Clarkson University
16th International Symposium on Chemical-Mechanical Planarization

CENTER FOR ADVANCED MATERIALS PROCESSING

at

Clarkson University

announces

16th International Symposium on *Chemical-Mechanical Planarization*

August 7 -10, 2011

Crowne Plaza Resort & Golf Club Lake Placid, NY

Co-chairs:
S. V. Babu, Clarkson University
Manabu Tsujimura, EBARA
Jin-goo Park, Hanyang University
Donald Canaperi, IBM
Joseph Steigerwald, Intel
Matt Prince, Intel
Lee Cook, Dow Electronic Materials
Anurag Jindal. Micron

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Draft Agenda (7/15/11)
Symposium on Chemical Mechanical Planarization

August 7-10, 2011
Crown Plaza Resort

Sunday, August 7:

12:00 - 5:00 P.M. Hotel Check-in and CAMP Registration

5:30 - 7:30 P.M. Cocktail Reception, Adirondack Great Room, (No formal dinner provided)

Monday, August 8:

7:00 - 8:00 A.M. Breakfast – MacKenzie's

MEETING HELD IN GRAND VIEW B

8:00 A.M. **S.V. Babu: Opening Remarks**

Session I

8:05 A.M. Progressive Enhancement of the Science of CMP -- Don Hooper, Intel

8:30 A.M. Colloidal Stability of Nanoparticles and Applications to CMP -- Ken Cadien, Fangjian Lin and Zhenghe Xu, U. Alberta

8:55 A.M. Characterization of Abrasive Particle Distribution in CMP Slurries -- Kevin Pate, Intel

9:20 A.M. Newly Engineered Abrasives for CMP Applications -- Christoph Batz-Sohn, Evonik-Degussa

9:45 A.M. Zirconia Particles for Oxide CMP Applications -- Jun Wang, Issac Cherian and Andrew Haerle, St. Gobain

10:10 A.M. Coffee Break

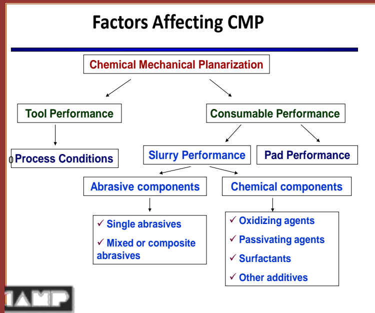
Session II

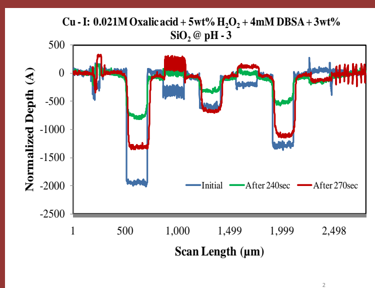
10:35 A.M. Correlation of Ceria particle properties to CMP performance -- Brian Santora, Ferro

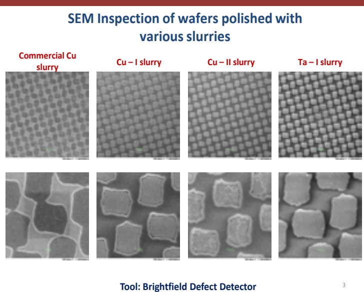
11:00 A.M. Ceria and Silica Based CMP Slurries for FEOL Applications -- Shyam Venkatraman, BASF

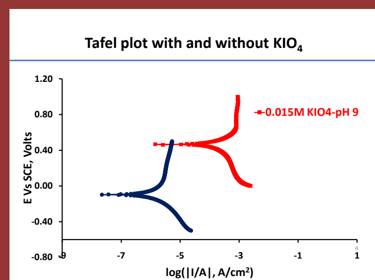
11:25 A.M. Investigation of the Viscosity and Slurry using Ceria Abrasives on CMP of Silicon Dioxide -- JongHeun Lim, Samsung

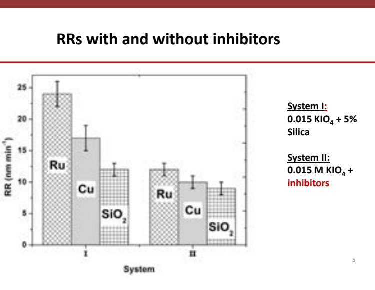
11:50 A.M. Direct and Inverse Analysis of Cerium Oxide Removal Rate Data-- Len Borucki, Y. Sampurno, Y. Zhuang, S. Theng, and A. Philipossian, Araca Inc.











12:15 P.M. Lunch – MacKenzie's

Monday, August 8 continued:

Session III

3:45 P.M. Characterization of CMP Pad Conditioners
-- Rakesh Singh, A. Galpin, D. Wells and J. Smith, Entegris, Inc.

4:10 P.M. Flipper F-2X" Double Sided Green CMP Conditioner
-- Taewook Hwang, Dinh-Ngoc Charles, R.Vedantham, S. Ramanath, T. Puthanangady, Saint Gobain Abrasives and JiChul Yang, Samsung Electronics

4.35 P.M. Defect Reduction on Barrier CMP -- Anne Miller, Fujimi

5:00 P.M The Use of in-situ Electrochemical Measurements During Barrier CMP to Study Cu/Ta Corrosion Issues in 30 nm Structures
-- Lieve Teugels, IMEC

5:25- 7:00 P.M. Poster Session/ Open Bar – Grand View A

7:00 P.M. Dinner – Olympic Room

After Dinner Speaker: Ken Cadien, U. Alberta, "Science and Technology of CMP"

Tuesday, August 9:

7:00 - 8:00 A.M. Breakfast – MacKenzie's

Session IV

8:10 A.M. Pattern Wafer Response Effects in Particle-Free PolySi CMP
-- Lee Cook, A. Reddy, Dow Electronic Materials; S.V. Babu and N. Penta, Clarkson University

8:40 A.M. Trials and Tribulations of the Development and Integration of Replacement Metal Gate CMP -- Tricia Burroughs, College of NanoScale Science and Engineering

9:05 A.M. Where 3D meets 2D: CMP applications and challenges in 3D integration-- Steve Olson, SEMATECH

9:30 A.M. Critical Aspects for TSV CMP Process
-- Yuchun Wang, Anji Microelectronics

9:55 A.M. Coffee Break

Session V

10:25 A.M. 3D Packaging - Oxide CMP -- Tuan A. Vo, IBM

10:50 A.M. Impact of Type of SiO2 films on Chemical Mechanical Planarization -- Sony Varghese, Guohua Wei and Andrew Carswell, Micron

11:15 A.M. Performance of Water-Soluble Fullerenol as Novel Functional Fine Particles for Polishing Nanosurfaces -- Keisuke Suzuk, Keiichi Kimura and Panart Khajornrungruang Kyushuu Institute of Technology and Yasuhiro Takaya, Osaka University

11:40 A.M. Influence of Wafer Edge Roll-Off and Notch on CMP Removal

Rate Distribution -- A. Fukuda, Manabu Tsujimura, Ebara Corporation and Tetsuo Fukuda, Fujitsu Semiconductor Ltd

12:05 P.M. Lunch – MacKenzie's

Tuesday, August 9, continued:

Session VI

3:45 P.M. Comparative study of nanomechanics of CMP polishing pads with HarmoniX AFM, nanoindenter, AFM indenter, and macroDMA - Igor Sokolov, Clarkson University

4:10 P.M. An In-depth Study on Physical and Mechanical Property of CMP Pads -- Fred Sun, Cabot Micro

4:35 P.M. Process Evaluation of Tungsten CMP for Enhancing the Uniformity and the Surface Roughness of Tungsten Film -- Seong-Kyu Yun, Seungho Park, Jeonghee Choi, Kyungho Jang, Inseak Hwang, Joon Kim and Seok Woo Nam, Samsung

5:00 P.M. The Fundamental Study for WIW-APC Control -- Jaeseok Kim, Hoyoung Kim, Boun Yoon, Siyoung Choi, Samsung

6:00 - 7:00 P.M. Reception at Lake Placid Club

7:00 P.M. Dinner at Lake Placid Club

After Dinner Speaker: Manabu Tsujimura, Ebara Corporation, "Enabling Solutions Below 20 nm" (Paradigm Shift 20)

Wednesday, August 10:

7:00 - 8:00 A.M. Breakfast – MacKenzie's

Session VII

8:05 A.M. Frictional Characteristic of CMP Process with Polymeric Additive PAA -- Ji Chul Yang, Hojoong Kim, Jae-Bum Joun, Jae-Phil Boo, Taesung Kim and Hyeon-Deok Lee Samsung Electronics & SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University

8:30 A.M. Introduction of Low-k damage free BM slurry with usage of water soluble polymer -- Tatsuya Yamanaka,Takashi Matsuda and Tomohisa Konno, JSR Corporation

8:55 A.M. Addressing The Cu CMP Cleaning Challenges -- Jin Lu, Andrew Carswell, Kent Zhuang, and Nicolai Petrov, Micron

9:20 A.M. Development of Next-Generation Post-CMP Cleaners for Better Defect Performance -- Peng Zhang, ATMI

9:45 A.M. Coffee Break

10:10 A.M. An Effective Cleaning Composition for the Defects Removal during Post Cu CMP Process-- Jingoo Park, Hanyang University, Korea

10:35 A.M. Post-CMP Cleaning of Copper Interconnects at Sub-30nm Technology Nodes -- D.C. Tamboli, M.B. Rao, and G. Banerjee, Air Products

Wednesday, August 10 Continued:

11.00 AM — Fixed Abrasive: A Solution for Planarization Challenges in STI and ILD0 CMP at Advanced Technology Nodes -- Jie Diao, Garlen Leung, Jun Qian, Sean Cui, Anand Iyer, Thomas Li, Chris Lee, Balaji Chandrasekaran, Thomas Osterheld, Lakshmanan Karuppiah, AMAT

11:25 A.M. — Development of Nickel Platinum CMP for Use in Graphene Device Manufacturing -- Tricia Burroughs, College of NanoScale Science and Engineering

11:50 A.M. — TBD, IBM

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

12:30 P.M. — Lunch - MacKenzie's