Call for Papers

ADMETA^{Plus} 2012

Advanced Metallization Conference 2012: 22nd Asian Session

Oct. 22 - 25, 2012
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 2012, 22nd Asian Session (ADMETA^{Plus} 2012) will be held from October 22 through 25, 2012. 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 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 the memory market and is widely used for Flash and DRAM. Securing good reliability for electromigration and low-k films in Low-k/Cu wiring schemes is still an important area of interest. There have been advancements in the introduction of metal deposition for front end processes such as for Silicide and Metal Gate, and submissions in this area are welcome. 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 will be 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, three Organized Sessions (Backend Devices, CMP, Nanocarbon Interconnects) will be held to discuss post-scaling technology that is either in 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} 2012 General Chair: Hisao Kawasaki (Mitsubishi Heavy Industries)
ADMETA^{Plus} 2012 Program Chair: Eiichi Kondo (Yamanashi University)

* *

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.

3D: COW, WOW, Thinning, Bonding, TSV, TMV, Bump, Individuating, Redistribution Layer, Cooling, Reliability, 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 Devices 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 Interconnects Session: Graphene, Carbon Nanotube, Deposition, Growth, Integration, Electrical Characteristics, Reliability, Evaluation, Analysis, Doping, etc.

* *

Conference Keynote Speakers

1) Hideo Ohno (Tohoku University)
2) Paul S. Ho (The University of Texas)

* *

Conference Invited Speakers

1) Ganpati Ramanath (RPI) [Low-k]
2) Fuminori Ito (Renesas Electronics) [Low-k]
3) Lucile Arnaud (STMicroelectronics/CEA-LETI) [Reliability/Metal]
4) Terry Spooner (IBM) [Metal]
5) Hyeong-Tag Jeon (Hanyang University) [Metal ALD]
6) Stéphane Moreau (CEA-LETI) [3D]
7) Takafumi Fukushima (Tohoku University) [3D]
8) Henry Wojcik (Technische Universität Dresden) [Metal]

* *

Organized Session Invited Speakers

1) Jamshid Sorooshian (Intel) [CMP(FEOL)]
2) Darren DeNardis (Intel) [CMP(BEOL)]
3) Hyunsang Hwang (Gwangju Institute) [ReRAM]
4) Yoshitaka Sasago (Hitachi) [PCM]
5) Toshitsugu Sakamoto (LEAP) [Atom Switch]
6) Azad Naeemi (Georgia Tech.) [GNR Interconnects]
7) Shintaro Sato (AIST) [Nanocarbon Process]
8) TBD

* *

Tutorial Program

1) Cu/Low-k Integration	Atsunobu Isobayashi (Toshiba)
2) CMP	Seiichi Kondo (Hitachi Chemical)
2) Patent (Semiconductors)	Yoichi Oshima (Japan Patent Office)
3) Metal	Yasushi Higuchi (ULVAC)
5) Reliability/Yield Analysis	Shinji Yokogawa (Renesas Electronics)
6) Basis of Plasma	Masaru Hori (Nagoya University)
7) Graphene	Hideo Nagase (Tokushima University)
8) MRAM	Tetsuhiro Suzuki (Renesas Electronics)

* *

★ **Dates:** **Tutorial** **2012/10/22 (Mon) in Japanese**
Conference **2012/10/23 (Tue) - 25 (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* 2012 Secretariat

★ **Abstract Preparation and Submission:**

Abstracts are due: **July 2, 2012** >> **July 17, 2012**

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* 2012 website. Notification of acceptance will be made to the authors by August 10, 2012. 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.

Authors with papers presented at ADMETA*Plus* 2012 are encouraged to submit their original manuscripts to a Special Issue of the Japanese Journal of Applied Physics (JJAP) dedicated to the ADMETA*Plus* 2012. The JJAP Special Issue will be published in May, 2013. Submission to the JJAP Special Issue will take place by November 10, 2012. 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* 2012 Secretariat (Note: abstracts can be sent to both US and Asian sessions).

★ **Contact: ADMETAPlus 2012 Secretariat**

Takeda-Sentanchi Bldg., Hongo, The Univ. of Tokyo, Yayoi 2-11-16, Bunkyo-ku, Tokyo 113-8656, Japan.
TEL: +81-3-6801-5685, FAX: +81-3-6801-5686, E-mail: **jimukyoku@admeta.org**

ADMETA

Asian Session: http://www.admeta.org/
- Tutorial: October 22, 2012
- Conference: October 23 - 25, 2012
U.S. Session: http://www.cvent.com/d/6cqp6p/1Q
- Conference: October 9 - 11, 2012, CNSE, Albany, New York