

# AEPSE-2007 Program

**Tuesday, September 25, 2007**

10:30 **Opening (Room A&B, 10:30-11:00, Sep. 25)**

**Plenary Lectures 1, 2 (Room A&B, 11:00-12:20, Sep. 25)**

11:00 **Plenary 1** JP Toyonobu Yoshida

11:40 **Plenary 2** Optical spectroscopy to control a plasma reactor for surface treatment Andre Ricard

12:20 Lunch Break (12:20-13:30)

13:30 **Poster Session 1 (13:30-15:00, Sep. 25)**

**Session 01: Plasma and Ion-based Processes (Room A, 15:00-16:30, Sep. 25)**

15:00 **KN0100** The effect of ion energy bombardment on mechanical properties of chromium nitride coating deposited at different pulse frequency and pulse-off time by DC reactive magnetron sputter deposition Rahamathunnisa Muhammad Azam, Ram Prasad Gandhiraman, David C Cameron

15:30 **OR0101** EFFECT OF PULSE MODE AND ANODE CONFIGURATION ON SUBSTRATE BOMBARDMENT AND LAYER PROPERTIES IN REACTIVE PULSE MAGNETRON SPUTTERING Daniel Gloess, Peter Frach, Hagen Bartzsch, Joern-Steffen Liebig, Olaf Zywitzki, Thomas Modes, Klaus Goedicke

15:50 **OR0102** Deposition of ternary Cr-Al-Si Oxides and nitrides by High Ionization Pulsed Sputtering Technique (H.I.P.) Rainer Cremer, Hans-Gerd Fuss, Jones Alami

16:10 **OR0103** A Study On Characteristics Of SF6/O2 Capacitive Discharge With QMS And Langmuir Probe HunSu Lee, Seung-Kyu Ahn, Shin-Jae You, Hong-Young Chang

**Session 02: Industrial Applications (Room B, 15:00-16:30, Sep. 25)**

15:00 **KN0200** PLASMA BORIDING OF AUTOMOTIVE PARTS Peter Kaestner, Klaus Stefan Klimek, Kyong Tschong Rie, Gunter Brauer

15:30 **OR0201** Preliminary study on the characteristics of the thin films coated on a prototype punch die for a hydro-forming press Bomsok Kim, SeungChun Oh, SangYul Lee

15:50 **OR0202** MACHINING TESTS AND CHARACTERIZATION OF Ti-Si-C-N THIN FILMS DEPOSITED ON CUTTING INSERTS. Mats L Ahlgren, Andreas Hedin

16:10 **OR0203** Tailored Super-hard CVD diamond Coatings For Highly demanding Cutting Operations Rainer Cremer, Wlaler Reichert, Stephan Kyrsta, Oliver Lemmer

16:30 Break (16:30-16:40)

**Session 03: Adhesion and Wear (Room A, 16:40-18:10, Sep. 25)**

16:40 **KN0300** INTERFACE ENGINEERING BY HIGH POWER IMPULSE MAGNETRON SPUTTERING FOR THE ENHANCEMENT OF ADHESION OF PVD COATINGS Arutiun P. EHIASARIAN

17:10 **OR0301** GLIDING ARC DISCHARGE ? APPLICATION FOR ADHESION IMPROVEMENT OF FIBRE REINFORCED POLYESTER COMPOSITES Yukihiro Kusano, Tom Logstrup Andersen, Bent F Sorensen, Henrik Junge Mortensen, Poul Kerff Michelsen

17:30 **OR0302** Improvement of Copper Plating Adhesion of PPE Printed Wiring Board by Plasma Treatment Shohei Ikari, Hiroshi Kashiwade, Takashi Matsuoka, Tomoko Hirayama, Shuichi Ishida, Kiyotaka Kato

17:50 **OR0303** ANTI-WEAR AND ANTI-BACTERIA BEHAVIORS OF TaN-Ag NANOCOMPOSITE THIN FILMS WITH AND WITHOUT ANNEALING Jang-Hsing Hsieh, C. C. Tseng, Weite Wu, Y. G. Chang, S. Y. Chang

**Session 04: Modeling and Analysis of Thin Films (Room B, 16:40-18:10, Sep. 25)**

16:40	<b>KN0400</b>	THE STABILIZATION OF COMPOSITE COATINGS: A DENSITY FUNCTIONAL THEORY BASED STUDY	Cecilia Charlotte AArhammar, C. Moyses Araujo, Rajeev Ahuja
17:10	<b>OR0401</b>	PHASE STABILITIES OF Ti-Al-N AND Cr-Al-N: COMPARISON BETWEEN EXPERIMENTS AND MODELING	Paul H. Mayrhofer
17:30	<b>OR0402</b>	SIMULATION OF MOLECULAR DYNAMICS ASSOCIATED WITH HARDNESS OF ALLOY THIN FILMS	Ya-Yun Cheng, Cheng-Chung Lee
17:50	<b>OR0403</b>	FUNCTIONAL MULTILAYER COATINGS OF TETRAVINYL SILANE	Vladimir Cech, Jan Studynka, Bozena Cechalova, Vladimir Perina

**Wednesday, September 26, 2007**

**Session 05: Electronic Device Processes (Room A, 9:30-11:20, Sep. 26)**

9:30	<b>KN0500</b>	Amplitude modulated RF discharges for low-k film deposition	Shinya Iwashita, Kazunori Koga, Masaharu Shiratani
10:00	<b>OR0501</b>	Diffusion barrier performance of amorphous Ta-Zr films in Cu metallization	Chuan Li, Jang-Hsing Hsieh
10:20	<b>OR0502</b>	ELECTRICALLY INSULATING Al <sub>2</sub> O <sub>3</sub> AND SiO <sub>2</sub> FILMS FOR SENSOR AND PHOTOVOLTAIC APPLICATIONS DEPOSITED BY REACTIVE PULSE MAGNETRON SPUTTERING AND MAGNETRON ACTIVATED CVD	Peter Frach, Hagen Bartzsch, Daniel Gloess, Matthias Fahland, Frank Haendel
10:40	<b>OR0503</b>	TWO-STEP REACTIVE SPUTTERING OF PIEZOELECTRIC ALUMINUM NITRIDE THIN FILMS ON MOLYBDENUM ELECTRODES FOR FBAR APPLICATIONS	Jyh-Shiarn Cherng, T.Y. Chen, C.M. Lin
11:00	<b>OR0504</b>	Gas-Chopping Etching of Silicon Using SF <sub>6</sub> /C <sub>4</sub> F <sub>8</sub> and SF <sub>6</sub> /C <sub>4</sub> F <sub>6</sub> Plasmas	Chang-Koo Kim, Hyongmoo Rhee Kim, Hyeokkyu Kwon, Sang Ho Woo, Yil Wook Kim

**Session 06: Nano-carbon Materials (Room B, 9:30-11:20, Sep. 26)**

9:30	<b>KN0600</b>	NANOSCALE SURFACE ENGINEERING: WHY PLASMA-AIDED?	Kostya Ostrikov, Shuyan Xu, Igor Levchenko
10:00	<b>OR0601</b>	Effects of plasma surface conditions on the growth of single-walled carbon nanotubes with diffusion plasma CVD	Toshiaki Kato, Rikizo Hatakeyama
10:20	<b>OR0602</b>	CHARACTERISTICS OF CARBON DUST PARTICLES PRODUCED IN DEUTERIUM HELICON PLASMAS	Kazunori Koga, Shinya Iwashita, Masaharu Shiratani
10:40	<b>OR0603</b>	FABRICATION OF DIAMOND NANO-WHISKERS THROUGH METAL SPUTTERING AND OXYGEN ETCHING	Hirokazu Takaki, Chaoyang Li, Akimitsu Hatta
11:00	<b>OR0604</b>	EVOLUTION MECHANISM OF WRINKLED HARD SKIN ON POLYMERS CREATED BY FOCUSED ION BEAM	Myoung-Woon Moon, Sang Hoon Lee, Jeong-Yun Sun, Kyu Hwan Oh, Kwang-Ryeol Lee, Ashkan Vaziri, John W. Hutchinson

11:20 Break (11:20-11:40)

**Plenary Lecture 3 (Room A&B, 11:40-12:20, Sep. 26)**

11:40	<b>Plenary 3</b>	Future Development in Silicon Nano-Electronics	Shigeaki Zaima
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12:20 Lunch Break (12:20-14:00)

14:00 Excursion (14:00- , Sep. 26)

## Thursday, September 27, 2007

### Session 07: Diamond-Like Carbon Films (Room A, 9:30-11:20, Sep. 27)

9:30	<b>KN0700</b>	TRIBOLOGICAL PROPERTIES AND HARDNESS OF DLC FILMS WITH VARIOUS HYDROGEN CONTENTS	Hiroataka Ito, Kenji Yamamoto, Masabumi Masuko
10:00	<b>OR0701</b>	The Effects of Deposition Parameters on the Structure and Properties of Titanium-containing DLC Films Synthesized by Cathodic Arc Plasma Evaporation	Pi Chuen Tsai, Jueh-Yu Chiang, Yen-Fei Hwang
10:20	<b>OR0702</b>	Thermal stability and mechanical properties of diamond-like carbon films grown by PACVD: Effect of silicon and hydrogen content.	Nuno Jorge Carvalho, Marta Saraiva, Cristina Louro, Albano Cavaleiro
10:40	<b>OR0703</b>	TRIBOLOGICAL BEHAVIORS OF A DLC FILM IN AQUEOUS ENVIRONMENT	Jin Woo Yi, Se Jun Park, Seung-Hwan Lee, Myoung-Woon Moon, Kwang-Ryeol Lee, Jung-Gu Kim, Seock-Sam Kim
11:00	<b>OR0704</b>	The structure and electrical properties of ultra thin carbon film synthesized by unbalanced magnetron sputtering	Sung I Kim, Tae J Byun, Ho Y Lee, Kab S Kim, Jeon G Han

### Session 08: Biomedical Applications (Room B, 9:30-11:20, Sep. 27)

9:30	<b>KN0800</b>	Investigation on Biocompatibility of Zirconium-coated Polyurethane Surfaces	Frank Hollstein, Chr. Wetzel, Th. K. Monsees, R. H. W. Funk, N. Ozkucur
10:00	<b>OR0801</b>	FABRICATION OF THE TRANSPARENT CONDUCTING THIN FILM FOR BIOLOGICAL MICROREACTOR	Tin Duc Chanh Doan, Tin Duc Chanh Doan, Vinh Cao Tran, Chien Mau Dang
10:20	<b>OR0802</b>	SURFACE CHARACTERISTICS OF TOOTH ASH COATINGS ON Ti AND Ti-6Al-4V DEPOSITED BY PULSED LASER METHOD	Han Cheol Choe, Yeong Mu Ko, Sang Sub Kim, W. Brantley
10:40	<b>OR0803</b>	MODIFICATION OF DEGRADATION BEHAVIOR OF MAGNESIUM ALLOY BY IBAD COATING OF HYDROXYAPATITE	Jingxin Yang, Yanpeng Jiao, Fuzhai Cui, In-Seop Lee, Qingshui Yin, Yu Zhang
11:00	<b>OR0804</b>	IN VITRO BEHAVIOUR OF OSTEOBLAST ON BIOACTIVE PLASMA MODIFIED NICKEL TITANIUM SHAPE MEMORY ALLOY	Kenneth MC Cheung, Roy YL Chan, Shuilin Wu, Xiangmei Liu, Paul K Chu, Kelvin WK Yeung, William W Lu, Alfonso HW Ngan, Keith DK Luk
11:20		Break (11:20-11:40)	

### Plenary Lecture 4 (Room A&B, 11:40-12:20, Sep. 27)

11:40	<b>Plenary 4</b>	Application of scaling law in the analysis of growth and annealing behavior of ZnO films deposited Si substrates	Qing-Yu Zhang
12:20		Lunch Break (12:20-13:30)	

### Poster Session 2 (13:30-15:00, Sep. 27)

### Session 09: Nanocomposite Films (Room A, 15:00-16:30, Sep. 27)

15:00	<b>KN0900</b>	HARD NANOCOMPOSITE COATINGS. PRESENT STATUS AND TRENDS	Jindrich Musil
15:30	<b>OR0901</b>	A PARAMETRIC STUDY ON PLASMA ENHANCED MAGNETRON SPUTTERED NANOCOMPOSITE COATINGS	Ronghua Wei, Sastry Cheruvu, Edward Langa
15:50	<b>OR0902</b>	NANOCOMPOSITE ALUMINA-ZIRCONIA THIN FILMS BY REACTIVE DUAL MAGNETRON SPUTTERING	David Huy Trinh, Tomas Kubart, Tomas Nyberg, Marianne Collin, Ingrid Reineck, Lars Hultman, Hans Hogberg
16:10	<b>OR0903</b>	Effect of Bilayer Period on CrN / Cu Superlattice Thin Films	Youn J. Kim, Ho Y. Lee, Tae J. Byun, Kab S. Kim, Jeon G. Han, Yun H. Shin, Young Z. Lee

**Session 10: Protective Coatings (Room B, 15:00-16:30, Sep. 27)**

15:00	<b>KN1000</b>	Transparent Scratch Protection Coatings with Nanocomposites	Wolfgang Diehl, Bernd Szyszka
15:30	<b>OR1001</b>	Development of Decorative and Corrosion Resistant Coatings for the Surface Refinement of Magnesium Alloys by Plasma-Based Methods	Holger Hoche, Frank Hollstein, Wolfgang Adamitzki, Juergen Schmidt
15:50	<b>OR1002</b>	STRUCTURE, MECHANICAL AND THERMAL PROPERTIES OF Zr-Al-Y-N AND Zr-Al-Y-O-N THIN FILMS	Martin Moser, Nezameddin Fateh, Paul Heinz Mayrhofer
16:10	<b>OR1003</b>	SPUTTER DEPOSITION OF PULSE BIASED INSULATING CHROMIUM AND ALUMINIUM OXIDE THIN FILMS	Martynas Audronis, Allan Matthews, Adrian Leyland
16:30		Break (16:30-16:40)	

**Session 11: Advanced Plasma Sources (Room A, 16:40-18:10, Sep. 27)**

16:40	<b>KN1100</b>	LARGE-AREA LOW-DAMAGE PLASMA SOURCES DRIVEN BY MULTIPLE LOW-INDUCTANCE-ANTENNA MODULES FOR NEXT-GENERATION FLAT-PANEL AND POLYMER PROCESSES	Yuichi Setsuhara, Kosuke Takenaka, Kazuaki Nishisaka, Akinori Ebe
17:10	<b>OR1101</b>	microplasma produced by carbon nanotube cathode	Qin Zou, Akimitsu Hatta
17:30	<b>OR1102</b>	Diagnostic of plasma in aqueous systems by time-resolved optical spectroscopy	Camelia Miron, Maria Antoaneta Bratescu, Takahiro Ishizaki, Nagahiro Saito, Osamu Takai
17:50	<b>OR1103</b>	MICROWAVE POWER ABSORPTION COEFFICIENT OF AN ECR XENON ION THRUSTER	Kazutaka Nishiyama, Hitoshi Kuninaka

**Session 12: Quarternary-phase Nitrides (Room B, 16:40-18:10, Sep. 27)**

16:40	<b>KN1200</b>	NOVEL CrAlYN/CrN SUPERLATTICE COATINGS DEPOSITED BY THE COMBINED HIGH POWER IMPULSE SPUTTERING/ UNBALANCED MAGNETRON SPUTTERING TECHNIQUE FOR ENVIRONMENTAL PROTECTION OF gamma-TiAl ALLOYS	Papken Eh. HOVSEPIAN, Arutiun P. Ehasarian, Christina Reinhard, Reinhold Braun, Hailiang Du, John Walker
17:10	<b>OR1201</b>	THE IMPACT OF YTTRIUM ON MAGNETRON SPUTTERED Cr-Al-N COATINGS: A COMPARATIVE STUDY OF EXPERIMENTAL AND THEORETICAL INVESTIGATIONS	Florian Rovere, Paul H. Mayrhofer, Denis Music, Jochen M. Schneider
17:30	<b>OR1202</b>	Deposition of Ti-A-CN (A=Si and Al) thin films by reactive sputtering of MAX-phase targets	Hans Hogberg, Jenny Frodelius, Per Eklund, Lars Hultman
17:50	<b>OR1203</b>	Deposition of superhard TiCrAlSiN thin films by cathodic arc plasma deposition	Sun Kyu Kim, Pham Van Vinh, Jae Wook Lee

18:30 **Conference Dinner (18:30- , Sep. 27)**

**Friday, September 28, 2007****Session 13: Corrosion Resistance (Room A, 9:30-11:20, Sep. 28)**

9:30	<b>KN1300</b>	MORPHOLOGY AND CRYSTAL ORIENTATION ON CORROSION RESISTANCE OF MG THIN FILMS FORMED BY PVD METHOD ONTO ZN ELECTROPLATED SUBSTRATE	Myeong Hoon Lee, SANG MIN BAEK
10:00	<b>OR1301</b>	Spatial and temporal variations of Ti, Ti <sup>M</sup> and Ti <sup>+</sup> densities in pulse-modulated rf magnetron sputtering plasmas	Nayan Nafarizal, Noriharu Takada, Keiji Nakamura, Masayoshi Ikeda, Yasumi Sago, Sasaki Koichi
10:20	<b>OR1302</b>	Corrosion Resistance of Plasma-Oxidized Stainless Steel	Jiro Okado, Ken Okada, Asahiko Ishiyama, Yuichi Setuhara
10:40	<b>OR1303</b>	Effect of the alloying elements in hot work tool steels on the near-surface zone during plasmanitriding	Mariann Lovonyak, Stefan Marsoner, Thomas Muller, Ingo Siller, Herbert Schweiger, Harald Leitner, Reinhold Ebner
11:00	<b>OR1304</b>	IMPROVEMENT IN CORROSION PROPERTIES OF PLASMA NITRIDED STEEL BY POST SPUTTERING	Subroto Mukherjee, Gajendra P. Singh, Joseph Alphonsa, S. K. Tiwari, Prakash M. Raole

**Session 14: Functionalization of Surfaces (Room B, 9:30-11:20, Sep. 28)**

9:30	<b>KN1400</b>	Site-selectivity of Chemical Reaction on a Biomimetic Super-hydrophobic/Super-hydrophilic Micropatterned Template	Hiroshi Sakurai, Takahiro Ishizaki, Nagahiro Saito, Osamu Takai
10:00	<b>OR1401</b>	TEMPERATURE EFFECT ON CHARGE DENSITY OF SIN FILMS DEPOSITED BY PLASMA-ENHANCED CHEMICAL VAPOR DEPOSITION	Byungwhan Kim, Sang Hee Kwon
10:20	<b>OR1402</b>	SURFACE ANALYSIS ON HYDROPHOBICITY OF THAI SILK TREATED BY SF6 PLASMA	Pradoong Suanpoot, K Kueseng, S Ortmann, R Kaufmann, P Nimmanpipug, C Umongno, D Boonyawan, T Vilaithong
10:40	<b>OR1403</b>	THERMAL ANNEALING RESPONSE OF CRCN COATINGS: EFFECT OF C CONTENT	Cristina Louro, Angela Neves, Vinicius Severo, Ladislav Cvrcek, Tomas Polcar, Albano Cavaleiro
11:00	<b>OR1404</b>	TEMPERATURE STABILITY OF MULTILAYERED W/W-O AND W-N/W-O COMPOSITE COATINGS	Nuno M.G. Parreira, Cristina Louro, Tomas Polcar, Albano Cavaleiro

11:20 Break (11:20-11:40)

**Plenary Lecture 5 (Room A&B, 11:40-12:20, Sep. 28)**

11:40 **Plenary 5** Youn S. Choi

12:20 Lunch Break (12:20-13:30)

**Poster Session 3 (13:30-15:00, Sep. 28)****Workshop on Flat-panel and Flexible Devices (Room A, 15:00-18:20, Sep. 28)****Session 15: Metallic Surface Treatments (Room B, 15:00-16:50, Sep. 28)**

15:00	<b>KN1500</b>	Properties of Glow Discharge Plasma Aluminizing on Titanium Alloy Surface	Fei Chen, Hai Zhou, Wei Ke
15:30	<b>OR1501</b>	STUDIES OF STRUCTURE AND PROPERTIES OF COATINGS ON Co-Cr BASE AFTER DUPLEX TREATMENT	alexander dmitrievich pogrebnyak, Yuliya Kravchenko, Ol'ga Petrovna Kul_ment_eva, Dar'ya L'vovna Alontseva, Shamurat Mazaripovich Rusimov, Vladimir Ahmad R. Rastkar, Ali Reza Niknam, Babak Shokri
15:50	<b>OR1502</b>	Friction and indentation tests on the modified surface of titanium aluminides	Tong Y Cho, Jae H Yoon, Kil S Kim, Ki O Song, Yun K Joo, Wei Fang, Shihong Zhang, Suk J Youn, Hui G Chun, Soon Y Hwang
16:10	<b>OR1503</b>	A Study on HVOF Coatings of Micron and Nano WC-Co Powders	JOSEPH MAKANGA, SARAH NALWOGA
16:30	<b>OR1504</b>	Characterization of TiNi shape-memory alloy thin Films for MEMS applications	

16:50 Break (16:50-17:00)

**Session 16: Tribological and Functional Coatings (Room B, 17:00-18:20, Sep. 28)**

17:00	<b>OR1601</b>	Relationship of chemical and structural properties with the tribological behavior of sputtered SiCN films	Holger Hoche, Daniel Allebrandt, Ralf Hauser, Michael Bruns, Claudia Fasel
17:20	<b>OR1602</b>	Tribological Behaviour of ZrTiB(N) sputtered coatings	Omar Jimenez, Adrian Leyland, Martynas Audronis, Allan Matthews
17:40	<b>OR1603</b>	CORRELATION BETWEEN MECHANICAL, OPTICAL AND CHEMICAL PROPERTIES OF THIN FILMS DEPOSITED BY PECVD	Vladimir Cech, Jan Studynka, Bozena Cechalova
18:00	<b>OR1604</b>	ICP with magnetic sputtering plasma synthesis organic nanocomposite PEO/ silver	Qiang Chen, Qiang Chen, Lei Yue, Fenyan Xie, Jing Weng, Chunqing Hao, Yaobo Fu, Meili Zhou, Yuefei Zhang

## Saturday, September 29, 2007

### Session 17: Functional Oxides and Nitrides (Room A, 9:30-10:50, Sep. 29)

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|-------|---------------|--|--|
| 9:30  | <b>OR1701</b> | p-TYPE ZnO THIN FILMS PREPARED BY THE OXIDATION OF Zn <sub>3</sub> N <sub>2</sub> DEPOSITED WITH RF MAGNETRON SPUTTERING                             | Le-Xi Shao, Jun Zhang  |
| 9:50  | <b>OR1702</b> | PREPARATION AND MECHANICAL PROPERTIES OF ALUMINUM-DOPED ZINC OXIDE TRANSPARENT CONDUCTING FILMS  | Shou-Yi Chang, Yen-Chih Hsiao, Yi-Chung Huang  |
| 10:10 | <b>OR1703</b> | Electron field emission in air at an atmospheric pressure from sp <sup>3</sup> -bonded 5H-BN films prepared by synergetic CVD using laser and plasma | Shojiro Komatsu, Eiichi Ohta, Yuhei Satoh, Takayuki Watanabe, Kiyomi Nakajima, Toyohiro Chikyo |
| 10:30 | <b>OR1704</b> | PHASE AND MORPHOLOGY EVOLUTION OF CUBIC BORON NITRIDE FILMS GROWN IN A HIGH-DENSITY FLUORINE-CONTAINING PLASMA                                       | KUNGEN TEII, Ryota Yamao, Seiichiro Matsumoto  |

### Session 18: Plasma Sources and Diagnostics (Room B, 9:30-10:50, Sep. 29)

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|-------|---------------|--|---|
| 9:30  | <b>OR1801</b> | ATMOSPHERIC DBD PLASMA SOURCE FOR SURFACE PROCESSING                                       | Heon-Ju Lee, Chan Joo Yim, Sabg Bum Joa, Min Kook Ko          |
| 9:50  | <b>OR1802</b> | PLASMA TEMPERATURE DIAGNOSTICS IN A MAGNETRON SPUTTERING SYSTEM                            | Nikolay Britun, Mireille Gaillard, Soo Ghee Oh, Jeon Geon Han |
| 10:10 | <b>OR1803</b> | PARAMETRIC SURVEY OF DROPLET-FREE HIGH-POWER SPUTTERING (HPPS) GLOW PLASMA CHARACTERISTICS | Ken Yukimura, Ryosuke Mieda, Hiroshi Tamagaki, Tadao Okimoto  |
| 10:30 | <b>OR1804</b> | ANALYSIS OF PLASMA EMISSION IN FEMTOSECOND LASER MACHINING                                 | Hongyu - Zheng  |

10:50 Break (10:50-11:10)

### Plenary Lectures 6, 7 (Room A&B, 11:10-12:30, Sep. 29)

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|-------|------------------|---|-------------------|
| 11:10 | <b>Plenary 6</b> | Large area web and glass coating                      | Prof. Schultheiss |
| 11:50 | <b>Plenary 7</b> | Nanoscale-Controlled Surface for Biochips and Bio-AFM | Joon Won Park     |

12:30 Lunch Break (12:30-13:40)

### 13:40 Poster Session 4 (13:40-15:10, Sep. 29)

### Session 19: Functional Oxide Films (Room A, 15:10-16:40, Sep. 29)

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|-------|---------------|---|--|
| 15:10 | <b>KN1900</b> | STUDY ON C12A7 EMBEDDED IN ITO THIN FILMS FOR TRANSPARENT CATHODE   | Chulho Jung, Tai Huu Phan, Jiwook Moon, Seok Gyu Yoon, Dae Ho Yoon   |
| 15:40 | <b>OR1901</b> | Characterization of the layered films consisting of Al, Sc-codoped ZnO /Al-doped ZnO and Al-doped ZnO /Al,Sc-codoped ZnO            | Kun-Cheng Peng, Jing-Chie Lin, C. A. Tseng, Sheng-Long Lee   |
| 16:00 | <b>OR1902</b> | Control of refractive index and composition of TiO <sub>x</sub> thin film for optical waveguide deposited by RF reactive sputtering | Soon Woo kwon, Woo Seok Yang, Hyung Man Lee, Woo Kyung Kim, Han Young Lee, Woo Jin Jeong, Myung Keun Song, Dae Ho Yoon |
| 16:20 | <b>OR1903</b> | THE GROWTH OF ORIENTED TITANATE NANOTUBE THIN FILM ON TITANIUM METAL FLAKE  | Yupeng Guo, Nam-Hee Lee, Hyo-Jin Oh, Cho-Rong Yoon, Sun-Jae Kim  |

**Session 20: FPD and Sollar Cells (Room B, 15:10-16:40, Sep. 29)**

15:10	<b>KN2000</b>	CHARGE STORAGE EFFECT OF NONVOLATILE MEMORY DEVICE ON GLASS FOR MEMORY IN PIXEL OF FLAT PANEL DISPLAY	Sungwook Jung, Sunghyun Hwang, Kyungsoo Jang, Jungin Lee, Kwangsoo Lee, Hyungjun Park, Kyunghae Kim, Suresh Kumar Dhungel, Junsin Yi
15:40	<b>OR2001</b>	EFFECTS OF ANNEALING ON THE ELECTRICAL AND OPTICAL BEHAVIORS OF Cu <sub>2</sub> O-Ag-Cu <sub>2</sub> O MULTILAYERS	Jang-Hsing Hsieh, P. W. Kuo, Weite Wu
16:00	<b>OR2002</b>	Deposition of a-Si:H films using multi-hollow discharge plasma CVD reactor with magnetic field	William Makoto Nakamura, Kazunori Koga, Masaharu Shiratani
16:20	<b>OR2003</b>	FORMATION OF TITANIA THIN FILMS FOR DYE SENSITIZED SOLAR CELLS BY INK JET PRINTING	Cho-Rong Yoon, Sang-Chul Jung, Hyo-Jin Oh, Nam-Hee Lee, Yupeng Guo, Sun-Jae Kim
16:40		Break (16:40-16:50)	

**Session 21: Plasma Sources and Diagnostics (Room A, 16:50-18:00, Sep. 29)**

16:50	<b>KN2100</b>	Plasma diagnostics by multiple probe array in ICP assisted magnetron sputtering	Junghoon Joo
17:20	<b>OR2101</b>	CHARACTERIZATION OF MASS-SEPARATED ION ENERGY DISTRIBUTIONS IN RF PLASMAS DRIVEN BY MULTIPLE INTERNAL-ANTENNA UNITS	Kosuke Takenaka, Yuichi Setsuhara, Kazuaki Nishisaka, Akinori Ebe, Yong-Mo Kim, Jeon G. Han
17:40	<b>OR2102</b>	CHARACTERISTICS OF IONIZED GAS METAL ARC PROCESSING	Manabu Tanaka, Takahiro Tamaki, Shinichi Tashiro, Kazuhiro Nakata, Toshio Ohnawa, Tomoyuki Ueyama

**Session 22: Plasma Etching (Room B, 16:50-18:00, Sep. 29)**

16:50	<b>KN2200</b>	EFFECT OF ADDITIVE GASES ON ZINC OXIDE THIN FILMS ETCHING USING INDUCTIVELY COUPLED PLASMA	Jong-Chang Woo, Kyoung-Tae Kim, Gwan-Ha Kim, Jong-Gyu Kim, Chang-Il Kim
17:20	<b>OR2201</b>	ANGULAR DEPENDENCE OF Si <sub>3</sub> N <sub>4</sub> ETCH RATES AND SiO <sub>2</sub> -TO-Si <sub>3</sub> N <sub>4</sub> ETCH SELECTIVITY IN A C <sub>4</sub> F <sub>8</sub> /Ar PLASMA	Jin-Kwan Lee, Il-Yong Jang, Seung-Haeng Lee, Sang Heup Moon, Chang-Koo Kim
17:40	<b>OR2202</b>	X-RAY PHOTOELECTRON SPECTROSCOPY OF Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> AND ITS ETCH CHARACTERISTICS IN FLUORINE BASED PLASMAS	Se-Koo Kang, Byung-Jae Park, Sang-Duk Park, Sung-Woo Kim, Geun-Young Yeom

18:00 **Closing (18:00-18:10)**

# Poster Sessions

Tuesday, September 25, 2007

13:30

## Poster Session 1 (13:30-15:00, Sep. 25)

### Poster - Carbon-based Coatings

- P1001** FORMATION OF CONVEX CARBON MICRO- AND NANO-DISK BY ATMOSPHERIC PLASMA SYSTEM  
Takashi Meguro, Naoki Tsuji, Shota Saito, Yasuhiro Yamamoto, Takaya Mise, Kowashi Watanabe
- P1002** EFFECT OF RADIO FREQUENCY POWER ON THE PROPERTIES OF CARBON-COATED OPTICAL FIBER PREPARED BY PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION METHOD  
Hung Chien Lin, Sham Tsong Shiue, Yi Ming Chou
- P1003** EFFECTS OF RADIO FREQUENCY POWER ON THE CHARACTERICS OF AMORPHOUS n-C:N/p-Si SOLAR CELLS PREPARED BY PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION  
Rong Shian Chu, Sham Tsong Shiue
- P1004** PREPARATION OF WATER-REPELLENT THIN FILM BY RF PLASMA CVD USING C<sub>2</sub>H<sub>2</sub>F<sub>2</sub> GAS  
Yasunori Ohtsu, Shinji Yazaki, Tatsuya Misawa, Hiroharu Fujita
- P1005** EFFECTS OF SUBSTRATE TEMPERATURE ON AMORPHOUS CARBON FILM GROWTH, INVESTIGATED INFRARED SPECTROSCOPY  
Masanori Shinohara, Ken Cho, Yoshinobu Matsuda, Hiroshi Fujiyama, Tatsuyuki Nakatani
- P1006** EFFECTS OF SUBSTRATE TEMPERATURE ON HYDROGEN PLASMA ETCHING OF AMORPHOUS CARBON FILMS  
Takanori Inayoshi, Masanori Shinohara, Ken Cho, Yoshinobu Matsuda, Hiroshi Fujiyama, Tatsuyuki Nakatani
- P1007** DIFFERENCE OF ETCHING OF AMORPHOUS CARBON FILMS BETWEEN BY HYDROGEN IONS AND BY HYDROGEN RADICALS  
Masanori Shinohara, Ken Cho, Yoshinobu Matsuda, Hiroshi Fujiyama, Tatsuyuki Nakatani
- P1008** HYDROGENATED AMORPHOUS CARBON NITRIDE WITH CONTROLLED HYDROGEN DENSITY - STRUCTURAL ANALYSIS AND ELECTRIC FIELD EMISSION PROPERTY  
Haruhiko Ito
- P1009** Comparison of Carbon Deposition on Tungsten between Molecular Dynamics and Dynamic Monte Carlo Simulation  
Kensuke Inai, Kensuke Inai, Yasuyuki Kikuhara, Kaoru Ohya
- P1010** Low Temperature Synthesis of Diamond Films Using Non-Equilibrium Carbon Monoxide Plasma  
Shinsuke Mori, Hiroto Hattori, Masaaki Suzuki
- P1011** Microstructure and mechanical properties of Si-C-N hard coatings deposited by arc ion enhanced magnetic sputtering hybrid system  
SHENGLI MA, BIN XU, GUIZHI WU, DAYAN MA, KEWEI XU
- P1012** Ti<sub>2</sub>AlC COATINGS SPRAYED WITH HIGH VELOCITY OXY-FUEL  
Jenny Frodelius, Marie Sonestedt, Stefan Bjorklund, Jens-Petter Palmquist, Krystyna Stiller, Hans Hogberg, Lars Hultman

### Poster - Oxides

- P1013** Lattice effects in ferromagnetic La<sub>1-x</sub>Ba<sub>x</sub>MnO<sub>3</sub> thin films  
Yung-Ching Liang, Yuan-Chang Liang
- P1014** Effect of metal ion implantation on the structural and optical properties of nanocrystalline TiO<sub>2</sub> films  
Yin-Yu Chang, Yaw-Nan Shieh, Chih-Jung Su, Da-Yung Wang
- P1015** Effects of Nitrogen Partial Pressure on Titanium Oxynitride Films Deposited by Reactive RF Magnetron Sputtering onto PET Substrates  
Ming-Chih Lin, Li-Shin Chang, Hsin-Chih Lin
- P1016** EFFECTS OF LASER IRRADIATION CONDITIONS AND TARGET CRYSTAL STRUCTURES ON FILM CHARACTERISTICS OF METALLIC OXIDE AT PULSED LASER DEPOSITION  
Tomoyuki Fujishima, Takahiko Yamashita
- P1017** IMPROVEMENT OF WO<sub>3</sub> THIN FILM SENSOR BY DOPING WITH SnO<sub>2</sub> OR CARBON NANOTUBES FOR NOX GAS PREPARED BY PLD  
Md. Mosharraf Hossain Bhuiyan, Fumiaki Mitsugi, Tomoaki Ikegami
- P1018** CHARACTERISTICS OF ALUMINUM OXIDE FILM ON DIE CASTING MAGNESIUM ALLOY COATED WITH ARGON-OXYGEN RF PLASMA  
Masaya Sugimoto, Masuo Hitomi, Koichi Takeda
- P1019** Effect of RF bias on the characteristics of TiO<sub>2</sub> films prepared by DC sputtering  
Hsiao Chiang Yao, Tu-Cheng Tsia, Wen-Tang Wu, Fuh-Sheng Shieu
- P1020** INFLUENCE OF PROCESS PARAMETERS ON GADOLINIUM DOPED CERIA ELECTROLYTE FILMS DEPOSITED BY ELECTROSTATIC SPRAY DEPOSITION  
Bussarin Ksapabutr, Chaowat Waikru, Manop Panapoy

<b>P1021</b>	PREPARATION AND CHARACTERIZATION OF PHOTOCATALYTIC POROUS TITANIA FILMS BY ELECTROSTATIC SPRAY DEPOSITION METHOD	Panadda Anukoolwittaya, Manop Panapoy, Bussarin Ksapabutr
<b>P1022</b>	FABRICATION OF POROUS NICKEL OXIDE/SCANDIA STABILIZED ZIRCONIA COMPOSITE ANODE USING ELECTROSTATIC SPRAY DEPOSITION TECHNIQUE	Manop Panapoy, Khongrat Tragolrat, Bussarin Ksapabutr
<b>P1023</b>	ELECTROSTATIC SPRAY DEPOSITION OF TITANIUM DIOXIDE PHOTOCATALYST FILM ON PATTERNED SUBSTRATE	Pattakit Wannasut, Bussarin Ksapabutr, Manop Panapoy
<b>P1024</b>	Effect of substrate temperature on the electrically conductive stability of sputtered NiO films	Wei-Luen Jang, Weng-Sing Hwang, Yang-Ming Lu, Tung-Li Hsiung, H. Paul Wang
<b>P1025</b>	EFFECTS OF POST ANNEALING ON THE MATERIAL CHARACTERISTICS AND ELECTRICAL PROPERTIES OF LA DOPED BaTiO <sub>3</sub> SPUTTERED FILMS	Cheng-Hui Wu, J. P. Chu, S. F. Wang, C. H. Lin, W. Z. Chang, V. S. John
<b>P1026</b>	NANOMETRE-SCALE Al <sub>2</sub> O <sub>3</sub> AND TiO <sub>2</sub> ADHESION LAYERS ON PMMA DEPOSITED BY ATOMIC LAYER DEPOSITION FOR IMPROVING THE ADHESION OF SPUTTERED FILMS	Tommi O. Kaariainen, Mari Tanttari, David C Cameron
<b>P1027</b>	The effect of heat treatments in sol-gel methods on Microstructures and Electrochemical properties of nano oxide cerium films on AA7020	Hosein Hasannejad, Tagi Shahrabi, Hamidreza Jafarian, Hsan Gasemi

**Poster - Nanoparticles**

<b>P1028</b>	MODIFICATION OF YTTRIUM-IRON-OXIDE NANOPARTICLE FILMS USING INDUCTIVELY-COUPLED PLASMA ANNEALING	Kosuke Takenaka, Yuichi Setsuhara, Hiroaki Nakayama, Hiroya Abe, Kiyoshi Nogi
<b>P1029</b>	Size effect of Ag and Au nanoparticles on surface plasmon resonance	Guang-Jhe Lee, Su-Jien Lin, Chih-Hong Lin, Chih-Song Tsai, Yu-Jen Lu
<b>P1030</b>	SIZE CONTROL OF GOLD NANOPARTICLES FABRICATED WITH DISCHARGE IN REVERSE MICELLE SOLUTIONS	Junko Hieda, Masatomo Oda, Nagahiro Saito, Osamu Takai
<b>P1031</b>	INVESTIGATION CORROSION BEHAVIOR OF TiO <sub>2</sub> NANOPARTICLE COATING APPLIED WITH SOL-GEL METHOD ON MILD STEEL	Ali Shanaghi, Alireza Sabour Rouha, Taghi Shahrabi, Hamidreza Jafarian, Hassan Ghasemiarmaki
<b>P1032</b>	MECHANICAL MILLING OF NANOPARTICLES UNDER ELECTRIC DISCHARGE	Junichi Noma, Hiroya Abe, Makio Naito, Kosuke Takenaka, Yuichi Setsuhara
<b>P1033</b>	EFFECTS OF COLLECTION REGION ON SYNTHESIS OF IRON OXIDE PARTICLES DURING THERMAL PLASMA PROCESSING	K Suresh , V Selvarajan

**Poster - Plasma and Ion Diffusion Treatments**

<b>P1034</b>	CHARACTERISTICS OF AUSTENITIC STAINLESS STEEL NITRIDED IN A HYBRID GLOW DISCHARGE PLASMA	Rogério Moraes Oliveira, Mario Ueda, Leide Lili Goncalves Silva, Helfried Reuther, Carlos Mauricio Lepiński
<b>P1035</b>	Plasma Nitriding of Austenitic Stainless Steel Containing Copper	Motoo Egawa, Nobuhiro Ueda, Takumi Sone, Masato Tsujikawa, Kazuhiro Nakata
<b>P1036</b>	PLASMA NITRIDING TO SELECTIVE LASER SINTERING PARTS WITH SCM430 POWDER	Takayuki Nakamoto, Nobuhiko Shirakawa, Nobuhiro Ueda, Takumi Sone
<b>P1037</b>	Long Term Cytocompatibility and In vivo Investigation of Nitrogen Plasma Implanted Shape Memory Alloy	Kenneth MC Cheung, Kelvin WK Yeung, Roy YL Chan, John KO Lam, Shuilin Wu, Xiangmei Liu, Jonathan CY Chung, Paul K Chu, Danny Chan, William W Lu, Keith DK Luk
<b>P1038</b>	LAYERED S PHASE STRUCTURE OF LOW TEMPERATURE NITRO-CARBURIZED AUSTENITIC STAINLESS STEEL IN VARIOUS METHAN PARTIAL PRESSURE	Masato Tsujikawa, Motoo egawa, Nobuhiro Ueda, Akira Okamoto, Takumi Sone, Kazuhiro Nakata
<b>P1039</b>	EFFECT OF MOLYBDENUM AND COPPER ON S PHASE LAYER THICKNESS OF LOW TEMPERATURE CARBURIZED AUSTENITIC STAINLESS STEEL	Takumi Sone, Masato Tsujikawa, Motoo Egawa, Akira Okamoto, Nobuhiro Ueda, Kazuhiro Nakata
<b>P1040</b>	CARBURIZING OF LOW MELTING POINT METALS BY PULSED PLASMA ELECTROLYTIC CARBURIZING	Mahmood Aliofkhaeaei, Carlos Morillo, Reza Miresmaeili, Alireza Sabour-Rouhaghdam

**Poster - Plasma Sources and Diagnostics**

<b>P1041</b>	STATE OF ACTIVATED SPECIES IN REMOTE PLASMA	Hongxia Liu, Jierong Chen
<b>P1042</b>	Measurements of H density in H <sub>2</sub> /Ar and CH <sub>4</sub> /Ar Inductively Coupled Plasmas Using Conventional Actinometry	Takashi Shibasaki, Masanori Shinohara, Yoshinobu Matsuda

<b>P1043</b>	EFFECT OF ADMIXTURE OF METAL VAPOR ON CATHODE SURFACE TEMPERATURE OF PLASMA TORCH	Shinichi Tashiro, Manabu Tanaka
<b>P1044</b>	The radial electric field profiles of a symmetric surface wave in a coaxial plasma waveguide	Ali Reza Niknam, Ahmad Reza Rastkar, Babak Shokri
<b>P1045</b>	MEASUREMENT OF DROPLET TEMPERATURE OF CONSUMABLE ELECTRODE ARC BY A TWO-COLOUR PHOTOMETRY SYSTEM	Kenji Waki, Manabu Tanaka, Shinichi Tashiro, Kazuhiro Nakata, Keiichi Suzuki, Kei Yamazaki
<b>P1046</b>	Influence of Ar gas flow rate in organosilicon plasma for the fabrication of SiO <sub>2</sub> :CH thin films by PECVD method	Yongsup Yun, Takanori Yoshida, Norifumi Shimazu, Naoki Nanba, Yasushi Inoue, Nagahiro Saito, Osamu Takai
<b>P1047</b>	MEASUREMENT SYSTEM FOR ARC DISCHARGE AT POWER RELAY CONTACT	Daisuke Haraguchi, Fumiaki Mitsugi, Tomoaki Ikegami
<b>P1048</b>	Application of Thin Films with High Crystal Orientation Using Magnetron Sputtering with Multipolar Magnetic Plasma Confinement Assisted by Inductively Coupled Plasma to Biochip	Atsunori Araki, Keishi Okamoto, Yuki Muraoka, Keishi Kawabata
<b>P1049</b>	ACOUSTIC SPECTRA ANALYSIS OF CREEPING DISCHARGE	Toshiyuki Nakamiya, Kenji Ebihara, Tomoaki Ikegami, Yoshito Sonoda, Ryoichi Tsuda
<b>P1050</b>	RETARDING FIELD ENERGY ANALYSER (RFEA) FOR ION ENERGY MEASUREMENT AT A RADIO-FREQUENCY BIASED SUBSTRATE	David Gahan, Borislav Dolinaj, Mike Brendan Hopkins
<b>P1051</b>	Development of a Collective Thomson Scattering System for Plasmas Produced for EUV Light Sources	Kentaro Tomita, Syunji Araki, Takao Yamada, Taisuke Kagawa, Kiichiro Uchino, Hideki Imamura, Sunao Katsuki, Hidenori Akiyama

#### Poster - Microplasmas

<b>P1052</b>	TiO <sub>2</sub> thin film coating on a capillary inner surface by an atmospheric-pressure microplasma	Hiroyuki Yoshiki
<b>P1053</b>	Inner Wall Coating of Narrow Tubes by Scanning Second Harmonic ECR Micro Plasmas	Yuki Nitta, Keishi Okamoto, Tatsuyuki Nakatani, Hiroshi Fujiyama
<b>P1054</b>	SILICON SLICE USING ATMOSPHERIC PRESSURE MICROPLASMA	Hiroto Inui, Hiroto Inui, Takuya Ideno, Hiroyuki Fujiwara, Masuda Atsushi, Michio Kondo, Mineo Hiramatsu, Masaru Hori
<b>P1055</b>	EFFECTS OF GAS BUBBLING ON WATER-SOLUBILIZATION OF CARBON NANOTUBE USING MICROPLASMA GENERATED IN WATER	Kiminobu Imasaka, Yuki Kato, Junya Suehiro
<b>P1056</b>	Generation of Microplasma Jet at Atmospheric Pressure Using a Needle-Waveguide Microwave Plasma Applicator	Seiji Kanazawa, Ryota Daidai, Shuichi Akamine, Toshikazu Ohkubo
<b>P1057</b>	LOW-PRESSURE MICRO PLASMA GENERATION USING MICROWAVE IN A MIRROR MAGNETIC FIELD	Akihiro Yukishige, Hiroshi Fujiyama, Tathuyuki Nakatani, masanori Shinohara
<b>P1058</b>	INNER COATING OF LONG NARROW TUBE BY SCANNING 2 <sup>nd</sup> HARMONIC ECR MICRO PLASMAS	K. Yan, Y. Nitta, T. Nakatani and H. Fujiyama

#### Poster - Industrial Applications

<b>P1059</b>	GASOCHROMIC PROPERTY OF Mg-Ni SWITCHABLE MIRROR THIN FILMS ON FLEXIBLE SHEET	shanhu bao, Yasusei Yamada, Kazuki Tajima, Masahisa Okada, Kazuki Yoshimura
<b>P1060</b>	Tribological properties of Cr <sub>2</sub> N ceramic films with W&C dopants	c s wu, J.S C Jang, wen chi chu
<b>P1061</b>	OZONE COMPOSITION ON THE SURFACE OF A CATALYSIS ELECTRODE	Akira Murai
<b>P1062</b>	CHEMICAL CHANGES OF HYDROCARBON COMPOUNDS BY OZONE INJECTION	Yoshihito Yagyu, Yoshihito Yagyu, Nobuya Hayashi, Hiroharu Kawasaki, Tamiko Ohshima, Yoshiaki Suda, Seiji Baba
<b>P1063</b>	SYNTHESIS OF SUPER HARD Ti-B-N NANO-STRUCTURE/NANO-COMPOSITE LAYER SYSTEMS FOR MAGNESIUM AND ALUMINUM DIE CASTING TOOLS MADE BY PLASMA ASSISTED CVD/DUPLEX PROCESS	Klaus S. Klimek, Andreas Gebauer-Teichmann, Kai Hock, Heiko Lange, Kyong-Tschong Rie
<b>P1064</b>	ENHANCEMENT OF WO <sub>3</sub> THIN FILM SENSOR BY DOPING WITH Ti FOR NO <sub>x</sub> PREPARED BY PULSED LASER DEPOSITION AND DC SPUTTERING	Md. Mosharraf Hossain Bhuiyan, Fumiaki Mitsugi, Tomoaki Ikegami

<b>P1065</b>	EFFECTIVE ACETONE REMOVAL FROM AIR BY NON-THERMAL PLASMA SYSTEM	Yukako Koshio, Michiya Takahashi, Jin-wei Hu, Shuji Tanabe, Yoshiteru Mizukoshi, Osamu Nakagoe
<b>P1066</b>	PLASMA STEAM REFORMING OF PROPANE FOR PRODUCTION OF HYDROGEN UNDER ATMOSPHERIC PRESSURE	Michiya Takahashi, Yukako Koshio, Jin-wei Hu, Shuji Tanabe, Yoshiteru Mizukoshi, Osamu Nakagoe
<b>P1067</b>	INFLUENCE AND EFFECTS OF GAS FLOW ON THE DEPOSITION OF SIOCN FILMS IN AN INDUSTRIAL SCALE DC GLOW DISCHARGE PLASMA SYSTEM	Thomas Mueller, Andreas Gebeshuber, Christian Forsich, Daniel Heim
<b>P1068</b>	Microstructural and Electrochemical characteristics of cerium oxide coatings obtained by sol-gel on AA5083-H321	Hosein Hasannejad, Tagi Shahrabi, Hamidreza Jafarian, Hasan Gasemi
<b>P1069</b>	Comparing the Microstructural and Electrochemical characteristics of cerium oxide coatings obtained by conversion and sol-gel methods on AA5083-H321	Hosein Hasannejad, Tagi Shahrabi, Hamidreza Jafarian, Hasan Gasemi
<b>P1070</b>	Microstructural and Electrochemical characteristics of cerium oxide coatings obtained by conversion on AA5083-H321	Hosein Hasannejad, Tagi Shahrabi, Hamidreza Jafarian, Hasan Gasemi

## Thursday, September 27, 2007

13:30

### Poster Session 2 (13:30-15:00, Sep. 27)

#### Poster - Carbon-based Coatings

<b>P2001</b>	Thermal oxidation of Cu-doped diamond-like carbon films synthesized by cathodic arc evaporation	JAO JUI YUN, Han S., Chang L. S., Shih H. C.
<b>P2002</b>	Mechanical Properties and Atomic Structure of DLC Films	Shinji Fujimoto
<b>P2003</b>	THE PROPERTIES OF NANOSCALE DIAMOND-LIKE CARBON FILMS DEPOSITED BY DBD PLASMA GUN AT AN ATMOSPHERIC PRESSURE	xinchao bian, Yuefei Zhang, Yabo Fu, Qiang Chen
<b>P2004</b>	PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION OF DLC FILMS ON SI/PMMA	Zeng Lin, Dechun Ba, In-Seop Lee
<b>P2005</b>	CHARACTERIZATION OF DIAMOND-LIKE CARBON PREPARED BY PLASMA DEPOSITION	Somchai Thongtem, Suparut Narksitipan, Titipun Thongtem
<b>P2006</b>	PREPARATION AND PROPERTIES OF DIAMOND-LIKE CARBON FILMS DEPOSITED BY PLASMA SOURCE ION IMPLANTATION WITH DC GLOW DISCHARGE	Koumei Baba, Ruriko Hatada
<b>P2007</b>	WEAR AND SEIZURE RESISTANCE OF DLC COATINGS UNDER WATER LUBRICATION	Kenji Yamamoto, Hirotaka Ito, Maiko Tokoro, Masabumi Masuko
<b>P2008</b>	CORRELATION BETWEEN THE ELECTRICAL PROPERTIES AND THE XPS C 1s SPECTRA OF THE DIAMOND-LIKE CARBON(DLC) FILMS	Susumu Takabayashi, Keishi Okamoto, Kunihiko Motomitsu, Tatsuyuki Nakatani, Takayuki Takahagi
<b>P2009</b>	Effect of Ion Beam conditions and Interlayer on the Formation of Diamond-like Carbon Films	Jae-In Jeong, Ji-Hoon Yang, Young-Hee Park, Kyoung-Hwang Lee
<b>P2010</b>	HIGH-DENSITY PLASMA PRODUCTION BY CAPACITIVELY COUPLED DISCHARGE WITH MULTI-HOLLOW CATHODE AND SECONDARY ELECTRON EMISSION FOR DLC COATING	Yasunori Ohtsu, Chisa Nakamura, Tatsuya Misawa, Hiroharu Fujita, Morito Akiyama, Tatsuo Tabaru, Ken Yukimura
<b>P2011</b>	Effects of Deposition Conditions on Adhesion of DLC Films Prepared by UBM Sputtering	Morimasa Nakamura, Morimasa Nakamura, Ken-ichi Miura, Takashi Matsuoka, Tomoko Hirayama
<b>P2012</b>	DLC THIN FILMS COATING TO EXTRA FINE WIRE BY QUADRUPOLE MAGNETRON PLASMAS	Shoji Koga, Hiroshi Fujiyama, Tatsuyuki Nakatani, Keiji Okamoto, Yukinobu Tokunaga, Naohisa Iwamoto
<b>P2013</b>	Cutting Performance of DLC Coated WC Insert by PIID for Aluminum Alloy Machining	Kyu-Yong Lee, Ronghua Wei
<b>P2014</b>	The Synthesis of Conductive Ti-C:H Films on the Stainless Steel Plates by PECVD process	Yong Ki Cho, Woo Soon Jang, Se Hoon Yoo, Sang Gweon Kim, Sung Wan Kim
<b>P2015</b>	TRIBOLOGICAL PROPERTIES OF a-C:H:N THIN FILMS PREPARED USING C2H2 AND N2 BY CFUBM SPUTTERING METHOD	Yong Seob Park, Hyung Jun Cho, Youn Jea Kim, Byungyou Hong

<b>P2016</b>	Tribological Behaviors of Phase Modulated Carbon Film Synthesized by Magnetron Sputtering	JONG JOO RHA, Yoon Chol Hwang, In Seop Lee, Kwang Ho Kim, Sik Chol Kwon
<b>P2017</b>	ARC JET PLASMA SYNTHESIS OF MICROCRYSTALLINE AND NANOCRYSTALLINE DIAMOND FILMS	Chan Min Lee, Jun Seok Nam, Hyeon Seok Lee, Sang Hee Hong

#### Poster - Nitrides

<b>P2018</b>	Effect of nitrogen flow ratio on the structural and mechanical properties of multi-element nitride coatings by reactive magnetron sputtering	Keng-Hao Cheng, Su-Jien Lin, Jien-Wei Yeh
<b>P2019</b>	Effect of cathode arc current and bias voltage on the mechanical properties of CrAlSiN thin films	Sun Kyu Kim, Vinh Van Le, Pham Van Vinh, Jae Wook Lee
<b>P2020</b>	Synthesis and Characteristics of TiSi(C,N) Hard Coating by Cathodic Arc Plasma Evaporation	Chi-Lung Chang, Tsung-Ju Hsieh, Pi-Chuen Tsai, Wei-Yu Ho, Da-Yung Wang
<b>P2021</b>	Tribological Properties of Cr <sub>2</sub> N Ceramic Films with Tungsten Dopant	wen chi chu, Jason S c Jang, S M Chiu
<b>P2022</b>	Electronic states and mechanical properties in transition metal nitrides.	JAMES KASUMBA
<b>P2023</b>	Electrochemical behavior of TiAlSiN coatings Synthesized by Cathodic Arc Evaporation	Weite Wu, Yin-Yu Chang, Sheng-Min Yang, Da-Yung Wang, Dong-Yih Lin
<b>P2024</b>	Chromium nitride coatings produced by physical vapor deposition for anti-abrasive flat stainless steel	Aurelia Douard, Magalie Pierre, Fabien Tenailleau, Marie-Helene Berger, Nicolas Maitre, Pascal Aubert, Sid Labdi, Francis Chassagne, Jean-Michel Damasse
<b>P2025</b>	Optimization of Convex Electrode Geometry for Surface Discharge Used for Fabrication of the Electrode Groove on Solar Cells	Toshiyuki Hamada, Junichi Arakawa, Tatsuya Sakoda, Masahisa Otsubo, Kazuo Matsui, Kazuo Nagasawa
<b>P2026</b>	SURFACE PROPERTIES OF TiN AND ZrN THIN FILMS DEPOSITED ON ANODIZED TITANIUM	Kang Lee, Kang Lee, Han Cheol Choe, Yeong Mu Ko, Sang Won Eun
<b>P2027</b>	Electrochromic Properties of In <sub>1-x</sub> M <sub>x</sub> N Films Deposited by Reactive Ion Plating	Hiroki Takeuchi, Hidetaka Takaba, Yasushi Inoue, Osamu Takai

#### Poster - Nanocomposite and Multilayer Films

<b>P2028</b>	The size effect of oxygen impurities on the hardness of TiN/Si <sub>3</sub> N <sub>4</sub> coatings	dayan MA, shengli MA, keweii XU
<b>P2029</b>	Mechanical and Corrosion Properties of (Ti,Si)N Coating Synthesized by Cathodic Arc Plasma Evaporation	Chi-Lung Chang, Chi-Lung Chang, Chao-Te Lin, Pi-Chuen Tsai, Wei-Yu Ho, Da-Yung Wang
<b>P2030</b>	SYNTHESIS AND CHARACTERIZATION OF MULTILAYER CrN/ZrN THIN FILMS	SangYul Lee, MyungGeun Kim, BoYoung Lee, JunHee Hahn
<b>P2031</b>	EFFECT OF AI TARGET POWER ON THE MECHANICAL AND OXIDATION RESISTANCE OF THE CrN/AlN SUPERLATTICE COATINGS	SungMin Kim, SangYul Lee, GwangSok Kim, BoYoung Lee, JunHee Hahn
<b>P2032</b>	EFFECT OF SUPERLATTICE PERIODS ON THE MECHANICAL AND THERMAL STABILITIES OF THE AlN/CrN COATINGS	BoYoung Lee, EunYoung Kim, SangYul Lee, JunHee Hahn
<b>P2033</b>	Mechanical behaviors of TaN-Cu nanocomposite thin films	Jang-Hsing Hsieh, M. K. Cheng, Chuan Li, C. L. Chang, Po-Chun Liu
<b>P2034</b>	adhesion of aluminum oxide film on a polycarbonate : effect of single layer, buffer layer and multilayer.	Hun Kim, Kyoung-Hee Nam, Hee-Yong Lee, Dong-Su Jang, Jung-Joong Lee

#### Poster - Functional Surface Treatments

<b>P2035</b>	ELECTROCHEMICAL PROPERTIES OF MODIFIED CARBON ELECTRODE FOR ELECTRIC DOUBLE LAYER CAPACITOR	Daisuke Tashima, Akihiko Sakamoto, Mitsufumi Taniguchi, Tatsuya Sakoda, Masahisa Otsubo
<b>P2036</b>	Studies on the Thin Film Characteristics of A Zr-Based Metallic Glass Fabricated by Magnetron Sputtering Process	Chi Wen Chu, J.S.C Jang, G J Chen
<b>P2037</b>	SURFACE ACTIVATION OF OXIDE CERAMICS WITH HYDROGEN PLASMA IRRADIATION	Tatsuo Ishijima, Yuuya Yamaguchi, Hideo Sugai

<b>P2038</b>	TiN/Cr/Al <sub>2</sub> O <sub>3</sub> AND TiN/Al <sub>2</sub> O <sub>3</sub> HYBRID COATINGS STRUCTURE FEATURES AND PROPERTIES RESULTING FROM COMBINED TREATMENT	Alexander dmitrievich Pogrebnyak, Yuliya Kravchenko
<b>P2039</b>	EFFECT OF SURFACE MODIFICATION OF CARBON ELECTRODE FOR ELECTRIC DOUBLE LAYER CAPACITOR USING DIELECTRIC BARRIER DISCHARGE	Masatoshi Esaki, Masatoshi Esaki, Toshiyuki Hamada, Daisuke Tashima, Tatsuya Sakoda, Masahisa Otubo
<b>P2040</b>	MIGRATION AND PROLIFERATION OF CHONDROCYTES ON SILK FILM TREATED TO ARGON PLASMA	Soo Chang Jin, Hyun Sook Baek, Yeon I Woo, Mi Hee Lee, Young Hwan Park, Dong Kyun Rah, Jong Chul Park
<b>P2041</b>	OBSERVATION OF CHONDROGENIC EFFECT ON ELECTROSPUN THREE-DIMENSIONAL SILK FIBROIN SCAFFOLD TREATED MICROWAVE-INDUCED ARGON PLASMA	Hyun Sook Baek, Young Hwan Park, Shang Seok Ki, Jong- Chul Park, Dong Kyun Rah
<b>P2042</b>	SUPER HYDROPHOBIC BEHAVIOR ON THE NANO-SCALE DUAL ROUGH SURFACE ASSISTED WITH a-C:H:Si:O COATING	Tae-Young Kim, Myoung-Woon Moon, Bialuch Ingmar, Klaus Bewilogua, Kwang-Ryeol Lee
<b>P2043</b>	MODIFICATION OF DC PLASMA TORCH NOZZLE FOR REACTIVE SPRAY COATING	Subramaniam Yugeswaran, Venkatasamy selvarajan

**Poster - Pulsed Plasma Processing**

<b>P2044</b>	INFLUENCE OF PULSE FREQUENCY AND DURATION ON MICROSTRUCTURE AND PROPERTIES OF PULSED DC MAGNETRON SPUTTERED Ti-Al-Y-N COATINGS	Martin Moser, Paul H Mayrhofer
<b>P2045</b>	CATHODE SPOT CRATERS IN PULSE VACUUM ARC CLEANING OF METAL SURFACE OXIDE LAYER	Yusaku Arai, Koichi Ishizaka, Masaya Sugimoto, Shigeaki Sugiyama, Koichi Takeda
<b>P2046</b>	Doping of Silicon by Pulsed Inductively-coupled Plasma	Won-Jun Lee, Won-Jun Lee, Youn-Seoung Lee, Sa-Kyun Rha, Young-Jong Lee, Seunghee Han
<b>P2047</b>	INVESTIGATION OF MICROCRATERS FORMATION ON A SURFACE OF STEELS AT IRRADIATION BY PULSED HIGH CURRENT ELECTRON BEAM	Sergey V. Grigoryev, Yulia A. Kolubaeva, Anton D. Teresov
<b>P2048</b>	SURFACE TREATMENT OF CARBIDE ALLOYS BY PULSED LOW ENERGY HIGH CURRENT ELECTRON BEAM IRRADIATION	Sergey V. Grigoryev, Vladimir N. Devyatkov, Yury F. Ivanov, Nikolay N. Koval, Kensuke Uemura
<b>P2049</b>	ELECTRON-ION-PLASMA TREATMENT OF ARMCO IRON	Sergey V. Grigoryev, Yury F. Ivanov, Nikolay N. Koval, Yulia A. Kolubaeva, Anton D. Teresov
<b>P2050</b>	DISCHARGE CHARACTERISTICS OF TITANIUM ELECTRODE ECCENTRIC PULSED ARC ELECTROHYDRAULIC DISCHARGE REACTOR	Tomohiro Ikeda, H O Li, K Teii, J S Chang
<b>P2051</b>	Probe Measurement of Shunting Arc Discharge Plasma under the low gas pressure	Tatsuya Misawa, Youei Matsumoto, Yasunori Ohtsu, Hiroharu Fujita, Ken Yukimura
<b>P2052</b>	STUDY OF PULSED PLASMA ELECTROLYTIC CARBONITRIDING OF A NI-BASE SUPERALLOY	Saeed Behrouzghaemi, Mahmood Aliofkhaeaei, Alireza Sabour Rouhaghdam, Amir Abdollah-Zadeh
<b>P2053</b>	STUDY OF PULSED CURRENT EFFECTS ON WEAR RESISTANCE OF PULSED PLASMA ELECTROLYTIC CARBONITRIDED 316L AUSTENITIC STAINLESS STEEL	Mahmood Aliofkhaeaei, Carlos Morillo, Reza Miresmaeili, Alireza Sabour-Rouhaghdam
<b>P2054</b>	A NOVEL PULSING METHOD FOR THE ENHANCEMENT OF THE DEPOSITION RATE IN HIGH POWER PULSED MAGNETRON SPUTTERING	Sang-Hun Seo, Jung-Hwan In, Hong-Young Chang

**Poster - Plasma Sources and Diagnostics**

<b>P2055</b>	PREDICTION OF WAFER CHUCK POSITION EFFECT ON HEMISPHERICAL INDUCTIVELY COUPLED PLASMA USING NEURAL NETWORK	Soo Youn Kim, Soo Youn Kim
<b>P2056</b>	Investigation of the Change of Electron Density and FTIR measurements by Photodissociation in the BTMSM/Ar Discharge	Won Bong Jung, Hyun Su Jun, Chi Kyu Choi, Hong Young Chang
<b>P2057</b>	Cluster-like mechanism of layers growth during Impulse Plasma Deposition (IPD)	Krzysztof Zdunek
<b>P2058</b>	VARIATION OF THE ELECTRICAL CHARACTERISTICS DURING ARCING AND THE DEVELOPMENT OF ARCING DETECTOR IN RF DISCHARGES	Yonghoon Kim, Sangwon Lee, Sanghun Seo, Hongyoung Chang

#### Poster - Modeling and Analysis

<b>P2059</b>	HEAT TRANSFER ANALYSIS IN PLASMA SPRAYING PROCESS BY MESHLESS LOCAL PETROV-GALERKIN METHOD	Wu Sheng-chuan, Zhang Hai-ou, Wang Gui-lan, Xia Wei-sheng
<b>P2060</b>	NUMERICAL INVESTIGATION OF GRADIENT COMPOSITION FORMATION DURING PLASMA DEPOSITION MANUFACTURING COMPOSITE MATERIAL PARTS	fan-rong kong, hai-ou zhang, gui-lan wang
<b>P2061</b>	SIMPLE MODEL FOR FRACTION ESTIMATE OF $\text{Fe}_3\text{O}_4$ AND $\text{Fe}_2\text{O}_3$ -IRON NITRIDE IN COMPOUND LAYER USING X-RAY DIFFRACTION	Yoon Kee Kim
<b>P2062</b>	EXPERIMENTS AND MODELLING OF REACTIVE SPUTTERING USING TWO REACTIVE GASES AND TWO TARGETS	Tomas Kubart, David Huy Trinh, Lina Lijeholm, Lars Hultman, Hans Hogberg, Tomas Nyberg, Soren Berg
<b>P2063</b>	NUMERICAL SUMIRATION OF METAL VAPOR BEHAVIOR IN ARC PLASMA	Kentaro Yamamoto, Manabu Tanaka, Sinichi Tashiro, Kazuhiro Nakata, Keiichi Suzuki, Kei Yamazaki
<b>P2064</b>	WAVE ANALYSIS AND FLUID MODELING OF MICROWAVE PLASMAS USING MSP ANTENNA	Akihiro Tsuji, Yasuyoshi Yasaka
<b>P2065</b>	ANALYSIS OF MICROSCOPIC COLLISION PROCESSES AT THE GAS-SOLID INTERFACE IN PLASMA OF SPUTTERING SYSTEM	Nariaki Imamura, Hailong Yu, Masakatsu Mabuchi, Mituomi Yamaguchi, Kozo Obara
<b>P2066</b>	THE INFLUENCE OF ON-STAGE CONTROL PARAMETERS FOR THE FIB DEPOSITION PROCESS	Joon Hyun Kim, Youn-Jea Kim
<b>P2067</b>	FORMATION PROCESSES OF ZINC LATTICE DEFECTS WITH EXCITED 3d-STATES DUE TO SURFACE EXCITATION MECHANISM	Mitsuomi Yamaguchi, Yutaka Oiwane, Yuki Uchino, Chen Xing Kai, Mitsugu Hamasaki, Kozo Obara
<b>P2068</b>	INCIDENT ELECTRON ENERGY DEPENDENCE OF ELECTRONIC AND CRYSTAL LATTICE STRUCTURES INDUCED BY THE ELECTRON EXCITATION OF THE INNER CORE ELECTRONS OF ZINC ATOMS	Kozo Obara, Yutaka Oiwane, Mitsuomi Yamaguchi, Yuki Uchino, Chen Xing Kai, Masumi Obara
<b>P2069</b>	Mathematical models and preparation of composed high energy ion beam assisted deposition concentration profiles	Frantisek Cerny, Svatava Konvickova, Rudolf Stefec, Vladimir Hnatowicz
<b>P2070</b>	Dynamic Simulation of Secondary Electron Emission and Charging Up of an Insulating Material	Kaoru Ohya, Kaoru Ohya, Kensuke Inai, Hideaki Kuwada, Teruyuki Hayashi, Misako Saitoh

## Friday, September 28, 2007

13:30

### Poster Session 3 (13:30-15:00, Sep. 28)

#### Poster - Oxides

<b>P3001</b>	LOW TEMPERATURE PREPARATION OF PHOTOCATALYTIC ANATASE $\text{TiO}_2$ FILMS BY INDUCTIVELY COUPLED PLASMA CHEMICAL VAPOR DEPOSITION	H. Y. Lee, D. S. Jang, Hun Kim, J. J. Lee
<b>P3002</b>	SURFACE REACTION OF $\text{Na}_0.5\text{K}_0.5\text{NbO}_3$ THIN FILMS ETCHING IN INDUCTIVELY COUPLED PLASMA	Chang-Il Kim, Gwan-Ha Kim, Kyoung-Tae Kim, Jong-Gyu Kim
<b>P3003</b>	EFFECT OF OXYGEN ION BEAM CONDITIONS ON OXIDE COATINGS DEPOSITED ON MAGNESIUM ALLOY	Young-hee Park
<b>P3004</b>	Preparation of Molybdenum Oxide Film for Surge Arrester Application by a Magnetic Null Discharge Sputter Method	D. J. Kwak, T. Yuji, Y. M. Sung
<b>P3005</b>	MEASUREMENT OF PLASMA PLUME PROPERTIES DURING PULSED LASER DEPOSITION OF OXIDE THIN FILMS	Tamiko Ohshima, Shinpei Ikeda, Tsutomu Yoshida, Yoshihito Yagy, Hiroharu Kawasaki, Yoshiaki Suda
<b>P3006</b>	Effect of Nozzle Shape on High Velocity Oxygen-Fuel (HVOF) Thermal Spray	Youn-Jea Kim, Jae-Sang Baik, B. Hong, J.-H. Boo

**Poster - Oxide Electronics**

<b>P3007</b>	Sputter-Deposition of Aluminum-Doped Zinc Oxide Thin Films by Inductively Coupled Plasma Assisted Magnetron Sputtering	Yoshinobu Matsuda, Shiro Iwai, Masanori Shinohara
<b>P3008</b>	Electrical and optical properties of undoped p-type ZnO films	Kyoung-Hee NAM, Hun Kim, Heeyong Lee, Jungjoong Lee, Donghoon Han
<b>P3009</b>	SPECTROSCOPIC MEASUREMENT OF PLASMA PLUME PRODUCED BY LASER ABLATION OF METAL OXIDE	Norihiro Sakai, Yoshihiro Umeda, Fumiaki Mitsugi, Tomoaki Ikegami
<b>P3010</b>	Synthesis of nano-sized tin oxide powder by argon plasma jet at atmosphere	Ji Hyoen Im, Ji Hyoen Im
<b>P3011</b>	Fabrication of the ZnO films using wet/dry chemical etching processes on application for organic light emitting diode (OLED) devices.	DONGGEUN YOO, S. H. Jeong, D.-Y. Kim, N.-E. Lee, B. Hong, Y. J. Kim, D. Jung, J.-H. Boo
<b>P3012</b>	Effect of bias voltage on the electrical properties of ZnO:Al film deposited on organic substrate	Youl-Moon Sung, Min-Woo Park, Dong-Joo Kwak
<b>P3013</b>	Deposition of Al-doped and Al, Sc-codoped zinc oxide films from the targets of ZnO and Al-xSc (x=0, 0.4, 0.8 and 1.7 wt%) sputtered by RF and DC	Jing-Chie Lin, Kun-Cheng Peng, C. A. Tseng, Sheng-Long Lee
<b>P3014</b>	PROPERTIES OF GALLIUM DOPED ZINC OXIDE FILMS DEPOSITED USING VARIOUS GZO TARGETS BY RF OR DC MAGNETRON SPUTTERING	sang eun Park, jin ho Lee, pung keun Song
<b>P3015</b>	EFFECT OF ANNEALING ENVIRONMENT ON OPTICAL AND ELECTRICAL PROPERTIES OF SOL-GEL DEPOSITED ZnO:Al THIN FILMS	Viet Ngoc Nguyen, Viet Ngoc Nguyen, Binh Khac Le, Chien Mau Dang
<b>P3016</b>	The characteristics of ZnO film deposited by dc magnetron sputtering depending on the O <sub>2</sub> partial pressure variation	Doohoon Song, Minjong Keum, Kyoungsik Shin, Kabseog Kim, Jeongeon Han
<b>P3017</b>	The electrical properties of ITO film with the change of thickness	Dong-Hoon Choi, Min J. Keum, Kyung S Shin, A R Jeon, Kyo Y Lee, Kab S Kim, Jeon G Han
<b>P3018</b>	A study of Sn content effect on electro-chemical properties of Ir-Sn-O coatings deposited by unbalanced magnetron sputtering	SungDae Kim, SangSik Kim, EunSil Lee, Jae-Hwan Choi

**Poster - Functional Coatings for Electronics**

<b>P3019</b>	ALL-SOLID-STATE SWITCHABLE MIRROR ON FLEXIBLE SHEET	Kazuki Tajima, Yasusei Yamada, Shanhu Bao, Masahisa Okada, Kazuki Yoshimura
<b>P3020</b>	CHARACTERIZATION OF MONOS NONVOLATILE MEMORY ON GLASS BY SOLID PHASE CRYSTALLIZATION FOR DISPLAY	Zhenghai Jin, Sungwook Jung, Sunghyun Hwang, Kyungsoo Jang, Jungin Lee, Kwangsoo Lee, Hyungjun Park, Jaehong Kim, Hyukjoo Son, Junsin Yi
<b>P3021</b>	OPERATION CHARACTERISTICS OF MONOS NONVOLATILE MEMORY USING SILICON NITRIDE OXIDE TUNELLING LAYER ON GLASS SUBSTRATE	Nguyen Thanh Nga, Sungwook Jung, Sunghyun Hwang, Kyungsoo Jang, Jungin Lee, Kwangsoo Lee, Hyungjun Park, Jaehong Kim, Hyukjoo Son, Junsin Yi
<b>P3022</b>	Quantifying strain effects in physical properties of colossal magnetoresistive La <sub>0.68</sub> Ba <sub>0.32</sub> MnO <sub>3</sub> epilayers and heterostructures	Yuan-Chang Liang, Yung-Ching Liang
<b>P3023</b>	NANOHARDNESS AND RESISTIVITY OF Au AND Au-V SOLID SOLUTION THIN FILMS SPUTTERED ON Si WAFERS	Suparut Narksitipan, Thirumalesh Bannuru, Walter L Brown, Richard P Vinci, Somchai Thongtem
<b>P3024</b>	Reactive sputtering deposition of a-V <sub>2</sub> O <sub>5</sub> -z on flexible PET/ITO substrates for Electrochromic Devices	Yung-Sen Lin, Chung-Wei Tsai
<b>P3025</b>	EFFECT OF SP <sup>2</sup> CARBON PHASE ON ELECTRICAL PROPERTIES OF NITROGEN-DOPED NANODIAMOND FILMS	Tomohiro Ikeda, Koji Takeguchi, Kungen Teii
<b>P3026</b>	EFFECT OF PRETREATMENT CONDITIONS ON THE PROPERTIES OF NANOCRYSTALLINE DIAMOND FILMS	C. M. Liu, T. L. Sung, K. Ting, S. Teii, K. Teii
<b>P3027</b>	TOP-EMITTING ORGANIC LIGHT-EMITTING DIODES BASED-ON SEMI-TRANSPARENT CONDUCTING CATHODE OF BA/AL	Jong Tae Lim, Geun Young Yeom
<b>P3028</b>	HYDROGEN BARRIERS FOR BLT THIN FILM USING ZnO ELECTRODE	Kyoung-Tae Kim, Jong-Chang Woo, Gwan-Ha Kim, Jong-Gyu Kim, Chang-Il Kim

<b>P3029</b>	THE OPTICAL, MECHANICAL, ELECTRONIC PROPERTIES OF ORGANIC-INORGANIC HYBRID LOW-K THIN FILMS BY PECVD	Sang Jin Cho, In-Seob Bae, H.J. Cho, B. Hong, Jin-Hyo Boo
<b>P3030</b>	Wet Chemical Etching Process of Silicon Carbide Thin Films for MEMS	Sang-Hun Nam, Jea-Sung Hyun, Jin-Hyo Boo
<b>P3031</b>	Discharge power dependence of generation rate H atom in H-assisted plasma CVD	Jun Umetsu, Kazunori Koga, Masaharu Shiratani
<b>P3032</b>	Effect of interfacial layer using LiF on the impedance characteristics of organic light emitting diodes	Hyungjun park, Jin Zheng Hai, Sungwook Jung, Nguyen Van Duy, Jeoungin Lee, Kwangsoo Lee, Keunhee ParK, Eunkyoun Nam, Donggeun Jung, Junsin Yi
<b>P3033</b>	Characteristics of silicon nanoparticles prepared by the pulsed ion beam evaporation (IBE)	Chul-Hong Lee, Sang-Min Yun, Byoung-Jung Choi, Sung-Chae Yang
<b>P3034</b>	Application of PVD coatings for developing an environmentally compatible DSA-type electrode	SangSik Kim, SungDae Kim, Jae-Hwan Choi
<b>P3035</b>	ANISOTROPIC Nd-Fe-B THICK FILM MAGNETS PREPARED ON VARIOUS SUBSTRATES	Masaki Nakano, H. Takeda, F. Yamashita, J. Fidler, T. Yanai, H. Fukunaga

#### Poster - Electronics Device Processing

<b>P3036</b>	ELECTRICAL CHARACTERISTICS OF ULTRATHIN SILICON OXYNITRIDE FILMS DEPOSITED BY PLASMA-ASSISTED OXYNITRIDATION	Sungwook Jung, Sunghyun Hwang, Kyungsoo Jang, Kwangsoo Lee, Jungin Lee, Hyungjun Park, Jaehong Kim, Hyukjoo Son, Suresh Kumar Dhungel, Junsin Yi
<b>P3037</b>	Comparison of BF <sub>2</sub> <sup>+</sup> with B <sup>+</sup> Low Energy Ion Implantation into Si (100)	Sa-Kyun Rha, Sa-Kyun Rha, Kee-Man Kim, Youn-Seoung Lee, Young-Jong Lee
<b>P3038</b>	Barrier properties of TaN films synthesized by CFUBMS for electronic device applications	Tae joon Byun, Ho young Lee, Sung il Kim, Kab seog Kim, Jeon geon Han
<b>P3039</b>	ELECTRICAL CHARACTERIZATION OF LOW-k FILMS WITH NANO-PORE STRUCTURE PREPARED WITH HMDSO/O <sub>2</sub> PRECURSORS	Chang Young Kim, R Navamathavan, Heon Ju Lee, Chi Kyu Choi
<b>P3040</b>	Dielectric properties of post-annealed low-k SiOC(-H) films prepared by using plasma enhanced chemical vapor deposition from DMDMS/O <sub>2</sub> precursors	An Soo Jung, R Navamathavan, Kwang Man Lee, Chi Kyu Choi
<b>P3041</b>	Surface Morphology of Silicon Oxide Barrier Thin Films on PET	A R, Jeon
<b>P3042</b>	RADICAL OXIDATION EFFECTS ON THRESHOLD-VOLTAGE DISTRIBUTION CHARACTERISTICS IN NOR FLASH FINFET CELLS	Dong Hwan Kim, Eung Kwon Kim, Jin Hong Kim, Joon Tae Song
<b>P3043</b>	REDUCTION OF OXIDE LEAKAGE CURRENTS AT SHALLOW TRENCH ISOLATION CORNERS USING SACRIFICIAL OXIDE/LINER SIN/LPCVD MTO	Min Sung Kim
<b>P3044</b>	Selective copper electroless plating and adhesion improvement for micro-scale metallization on plasma-pretreated polyimide substrate	J. H. Kim*, H. W. Kim, Y. G. Seol, N.-E. Lee
<b>P3045</b>	FORMATION AND COMPARISON OF VARIOUS METAL-SILICIDE AND -GERMANIDE FILMS FOR HIGH PERFORMANCE TRANSISTER APPLICATIONS	K. Park <sup>1</sup> , C. H. Ahn <sup>1</sup> , M. S. Lee <sup>1</sup> , E. J. Jung <sup>2</sup> , D.-H. Ko <sup>2</sup> and H. KIM

#### Poster - Polymer Processes

<b>P3046</b>	Preparation of composite membranes by plasma deposited polymerization and membranes separation characteristics	Dung Thi Tran, Shinsuke Mori, Daisuke Tsuboi, Masaaki Suzuki
<b>P3047</b>	EFFECTS OF He/O <sub>2</sub> /NF <sub>3</sub> ATMOSPHERIC PRESSURE PLASMA ON THE ADHESION OF Cu/Cr FILMS ON POLYIMIDE	Yoon Kee Kim, Su Bin Lee
<b>P3048</b>	PLASMA POLYMER COATING IN A TRIODE GLOW DISCHARGE	Minoru Kusabiraki, Atsushi Tamura
<b>P3049</b>	EFFECT OF ELECTRON BEAM IRRADIATED WITH ALTERATION OF AMOUNT OF IRRADIATION ON THE MECHANICAL CHARACTERISTICS OF THE UHMWPE	Jung-sung Kim, Dohyun Lim, Mi Hee Lee, Yong Sik Kim, Kwon-Young Lee, Jong-Chul Park
<b>P3050</b>	SURFACE MODIFICATION OF POROUS POLY(LACTIDE-CO-GLYCOLIDE) SCAFFOLD BY TREATMENT WITH NITROGEN ION BEAM	Insup Noh, Yoon Jeong Choi, Mi-Sook Kim, Hyunju Lee, Hyun Ki Kang

<b>P3051</b>	HYDROPHILIC SURFACE FORMATION OF ION IMPLANTED POLYETHYLENE TEREPHTHALATE	Jae S. Lee, Bom Som. Kim, Chan Y. Lee
<b>P3052</b>	STUDY ON IN-ZN-SN-O AND IN-SN-ZN-O FILMS DEPOSITED ON PET SUBSTRATE BY MAGNETRON CO-SPUTTERING SYSTEM	dong yeop Lee, sang chul Lee, gun hwan Lee, pung keun Song
<b>P3053</b>	Surface Modification of Polyimide Using Ion Beam	Sung H. Kim, Youn J. Kim, Su B. Jin, Yong M. Kim, Kab S. Kim, Jeon G Han
<b>P3054</b>	INTRODUCTION OF CARBOXYL GROUP ONTO POLYSTYRENE SURFACE USING PLASMA TECHNIQUES	Yasushi Sasai, Natsuko Matsuzaki, Shin-ichi Kondo, Masayuki Kuzuya
<b>P3055</b>	Improvement in adhesion properties of low density polyethylene with low-temperature plasma treatment	siamak moradian, maryam ataefard, mojtaba mirabedini, morteza ebrahimi, said asiaban

**Poster - Large-area Plasmas**

<b>P3056</b>	EFFECTS OF ANTENNA SHAPES ON DISCHARGE PROFILES OF INTERNAL-ANTENNA-DRIVEN INDUCTIVELY-COUPLED PLASMAS	Kosuke Takenaka, Takashi Sera, Yuichi Setsuhara, Akinori Ebe
<b>P3057</b>	UNIFORMITY OF 500-MM CYLINDRICAL PLASMA SOURCE SUSTAINED WITH MULTIPLE LOW-INDUCTANCE ANTENNA UNITS	Kosuke Takenaka, Daisuke Tsukiyama, Yuichi Setsuhara, Kazuaki Nishisaka, Akinori Ebe
<b>P3058</b>	PRODUCTION OF ONE-METER-SQUARE LARGE-AREA SURFACE WAVE PLASMA WITH PARALLEL LINEAR ANTENNAS	Yudai Takanishi, Hirotaka Endo, Tatsuo Ishijima, Hirotaka Toyoda, Hideo Sugai
<b>P3059</b>	INTERNAL LINEAR INDUCTIVELY COUPLED PLASMA SOURCE USING PARALLEL TYPE ANTENNA FOR THE FLAT PANEL DISPLAY PROCESSING	JongHyeuk Lim, JungGuen Park, KyongNam Kim, GeunYoung Yeom

**Poster - Wear and Corrosion Resistance**

<b>P3060</b>	Engineering and Design of Wear and Corrosion Resistant PVD coatings for Magnesium Alloys	Holger Hoche, Christina Berger
<b>P3061</b>	EFFECT OF DOUBLE Mo-W, W <sub>0</sub> -Zr ION IMPLANTATION ON PHYSICAL, CHEMICAL AND MECHANICAL PROPERTIES OF TITANIUM ALLOYS VT-6 and VT-22	Alexander Dmitrievich Pogrebnjak, Vyacheslav Serafimovich Rusakov, Vladimir Vladimirovich Uglov, Ol'ga Petrovna Kul'ment'eva, Nazgul_ Erdybaeva, Boris Petrovich Gritsenko
<b>P3062</b>	Investigation of Corrosion Properties of Magnesium Alloys Treated by Plasma Electrolytic Oxidation Process with DC/Pulse Plating	Jae-Ho Lee, Min-Woo Kang
<b>P3063</b>	PROTECTIVE SURFACE OF Mg-Li ALLOY BY LOW PRESSURE THERMAL SPRAYING OF ALUMINUM	Taiki Morishige, Masato Tsujikawa, Sachio Oki, Shin-ichiro Adachi, Takumi Sone, Kazuhiro Nakata
<b>P3064</b>	ELECTROCHEMICAL PROPERTIES OF THE TIN COATINGS ON PREVIOUSLY ANODIZED Ti-xNb ALLOY SUBSTRATE	Seung Hyeon Jang, Seung Hyeon Jang, Yeong Mu Ko, Han Cheol Choe, Gwon Seung Yang
<b>P3065</b>	MICROSTRUCTURE AND ELECTROCHEMICAL PROPERTIES OF TIN THIN FILMS DEPOSITION ON ANODIZED Ti-30Ta-xZr ALLOYS.	Yeong Mu Ko, Yeong Mu Ko, Kang Lee, Han Cheol Choe, Su Jung Park
<b>P3066</b>	TITANIUM ALLOY -BASED COMPOSITE COATINGS BY HVOF AND PLASMA SPRAY TECHNIQUES	Jenny Hung, Yu Lung Chiu, Jing Liang
<b>P3067</b>	PROPERITIES OF ELECTROCHEMISTRY ON ZN-MG THIN FILM PREPARED DC BIAS SPUTTERING METHOD	Myeong Hoon Lee, IL YONG BAE
<b>P3068</b>	A STUDY OF MG THIN FILM BY ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY(EIS) MEASUREMENTS ON WET AND DRY CONDITION	Myeong Hoon Lee, IL YONG BAE
<b>P3069</b>	CORROSION RESISTANCE AND ADHESION PRORERTIES OF ZN-MG THIN FILMS PREPARED BY PVD METHOD	Myeong Hoon Lee, IL YONG BAE
<b>P3070</b>	INFLUENCE OF INTERLAYERS ON CORROSION RESISTANCE OF ION-PLATED MG THIN FILMS	Myeong Hoon Lee, SANG MIN BAEK

## Saturday, September 29, 2007

13:40

### Poster Session 4 (13:40-15:10, Sep. 29)

#### Poster - Atmospheric-pressure Plasmas and Processing

- P4001** CHARACTERIZATION OF ATMOSPHERIC PRESSURE AIR BUNDLE MICROPLASMA GENERATED BETWEEN NANOPOROUS ALUMINA DIELECTRIC  
Myeong Yeol Choi, Jin Hoon Cho, Il Gyo Koo, Myeong Yeol Choi, Young Dong Park, Woong Moo Lee
- P4002** SURFACE TREATMENT BY SLOT MICROPLASMA IN ATMOSPHERIC PRESSURE AIR  
Myeong Yeol Choi, Jin Hoon Cho, Il Gyo Koo, Myeong Yeol Choi, Jong Hoon Kim, Young Dong Park, Woong Moo Lee
- P4003** Decomposition of PFCs by steam plasma at atmosphere pressure  
Dong-yun Kim, Dong Wha Park
- P4004** Surface Functionalization of PTFE Sheet through Atmospheric Pressure Plasma Liquid Deposition Approach  
Nobuyuki Zettsu, Hiroto Itoh, Kazuya Yamamura
- P4005** DEPOSITION OF SiO<sub>2</sub> THIN FILM BY ATMOSPHERIC PRESSURE PLASMA FOR THE DIFFUSION BARRIER COATINGS OF FLEXIBLE DISPLAYS  
J. H. Lee, Thuy T. T. Pham, I. K. Kim, J. T. Lim, S. J. Kyung, G. Y. Yeom
- P4006** STUDY OF THE AMORPHOUS SILICON TO SILICON NITRIDE ETCH SELECTIVITY MECHANISM USING PIN TO PLATE DIELECTRIC BARRIER DISCHARGE IN ATMOSPHERIC PRESSURE PLASMA  
SeJin Kyung, JaeBeom Park, JuneHee Lee, GeunYoung Yeom
- P4007** ATMOSPHERIC LINE REMOTE PLASMA SOURCE FOR SURFACE TREATMENT  
Wataru Kumagai, Hidekazu Miyahara, Eiki Hotta, Akitoshi Okino
- P4008** Temperature behavior of Atmospheric-Pressure Non-equilibrium Microwave Discharge Plasma Jets for PEN-Surface Processing  
Toshifumi Yuji, Toshifumi Yuji, Shuitsu Fujii, Raju Ramasamy, Hiroshi Akatsuka, Youl-Moon Sung
- P4009** MULTI-GAS HIGH PURITY PLASMA SOURCE FOR REDUCE TO ATMOSPHERIC PLASMA PROCESSING  
Hidekazu Miyahara, Taichi Kageyasu, Wataru Kumagai, Kazuyasu Takimoto, Eiki Hotta, Ryuichi Shimada, Akitoshi Okino
- P4010** PCB De-smear by H<sub>2</sub>O Plasma  
TALUN SUNG, Chung-Ming Liu, Kuen Ting, Shinriki TEII

#### Poster - Nanocarbon Materials

- P4011** EFFECT OF LASER IRRADIATION ON CARBON NANOTUBE FILMS FOR NO<sub>x</sub> GAS SENSOR  
Tsuyoshi Ueda, Sadayuki Katsuki, Fumiaki Mitsugi, Tomoaki Ikegami, Toshiyuki Nakamiya
- P4012** INFLUENCE OF CATALYST MORPHOLOGY ON GROWTH OF VERTICALLY ALIGNED MULTI-WALLED CARBON NANOTUBES  
Fumiaki Mitsugi, Narges Heidari, Tsuyoshi Ueda, Tomoaki Ikegami
- P4013** Radical Density Measurements in VHF C<sub>2</sub>F<sub>6</sub>/H<sub>2</sub> Plasma with Radical Injection CVD Used for Carbon Nanowall Fabrication  
Satoru Kato, Hajime Sasaki, Sego Takasima, Koji Yamakawa, Mineo Hiramatsu, Masaru Hori
- P4014** Continuous Synthesis of Carbon Nanoclusters Using Well-Controlled Thermal Plasmas  
Tsuyoshi Ohishi, Yuichi Yoshihara, Osamu Fukumasa
- P4015** SYNTHESIS OF CARBON NANOWALLS USING ELECTRON BEAM EXCITED PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION  
Takateru Mori, Mineo Hiramatsu, Koji Yamakawa, Keigo Takeda, Masaru Hori
- P4016** SYNTHESIS OF CARBON NANOTUBES ON DIAMOND-LIKE CARBON BY MICROWAVE PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION  
Won Seok Choi, Eun Chang Choi, Jae-Hyeoung Lee, Byungyou Hong
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- P4018** PATTERN TRANSFER OF CARBON NANOWALL INTO SiO<sub>2</sub> FILM  
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