

DPS2016 Timetable

November 21

8:00	
8:10	
8:20	
8:30	
8:40	
8:50	
9:00	
9:10	
9:20	Registration
9:30	
9:40	
9:50	Opening Remark (M Honda), Award Ceremony (K. Sasaki)
10:00	
10:10	<Nisizawa Award> Prof. Hideo Sugai (Nagoya Univ.)
10:20	"Development of Basic Plasma Technology for Dry Process"
10:30	Break 10min
10:40	
10:50	A-1 <Invited>
11:00	Prof. Dr. Erwin Kessels (Eindhoven Univ. of Technol.)
11:10	"Plasma-based atomic layer processing for nanoelectronics"
11:20	
11:30	A-2 N. Miyoshi (Hitachi, Ltd)
11:40	"Formation and Desorption Processes of Surface Modified Layers for High-throughput Atomic Layer Etching of SiN"
11:50	
12:00	A-3 M. Tabata (Tokyo Electron Miyagi Ltd.)
12:10	"Improvement of small contact etch capability with TiN mask by Quasi-ALE"
12:20	
12:30	A-4 Y. Ishii (Hitachi High Technologies America, Inc.)
12:40	"Atomic Layer Etching of Silicon Nitride using Cyclic Process with Hydrofluorocarbon Chemistry"
12:50	
13:00	Lunch 12:20-13:30 (70min)
13:10	
13:20	
13:30	
13:40	B-1 <Invited>
13:50	Prof. Jane P. Chang (UCLA)
14:00	"Enabling the Synthesis and Integration of Multiferroic Materials by Atomic Layer Processing"
14:10	
14:20	B-2 <Invited>
14:30	Prof. Steven M. George (University of Colorado)
14:40	"Thermal Atomic Layer Etching Using Sequential, Self-Limiting Fluorination and Ligand-Exchange Reactions"
14:50	
15:00	B-3 T. Ohba (Lam Research Co. Ltd.)
15:10	"Atomic layer etching of GaN / AlGaN"
15:20	
15:30	B-4 N. Kofuji (Hitachi R&D Group)
15:40	"Uniform Lateral Etching of Tungsten in Deep Trenches Utilizing Reaction-Limited NF ₃ Plasma Process"
15:50	
16:00	Break 20min
16:10	
16:20	C-1 Y. Okada (Kyoto University)
16:30	"A new damage evaluation scheme predicting the nature of defects—an advanced capacitance-voltage technique"
16:40	
16:50	C-2 A. Hirata (Sony Semiconductor Solutions Corp.)
17:00	"Effects of hydrogen-damaged-layer on ITO etching by H ₂ /Ar plasma"
17:10	
17:20	C-3 K. Shinohara (Kyoto University)
17:30	"Effects of plasma exposure on leakage and reliability parameters of dielectric film: New measures of damage?"
17:40	
17:50	Break 10min
18:00	
18:10	D-1 Y. Hasegawa (University of Chubu)
18:20	"Microwave plasma production by rotating fields in resonant cavity"
18:30	
18:40	D-2 R. Nakashima (University of Hiroshima)
18:50	"Generation of Ultra High Power Thermal Plasma Jet (Super TPJ) and Its Application to Crystallization of Amorphous Silicon Films"
19:00	
19:10	D-3 T. Seki (Kyoto University)
19:20	"Oblique pattern etching with ClF ₃ -Ar neutral cluster beam"
19:30	
19:40	
19:50	
20:00	
20:10	
20:20	
20:30	Banquet

Session A
How can we control atomic layer reactions? (1)

Session B
How can we control atomic layer reactions? (2)

Session C
Plasma Induced Damage

Session D
New Dry Process and Equipment

November 22

8:00	
8:10	
8:20	
8:30	
8:40	
8:50	
9:00	
9:10	
9:20	Registration
9:30	
9:40	E-1 K. Shima (University of Tokyo)
9:50	"Tailoring high-aspect-ratio three-dimensional test structures for process development of conformal-film deposition technologies"
10:00	
10:10	E-2 H. Murata (TAIYO NIPPON SANSO Corporation)
10:20	"Reaction Mechanism of ALD-SiN Process Based on Quantum Chemical Calculation Comparing to Experimental Results"
10:30	
10:40	
10:50	
11:00	Poster 100min
11:10	
11:20	
11:30	
11:40	
11:50	
12:00	
12:10	
12:20	Lunch 11:50-13:00 (70min)
12:30	
12:40	
12:50	
13:00	
13:10	F-1 <Invited>
13:20	Prof. Hae June Lee (Pusan National University)
13:30	"Fluid and Particle-in-Cell Simulations of the Capacitively Coupled Plasma Deposition Reactor"
13:40	
13:50	
14:00	F-2 <Invited>
14:10	Dr. Jung Hwan Anselmo Um (Samsung Electronics Co., Ltd.)
14:20	"Analysis of ion energy and angular distribution at 300mm wafer edge using simulation and measured information"
14:30	
14:40	F-3 K. Denpoh (Tokyo Electron Ltd.)
14:50	"Novel PECVD equipment for Ti thin film deposition utilizing Ar-based plasma and wafer stage impedance control"
15:00	
15:10	Break 20min
15:20	
15:30	G-1 M. Ito (Lam Research Co. Ltd.)
15:40	"Use of VI-probe signals for advanced process and equipment control and micro-arc detection"
15:50	
16:00	G-2 Keun Hee Bai (Samsung Electronics Co., Ltd.)
16:10	"Development of a capacitively coupled planar probe for AEC/APC and chamber to chamber matching"
16:20	
16:30	G-3 T. Ueyama (Nagoya University)
16:40	"Phase-resolved measurement of electron density in afterglow of synchronized dc-imposed pulsed plasmas of fluorocarbon based gases"
16:50	
17:00	Break 10min
17:10	
17:20	H-1 <Invited>
17:30	Dr. Stefan Tincx (University of Antwerp)
17:40	"Numerical and experimental investigation of cryogenic etching of silicon and porous low-k dielectric"
17:50	
18:00	H-2 T. Iwase (Hitachi, Ltd.)
18:10	"Effect of temperature on mixing layer in HBr/N ₂ /fluorocarbon-based plasma"
18:20	
18:30	H-3 M. Matsui (Hitachi, Ltd.)
18:40	"Effect of plasma dissociation on fluorocarbon layers formed under C ₂ F ₄ /Ar pulsed-plasma for SiO ₂ etching"
18:50	
19:00	H-4 Remi Dussart (GREMI - Univ. Orleans – CNRS)
19:10	"Cryoetching mechanisms and STIGer process evaluation"
19:20	
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20:00	
20:10	
20:20	Closing Remark (M. Matsui)
20:30	

Session E
CVD/ALD

Session F
Modeling and simulation for precise reaction control

Session G
AEC, APC and Monitoring

Session H
Etching Technology