Call for Papers

ADMETA^{Plus} 2014/IWAPS Joint Conference

Advanced Metallization Conference 2014: 24th Asian Session

Oct. 22 - 24, 2014
The University of Tokyo, Yayoi Auditorium, Ichijo Hall (Hongo Campus), Tokyo

Sponsored by the Japan Society of Applied Physics

Co-sponsor (Korea) by National Research Council of Science & Technology, Korea Institute of Machinery & Materials, Korea Electronics-Machinery Convergence Technology Institute, Korea Society for Precision Engineering, The Korean Microelectronics and Packaging Society

Support (under arrangements) by The Surface Finishing Society of Japan, The Institute of Electrical Engineers of Japan, The Japan Society for Precision Engineering, The Institute of Electronics, Information and Communication Engineers, The Japan Institute of Metals, IEEE EDS Japan Chapter, The Vacuum Society of Japan, The Surface Science Society of Japan.

Advanced Metallization Conference 2014, 24th Asian Session (ADMETA^{Plus} 2014) "Advanced Metallization Conference 2014: 24th Asian Session" will be held in October, 2014 in conjunction with the3rd International Workshop on Advanced Packaging & System Technology (IWAPS).

ADMETA has its 24-year history of a conference on the state-of-the-art interconnect technology which has contributed considerably on the development of integrated circuits including MPUs, DRAMs and Flash memories. Reliability issues in Low-k / Cu interconnect is still of great importance to meet the demand for high-density interconnect in future ULSIs, and therefore, emerging nano-carbon materials, air-gap technologies, as well as backend devices like MRAMs and ReRAMs embedded in interconnect layers are currently developed. Packaging is also facing to the down scaling of form factor and thus new interconnects bridging from silicon chips and PCB is required. In particular, 3D interconnect technologies based on TSV is attracting much attention as a promising future technology. ADMETA will focus on process, design, reliability, production tool, material and cost-reduction technologies, and discuss both scientific and engineering approaches to solve those issues. The 3D / Packaging Session will be hosted jointly with IWAPS (International Workshop on Advanced Packaging and System Technology) this year to encourage among Asian semiconductor industries more into.

ADMETA^{Plus} 2014 General Chair: Eiichi Kondoh (Yamanashi University)
ADMETA^{Plus} 2014 Program Chair: Takenao Nemoto (Tokyo Electron)

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Session Categories

Conference Topics of Interest

Integration: Structure, Performance, Resistance, Capacitance, Evaluation, Analysis, etc.

Reliability Science and Failure Analysis: EM, SIV, TDDB, Measurement, Evaluation, Defect Inspection, Yield Improvement, Process Dispersion Modeling, etc.

Metallization: PVD, CVD, ALD, ECD, Barrier Metal, Nucleation Layer, Seed Layer, Alloy, Supercritical, New Materials, etc.

Low-k Dielectric: CVD, ALD, SOD, Porous Films, New Materials, Adhesion, Interface Reaction, Air Gap, Evaluation, etc.

CMP: Planarization Technology, Slurry, Pad, Dress, End Point Detection, Cleaning, Anti-corrosive Technology, etc.

Contact: Silicide, Interface, Solid Phase Reaction, Shallow Junction, Crystal Properties, Electron Properties, Carrier Transport, Parasitic Resistance, etc.

MEMS/RF: Structure, Materials, Packaging, Deposition Tech., Etching Tech., CMP, Electroplating, Switch, Inductor, Varactor, Resonator, Transmission Line, etc.

Emerging Technology: Active Wiring, Memristor, Sensor, Electronic Luminescence, Silicon Photonics, Power Electronics, Flexible Electronics, Energy Harvesting, etc.

Organized-Session Topics of Interest

Backend Device Technologies Session: Tech. for Embedding Devices (MRAM, PCRAM, ReRAM, DRAM etc.), Science and Process of Magnetic, Phase-Change and Resistive-Change Devices, Electrode, Metallization, etc.

Nanocarbon Session: Graphene, Carbon Nanotube, Deposition, Growth, Integration, Electrical Characteristics, Reliability, Evaluation, Analysis, Doping, etc.

Joint-Session (with IWAPS) Topics of Interest

3D and Packaging Session: TSV (etching, CVD, PVD, plating, CMP, etc.), stacking technologies (COW, WOW), Thinning, Planarizaiton, Flattening, Bonding, TMV, Bump, Stress Analysis, Thermal Management, Individuating, Redistribution Layer, Sealing, Cooling, Reliability, Test and Inspection, etc.

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Conference Keynote Speakers

1) Mark Scannell (Leti) 2) Namseog Kim (SK hynix) 3) Kwon Yong Tae (Nepes PTE)

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Conference Invited Speakers

1) Takeshi Nogami (IBM) [Process Integration]
2) Akira Uedono (Univ. of Tsukuba) [Vacancy/Void Characterization]
3) Kuniyuki Kakushima (Tokyo Institute of Technology) [Metal / Reliability]
4) Stefan E. Schulz (Chemnitz University of Technology) [Lowk/CMP]

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Organized Session Invited Speakers

1) Walter de Heer (Georgia Tech) [Nanocarbon]
2) Ludovic Goux (imec) [Backend device Technologies]

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Joint Session Invited Speakers

1) Young-Chang Joo (Seoul National University)
2) Youngsuk Kim (Tokyo Institute of Technology)

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Tutorial Program

1) Trends in Cu / low-k Integration and Future	Takeshi Nogami (IBM)
2) Introduction to Atomic Layer Deposition	Yukihiro Shmogaki (University of Tokyo)
3) Interconnect Technology for Nonvolatile Memories	Masahiro Moniwa (Tokyo University of Technology)
4) Trends in Semiconductor Market and Future	Wataru Izumiya (The Semiconductor Industry News)
5) Advanced Scaling and Wiring Technology	Hitoshi Wakabayashi (Tokyo Institute of Technology)
6) Introduction and Trend of TSV/3DIC Technology	Hiroaki Ikeda (Napra)
7) Panel Discussion	

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★ **Dates:** **Tutorial 2014/10/22 (Wed) in Japanese**
Conference 2014/10/23 (Thu) - 24 (Fri) in English

★ **Location:** **The University of Tokyo, Yayoi Auditorium, Ichijo Hall (Hongo Campus)**
http://www.a.u-tokyo.ac.jp/yayoi/

★ **To Apply:** Prepare an abstract per the below directions and submit it to the ADMETA*Plus* 2014 Secretariat

★ **Abstract Preparation and Submission:**

Abstracts are due: July 15, 2014 >> July 24, 2014
We have extened the deadline of abstract submission.

Prospective authors must submit a two-page PDF file with all figures and tables. Send the PDF file along with desired session category to the secretariat office via e-mail. On the abstract, please indicate the author to whom correspondence should be addressed, and include mailing and e-mail addresses. A template of abstract can be downloaded from the ADMETA*Plus* 2014 website. Notification of acceptance will be made to the authors by August 15, 2014. Upon notification, authors will be requested to confirm their participation in the conference

The accepted abstracts will be included in the Extended-Abstract CD-ROM which the participants will receive on site at the registration desk of ADMETA*Plus* 2014. Pre-registered participants will also be able to download the accepted abstracts from the ADMETAPlus 2014 webpage after Oct. 15, 2014. Authors with papers presented at ADMETA*Plus* 2014 are encouraged to submit their original manuscripts to a Special Issue of the Japanese Journal of Applied Physics (JJAP) dedicated to the ADMETA*Plus* 2014. The JJAP Special Issue will be published in May, 2015. Submission to the JJAP Special Issue will take place by November 25, 2014.

※**Reminder:** As the proceedings will be the original papers, please be careful not to post the same contents to any other journals.
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★ **Contact: ADMETA*Plus* 2014 Secretariat**
#502 Omiyadaini Bldg., 4-1-7 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan.
TEL: +81-3-6801-5685, FAX: +81-3-6801-5686, E-mail: jimukyoku@admeta.org

Asian Session: http://www.admeta.org/
- Tutorial: October 22, 2014
- Conference: October 23 - 24, 2014