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NANO KOREA 2008

THE 6TH INTERNATIONAL NANOTECH SYMPOSIUM & EXHIBITION IN KOREA

*Nanotechnology
for the Sustainable World*

Aug 27 (wed.) - **29** (fri.) / 3days
KINTEX, Ilsan, Korea

Host

Ministry of Education, Science and Technology(MEST)
Ministry of Knowledge Economy(MKE)

Organizer

Nano Technology Research Association(NTRA)
Korea Nano Technology Research Society(KoNTRS)
Korea Institute of Science Technology Information(KISTI)

Support

GYEONGGIDO
The Electronic Times
KSF(Korea Science Foundation)

www.nanokorea.or.kr



INVITATION

It is our great pleasure that we invite you to attend NANO KOREA 2008 at KINTEX, Korea from August 27-29, 2008.

NANO KOREA Symposium is an annual international event along with NANO KOREA Exhibition hosted by both Ministry of Education, Science and Technology(MEST) and Ministry of Knowledge Economy(MKE).

The slogan of NANO KOREA 2008 is "Nanotechnology for the Sustainable World." Under this year's slogan, we prepared 7 main sessions, which cover nanoelectronics, nanomaterials, nano tools & manufacturing, nano analysis & computational modeling, nanotechnology for ecology & foods, nano medicine and energy nanomaterials, and other profitable sessions like public session, special session, panel discussion, and education program for juveniles.

All symposium session will provide the opportunity to follow up the current studies on nanotechnologies on various field and we hope NANO KOREA 2008 will be the place for the interchange of scientific studies which will contribute to the consistent development of human being between scientists.

All Symposium Committee are looking forward to seeing you this August at NANO KOREA 2008 Symposium and Exhibition.

Jo-Won Lee

Chair Symposium Committee

Director, The National Program for Tera-level Nanodevices

COMMITTEE

Symposium Steering Committee	Chair	Jo-Won Lee/ The National Program for Tera-level Nanodevices
		Sang Hee Suh/ Center for Nanostructured Materials Technology
		Young-Joon Park/ Seoul National University
		Sang Rok Lee/ Center for Nanoscale Mechatron
		Chang Kyung Kim/ Hanyang University
		Joon Won Park/ POSTECH
		Seunghun Hong/ Seoul National University
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		Shinill Kang/ Yonsei University
		Doo Sun Choi/ Korea Institute of Machinery Materials
		Yong-Jin Cho/ Korea Food Research Institute
		Dong Jin Suh/ KIST
		In-Hoo Kim/ National Cancer Center
		Kyu Back Lee/ Korea University
		Sung Hwan Lee/ Hanyang University
		Tae Hwan Yeu/ Chung-Ang University
		Se-Jong Kahng/ Korea University
		Hyung Joon Choi/ Yonsei University
		Dae Sup So/ KISTI
		Won Bae Ko/ Sahmyook University
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		Jungil Lee/ KIST
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		Hyun Sik Cheong/ Sogang University
		Il-Ki Han/ KIST
		Joo Yull Rhee/ Sungkyunkwan University
Secretary		Jang-Jae Il/ Hanyang University

NANO KOREA 2008

SYMPOSIUM SPEAKERS



Teruo Kishi/ NIMS



Dongwha Kum/ KIST

NANO KOREA 2008 Keynote Address

	Time	Location	Speaker	Affiliation	Title
I	27(Wed) 13:40-14:30	212	Teruo Kishi	NIMS	Japan R&D Strategy for Nanotechnology / Materials and NIMS Activity
II	27(Wed) 14:30-15:20	212	Dongwha Kum	KIST	New Horizon over the Micron-technology Industries

☞ "August 27 (Wed)"

Location	Time	Speaker	Affiliation	Title
2F	09:30-10:00			Registration
1F	11:30-13:30			Opening Ceremony / NANOKOREA Awards
Room 212	13:40-14:30			Keynote Address I
Room 212	14:30-15:20			Keynote Address II
Nano Analysis & Computational Modeling				Chair: Se-Jong Kahng/ Korea University Hyung Joon Choi/ Yonsei University
Room 207	10:00-10:45	Kwang-Ryeol Lee	KIST	Molecular dynamics simulation of the atomic scale structure evolution of thin multilayers and surfaces
	10:45-11:30	Geunseop Lee	Inha University	Self-organization of molecules on metal / Si(111) surfaces
	15:30-16:15	Hanchul Kim	Sookmyung Women's University	Revisiting the dimerized Si(001) surface: nature of intrinsic point defects and molecular adsorption features
	16:15-17:00	Steven G. Louie	Univ. of California	Novel Electronic and Optical Properties of Carbon Nanostructures: Tubes, Sheets, Ribbons, and Superlattices
	17:00-17:45	Chang Young Kim	Yonsei University	Effect of Linear Density of States on the Quasiparticle Dynamics and Small Electron-Phonon Coupling in Graphite
Nano Tools and Manufacturing				Chair: Shinill Kang/ Yonsei University Doo Sun Choi/ Korea Institute of Machinery Materials
Room 208	10:00-10:45	Hyuk Kim	Samsung Electronics	Mechatronics and Manufacturing Technology for Printable Electronics
	10:45-11:30	Yeong-Eun Yoo	KIMM	Injection Molding of Nano Structured Plate And Measurement of Its Surface Properties
	15:30-16:15	Hiroshi Ito	Yamagata University	Polymer Structure and Properties in Micro- and Nano-Molding Process
	16:15-17:00	Myung Yung Jeong	Pusan National University	An Imprinted Optical Device and Its Reliability
	17:00-17:45	Jin-Hong Kim	LG Elite	Nanoscale Patterning and Operating Technologies in Optical Data Storage
Nano Materials				Chair: Soon Hyung Hong/ KAIST Myung Mo Sung/ Hanyang University
Room 209	10:00-10:45	Yoshio Bando	NIMS	Novel Inorganic Nanotubes and Nanowires
	10:45-11:30	Youngjong Kang	Hanyang University	Polymeric Photonic Materials
	15:30-16:15	Kilwon Cho	POSTECH	Managing Morphology and Structure Development of Inkjet-Printed Organic Semiconductors for High-Performance Organic Transistors
	16:15-17:00	Soon Hyung Hong	KAIST	Fabrication Processes and Multi-functional Properties of CNT/Inorganic Nanocomposites
	17:00-17:45	Sang Ho Kim	LG Chem.	Material Issues in Printed Electronics: A new conductive material based on Cu nanoparticles
Nano Electronics				Chair: Kwang Seok Seo/ Seoul National University Byung-Gook Park/ Seoul National University
Room 211	10:00-10:45	Kyoungheon Yang	KAIST	Practical Application of Quantum-effect device technology : Resonant Tunneling Diode
	10:45-11:30	Shunri Oda	Tokyo Inst. Of Tech.	Silicon quantum dots: the future of electronics and photonics?
	15:30-16:15	Yoonjong Park	SAIT	Architectural Innovation for nanoelectronic devices
	16:15-17:00	Seong Jun Kang	KRISS	Printed High Performance Flexible Carbon Nanotube Electronics
	17:00-17:45	Doyeol Ahn	University of Seoul	General two-qubit quantum gate with all electrically controlled intervalley polarized states of Si quantum dots
G.B	18:00-20:00			NANO KOREA 2008 Reception

☞ "August 28 (Thu)"

Location	Time	Speaker	Affiliation	Title
2F	09:30-10:00			Registration
Room 212	14:00-14:50			Plenary Speech I
Room 212	14:50-15:40			Plenary Speech II
Nano Medicine				Chair: In-Hoo Kim/ National Cancer Center Kyu Back Lee/ Korea University
Room 208	10:00-10:45	Jin-Suck Suh	Yonsei University	Promise of Personalized Medicine with Development of Theragnostic MR Molecular Imaging Agents
	10:45-11:30	Yoon-Kyoung Cho	UNIST	Centrifugal Microfluidics for Biomedical Application
	11:30-12:15	Sangyong Jon	GIST	Multifunctional Superparamagnetic Iron Oxide Nanoparticles for Combined Cancer Imaging and Therapy in Vivo
	12:15-14:00			Lunch & Poster Presentation
	16:00-16:45	Omid C. Farokhzad	Harvard University	To Be Announced
	16:45-17:30	Gilson Khang	Chonbuk National University	Natural / Synthetic Nanohybrid Scaffolds for Tissue Regeneration
	17:30-18:15	Kyu Back Lee	Korea University	Cellular Behaviors on Nanostructured Surfaces and the Possible Mechanism

NANO KOREA 2008

SYMPOSIUM SPEAKERS



Pallab K. Bhattacharya
/ University of Michigan



Yoshiyasu Itoh
/ Toshiba

NANO KOREA 2008 Plenary Speech

	Time	Location	Speaker	Affiliation	Title
I	28(Thu) 14:00-14:50	212	Pallab K. Bhattacharya	University of Michigan	High-Performance Quantum Dot Lasers and Spin VCSELS
II	28(Thu) 14:50-15:40	212	Yoshiyasu Itoh	Toshiba	Nanotechnology for Energy Innovation

Location	Time	Speaker	Affiliation	Title
Energy Nanomaterials				Chair: Sung Hwan Lee/ Hanyang University Tae Hwan Yeu/ Chung-Ang University
Room 209	10:00-10:45	Dong Hwan Kim	Korea University	Status and Prospect of Photovoltaic Industry and Technology Development
	10:45-11:30	I.M.Dharmadasa	Sheffield Hallam University	Latest Developments in Thin Film PV Solar Cells
	11:30-12:15	Kwang Bum Kim	Yonsei University	Metal Oxide/Carbon Nanocomposite Materials for Electrochemical Capacitors Applications
	12:15-14:00			Lunch & Poster Presentation
	16:00-16:45	Suk Woo Nam	KIST	To Be Announced
	16:45-17:30			To Be Announced
Nanotechnology for Ecology and Foods				Chair: Yong-Jin Cho/ Korea Food Research Institute Dong Jin Suh/ KIST
Room 211	10:00-10:45	Bosoon Park	USDA ARS	Nanobiosensor for Foodborne Pathogenic Bacteria Detection
	10:45-11:30	Dae Young Kwon	KFRI	Nanotechnology in Food Science
	11:30-12:15	Wonyong Choi	POSTECH	Utilization of Photoactive Metal Oxides for Eco-friendly Technologies
	12:15-14:00			Lunch & Poster Presentation
	16:00-16:45	Young Moo Lee	Hanyang University	Polymer Membranes with Cavities Tuned for Fast, Selective Transport of Small Molecules including Carbon Dioxide
	16:45-17:30	Jongheop Yi	Seoul National University	Development of the Highly Sensitive NanoBio Sensors for the Environmental and Bio/Medical Monitoring Systems
Nano Education Program				Chair: Won Bae Ko/ Samyook Univeristy
Room 207	14:00-17:30	Sang-il Park	Park Systems	Nano world and Atomic Force Microscope
Room 212	12:15-14:00	Panel Discussion		Chair: Joon Won Park/ POSTECH
Room 213	10:00-16:00	IVAM Microtechnology Network, Korea Advanced Nano Fab Center (KANC)		Micro / Nano Business Workshop
Room 212	17:30-18:00	Best Poster Awards		

☞ "August 29 (Fri)

Location	Time	Speaker	Affiliation	Title
2F	09:30-10:00			Registration
Special Session - EHS(Environment, Health & Safety)				Chair: Jungil Lee/ KIST Il Je Yu/ Korea Environment & Merchandise Testing Institute
Room 209	14:00-14:45	Il Je YuK	EMTI	Toxicity and exposure assessment of Nanomaterials
	14:45-15:30	Kyung Hui Oh	KATS	Standardization Activites of Nanotechnologies in Korea
	15:30-16:15	Kyunghee Choi	NIER	Current Status and Perspectives of Nanosafety Research in Ministry of Environment, Korea
	16:15-17:00	Jayoung Jeong	KFDA	Establishment of Testing Approaches for Assessing Safety and Regulatory Policy Issues for NanoBio Products
Special Session - NT workforce Training (Room 211)				Chair: Youngjin Choi/ Myongji Univeristy
Public Lectures				Chair: Dae Sup So/ KISTI
Room 211	10:00-11:00	Young-Rok Kim	Kyung Hee University	Nanotechnology in Food and Agriculture
	11:00-12:00	In-Hoo Kim	NCC	Cancer Conquest with Nanotechnology
Satellites Session				
Room 208	10:00-18:00	Nano Wires		The 9th Nanowire Research Society Meeting - Issues in Industrialization of Nano wires
Room 212	10:00-18:00	Microtech Committee		Microtech World 2008 Conference
Room 213	10:00-18:00	KIST-Saarland		KIST-Saarland Nanotechnology Symposium
Nano Education Program				Chair: Won Bae Ko/ Samyook Univeristy
Room 207	14:00-17:30	Jae Kwan Park	KIST	Story of Nanotechnology - Nanostructure in Nature

NANO KOREA 2008 SYMPOSIUM PROGRAM

Time	8/27 (Wed.)				Time	8/28 (Thu.)						Time	8/29 (Fri.)						
	211	209	208	207		213	212	211	209	208	207		213	212	211	209	208	207	
09:30 - 10:00	Registration				09:30 - 10:00	SS1 The 3rd Korea-Germany Nano Business Workshop		Registration				09:30 - 10:00	Registration						
10:00 - 10:45	Nano Electronics	Nano Materials	Nano Tools & Manufacturing	Nano Analysis & Computational Modeling	10:00 - 10:45			Nano technology for Ecology & Foods	Energy Nano Materials	Nano Medicine		10:00 - 11:00	SS2 KIST-Saarland Nanotechnology Seminar	SS3 MICRO TECH WORLD 2008	F. Public Lectures				
10:45 - 11:30					10:45 - 11:30							11:00 - 12:00							
11:30 - 13:30	Opening Ceremony / NANOKOREA Awards				11:30 - 12:15			Panel Discussion (212)				12:00 - 14:00			Lunch				
13:40 - 14:30	Keynote Address 1. Teruo Kishi / NIMS				12:15 - 14:00			Poster Presentation / Lunch				14:00 - 17:00			Social 1 NT Work force Training	Special 2 EHS	SS4 NANO WIRES	Nano Education Program	
14:30 - 15:20	Keynote Address 2. Dongwha Kum / KIST				14:00 - 14:50			Plenary Speech 1 Pallab K. Bhattacharya / Univ. of Michigan (212)											
15:30 - 16:15	Nano Electronics	Nano Materials	Nano Tools & Manufacturing	Nano Analysis & Computational Modeling	14:50 - 15:40			Plenary Speech 2 Yoshiyasu Ito / Toshiba (212)			17:00 -								
16:15 - 17:00					Break														
17:00 - 17:45					Nano technology for Ecology & Foods			Energy Nano Materials	Nano Medicine										
17:45 - 18:00	Best Poster Awards (212)																		
18:00 - 20:00	Reception																		

*The Programs may be changed *F : Free Admission *SS1-4 : Satellite Session

Panel Discussion

- The time with invited speakers to hear their opinions about the topics
- Sandwiches will be served to the attendees for the luncheon (only 100pcs), first-coming first-served.
- English-Korean simultaneous interpretation is provided.

= Topic for this session =

1. What is the SINGLE MOST IMPORTANT NANO-PRODUCT(or technology) in your field(energy, environment, etc) which will contribute in making our world more sustainable?
2. Please provide ONE POSITIVE and ONE NEGATIVE effect of nanotechnology on human life, which you think are most important.
3. What is the SINGLE MOST PROMISING NANO-RESEARCH are in your field which will contribute in making our world more sustainable?

Nano Education Program Aug 28(Thu.) ~ 29(Fri.)

- This is the free education program for middle and high school students.
- Date & Time : 28(Thu.) ~ 29(Fri.), 14:00~ 17:30
- Programs
 - 1) The lecture from the nanotechnology specialist.
 - 2) Watching moving film, making models, and experimenting on about Nanotechnology.
 - 3) Nano Book Review Contest - Award by Nano Korea 2008

Please visit the Nano Korea website(www.nanokorea.or.kr) for more information.

REGISTRATION

Individual Registration

Category	Regular	Student
Online registration	300,000 Won	50,000 Won
On-site registration	350,000 Won	80,000 Won

- Online registration will be end on Aug. 11 2008 at website www.nanokorea.or.kr
- Regular registration fee includes symposium proceedings, lunch and parking ticket.
- Student registration fee includes symposium proceedings and lunch.
- 25% discount of registration fee for KoNTRS and NTRA members.
- Public lecture is open for everyone free of charge.
- Free exhibition ticket is granted for registered participants.

The official language of the symposium is English, simultaneous interpretation into Korean will be provided only for Opening ceremony, Keynote Addresses(Aug.27) and Panel Discussion(Aug.28).

EXHIBITION

For FREE Admission register On-line (www.nanokorea.or.kr)
Due-date: August 22

NANO/MICRO Technology Exhibition held under 1 roof !

NANO KOREA 2008 (6th International Nanotech Exhibition in Korea)

Microtech World (International Microtech/MEMS Exhibition & Conference)

Venue KINTEX Hall 4 (10,377m²)

Scale 200 companies 330 Booths from 10 Countries.

Visitors 8,000(Expected) from 35 countries.

R&BD Seminar (Research & Business Development)

- Nano/Micro Technology Transfer Market
- Nano/Micro Products and Technologies Presentation

Exhibit Categories

NANO KOREA 2008	Microtech World
Nano Devices	MEMS(Micro System)
Nano Materials	Micro Materials
Nano Biotechnology	Micro-Applications
Evaluation & Measurement	Evaluation & Measurement
Life & Energy	Fine Processing

VENUE

Venue KINTEX, Goyang, Gyeonggi-do



Transpostation

By Airport Limousine

Embarkation Points

Incheon International Airport Express Way

⇄ Gimpo International Airport ⇄ KINTEX

⇄ Pung-dong ⇄ Uijeongbu Station

Intervals 15~20 minute

Travel Times 70~75 minute

Trapostation fare Uijeongbu 11,000won / KINTEX 8,000won

By Subway

The closest subway station Daehwa Station(Orange Line, Line 3)

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