

# ADMETA Plus 2015 Program

16 - 18 September 2015  
Rm. 520 Global Convention Plaza, Seoul National University  
Seoul, Korea

## 16th Sep. (Wednesday)

Time	Session	Presenter	Affiliation	Title
Tutorial Session				
09:00-10:20	Tutorial 1	Oh Joong Kwon	Incheon National Univ.	Electroplating Fundamentals and Applications
10:30-11:50	Tutorial 2	Han-Bo-Ram Lee	Incheon National Univ.	Atomic Layer Deposition
11:50-13:30	Lunch			
13:30-14:50	Tutorial 3	Jin-Goo Park	Hanyang Univ.	Chemical Mechanical Polishing
15:00-16:20	Tutorial 4	Sarah Eunkyung Kim	Seoul National Univ. of Sci. & Tech.	3D Integration & Packaging
16:30-17:50	Tutorial 5	Young-Joon Park	Texas Instruments Inc.	Interconnect Reliability

## 17th Sep. (Thursday)

Time	Session	Presenter	Affiliation	Title
09:15-09:25	Opening	Young-Chang Joo	Seoul National Univ.	Welcome remarks
Keynote session (Chair: Prof. Young-chang Joo)				
09:30-10:15	Keynote 1	Satoshi Tanimoto	Nissan Arc	The Coming SiC Age: Expectations and Challenges for Achieving High-density Power Conversion Systems
10:15-11:00	Keynote 2	Seok-Hee Lee	SK Hynix	TBD
11:00-11:15	Break			
Session 1: Advanced barrier technologies for metallization (Chair: Prof. Hyungjun Kim)				
11:15-11:45	Invited 1	Xin-Ping Qu	Fudan Univ.	Novel Alloy Diffusion Barrier for Advanced Copper Interconnect
11:45-12:00	Oral 1	Hiroyuki Koide	Tohoku university	The effect of the Mn penetration in porous SiOCH for CVD-Mn diffusion barrier
12:00-12:15	Oral 2	Taewoon Kim	University of Tokyo	PVD-Co(W) single barrier/liner for highly reliable ULSI Cu interconnects
12:15-12:30	Oral 3	Hyun-Jung Lee	Yeungnam University	Analysis of ALD Ru-Mn as a Cu direct plateable diffusion barrier with self-forming barrier process
12:30-14:00	Lunch			
Session 2: Thin film deposition using ALD and CVD (Chair: Prof. Soo-hyun Kim)				
14:00-14:30	Invited 2	Hyungjun Kim	Yonsei University	Atomic Layer Deposition of Transition Metals for Interconnect Technology
14:30-14:45	Oral 1	Yasuhiko Saito	Tokyo Electron Miyagi Limited	A Robust Silicon Nitride Capping Layer Deposition by Microwave Plasma Chemical Vapor Deposition on the Spin Transfer Torque Magnetoresistive RAM
14:45-15:00	Oral 2	Changhee Ko	Air Liquide Laboratories	Synthesis and evaluation of Cobalt precursor for pure Cobalt film
15:00-15:15	Oral 3	Il-Kwon Oh	Yonsei University	Lowering Plasma Damage in PE-ALD by using VHF Plasma Source
15:15-15:30	Break			
Session 3: Materials and processes for advanced packaging I (Chair: Young-bae Park)				
15:30-16:00	Invited 3	Chee Lip Gan	Nanyang Tech. Univ.	Copper Nanoparticles Enabled Low Temperature Bonded Interconnections
16:00-16:15	Oral 1	Bum-Geun Park	Sungkyunkwan Univ.	Highly Flexible Screen-Printed Circuit with Hybrid Ag Flake Paste
16:15-16:30	Oral 2	Jee-Hwan Bae	Sungkyunkwan Univ.	Characterization of interfacial reaction layers between Zn-Al-Mg solder alloy and Cu substrate
16:30-18:00	Poster Presentation			
18:00-	Dinner			

## 18th Sep. (Friday)

Time	Session	Presenter	Affiliation	Title
Session 4: Materials and processes for advanced packaging II (Chair: Prof. Sung-Dong Kim)				
09:30-10:00	Invited 4	Tae-Kyu Lee	Cisco Systems Inc.	Link Between Degradation Mechanisms and Microstructure Signatures in Solder Joint Interconnects
10:00-10:15	Oral 1	Takayuki Ohba	Tokyo Institute of Technology	BEOL Friendly Bumpless Interconnects Technology for 3D-3D Integration
10:15-10:30	Oral 2	Aki Dote	Fujitsu Laboratories Ltd.	Deformation of Thin and Large Si Die with Non-uniform RDL Pattern
10:30-10:45	Oral 3	Kwang-Seong Choi	ETRI	The Effects of Si Resistivity and TSV liners of Si Interposers on RF Performance for RF-3D Module
10:45-11:00	Oral 4	Ji-Won Park	Seoul National Univ.	Smart Solution of Adhesive for Temporary Bonding De-bonding
11:00-11:15	Break			
Session 5: Reliability — materials and testing issues I (Chair: Hoo-Jeong Lee)				
11:15-11:45	Invited 5	Young-Joon Park	Texas Instruments Inc.	Electromigration in Strapped Metal Layers with Large Dimensions for Lateral Power Device Applications
11:45-12:00	Oral 1	Shiriji Yokogawa	Polytechnic University of Japan	A simulation study of impacts of global and local space variations
12:00-12:15	Oral 2	Byoung-Joon Kim	KIMS	Mechanical reliability of metal interconnect on polymer substrate
12:15-12:30	Oral 3	Kyung-Tae Jang	Seoul National Univ.	Current induced microstructure evolution and electrical reliability of Ag interconnects based on nanometer sized particles
12:30-14:00	Lunch			
Session 6: Reliability — materials and testing issues II (Chair: Dr. Byoung-Joon Kim)				
14:00-14:30	Invited 6	Manabu Tsujimura	Ebara Corporation	The Way to Zero's —The future of Semiconductor Device and CMP Technologies
14:30-14:45	Oral 1	Jung-Kwon Yang	Seoul National Univ.	Limited Line Width and Bending Frequency Effects on the Fatigue Lifetime of Cu Interconnects
14:45-15:00	Oral 2	Yuya Otsuka	Hitachi Chemical Co., Ltd.	Electrochemical Impedance Spectroscopy on Galvanic Corrosion between Co Liner and Cu Interconnect
15:00-15:15	Oral 3	Eiichi Kondoh	University of Yamanashi	In-situ ellipsometry of Cu surfaces immersed in BTA-H2O2 solutions
15:15-15:30	Break			
Session 7: Emerging materials and processes (Chair: Prof. Oh-Joong Kwon)				
15:30-16:00	Invited 7	Sintaro Sato	Fujitsu Laboratories Ltd.	Nanocarbon Interconnects with Resistivity and Reliability Better than Cu
16:00-16:15	Oral 1	Wei Feng	National Institute of Advanced Industrial Science and Technology	Investigation of Transport Properties of Carbon Nanotube by Nanoprobe
16:15-16:30	Oral 2	Masayuki Katagiri	Toshiba Corporation	Resistivity Reduction of Multilayer Graphene Interconnects Prepared by Low-Temperature Chemical Vapor Deposition
16:30-16:45	Oral 3	Md. Sahab Uddin	Shibaura Institute of Technology	Improvement of multilayer graphene crystallinity by solid phase precipitation applying current stress during annealing
16:45-17:00	Oral 4	Xun GU	SMIC	RC Delay Reduction by using a Barrier Polymer Layer for Advanced Cu/ULK Interconnects
17:00-17:15	Oral 5	Yongjin Kim	KJMM	Experimental Failure Analysis of Nano-scale Thin Film Structures Used for Organic Electronic Device
17:15-17:30	Oral 6	Byungil Hwang	KAIST	Study on the Bending Fatigue Behavior of GO coated Ag Nanowire Networks