

TECHNICAL PROGRAM TIMETABLE

Day 2 (FRI, 17th Nov)						
Time	Nanobio Materials & Technologies for Biosensing and Biotechnology (Man Bock Gu/Mihwa Lee)	Biomaterials & Nanomedicine (Won-Gun Koh/Juha Song/Sokcheon Pak)	Translational Science & Engineering, Biosensors & medical devices (Nam-Joon Cho/Haiwon Lee)	Green Energy & Ecoscience (Seok Woo Lee/Yong Jin Yoon)	Digital & Information Technology (Taegeun Yoo/Samsung Lim/Bong Keun Yoo)	Korea-Singapore International Global Industry Forum 2017 (Bio Industry) (Ho Sup Yoon/Shin Cheul Kim)
13:30 - 13:50			Sang Joon Cho (Paper #144)	Hyun-Wook Lee (Paper #29)		Wu Bin
13:50 - 14:10	Sei Kwang Hahn (Paper #23)	Heungsoo Shin (Paper #7)	In Young Hwang (Paper #90)	Seung S. Lee (Paper #44)	Chulmin Choi (Paper #70)	Andrew Tan
14:10 - 14:30	Jae-Chul Pyun (Paper #41)	Sang-Hyun Min (Paper #119)	Su Bin Lim (Paper #49)	Minh Sang Nguyen (Paper #89)	Seungmin Kang (Paper #81)	Byung Soo Youn
14:30 - 14:50	Yong Hee Kim (Paper #55)	Yoon Sung Nam (Paper #60)	Robert J Mitchell (Paper #69)	Chek Hai Lim (Paper #39)	Inkyu Bang (Paper #82)	Rishikesan Sankaranarayanan
14:50 - 15:10	Harin Jung (Paper #118)	Young Bin Choy (Paper #68)	Wonsik Mun (Paper #84)	Seok Woo Lee (Paper #27)	Taegeun Yoo (Paper #97)	Sang-Hyun Min
15:10 - 15:30	Mihwa Lee (Paper #124)	Hansoo Park (Paper #107)		Tae-Hyun Bae (Paper #20)	Seok-Hee Hong (Paper #25)	Soowoong (Philip) Kim
15:30 - 16:00	Coffee/Tea Break					
16:00 - 16:20	Kisoo Park (Paper #8)	Kangwon Lee (Paper #106)	Jiseok Lee (Paper #72)	Jongwoo Lim (Paper #28)	Jung Hoon Han (Paper #6)	Jaeseung Yoon
16:20 - 16:40	Ji Hoon Jeong (Paper #52)	Paul Kumar Upputuri (Paper #22)	Haiwon Lee (Paper #80)	Sangbaek Park (Paper #85)	Minju Park (Paper #122)	Jong-seong Ahn
16:40 - 15:00	In-Geol Choi (Paper #58)	Ja-Hyoung Ryu (Paper #71)	Hyunhyub Ko (Paper #92)	Seok Ju Kang (Paper #45)	Jinwoo Lee (Paper #34)	Open Forum: Biopharmaceuticals - Quest for Billion Dollar Molecules?
17:00 - 17:20	Sungsu Park (Paper #5)	Tae-Hyun Bae (Paper #26)	Jung Heon Lee (Paper #112)	Youngsik Kim (Paper #57)	Kye Chung Park (Paper #37)	
17:20 - 17:40	Man Bock Gu (Paper #31)	Matthew Pan (Paper #65)		Sang Kyu Kwak (Paper #66)		
17:40 - 17:50						Closing

TECHNICAL PROGRAM – Friday

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Nanobio Materials & Technologies for Biosensing and Biotechnology

Chair/Co-Chair: Prof. Man Bock Gu / Prof. Mihwa Lee

Ballroom 3811, MBS, Level 3

- 13:50 - 14:10 **Sei Kwang Hahn:** Multi-Functional Photonic Nanomaterials for Smart Photomedicines
- 14:10 - 14:30 **Jae-Chul Pyun:** Laser desorption/ionization (LDI) mass spectrometry based on nanomaterials for biomedical applications
- 14:30 - 14:50 **Yong Hee Kim:** Anti-inflammatory RNA Interference Targeting TNF- α Converting Enzyme to Down Regulate Soluble TNF- α for treatment of acute and chronic colitis
- 14:50 - 15:10 **Harin Jung:** Root-specific overexpression of OsERF48 causes regulation of OsCML16, a calmodulin-like protein gene that enhances root growth and drought tolerance
- 15:10 - 15:30 **Mihwa Lee:** Targeting non-coding RNA as a new avenue for cancer therapy
- 15:30 - 16:00 **Coffee/Tea Break**
- 16:00 - 16:20 **Kisoo Park:** Advanced biosensors for rapid diagnosis of infection
- 16:20 - 16:40 **Ji Hoon Jeong:** Use of facially amphiphilic bile acid-polymer conjugate for the delivery of macromolecules
- 16:40 - 15:00 **In-Geol Choi:** Genomic Discovery of Novel Enzyme Catalysts Capable of Metabolite Biosensors
- 17:00 - 17:20 **Sungsu Park:** Effect of concentration gradient and mechanical strain on Tissue On Chip (TOC)
- 17:20 - 17:40 **Man Bock Gu:** Graphene Oxide-based Screening of Pairs of Aptamers to Nanobiosensors and Lateral Flow Assays

Biomaterials & Nanomedicine

Chair/Co-Chair: Prof. Won-Gun Koh / Prof. Juha Song and Prof. Sokcheon Pak

Ballroom 3812, MBS, Level 3

- 13:50 - 14:10 **Heugsoo Shin:** Guidance of bone regeneration using functionalized fibrous materials
- 14:10 - 14:30 **Sang-Hyun Min:** Screening of inhibitors for Breast cancer therapeutics
- 14:30 - 14:50 **Yoon Sung Nam:** Increasing Therapeutic Efficacy of Anti-cancer Drugs Using Tumor-targeted Polymer Nanocarriers
- 14:50 - 15:10 **Young Bin Choy:** Mucoadhesive Nanostructured Particles for Topical Delivery of Glaucoma Drug to the Eye
- 15:10 - 15:30 **Hansoo Park:** Size and Morphology Control of Siloxane-Based Poly(dimethylsiloxane) Nanoparticles for Biomedical Applications
- 15:30 - 16:00 **Coffee/Tea Break**
- 16:00 - 16:20 **Kanwon Lee:** Promotion of blood vessel regeneration using biocompatible polymer based approaches
- 16:20 - 16:40 **Paul Kumar Upputuri:** Dynamic contrast-enhanced photoacoustic tomography system for in vivo small animal imaging
- 16:40 - 15:00 **Ja-Hyoung Ryu:** Mitochondria Localization-induced Self-Assembly for New Cancer Therapy
- 17:00 - 17:20 **Tae-Hyun Bae:** Design and synthesis of porous materials with adjustable structural properties
- 17:20 - 17:40 **Matthew Pan:** Polymeric Capsules and Particles for Encapsulation and Selective Release of Biomacromolecules

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Translational Science & Engineering, Biosensors & medical devices

Chair/Co-Chair: Prof. Nam-Joon Cho / Prof. Haiwon Lee

Ballroom 3813, MBS, Level 3

- 13:20 – 13:50 **Sang Joon Cho:** Present and Future of SPM Translational Science
- 13:50 - 14:10 **In Young Hwang:** Probiotics engineered to fight against human pathogens
- 14:10 - 14:30 **Su Bin Lim:** An Integrative Platform for Single-Cell Analysis of Circulating Tumor Cells
- 14:30 - 14:50 **Robert J Mitchell:** Mapping the Predatory Transcriptome during Predation of a Multidrug-Resistant *Klebsiella pneumoniae* by *Bdellovibrio bacteriovorus* HD100
- 14:50 - 15:10 **Wonsik Mun:** *Bdellovibrio bacteriovorus* HD100 Predation of *Chromobacterium piscinae* is inhibited by Cyanide Production
- 15:30 - 16:00 **Coffee/Tea Break**
- 16:00 - 16:20 **Jiseok Lee:** Versatile Applications of Upconversion Luminescent Microstructures
- 16:20 - 16:40 **Haiwon Lee:** Cancer Biomarker Recognition by Concurrent Sensor based on the Three Dimensional Structure of Carbon Nanotubes as Reliable Diagnostic Device
- 16:40 - 15:00 **Hyunhyub Ko:** Multifunctional Electronic Skins for Wearable Devices
- 17:00 - 17:20 **Jung Heon Lee:** A significant enhancement of color transition from an on/off type achromatic colorimetric nanosensor for highly sensitive multi-analyte detection with the naked eye

Green Energy & Ecoscience

Chair/Co-Chair: Prof. Seok Woo Lee / Prof. Yong Jin Yoon

Ballroom 3911, MBS, Level 3

- 13:30 - 13:50 **Hyun-Wook Lee:** Direct visualization of electrochemical reactions in lithium-ion batteries by in-situ transmission electron microscopy
- 13:50 - 14:10 **Seung S. Lee:** Highly conductive silver mesh transparent electrode and its applications
- 14:10 - 14:30 **Minh Sang Nguyen:** Enhanced performance of bi-stable energy harvester using horizontal magnet oscillator
- 14:30 - 14:50 **Chek Hai Lim:** Reduce Graphene Oxide Wrapped Lithium Vanadium Phosphate as Lithium-ion Battery Cathode with a Good Performance at Elevated Temperature
- 14:50 - 15:10 **Seok Woo Lee:** Electrochemical low-grade heat harvesting
- 15:10 - 15:30 **Tae-Hyun Bae:** Membrane technology for recovery and purification of biomethane
- 15:30 - 16:00 **Coffee/Tea Break**
- 16:00 - 16:20 **Jongwoo Lim:** Bringing spectro-microscopy to electrochemical system : microbial fuel cell and lithium ion battery
- 16:20 - 16:40 **Sangbaek Park:** Highly Conductive and Electrochemically Stable Transparent and Stretchable Coaxial Bimetallic Ag-based Nanowire Network and its application in Asymmetric Supercapacitors Energy Storage
- 16:40 - 15:00 **Seok Ju Kang:** Reversible Li-Oxygen battery without Carbon dioxide evolution
- 17:00 - 17:20 **Youngsik Kim:** Ceramic based Composite Electrolyte for Solid-State Batteries
- 17:20 - 17:40 **Sang Kyu Kwak:** Theoretical Study on Hong-Type NASICON Structure for the Application on Sodium-ion Battery

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Digital & Information Technology

Chair/Co-Chair: Dr. Taegeun Yoo / Prof. Samsung Lim and Mr. Bong Keun Yoo

Ballroom 3912, MBS, Level 3

- 13:50 - 14:10 **Chulmin Choi:** Reliability Characteristics for Magnetic Tunnel Junctions with MgO and a Spinel-MgAl₂O₄ Tunnel barrier
- 14:10 - 14:30 **Seugmin Kang:** Towards Secure and Fast Mapping of Genomic Sequences on Public Clouds
- 14:30 - 14:50 **Inkyu Bang:** Artificial Noise-Aided User Scheduling from the Perspective of Secrecy Outage Probability
- 14:50 - 15:10 **Taegeun Yoo:** A 0.5 V CMOS Image Sensor with Adaptive Dynamic Range
- 15:10 - 15:30 **Seok-Hee Hong:** Topology-based Sampling and Visualisation of Big Graphs
- 15:30 - 16:00 **Coffee/Tea Break**
- 16:00 - 16:20 **Jung Hoon Han:** Spatial Clustering and Heterogeneity of Industry Mix: A Big Data Analysis of Office Floor Space in Sydney, Australia
- 16:20 - 16:40 **Minju Park:** Application of Traffic State Prediction Methods to Network in the Big City
- 16:40 - 15:00 **Jinwoo Lee:** Transit Connectivity in a Radial Transit Network Structure
- 17:00 - 17:20 **Kye Chung Park:** Biosecurity and chemical senses