



6<sup>th</sup>



# International Conference on Isotopes

May 12-16, 2008

Sheraton Grande Walkerhill Hotel  
Seoul, Korea

*Global Wellbeing with Isotopes*

## Host Organization

Ministry of Education, Science & Technology



The Korea Radioisotope Association

## Supporting Organization



International Atomic Energy Agency



Japan Radioisotope Association



China Isotope and Radiation Association



Chinese Nuclear Society



## Ventilated Protection Suit

Anti-Contamination...

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## Foreword



On behalf of the program committee of the 6<sup>th</sup> International Conference on Isotopes (ICI), we welcome you all to Seoul, our most dynamic center for education, cultural and economic activities of Korea.



The conference will provide a warm yet exciting venue and opportunity for our colleagues and associates from all over the world to meet and exchange stimulating ideas and invoke new scientific thoughts. We would like to acknowledge each of the attendees for your participation in this meeting. We hope that each of you will come out of this scientific meeting with greater interest and appreciation on the possibilities of radioisotopes and its applications and contribute to further promotion of the use of isotopes worldwide.

The 6<sup>th</sup> ICI, as the premier international conference for isotopes and its applications, integrated a wide spectrum of new scientific topics with emphasis on the production, utilization, safety of radiation technology and its fusion technologies that aims to improve the quality of life. We believe that this conference has unlimited capacity to bring out the best of from everybody present. We hope we can move forward with what we will achieve during the conference.

We are particularly grateful to all the members of the Scientific Program Committee for dedicating their time and effort to come up with such an intensive program which includes 9 outstanding plenary speakers, 14 special sessions and more than 24 scientific sessions in addition to exhibitions from various companies. Enjoy the conference and enjoy Seoul! We hope you bring the memories of Korean warmth and friendship to your home.



Young-Jin Kim  
Scientific Program Committee, Chairman



Byung-Jin Jun  
Scientific Program Committee, Chairman



## Organizations

### Scientific Program Committee

Chairmen	Young Jin Kim		
	Byung-Jin Jun		
Vice Chairman	Hee-Seung Bom		
Members	Jong Sung Ahn	Hyon-Soo Han	Sang Hoon Lee
	Myung-Woo Byun	Moon-Hee Han	Young-Khi Lim
	Gi-Jeong Cheon	Jae Min Jeong	Seong Ho Na
	Hee Dong Choi	Gwang Tae Joo	Hee Myong Ro
	Ho Shin Choi	Si-Yong Kang	Yeon-Suk Yun
	Sun-Ju Choi	Chan Hyung Kim	

### International Monitoring and Steering Committee

Chang Sun Kang (Korea) / Chairman	Zhifu Luo (China)
Henri Bonet (Belgium)	Renata Mikolajczak (Poland)
Valentine D. Borisevich (Russia)	Shigenobu Nagataki (Japan)
Carlo R. Chemaly (France)	Timothy Payne (Australia)
Kun-Woo Cho (Korea)	Luiz Carlos R. Pessenda (Brasil)
Paganelli Giovanni (Italy)	Natesan Ramamoorthy (IAEA)
Gyöző Janoki (Hungary)	Gursharan Singh (India)
Jong Kyung Kim (Korea)	Pius August Schubiger (Swiss)
Jerry A. Klein (USA)	Nigel R. Stevenson (USA)
Dewi M. Lewis (UK)	Van Zyl de Villiers (South Africa)
Myung-Chul Lee (Korea)	

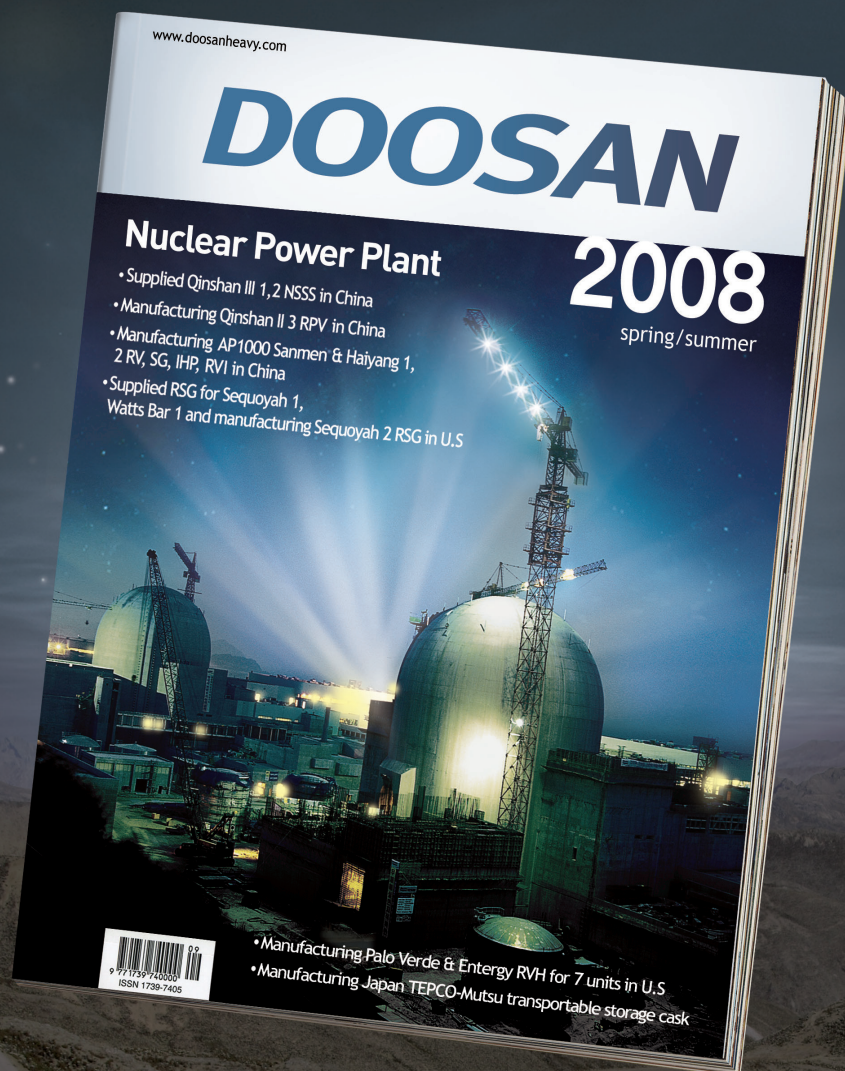
### International Scientific Program Committee

Chairman	Kyung Bae Park (Korea)	
Vice Chairman	J.M. Sung Il Park (Korea)	
Members	Nagara Tamaki (Japan)	Barry J. Allen (Australia)
	Ashutosh Dash (India)	Yuri Toprov (Russia)
	Marco Chinol (Italy)	Ken Lawrie (UK)
	Jan-Rijin Zeevaart (South Africa)	Furn F. Knapp (USA)
	Marcela Zubillaga (Argentina)	June-Key Chung (Korea)

### Special Session Coordinators

Jeong-Geun Ahn	Kwang-Seop Choi	Phil-Hyun Kang	Young-Khi Lim
Hee-Seung Bom	Sun-Ju Choi	Jin-Kyu Kim	Seon-Young Nam
Darren Brown	Hyon-Soo Han	Chang-Ho Kim	Young-Chang Nho
Jong-Seo Chai	Moon-Hee Han	Cheol-Jung Kim	Kyung-Woon Noh
Gi-Jeong Cheon	Nam Ho	Chong-Soon Kim	Heon-Joo Park
Kun-Woo Cho	Sung-Youp Jeon	Sang-Eun Kim	Hee Myong Ro
Woon-Kap Cho	Young-Woo Jin	Young-Jin Kim	Gary Rotert
Byung-Ho Choi	Byeong Jin Jun	In-Won Lee	Gwang-Min Sun
Chang-Woon Choi	Keon-Wook Kang	Su-Jae Lee	Seung-Dae Yang





## Global Champion in Major Nuclear Component Manufacturing!

Doosan is Korea's only company that specializes in NSSS for nuclear power plants with the highest level of technology. With its NSSS production lines and management systems for design, material, manufacturing, construction, testing, services, maintenance and repair, Doosan is strengthening its position as a leading provider of nuclear power systems. Since supplying NSSS for Yonggwang Nuclear Power Plant 1 & 2, Doosan has so far supplied a total of 15 nuclear power plants domestically while six more are currently under construction. Doosan is also well recognized for its successful overseas projects such as Qinshan III 1, 2 NSSS, Sequoyah #1 & Watts Bar #1 RSG, and our on going projects include Sanmen & Haiyang #1 AP1000, Palo Verde #1, 2, 3 RVH & CEDM, Sequoyah #2 RSG. Doosan also devotes to developing solutions for next generation reactors, nuclear waste solutions and other R&D programs including fully digitalized I&C system.



Doosan Heavy Industries & Construction

[www.doosanheavy.com](http://www.doosanheavy.com)



## Conference Schedule

Date	May 12 Monday	May 13 Tuesday	May 14 Wednesday	May 15 Thursday	May 16 Friday
07:00					
08:00					
09:00		Keynote Lecture (09:00-10:30)	Plenary Lecture 1 (08:30-10:00)	Plenary Lecture 2 (08:30-10:00)	Plenary Lecture 3 (08:30-10:00)
10:00		Coffee Break (30')	Coffee Break (15')	Coffee Break (15')	Coffee Break (15')
11:00		Opening Ceremony (11:00-12:00)	ST 1-3 ST 2-2 ST 3-3 SS 5 SS 6	ST 4-2 ST 4-3 ST 3-4 SS 9 SS 10	ST 4-5 ST 4-6 ST 7-2 SS 13
12:00		Lunch (12:00-13:30)	Lunch (12:15-13:30)	Lunch (12:15-13:30)	Lunch (12:15-13:30)
13:00	Registration	PS 1 (TR1) Exhibition	PS 3 (TR3) Exhibition	PS 5 (TR5, 6, 7) Exhibition	Exhibition
14:00	SS 1-1	ST 1-1 ST 2-1 ST 3-1 SS 2 SS 3	ST 1-4 ST 5-1 ST 5-2 SS 7	ST 4-4 ST 5-3 ST 3-5 SS 11 SS 12	ST 6-1 ST 6-2 ST 7-3 SS 14
15:00		Coffee Break (30')	Coffee Break (30')		Break (15')
16:00		ST 1-2 ST 4-1 ST 3-2 SS 4 SS 15	ST 7-1 SS 8		Closing Ceremony (15:45-16:45)
17:00				Conference Banquet (18:30-20:30)	
18:00	Welcome Reception (18:00-20:00)				
19:00					
20:00					
21:00					

ST: Scientific Track  
SS: Special Session  
PS: Poster Session



# 사단 법인 원자력응용의학진흥협회

## Korean Association for Nuclear Medicine Promotion

### Objectives

The Korean Association for Nuclear Medicine Promotion has been established in compliance with the Public Corporation Establishment / Operation Act to promote nuclear medicine by supporting the development of applied atomic medicine and the International Nuclear Medicine Association, to encourage members' mutual cooperation and to protect their rights.

### Description

1. Supports cooperation of Korea's nuclear medicine organizations
2. Supports international collaboration and development of nuclear medicine in underdeveloped countries
3. Organically related to the Korean Government, members, and related societies/organizations
4. Promotes nuclear medicine in underdeveloped countries  
(Asian Regional Cooperative Council for Nuclear Medicine)
5. Promotes nuclear medicine in Korea
6. Educates/trains leadership
7. Hosts Nuclear Medicine forums

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## Scientific Program at a Glance

	May 13 Tuesday	May 14 Wednesday	May 15 Thursday	May 16 Friday
09:00		Plenary Lecture 1 Production and Transmutation (08:30-10:00)	Plenary Lecture 2 Medical Applications (08:30-10:00)	Plenary Lecture 3 Non-Medical Applications (08:30-10:00)
10:00	Keynote Lecture (09:00-10:30)	Coffee Break (10:00-10:15)	Coffee Break (10:00-10:15)	Coffee Break (10:00-10:15)
11:00	Coffee Break (10:30-11:00)	ST1-3 Accelerator based isotope production/Physical Measurement	ST4-2 NDT and Gauging	ST4-5 Radiation Applications
12:00	Opening Ceremony (11:00-12:00)	ST2-2 Metal Compounds, Stable Isotopes and Others	ST4-3 Measurement of Radiation and Radioactivity	ST4-6 Tracers
13:00	Lunch (12:00-13:30)	ST3-3 Medical isotope application in general, Molecular Imaging	ST3-4 Positron Emission Tomography	ST7-2 Regulatory Issues, Shipping and Transportation Issues
14:00	ST1-1 Isotope Production Technology, in general/Isotope Program	ST1-4 Stable Isotope Production	ST4-4 Radiation Applications	ST6-1 Food Biotechnology, Mutation breeding
15:00	ST2-1 Hydrogen and Carbon Compounds, PET Compounds	ST5-1 Dating and Environmental Analysis	ST5-3 Radioactivity in the Environment	ST6-2 Radiogenomics & Agrochemis-try
16:00	ST3-1 BNCT, Radioimmunoassay, Radionuclide therapy, Brachytherapy, Dosimetry	ST5-2 Environmental Recovery	ST3-5 Radionuclide Therapy	ST7-3 NPPs ALARA Issues
17:00	ST1-2 Reactor Based Isotope Production	ST4-1 Measurement of Radiation and Radioactivity		Break (15:30-15:45)
18:00	ST3-2 Positron emission tomography, Medical isotope Applications in General	ST7-1 Isotope and Radiation Safety, Radiation Effect, Management, Decontamination	- ST : Scientific Track - PS : Poster Session	

## Keynote / Plenary Lectures

### Keynote Lecture

**09:00-10:30, Tuesday, May 13**



#### **KL1-1 Making Research Reactors Work - Using Isotopes Commercially and Scientifically**

Greg Storr, *Australia*

General Manager, Reactor Operations

Australian Nuclear Science and Technology Organisation (ANSTO)



#### **KL1-2 Remote and Continuous Gamma Spectrometry for Environmental Radiation Protection: State of the Art Technology and Applications**

Henri Bonet, *Belgium*

General Manager

Institute National Des Radioelements (I.R.E.)



#### **KL1-3 National Strategies for the Promotion of Radiation Technology in Korea**

Jong Kyung Kim, *Republic of Korea*

Professor, Department of Nuclear Engineering,  
Hanyang University

### Plenary Lectures

#### **PL1: Production and Transmutation**

**(08:30-10:00, Wednesday, May 14)**



#### **PL1-1 The Important Role of Research Reactors for the Production of Therapeutic Radioisotopes**

Russ Knapp, *USA*

Nuclear Medicine Program, Oak Ridge National Laboratory (ORNL)



#### **PL1-2 Radioisotope Requirements for Medical and Industrial Uses and the IAEA's Contributions**

Natesan Ramamoorthy, *IAEA*

Division of Physical and Chemical Sciences

Department of Nuclear Sciences and Applications



#### **PL1-3 Trends in Radioisotope Production and Supply**

Van Zyl de Villiers, *South Africa*

Research and Development Division, Necsa

## PL2: Medical Applications

(08:30–10:00, Thursday, May 15)



### PL2-1 Isotope Application in Cancer Therapy

Marco Chinol, *Italy*

Chief Radiochemist, European Institute of Oncology



### PL2-2 Clinical Trials of Targeted Alpha Therapy with Bi-213 for Metastatic Melanoma

Barry J. Allen, *Australia*

Centre for Experimental Radiation Oncology

St George Hospital Cancer Care Centre and Clinical School, University NSW



### PL2-3 The System to Promote the Utilization of Radioisotopes and to Secure Their Safety in Japan: Introduction of Japan Radioisotope Association

Shigenobu Nagataki, *Japan*

Japan Radioisotope Association

## PL3: Non-Medical Applications

(08:30–10:00, Friday, May 16)



### PL3-1 Applications of Radioisotope and Nucleonic Control Systems in Indian Industry

Gursharan Singh, *India*

Head, Isotope Applications Division, Bhabha Atomic Research Centre



### PL3-2 Application of Radiation in Biotechnology in Korea

Sung-Kee Jo, *Republic of Korea*

Director of Radiation Research Center for Biotechnology

Advanced Radiation Technology Institute



### PL3-3 The Current Status and Future of Radioisotopes in China

Jhang Jin Rong, *China*

China Institute of Atomic Energy