

# The 2<sup>nd</sup> Symposium for A3 Foresight Program

*July 12-13, 2018*

*Science Building D, Room B101, College of Natural Science,  
Ewha Womans University, Korea*



**Hosted and Supervised by** Center for Intelligent Nano-Bio Materials (CINBM),  
Department of Chemistry and Nano Science,  
Ewha Womans University

**Supported by** NRF Korea (A3 Foresight Program) and Ewha Womans University

**The 2<sup>nd</sup> Symposium for  
A3 Foresight Program on  
Organic/Inorganic Nanohybrid Platforms for  
Precision Tumor Imaging and Therapy  
at the Center for Intelligent Nano-Bio Materials (CINBM),  
Ewha Womans University, Seoul, Korea**



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## Welcoming Address

July 12, 2018

It is my great pleasure to welcome you to “The 2nd Symposium for A3 Foresight Program” in Ewha Womans University. Taking this opportunity, I would like to express my sincere appreciation for your interest and participation in this 2nd Symposium for A3 Foresight Program.

And I am also deeply grateful to the National Research Foundation (NRF) of Korea, and Ewha Womans University for their contributions towards supporting this conference, which make us possible to gather here to present papers, discuss subjects of mutual research interests, and exchange research ideas and strategies for the future.

As you already know, this symposium began last year, for the first time, in Osaka by Prof. Suganuma not only for developing research collaboration on organic-inorganic nanohybrids for theranostic applications, particularly for precision tumor imaging and therapy, but also for exchanging young scientists and students among three countries (China, Japan and Korea) to learn more about a cutting edge technology in this convergence research field.

In the present 2nd symposium, various hybrid materials will be discussed in terms of their therapeutic and diagnostic functions, since precision theranostics for tumor becomes more and more important in the view point of health and welfare of human beings.

As well described in the program booklet, this 2nd Symposium for A3 Foresight Program with the main theme, “Organic/Inorganic Nanohybrid Platforms for Precision Tumor Imaging and Therapy”, is composed of totally 32 oral presentations, 2 keynote and 11 invited lectures, and 19 oral presentations for two days.

I am sure that all the lectures and poster presentations at this symposium are immensely inspirational to all the participating scientists and students, those who are involved in this emerging science and technological research field like nanomedicine.

Finally I'd like to express my thanks again to all the guests from China, Japan, Taiwan, Thailand, and Korea including my colleagues from Ewha. And I also want to thank all the graduate students of my laboratory, who handled many complicated managing problems nicely with passion and patience.

Once again, I do thank you for your participation in this 2nd Symposium for A3 Foresight Program, and I really wish all the foreign guests enjoy the seminar, the hospitality of heart-warming Korean friends, and the delicious season's food.

Thank you.

A handwritten signature in black ink, reading "Jin-Ho Choy". The signature is written in a cursive, flowing style. Below the signature is a horizontal line.

**Prof. Jin-Ho Choy, Organizing Chair  
Center for Intelligent Nano-Bio Materials (CINBM)  
Department of Chemistry and Nano Science  
Ewha Womans University**

## Program

Day one 2018. 07. 12 (Thu)				
10:00 - 12:00	Registration			
12:00 - 13:00	Lunch			
Chair: Prof. Jin-Ho Choy      Time keeper: Ji-Hee Lee				
13:00 - 13:10 (10 min)	Welcoming Address	Ewha Womans University	Prof. Jin-Ho Choy	
13:10 - 13:40 (30 min)	Albumin-Based Boron Delivery to Tumor on BNCT	Tokyo Institute of Technology	Prof. Hiroyuki Nakamura	Keynote Lecture
Chair: Prof. Byeongmoon Jeong      Time keeper: Hyeon-Ju Ryu				
13:40 - 14:05 (25 min)	Inorganic Nanomaterials for Theranostics	Donghua University	Prof. Xiangyang Shi	IL-01
14:05 - 14:30 (25 min)	Interconnection Materials for Advanced Electronics	Osaka University	Prof. Katsuaki Suganuma	IL-02
14:30 - 14:55 (25 min)	Nanostructured Phthalocyanine Assemblies as Activatable Photosensitizers	Ewha Womans University	Prof. Juyoung Yoon	IL-03
14:55 - 15:20 (25 min)	Gel-Sol Method: Preparation of Monodispersed Fine Particles	Tohoku University	Prof. Atsushi Muramatsu	IL-04
15:20 - 15:40	Coffee break			
Chair: Prof. Juyoung Yoon      Time keeper: Ji-Yeong Kim				
15:40 - 16:05 (25 min)	Composite Hydrogel as an Effective Niche for Stem Cells	Ewha Womans University	Prof. Byeongmoon Jeong	IL-05
16:05 - 16:30 (25min)	Nanogels as Platforms for Tumor Imaging and Photothermal Therapy	Donghua University	Prof. Mingwu Shen	IL-06
16:30 - 16:55 (25 min)	Copper and Tin Fine Particle Systems	Hokkaido University	Prof. Tetsu Yonezawa	IL-07
16:55 - 17:20 (25 min)	Simple-assembly, Implantable Pump Enabled with Batteryless Actuation for On-demand, Pulsatile Insulin Administration	Seoul National University	Prof. Young Bin Choy	IL-08
17:20 - 17:45 (25 min)	Surface and Interface Properties of Polyelectrolyte Brushes	Kyushu University	Prof. Atsushi Takahara	IL-09
17:45 - 18:00	Closing Remarks and Photo	Ewha Womans University	Prof. Jin-Ho Choy	
18:30 - 20:00	Conference Dinner			

<b>Day Two 2018.07.13 (Fri)</b>				
09:00 ~	<b>Poster Presentation</b> * Posters should be mounted by 3:30 pm on July 12 (Thursday), and remained on the boards through July 13 (Friday). Poster speakers are required to be in front of their posters during the break for discussion and questions.			
09:00 - 09:05	Opening Remarks			
Chair : Prof. Makoto Ogawa      Time keeper: Huiyan Piao				
09:05 - 09:35 (30 min)	Soft Processing for 2D Materials	National Cheng Kung University	Prof. Masahiro Yoshimura	Keynote Lecture
Chair : Dr. Chen Peng      Time keeper: Huiyan Piao				
09:35 - 10:00 (25 min)	Host-Guest Chemistry of Nanospace Materials from Immobilization to Diffusion	Vidyasirimedhi Institute of Science and Technology	Prof. Makoto Ogawa	IL-10
10:00 - 10:25 (25 min)	Self-Organizing Organic-Inorganic Hybrid Dendrimers with a Monodispersed Functional Nano Dot: The Liquid-Crystalline Dynamic Functions	Tohoku University	Prof. Kiyoshi Kanie	IL-11
10:25 - 10:40 (15 min)	TiO <sub>2</sub> Nanoparticles for Co-catalyst Free Photocatalyst	Osaka University	Prof. Sung Hun Cho	OP-01
10:40 - 10:55 (15 min)	Boron Neutron Capture Therapy Assisted by Drug Delivery System	Ewha Womans University	Dr. Goeun Choi	OP-02
10:55 - 11:10 (15 min)	Biomimetic Catechol Bearing Macrophotoinitiator as a Versatile Platform for Surface-Initiated Polymerization on Metals	Kyushu University	Dr. Wei Ma	OP-03
Chair : Dr. Goeun Choi      Time keeper: Yi-Rong Pei				
11:10 - 11:25 (15 min)	Nanogel-laden stem cells for enhanced MR imaging of tumors	Donghua University	Dr. Xueyan Cao	OP-04
11:25 - 11:40 (15 min)	A Nearly-Perfect Ag Joints Prepared by Novel Ag to Ag Direct Bonding	Osaka University	Prof. Hao Zhang	OP-05
11:40 - 11:55 (15 min)	Redox Sensitive Clustered Ultrasmall Iron Oxide Nanoparticles for Activatable T <sub>1</sub> -T <sub>2</sub> -weighted Magnetic Resonance Imaging Applications	Donghua University	Dr. Chen Peng	OP-06
11:55 - 12:10 (15 min)	Stretchable Wirings Prepared with PU and Silver Flakes	Osaka University	Prof. Caifu Li	OP-07
Lunch				

Chair : Prof. Hao Zhang Time keeper: Ji-Yeong Kim				
Student's Oral Presentation I				
13:00 - 13:10 (10 min)	Surface-Initiated Polymerization of Magnetite Particles Controlled in Size and Morphology	Tohoku University	Chen Shen	SOP-01
13:10 - 13:20 (10 min)	Zwitterion-Functionalized Dendrimers for Gene Delivery to Inhibit Cancer Metastasis	Donghua University	Zhijuan Xiong	SOP-02
13:20 - 13:30 (10 min)	Near Infrared Light Irradiated Device Enabled with Pulsatile Drug Delivery	Ewha Womans University	Huiyan Piao	SOP-03
13:30 - 13:40 (10 min)	Thermal Shock Performance of DBA/DBC Substrates Plated by Ni and Ni-P Layers for High Temperature Applications of Power Device Modules	Osaka University	Chanyang Choe	SOP-04
13:40 - 13:50 (10 min)	Synthesis of Dendrimer-Pyridine-Copper(II) Complexes for Radiotherapy-Enhanced MR Imaging and Chemotherapy of Breast Cancer	Donghua University	Yu Fan	SOP-05
13:50 - 14:00 (10 min)	A First Synthesis of Fully Cationized Gold Clusters	Hokkaido University	Kunihiro Narita	SOP-06
Coffee break				
Chair : Prof. Caifu Li Time keeper: Ji-Hee Lee				
Student's Oral Presentation II				
14:15 - 14:25 (10 min)	Novel Antimalarial Drug- Layered Metal Hydroxide; Oral and Intravenous Routes	Ewha Womans University	Ji-Yeong Kim	SOP-07
14:25 - 14:35 (10 min)	Transparent Organic-Inorganic Hybrid Thin Film Fabricated by Layer-by-Layer Assembly of Phosphorylated Cellulose Nanocrystal and Imogolite Nanotubes	Kyushu University	Linlin Li	SOP-08
14:35 - 14:45 (10 min)	One Step Synthesis of Bimodal Cu Particles and Their Application in Die Bonding	Osaka University	Yue Gao	SOP-09
14:45 - 14:55 (10 min)	Novel Geopolymer Route to Porous Carbon as an Effective CO <sub>2</sub> Uptake Material	Ewha Womans University	Yi-Rong Pei	SOP-10
14:55 - 15:05 (10 min)	Heat-Resistant Die-Attach with Cold-Rolled Ag Sheet	Osaka University	Seungjun Noh	SOP-11
15:05 - 15:15 (10 min)	Ultrathin and Uniform Core-Shell Nanowires for High-Performance Transparent Conductive Electrodes Based on a Novel Coating Technology	Osaka University	Lingying Li	SOP-12

15:15 - 15:30	Award for Encouragement of Research in the 2nd Symposium for A3 Foresight Program		
15:30 - 15:40	Closing Remarks	Ewha Womans University	Prof. Jin-Ho Choy

### Poster Presentation

Presentation Code	Title & Authors
PP-01	<sup>64</sup> Cu-doped layered double hydroxide for <i>in-vivo</i> PET imaging <b><u>Sairan Eom</u></b> , Goeun Choi, Jin-Ho Choy*
PP-02	Enhanced mechanical and thermal property of EVA nanocomposites with cationic and anionic clays <b><u>Ji-Hee Lee</u></b> , Hyeon-Ju Ryu, Jin-Ho Choy*
PP-03	PLP-LDH nanohybrid as multi-minerals and vitamin supplement for patients with type 2 diabetes mellitus <b><u>Hyeon-Ju Rvu</u></b> , Goeun Choi, Jin-Ho Choy*
PP-04	Development of thermal shock-resistant GaN die-attach power module structure by using W thin film <b><u>Dongjin Kim</u></b> , Chuantong Chen*, Aiji Suetake, Chanyang Choe, Tohru Sugahara, Shijo Nagao, Katsuaki Suganuma
PP-05	Contrastive study on polyol-synthwesized bimodal silver paste sintering mechanism <b><u>Jevun Yeom</u></b> , Cai-Fu Li*, Hao Zhang, Chuantong Chen, Jingting Jiu, Katsuaki Suganuma
SOP-01	Surface-initiated polymerization of magnetite particles controlled in size and morphology <b><u>Chen Shen</u></b> , Kiyoshi Kanie*, Atsushi Muramatsu
SOP-02	Zwitterion-functionalized dendrimers for gene delivery to inhibit cancer metastasis <b><u>Zhijuan Xiong</u></b> , Xiangyang Shi*
SOP-03	Near infrared light irradiated device enabled with pulsatile drug delivery <b><u>Huiyan Piao</u></b> , Jin-Ho Choy*
SOP-04	Thermal shock performance of DBA/DBC substrates plated by Ni and Ni-P layers for high temperature applications of power device modules <b><u>Chanayang Choe</u></b> , Chuantong Chen*, Seunjun Noh, Katsuaki Suganuma
SOP-05	Synthesis of dendrimer-pyridine-copper(II) complexes for radiotherapy-enhanced MR imaging and chemotherapy of breast cancer <b><u>Yu Fan</u></b> , Xiangyang Shi*



SOP-06	A first synthesis of fully cationized gold clusters <b><u>Kunihiro Narita</u></b> , Yohei Ishida, Tetsu Yonezawa*
SOP-07	Novel antimalarial drug-layered metal hydroxide; oral and intravenous routes <b><u>Ji-Yeong Kim</u></b> , Jin-Ho Choy*
SOP-08	Transparent organic-inorganic hybrid thin film fabricated by layer-by-layer assembly of phosphorylated cellulose nanocrystal and imogolite nanotubes <b><u>Linlin Li</u></b> , Wei Ma, Yuji Higaki, Atsushi Takahara*
SOP-09	One step synthesis of bimodal Cu particles and their application in die bonding <b><u>Yue Gao</u></b> , Jinting Jiu, Hao Zhang, Chuantong Chen, Katsuaki Suganuma*
SOP-10	Novel geopolymer route to porous carbon as an effective CO <sub>2</sub> uptake material <b><u>Yi-Rong Pei</u></b> , Jin-Ho Choy*
SOP-11	Heat-resistant die-attach with cold-rolled Ag sheet <b><u>Seungjun Noh</u></b> , Chuantong Chen, Hao Zhang, Katsuaki Suganuma*
SOP-12	Ultrathin and uniform core-shell nanowires for high-performance transparent conductive electrodes based on a novel coating technology <b><u>Lingying</u></b> , Wanli, Jinting Jiu, Katsuaki Suganuma*

□ Presentation type

IL : Invited Lecture

OP : Oral Presentation

SOP : Student's Oral Presentation

PP : Poster Presentation

## E-mail Address of Participants

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Prof. Masahiro Yoshimura	yoshimura@msl.titech.ac.jp yoshimur@mail.ncku.edu.tw	Keynote Lecture

Institute of Innovative Research, Tokyo Institute of Technology, Japan.

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Prof. Hiroyuki Nakamura	hiro@res.titech.ac.jp	Keynote Lecture

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Linlin Li (Ph.D. student)	linlin@ms.ifoc.kyushu-u.ac.jp	SOP-08

# The Place of Symposium

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