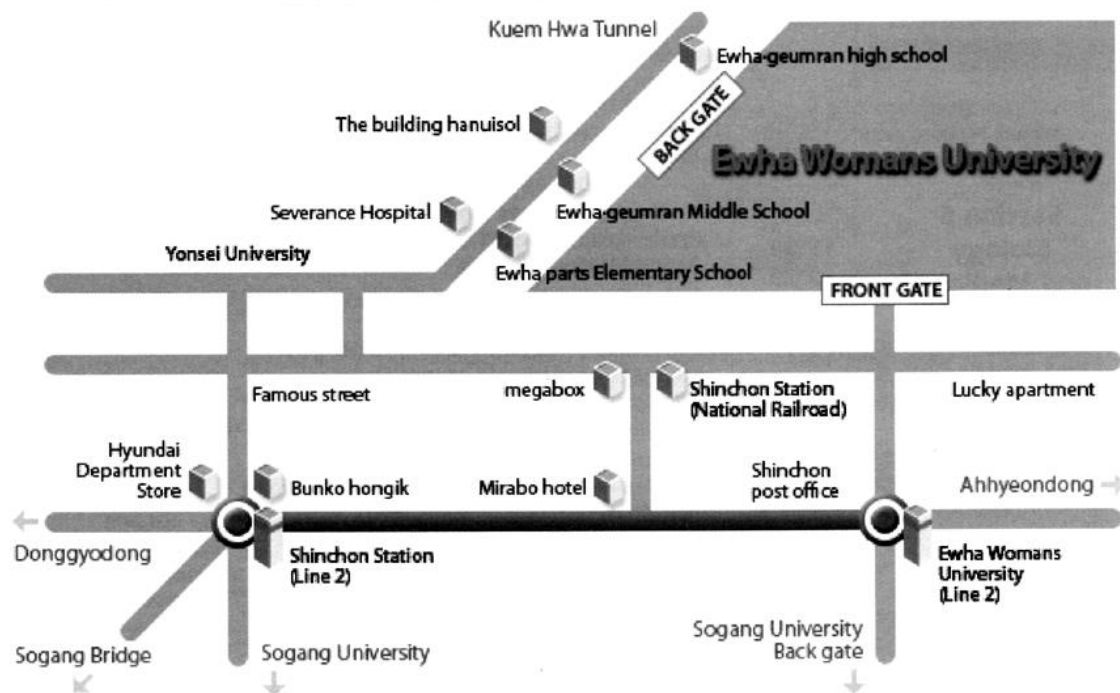
Registration fee for Participants includes access and availability to

- Admission to the Exhibition
- Admission to All Scientific Sessions
- Conference Materials
- Coffee and some cookies
- Lunch on 7th September
- Banquet on 7th September
- Small souvenirs

# Venue

## 1) Conference Place

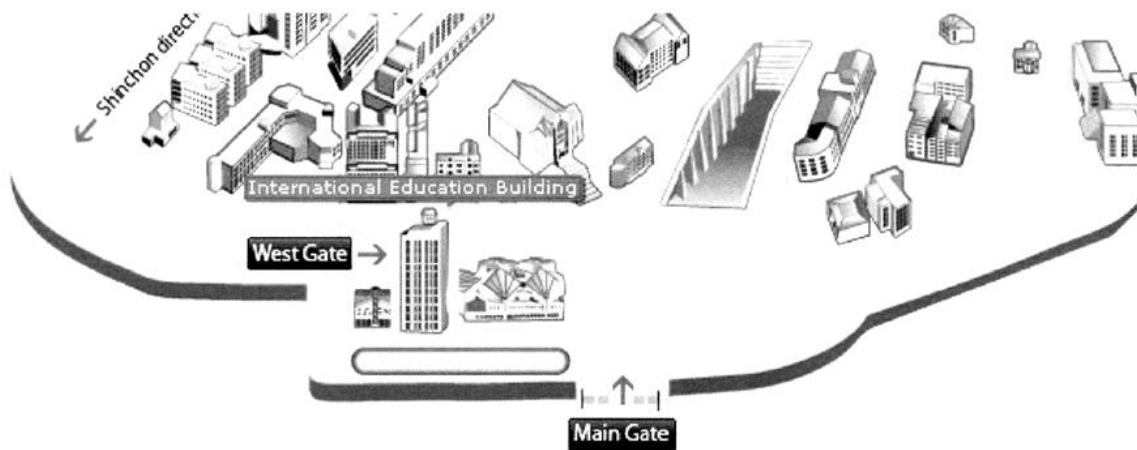
LG Convention Hall, International Education Building, Ewha Womans University, Seoul, Korea



Ewha Womans University by subway

### Floor B1 LG Convention Hall in International Education Building

International Education Building has two lower level with 14 higher level with International conference hall, Interpretation room, Translation room and Seminar rooms with world best qualities to upbring the International experts and design industry. It is perfect place to hold conferences and events. It provides pleasant rooms and clean facilities. The conference will be held B1 at International Education Building.



International Education Building from the Main Gate

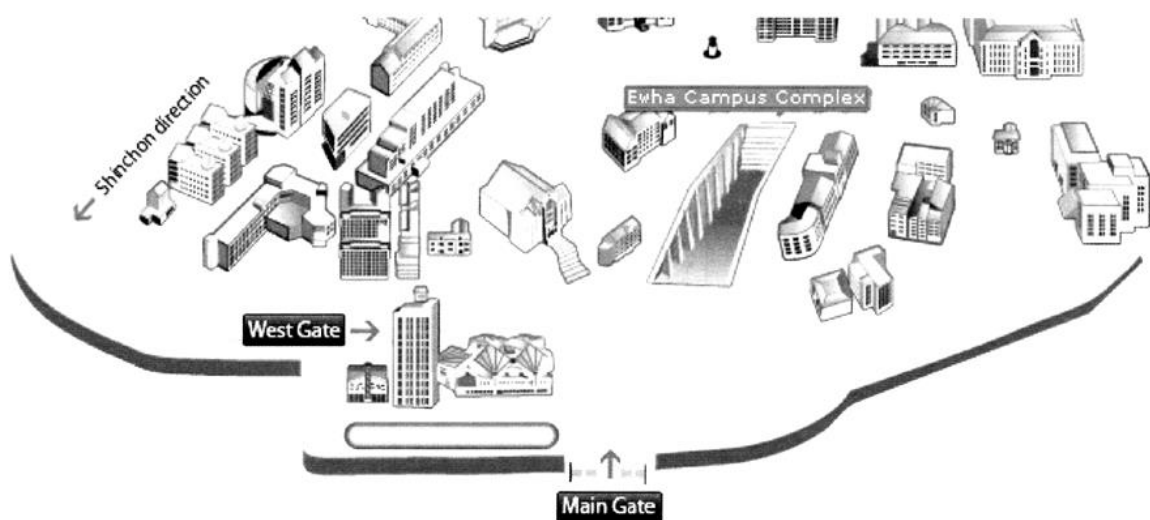


International Education Building



Ewha Womans University

### 2) Poster Presentation & Reception Place



Ewha Campus Complex (ECC)