

Call for Papers

ADMETA^{Plus} 2013

Advanced Metallization Conference 2013: 23rd Asian Session

Oct. 7 - 10, 2013

The University of Tokyo, Yayoi Auditorium, Ichijo Hall (Hongo Campus), Tokyo

Sponsored by the Japan Society of Applied Physics

Supported 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. (under arrangement)

Advanced Metallization Conference 2013, 23rd Asian Session (ADMETA^{Plus} 2013) will be held from October 7 through 10, 2013. The conference is organized to stimulate and enhance the research and development of ULSI interconnect technology. In every year since 1989, the conference has been held at about the same time in both Japan (ADMETA) and USA (AMC), and ADMETA has showcased remarkable interconnect technology development in Asia.

Current active development of Cu multilayer wiring technology is aimed at feature sizes of less than 50nm, and application of Cu wiring has been broadened to be widely used for Flash and DRAM. Securing good reliability for electromigration and low-k films in cutting-edge low-k/Cu wiring schemes is an important area of interest. There have been advancements in the introduction of metal deposition for front end processes such as for silicides and metal gates, and this area is also covered by ADMETA. The progress of miniaturization technology for packaging is rapid, and concepts for integrated wiring technology between Si chips and mounting substrates are required. 3D wiring technology is currently paid special attention as an important direction for further device integration. Contributions of papers addressing these topics are being highly solicited as well as papers in related areas such as interconnect materials, interconnect design, reliability, process equipment, and cost reduction, etc. where there is no shortage of problems to be solved.

In addition to the main conference with its emphasis on the direction of conventional wiring scaling, four Organized Sessions (Backend Device Technologies, Nanocarbon, 3D Challenges, CMP) will be held to discuss post-scaling technologies that are either under development or in concept stage.

This conference offers an excellent opportunity to learn about the most recent R&D activities in interconnect technology and related fields from researchers around the world. We look forward to your attendance.

ADMETA^{Plus} 2013 General Chair: Junichi Koike (Tohoku University)

ADMETA^{Plus} 2013 Program Chair: Fuminori Ito (Renesas Electronics)

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.

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.

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

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

3D Challenges Session: COW, WOW, Thinning, Bonding, TSV, Bump, Individuating, Redistribution Layer, Cooling, Reliability, etc.

Conference Keynote Speakers

- 1) Atsuyoshi Koike (SanDisk Limited) 2) Shinichiro Kimura (LEAP)

Conference Invited Speakers

- 1) Meike.Hauschildt (GLOBALFOUNDRIES) [Crucial Metal Technologies]
2) Yukihiro Shimogaki (The Univ. of Tokyo) [Advanced Metal Processes]
3) Shoji Kamiya (Nagoya Inst. of Tech.) [Advanced Metal Processes] 4) Fen Chen (IBM) [Reliability and Contacts]
5) Nobuyoshi Kobayashi (ASM Japan) [Low-k] 6) Xiao Hu Liu (IBM) [Low-k]

Organized Session Invited Speakers

- 1) Tadatomo Suga (The Univ. of Tokyo) [3D Challenge] 2) Tzu Kun Ku (ITRI) [3D Challenge]
3) Tadashi Sakai (LEAP) [Nanocarbon] 4) Kaustav Banerjee (UCSB) [Nanocarbon]
5) Kumar Virwani (IBM) [Backend devices Technology] 6) Koji Tsunoda (LEAP.) [Backend devices Technology]
7) Cheol Seong Hwang (Seoul National Univ.) [Backend devices Technology]
8) Toshiji Taiji (Renesas Electronics) [CMP] 9) Jam Sorooshian (Intel) [CMP]

Tutorial Program

- 1) Low-k Integration Shunichi Fukuyama (Fujitsu Semiconductor)
2) Metal Satoshi Kawashima (Meltex)
3) SiC Device Hiroshi Yano (Nara Institute of Science and Technology)
4) Marketing (Semiconductors) Tetsuya Wadaki (Nomura Securities)
5) 3D (TSV) Sunil Wickramanayaka (Institute of Microelectronics)
6) Basis of CVD Motoaki Kawase (Kyoto Univ.)
7) Image Sensor Nobukazu Teranishi (Panasonic)
8) CMP Manabu Tsujimura (Ebara)

- ★ **Dates:** Tutorial 2013/10/7 (Mon) in Japanese
Conference 2013/10/8 (Tue) - 10 (Thu) 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} 2013 Secretariat
★ **Abstract Preparation and Submission:**
Abstracts are due: ~~June 21, 2013~~ >> July 5, 2013

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} 2013 website. Notification of acceptance will be made to the authors by August 1, 2013. Upon notification, authors will be requested to confirm their participation in the conference. Authors submitting their abstracts to the US session are encouraged to submit the identical abstracts to the Asian session for presentation. As the ADMETA is a sister conference of the AMC, authors can take advantage of presenting the same work at both conferences.

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} 2013. Pre-registered participants will also be able to download the accepted abstracts from the ADMETA^{Plus} 2013 webpage after Oct. 1, 2013. Authors with papers presented at ADMETA^{Plus} 2013 are encouraged to submit their original manuscripts to a Special Issue of the Japanese Journal of Applied Physics (JJAP) dedicated to the ADMETA^{Plus} 2013. The JJAP Special Issue will be published in May, 2014. Submission to the JJAP Special Issue will take place by November 10, 2013. Authors with papers accepted for both the US and Asian sessions should choose either the AMC proceedings or the JJAP Special Issue for publication (Note: these will be published individually). If you wish to have your paper published in the AMC Proceedings, please send your final manuscript to the US Session only. If you wish to have your paper published in the JJAP Special Issue, please send your final manuscript to the ADMETA^{Plus} 2013 Secretariat (Note: abstracts can be sent to both US and Asian sessions).

✳ **Reminder:** As the Extended Abstracts will be the original papers, please be careful not to post the same contents to any other journals.

★ **Contact: ADMETA^{Plus} 2013 Secretariat**

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Asian Session: <http://www.admeta.org/>

- Tutorial: October 7, 2013

- Conference: October 8 - 10, 2013

U.S. Session: <http://www.advancedmetallizationconference.com/>

- Conference: October 21 - 23, 2013