Nov. 1, 2009, Sunday

- 16:00-20:00 Registration
- 18:00-20:00 Reception **(Spring Room)**

Nov. 2, 2009, Monday

Conference Room : International Reception Hall (V.F.)

- 7:30-17:00 Registration
- 8:20-17:20 Conference Session

Mon AM (Nov. 2)	**Battery/LED** *Session Chair: Dr. M. Singh, Prof. Pavol Sajgalik*		
8:20-8:40	**Prof. Jow-Lay Huang** **Deputy Minister, Lih. J. Chen, NSC**		**Opening Remark**
8:40-9:10	**Prof. Zhong-Lin Wang** ***(Keynote)***	**USA**	**Nanogenerators and Nanopiezotronics: from Science to Technology**
9:10-9:30	Prof. Tohru Sekino *(Invited)*	Japan	Structure and Properties Control of TiO_2 Nanotubes for Advanced Environmental and Energy System
9:30-9:50	Dr. Marcin Strawski Prof. Ralf Riedel *(Invited)*	Germany	SiCN Ceramic-Based Anode Material for Li-Ion Batteries
9:50-10:10	Prof. Shigeto Okada *(Invited)*	Japan	Environmentally-friendly Cathode Active Materials for Sodium Secondary Battery
10:10-10:30	**Session Break**		
10:30-10:50	Prof. Liu-Hao Tjeng *(Invited)*	Germany	Search for New Materials and New Properties Using Thin Films
10:50-11:10	Prof. Pavol Sajgalik *(Invited)*	Slovakia	Synthesis and Luminescent Properties of Eu Doped $MgSiN_2$ and $LaSi_3N_5$
11:10-11:30	Ms. Ilaria Menapace Prof. Ralf Riedel *(Invited)*	Germany	Photoluminescence of Heat-treated Si-based Polymers as Promising Materials for LEDs Applications
11:30-11:50	Dr. Toshihiro Ishikawa *(Invited)*	Japan	Durable Ultra-luminous Structure for Incandescent High-Power White-LED
11:50-12:10	Dr.Yoshinobu Fujishiro *(Invited)*	Japan	Development of Advanced Ceramic Electrochemical Reactors for SOFC Technology
12:10-13:20	**Lunch Break (Golden Dragon Banquet Room, 2F)**		
Mon PM (Nov. 2)	**SOFC** *Session Chair: Prof. T. Sekino, Prof. S.F. Wang*		
13:20-13:40	Dr. Chien-Hsiung Lee *(Invited)*	Taiwan	Development of Solid Oxide Fuel Cell at INER
13:40-14:00	Prof. Xing-Bo Liu *(Invited)*	USA	Solid Oxide Fuel Cells Operating on Coal Syngas: Effects of Fuel Contaminants
14:00-14:20	Prof. Dong-Soo Park *(Invited)*	Korea	Conductive Oxide Films for Metal Interconnect of Fuel Cells by Aerosol
14:20-14:40	Dr. Chen-Chia Chou *(Invited)*	Taiwan	Effect of Sintering Process on the Ionic Conductivities of Bi_2O_3-doped Yttria Stabilized Zirconia System
14:40:15:00	Prof. Sea-Fue Wang *(Invited)*	Taiwan	Electrochemical Performances of Anode-supported SOFCs with Bi-layered Electrolyte and Electrodes
15:00-15:20	**Session Break**		
15:20-15:40	Prof. Anil Virkar *(Invited)*	USA	A Study of Solid Oxide Fuel Cell Performance: Experiments and Modeling
15:40-16:00	Prof. Wen-Cheng J. Wei *(Invited)*	Taiwan	Doped (M1,M2)Bi_2O_3 Electrolytes for SOFC
16:00-16:20	Prof. Suk-Joong L. Kang *(Invited)*	Korea	Continuum Mechanical Analysis of the Warpage Behavior of GDC/NiO-YSZ Bi-layers
16:20-16:40	Prof. Dong-Hau Kuo *(Invited)*	Taiwan	PEN-embedded SOFCs with Gradient Interconnects
16:40:17:00	Prof. Hikaru Kobayashi *(Invited)*	Japan	Defect Passivation Etch-less Cleaning for Semiconductor Devices: Zero Emission Process
17:00:17:20	Prof. Junichi Hojo *(Invited)*	Japan	Chemical Synthesis of Semiconducting Zinc Oxide Powders by Various Routes
18:00-21:00	**Poster Session (Food and Drinks) (The Corridor Outside Conference Room, V.F.)** *Session Chair: Prof. Jow-Lay Huang, Prof. Chi-Yuen Huang*		

Nov. 3, 2009, Tuesday

Conference Room : International Reception Hall (V.F.)

- 7:30-17:00 Registration
- 8:10-12:00 Conference Session

Tues AM (Nov. 3)	Thermoelectric materials *Session Chair: Dr. T. Ohji, Prof. Y.C. Zhou*		
8:10-8:40	**Prof. K. Koumoto** ***(Keynote)***	**Japan**	**R&D Status and Challenges of Thermoelectric Materials**
8:40-9:00	Dr. Ichiro Terasaki *(Invited)*	Japan	Design and Control of the Thermoelectric Power in Transition Metal Oxides
9:00-9:20	Prof. Takashi Goto *(Invited)*	Japan	Thermoelectric Properties of Alkaline-earth Ruthenate Compounds by Spark Plasma Sintering
9:20-9:40	Prof. Armin Reller *(Invited)*	Germany	Functional Ceramic Materials for Emerging Energy Technologies: Potentials and Limitations
9:40-10:00	Prof. Gunnar Westin *(Invited)*	Sweden	Energy Materials Through Solution Processing
10:00-10:20	**Session Break**		
10:20-10:40	Prof. Yan-Chun Zhou *(Invited)*	China	Challenges for the Application of MAX Phases in Clean Energy Systems
10:40-11:00	Prof. Hisao Suzuki *(Invited)*	Japan	A New Class of Nanohybrid Particles for Smart Window by A Sol-gel Method
11:00-11:20	Prof. She-Huang Wu *(Invited)*	Taiwan	Effects of Impurities in $LiFePO_4$ Cathodes on the Cycling Performance of $LiFePO_4$/MCMB Cells
11:20-11:40	Prof. Federico Rosei *(Invited)*	Canada	Strategies for Controlled Assembly at the Nanoscale
11:40-12:00	Prof. Jaw-Yeu Liang *(Invited)*	Taiwan	Growth Temperature Effect on Optical Property of AlN Nanowires
12:00-12:10	**Photo taking (The Entrance of The Grand Hotel)**		
12:10-13:20	**Lunch Break (Grand Garden Western Dining Room, Lobby, 1F)**		
13:20-17:00	**Outdoor Tour (Palace Museum)**		
19:00-21:00	**Banquet (Skylounge Room, 12F)**		

Nov. 4, 2009, Wednesday

Conference Room : International Reception Hall (V.F.)

- 7:30-17:00 Registration
- 8:10-17:00 Conference Session

Wed AM (Nov. 4)	**Photovoltaic/Solar** *Session Chair: Dr. H.T. Lin, Prof. S.Y. Chen*		
8:10-8:40	**Prof. Hans-Werner Schock *(keynote)***	**Germany**	**Status and Development of Photovoltaic Solar Technology in Europe**
8:40-9:00	Dr. Ming-Chi Kan Dr. James C. Sung *(Invited)*	Taiwan	Amorphous Diamond Solar Cells with Nanodiamond Quantum Wells
9:00-9:20	Dr. Alberto Vomiero Prof. G. Sberveglieri *(Invited)*	Italy	Nanowire-based Photoanodes for Third Generation Excitonic Solar Cells
9:20-9:40	Prof. San-Yuan Chen *(Invited)*	Taiwan	Synthesis and Characterization of High-Quality Zn-doping $CuInS_2$ and $ZnCuInS_2/ZnS$ Core/shell Luminescent Nanocrystals for Solar Cell Applications
9:40-10:00	Prof. Yi-Bing Cheng *(Invited)*	Australia	Synthesis and Application of Submicron-sized Mesoporous TiO_2 Spheres for Dye Sensitized Solar Cells
10:00-10:20	**Session Break**		
Wed AM (Nov. 4)	**Advanced Ceramics for Energy Technologies** *Session Chair: Dr. H.T. Lin, Prof. S.Y. Chen*		
10:20-10:40	Prof. Lian Gao *(Invited)*	China	Preparation and Properties of Carbon Nanotube Ceramic Composites
10:40-11:00	Dr. Paul F. Becher *(Invited)*	USA	The Influence of Additives in Tailoring of Silicon Nitride Ceramic Microstructures and Properties
11:00-11:20	Prof. Junichi Tatami (Invited)	Japan	Fabrication and Mechanical Properties of CNT Dispersed Si_3N_4 Ceramics by Adding HfO_2 and TiO_2 Addition
11:20-11:40	Dr. Hai-Doo Kim *(Invited)*	Korea	Processing and Microstructure Control in Sintered Reaction Bonded Silicon Nitride and Sialon
11:40-12:00	Prof. Katsutoshi Komeya *(Invited)*	Japan	Nano-sized TiN Dispersed Si_3N_4 Ceramics as New Bearing Balls
12:00-13:20	**Lunch Break (Yuan-Yuan Tea House, Lobby, 1F)**		
Wed PM (Nov. 4)	**Advanced Ceramics for Energy Applications** *Session Chair: Prof. Walter Krenkel, Prof. W.H. Tuan*		
13:20-13:40	Prof. Walter Krenkel *(Invited)*	Germany	Hybrid Ceramic-metal Constructions for High Temperature Applications
13:40-14:00	Prof. Guo-Jun Zhang *(Invited)*	China	High Temperature Stabilized Silicon Nitride by Hexagonal Boron Nitride Nanocoating
14:00:14:20	Prof. Lai-Fei Cheng *(Invited)*	China	The Environmental Behaviors of Barium Aluminosilicates Coated C/SiC Composites
14:20-14:40	Prof. Ying-Chieh Lee *(Invited)*	Taiwan	The Effect of Cu doped Ni Electrodes on the Dielectric Properties and Microstructures of $(Ba_{0.96}Ca_{0.04})(Ti_{0.85}Zr_{0.15})O_3$ Multilayer Ceramic Capacitors
14:40-15:00	Prof. Shao-Ming Dong *(Invited)*	China	Cf/Ti_3SiC_2-SiC Composite from a Polymer Rout by In-situ Reaction
15:00-15:20	**Session Break**		
15:20-15:40	Dr. Kuang-Hsi Wu *(Invited)*	USA	Carbon Nanotube (CNT) – Ceramic Composites Manufactured by Direct In-situ Growth of Nanotubes
15:40-16:00	Prof. Zhe-Chuan Feng *(Invited)*	Taiwan	Lead Zirconate Titanate Thin Ceramic Films with Full Composition Range Prepared by Metalorganic Chemical Vapor Deposition
16:00-16:20	Prof. Shyan-Lung Chung *(Invited)*	Taiwan	Enhancement of Thermal Conductivity in Ceramics Obtained from a Combustion Synthesized AlN Powder by Microwave Sintering and Reheating
16:20-16:40	Prof. Soo-Wohn Lee *(Invited)*	Korea	Global Trends of Ecomaterials for Food and Fuel
16:40-17:00	Prof. Yoshio Sakka *(Invited)*	Japan	Fabrication and Some Properties of Energy-Related Textured Ceramics

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Poster

Nov. 2 (Monday) 6:00 to 9:00 PM

(The Corridor Outside Conference Room, V.F.)

No.	Title & Author
P-001	**A Study on the Thermoelectrical Properties of CVD SiC for Semiconductor Process Application** *Jun Gyu Kim, Yoo Youl Choi, Doo Jin Choi, Jung Il Kim*
P-002	**A Study of CVD SiC Whiskers on Carbon Woven Fabric for High Energy Filter Applications** *Yoo Youl Choi, Jun Gyu Kim, Doo Jin Choi*
P-003	**Fabrication of Dense Si_3N_4 Based Ceramics via Rapid Reaction-Bonding and Post Sintering for Energy Saving** *H. Hyuga, N. Kondo, H. Kita*
P-004	**Electrical Resistivity of AlN Ceramics Without Additive** *Hideyuki Ohguni, J. Tatama, T. Wakihara, K. Komeya, T. Meguro*
P-005	**Fabrication and Evaluation of Si_4N_4Ceramics by Adding Y_2O_3-HfO_2-SiO_2** *Sayaka Hagimura, Junichi Tatami, Toru Wakihara, Katsutoshi Komeya, Takeshi Meguro*
P-006	**Synthesis of Si_3N_4 Powder by Direct Nitridation of Waste Silicon Sludge Pulverized by Wet-jet Milling Process** *T. Kunishima, J. Tatami, T. Wakihara, K. Komeya T. Meguro*
P-007	**Single Crystalline Bismuth Telluride Powders by Polyol Process** *S.-C. Wang, Y.-J. Siao, C.-R. Lin, W.-C. Chang*
P-008	**A Novel Synthesis Route to Prepare Semiconductive In_2O_3 Hollow Particles** *Tzu-Tsung Tseng, Wenjea J. Tseng*
P-010	**Plasma Sprayed Metal Supported ITSOFC with Nano Ag Catalyst** *Chang-Sing Hwang, Chun-Huang Tsai, Nian-Tzu Suen, Jen-Feng Yu*
P-011	**High Power Density Metal-supported ITSOFC Fabricated by Plasma Spraying** *Chang-sing Hwang, Chun-Huang Tsai, Nian-Tzu Suen, Jen-Feng Yu*
P-012	**The Electrical Conduction Behavior of Nickel-added Yttria Doped Ceria (YDC) Electrolyte** *Chin-Yi Chen, Li-Jr Liu, Chein-Yie Tsay, Chung-Kwei Lin*
P-013	**Microwave Sintering Multi-doped Solid Electrolyte** *Yao-Ming Wang, Horng-Yi Chang*
P-014	**Phase Stability and Conductivity of $Ba_{1-y}Sr_yCe_{0.8}Y_{0.2-x}Nd_xO_{3-\delta}$ Solid Oxide Fuel Cell Electrolyte** *I-Ming Hung, Yu-Chen Lee*
P-015	**Conductivity and Structure of $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$ Cathode Prepared by Citrate-EDTA Complexing Method** *I-Ming Hung, Chen-Yu Liang*
P-016	**Electrophoretic Deposition of Tri-Layered Ceramic Structure for Medium Temperature Solid Oxide Fuel Cells** *Yung-Tse Chang, Ho-Cheng Tsai, Yi-Jui Huang, Pu-Wei Wu, Pang Lin*
P-017	**Fabrication of Plasma Sprayed Porous Ni/YSZ Anode by Introducing the Pore Former in the Feedstock Powder** *Yung-Chin Yang, Yu-Ching Wang, Sea-Fue Wang*
P-018	**Low Temperature Chemical Bath Deposition for ZnS/ZnO Multilayer Structure for CIGS Solar Cells** *R. F. Louh, Warren Wu*

P-019	**Investigation of Characteristics of TiO_2 Doped with Zn^{2+}** *Leo Chau-Kuang Liau, Jia-Hung Chen*
P-020	**Flexibly Electrochromic WO_3 Films Prepared by R.F. Magnetron** *Yang-Ming Lu, Feng-Ching Lien*
P-021	**Crystal Structure and Fluorescent Property of $(Y_{1-x}Tb_x)_3Al_5O_{12}$ Solid Solution Synthesized in Different Atmospheres** *H. M. Lee, J. Y. Wu, C. Y. Huang*
P-022	**AlZnO Thin Films and Thermal Annealing for Solar Cell Applications Prepared by RF Magnetron Sputtering at Room Temperature** *Weifeng Yang, Zhengyun Wu, Aisuo Pang, Yu-Li Tu, Zhe-Chuan Feng, Weijie Lu*
P-023	**Adhesion and Fracture of Eutectic Bonded Cu/Al_2O_3 Interface** *S. K. Lee, W. H. Tuan*
P-024	**Models Prediction of Thermal Conductivity** *J. Y. Chou, W. H. Tuan*
P-025	**Study on the Co-firing Behaviors of Ferrite and LTCC** *Yueh-Han Lee, Wei-Hsing Tuan*
P-026	**Fabrication of Porous Ceramics by Gelcasting** *Shu-Ting Kuo, Wei-HsingTuan*
P-027	**Strengthening Zirconia by Heat-treatment in the Reducing Environment** *Chang-Ju Ho, Wei-Hsing Tuan*
P-028	**The Lifetime Distribution of $BaTiO_3$ Perovskite under High DC Electric Field** *Ying-Hua Chen, Wei-Hsing Tuan*
P-029	**Electrical Properties of p-ZnO/n-Si Heterojunction Formed by RF Magnetron Sputter** *Sean Wu, Maw-Shung Lee, Shih-Bin Jhong, Kuan-Ting Liu, Yee-Shin Chang, Yu-Jen Hsiao*
P-030	**Synthesis and Optoelectronic Characterization of Cu_2O/Al:ZnO Radial p-n Junction Nanowire Arrays** *Chien-Lin KuO, Ruey-Chi Wang, Jow-Lay Huang, Chuan-Pu Liu, Chun-Kai Wang, Sheng-Po Chang, Wen-Huei Chu, Chao-Hung Wang, Chia-hao Tu*
P-031	**Fabrication and Microstructure of a Ti(C,N)/Si_3N_4 Nanocomposite Fabricated by Spark Plasma Sintering** *Ching-Huan Lee, Horn-Hwa Lu, Chang-An Wang, Jow-Lay Huang*
P-032	**The SAW Characterization of (B, Al)N Films on 128° Y-X $LiNbO_3$** *Jen-Hao Song, Jow-Lay Huang, Sean Wu, James C. Sung, Ding-Fwu Lii*
P-033	**Mechanical and Electro-conductive Properties of TiN/Si_3N_4 Nano Composites Synthesized by Hydrolysis Method** *P. K. Nayak, How-Wei Feng, Jow-Lay Huang*
P-034	**Crystal Structure and Electrical Conductivity of $(YO_{1.5})_{0.7-x}(ZrO_2)_x(BiO_{1.5})_{0.3}$ ($0.1 \leq x \leq 0.35$) Ternary System** *Cheng-Yen Hsieh, Kuan-Zong Fung*
P-035	**Effect of La Substitution on the Conductivity of La_{1-x} Sr_xVO_3 Anode in Reducing Atmosphere** *Chi-Yang Liu, Chung-Yao Cho, Kuan-Zong Fung*
P-036	**$LiCoO_2$ Cathode on Flexible Polymer Substrate for Li-ion Battery Applications** *Chung-Ta Ni, Kuan-Zong Fung*