AGENDA
Symposium on Chemical Mechanical Planarization
August 13-16, 2017, Crowne Plaza Lake Placid

Sunday, August 13:
12:00 - 5:00 P.M.  Hotel and CAMP Registration
5:45 - 7:15 P.M.   Cocktail Reception, (No formal dinner provided)

Monday, August 14:
7:00- 8:10 AM  Breakfast

Session I

8:00 A.M.  S.V. Babu: Opening Remarks
8:05 A.M.  Cherishing Old Knowledge, Acquiring New
-- Manabu Tsujimura (EBARA Corporation)
8:30 A.M.  Polishing Anything with Everything: Common Material Science Themes in the
CMP of Uncommon Materials -- Lee Cook (Recursive Systems LLC)
8:55 A.M.  Middle of Line CMP: Stop-on-Selectivity -- Stan Tsai (GlobalFoundries/IBM)
9:20 A.M.  Cobalt CMP Development for Advanced Logic Devices
-- Changhong Wu (GlobalFoundries)
9:45 A.M.  Coffee Break

Session II

Chair:
10:10 A.M.  Use of imec's CMP Test Mask for Process Development in FEOL, MOL and
BEOL - Description of test cases in STI/Fin CMP and Co CMP
-- Katia Devriendt (IMEC)
10:35 A.M.  Effect of Process Variations on Interconnects Performance in Advance
Semiconductor Manufacturing Nodes -- Prasad Bhosale (IBM, Albany)
11:00 A.M.  Cobalt Metallization in MOL Contacts and Related Challenges
-- Vimal Kamineni (GlobalFoundries/IBM)
11:25 A.M.  A Closer Look at Defectivity and Defect Types at Advanced (≤16nm) Device
Nodes Following Post-CMP Cleaning -- Paul Bernatis (DuPont)
11:50 A.M.  14nm FinFET Cleaning Technology -- Youngki Ahn (Daelim University)
12:15 P.M.  Lunch

Session III

Chair:
3:45 P.M.  Using Process Control to Address Challenges in Consistent Cleaning Forces Over
Brush Lifetime – Jaimie Stomberg (Applied Materials)
4:10 P.M.  Effects of Back Surface Polishing of Silicon Wafer on Lithography Process
-- Yukiteru Matsui (Toshiba Memory Corporation)
Monday, August 14 continued:

4:35 P.M.   Post-Oxide CMP Defects Improvement
-- Jimmy Granstrom and Hisashi Takeda (Fujimi Co.)

5:00 P.M.   Monitoring of Pad Surface Using the Optical Sensor during CMP Process
-- Taesung Kim (Sungkyunkwan University)

5:25 P.M.   Skin Layer Effect on a PVA Brush Friction
-- Toshiyuki Sanada (Shizuoka University)

5:50 -7:00 P.M.  Poster Session / Open Bar

7:00 P.M.   Dinner - After Dinner Speaker:  Semiconductors: The Industry Which Change the World, Jason Mazzotti, Director of Deposition ETCH & CMP (GlobalFoundries)

Tuesday, August 15:

7:00 - 8:00 A.M.  Breakfast

Session IV  Chair:

8:00 A.M.   Dynamic Pad Measurement and Monitoring for CMP Pad Performance Index
-- C-C Arthur Chen (National Taiwan University of Science & Technology)

8:25 A.M.   Characterization of Pad Surfaces for Investigating Conditioner Performance in Dielectric CMP Process Development of 5-7 nm nodes
-- Mayu Yamamura (Applied Materials)

8:50 A.M.   CVD-Coated Conditioning Disc Designs and Their Effect on Pad Surface Micro-Texture and Copper CMP Performance
-- Ara Philipossian (U. Arizona)

9:15 A.M.   Structures of Cu Surfaces Developing in Benzos triazole Solutions - Effect of pH
-- Eiichi Doh (University of Yamanashi)

9:40 A.M.   Qualitative and quantitative characterization of Cu complex layer in Cu CMP
-- Jingoo Park (Hanyang University)

10:05 A.M.  Coffee Break

Session V  Chair:

10:30 A.M.  Surface Chemistry of Ceria Nanoparticles for CMP Applications
-- Jihoon Seo (Clarkson University)

10:55 A.M.  Investigation of Polisher Defect Generation Mechanism by Predictable Process Conditions
-- Ji Chul Yang (GlobalFoundries)

11:20 A.M.  Defects Improvement by the Advanced CMP Slurry
-- Yoshihiro Izawa¹, Toshio Shinoda¹, Masaki Tada¹, Naoyuki Ishihara¹, Tomohiko Akatuska¹, and Hisashi Takeda² (¹ Fujimi Inc; ² Fujimi Co.)

11:45 A.M.  Neutral Beam Technology for Nano-Materials and Nano-Devices
-- Seiji Samukawa (Tohoku University)

12:10  P.M.  Lunch - Remarks by Tony Collins, Clarkson University President

Session VI  Chair:

3:45 P.M.   Real Time Process Monitoring with LKPrime and HPPC Hardware Capabilities for Advanced Nodes
-- Venkat Hariharan (Applied Materials)

4:10 P.M.   Characteristics of Wafer Cleaning by Liquid Flow
-- Satomi Hamada (Phara Corporation)
Tuesday, August 15 continued:

4:35 P.M.  Defects and Their Formation Mechanism in Middle Of Line (MOL) Tungsten CMP Process, Hong Jin Kim (GlobalFoundries)

5:00 P.M.  Sputtered TMDC 2D Materials and their Electrical Properties -- Hitoshi Wakabayashi (Tokyo Institute of Technology)

5:25 P.M.  A Ring Shape Copper Oxide Formation During Post Cu CMP Cleaning -- Hojoong Kim (Samsung Electronics)

6:15 - 6:30 P.M.  Travel to Golf Club

6:30 - 7:15 P.M.  Reception


Wednesday, August 16:

7:00 - 8:00 A.M.  Breakfast

Session VII  Chair:

8:05 A.M.  Planarization of Silicon Carbide Wafer Using Catalyst-Referred Etching -- Yasuhisa Sano (Osaka University)

8:30 A.M.  Advanced Nanoceria for STI Polishing Applications -- Nate D. Urban, Peter M. Marley and Robert Her, (Ferro Corporation)

8:55 A.M.  Studying Large Particle Contaminants in Various Nanoparticle Chemical Mechanical Planarization Slurries with Holographic Particle Characterization -- Fook C. Cheong, Priya Kasimbeg, and Laura A. Phillips (Spheryx Solutions)

9:20 A.M.  Within-wafer and Within-die Nanotopography Challenges and Characterization for Advanced Logs -- Wei Tsu Tseng (GlobalFoundries)

9:45 A.M.  Proposal of Optical Measurement Method for 3D Single Nanoparticle Position Near a Surface -- Panart Khajornrungruang (Kyushu Institute of Technology)

Session VIII  Chair:

10:10 A.M.  Coffee Break

10:35 A.M.  Electrochemical Study of Germanium and Its Application in CMP -- Baoguo Zhang (Hebei Institute of Technology)

11:00 A.M.  Challenges and Solutions for Post-CMP Cleaning of Dielectric Surfaces Contaminated with Ceria Nanoparticles – Mechanistic Aspects of Bond Breaking and Particle-Substrate Interfacial Interactions -- Daniela White (Entegris)


11:50 A.M.  Wafer Cleaning Challenges -- Uma Lagudu (Micron)

12:15 P.M.  Closing Remarks, S.V. Babu, CAMP

12:20 P.M.  Lunch