Technical Program Table

PL Plenary
KN Keynote
IN Invited
O Oral

Day Time 16:00-19:00 Sunday, Nov. 5 Registration, Welcome Party (Grand Hotel 2F)

Day						Monday, Nov. 6						
8:00-10:00		Registration 										
0:00-10:30						Opening						
0:30-11:10	PL-1	ry Session 1 Chair : Prof. Nong-Moon Hwang <room a=""> Plenary Session 1</room>		Ne	Stacey F. Bent New Materials by Atomic and Molecular Layer Deposition							
1:10-11:50	Plena PL-2	ry Session 2 Chair : Prof. Nong-Moon Hwang <room a=""> Plenary Session 2</room>				Rodney Ruoff Carbon Materials for the Future						
1:50-12:50	Deste					Lunch Break						
2:40-14:20	Poster Session Chair: Prof. Se-Hun Kwon Poster Session - I											
		<room a=""> New Surface Materials & Process <i></i></room>		<room b=""> Applications of Hybrid Materials</room>		<room g=""> Hybrid Inteface Materials</room>		<room c=""> Computation and Characterization of Hybrid Materials</room>		<room d=""> New Surface Materials & Process <ii> session Chairs: Prof.Yasushi Inoue, Dr.Kyoung II Moon</ii></room>		
4:20-14:35 4:35-14:50	A-KN-	n Chairs: Prof.Katsuya Teshima, Prof. Yongsub Yoon Prof. Nagahiro Salto (KN) Solution Plasma Chemical Synthesis for Nanomaterials	B-IN- 1 B-IN- 2	n Chair : Prof. Moon-Ho Ham Prof. Byoung Hun Lee (IN) Electronic applications of graphene barristor Prof. Byungjin Cho (IN) High Performance Electronic Transfor and Chemical Sensor	G- KN-1		C-KN-	n Chairs : Dr. Fei Zhou, Byungchan Han Prof. Masanobu Nakayama (KN) Efficient Computation of lonic Conductivity of Li for Rechareable Battery with Informatics	D-KN-	on Chairs: Prof. Yasushi Inoue, Dr. Xyoung II Moon Prof. Mustafa Urgen (KN) A powerful tool: Changing the mode and magnitude of bias voltage in cathodic are systems for turning the properties of hard coatings and surface alloying		
4:50-15:05	A-1	Dr. Voranuch Somsongkul Synthesis of titanium dioxide from various natural extract	B-1	Applications Based on Two-dimensional Alloys Dr. Teng-Fel Zhang Conductive DLC films and their electrochemical applications	G-1	Prof. Soo Hyung Kim Next Generation Energetic Materials	C-IN-	Prof. James Buban (IN) Noise reduction for scanning transmission electron microscopy using machine learning	D-IN- 1	Prof. Nong-Moon Hwang (IN) Growth of thin films and nanostructures by charged nanoparticles in CVD and PVD processes		
5:05-15:20	A-IN- 1	Prof. Rajaram Mane (IN) Incredible Solution-processed High Energy Storage Nanostructures	B-2	Jeongjae Ryu Multifunctional stretchable piezoelectric hollow fiber	G-2	Prof. Young Min Song Thin-film photonics for flexible optoelectronic device applications	C-1	Dr. Joonhee Kang Identification of a Universal Relation between a Thermodynamic Variable and Catalytic Activity of Pyrites toward Hydrogen Evolution Reaction: Density Functional Theory Calculations	D-1	Dr. Haribabu Palneedi Scalable fabrication of high-performance PZT/Metglas magnetoelectric film heterostructures by granule spray in vacuum deposition and laser annealing		
5:20-15:35	A-2	Dr. Vijaykumar Jadhav Annealing temperature reliant in depth analysis of structural, morphological and electrochemical performance of Ni foam	B-IN- 3	Prof. Sungjoo Lee (IN) Integration of multifunctional homogeneous lateral black phosphorus junction devices	G-IN- 1	Prof. Byung Yang Lee (IN) Hybrid Structures of Nanoscale Biomimetic Materials for Sensor Applications	C-2	Prof. Nuri Solak Computational Thermodynamic Studies in the Solid Oxide Fuel Cells	D-IN- 2	Dr. Gun-Hwan Lee (IN) Flexible TCO coatings for a large area electro-chromic device		
5:35-15:50	A-IN- 2	Prof. Chikara Ohtsuki (IN) Design of surface-active biomaterials for bone tissue reconstruction	B-3	Jaegyu Kim Fabric-based piezoelectric P(VDF-TrFE) film structure for wearable device applications	G-3	Dr. Houyu Wang Silicon Nanohybrids-Based Optical Biosensors	C-IN- 2	Dr. Fei Zhou (IN) Multiscale Materials Modeling with Machine Learning	D-2	Dr. Kyoung II Moon Development and characterization of multi component nanocomposite coating for low friction applications		
5:50-16:05	A-3	Dr. Hoonseung Lee Simultaneous synthesis of nano graphite and amorphous carbon during electric discharge in organic solution	B-4	Saba Seyedmahmoudbaraghani Room Temperature Gas Sensor Array based on Selenium, Metal Selenide, Se/SWNT, and MSe2/SWNT Hybrid Nanostructures	G-IN- 2	Prof. Kolchi Matsuo (IN) Characterization of Biomolecule Structures by Synchrotron- Radiation Vacuum-Ultraviolet Circular-Dichroism Spectroscopy	C-3	Odongo Francis Ngome Okello Correlation between Small Molecule dependent Nanomorphology and Device Performance of Organic Light Emitting Diodes with Temary Blend Emitting Layer	D-3	Dr. N. M. shinde Soft chemical approach grown bismuth oxide nanoflowers on Ni-foam for supercapacitor application		
6:05-16:25						Coffee Break						
		<room a=""> New Surface Materials & Process <i></i></room>		<room b=""> Applications of Hybrid Materials</room>		<room g=""> Hybrid Inteface Materials</room>		<room c=""> Computation and Characterization of Hybrid Materials</room>		<room d=""> New Surface Materials & Process <ii></ii></room>		
	Sessio	n Chairs : Prof. Rajaram Mane, Prof. Nobuyuki Zettsu	Sessio	on Chairs : Prof. Sungjoo Lee	Sessio	on Chairs : Prof. Han-Bo-Ram Lee, Prof. Rong Chen	Sessio	on Chairs : Dr. Eita Tochigi, Prof. Si-Young Choi	Sessio	on Chairs : Dr. Gun-Hwan Lee, Prof. Yukihiro Sakamoto		
6:25-16:40	A-IN- 3	Dr. Fumitaka Hayashi (IN) Factors controlling adsorption properties of (H/Li)2TIO3 crystals for lithium ion recovery from aqueous solution	B-IN- 4	Prof. JI Young Kim (IN) Molecular-Atomic Layer Deposited (MALD) Organic-Inorganic Hybrid Dielectrics for 2D MoS2 Devices	G- KN-2	Prof. Rong Chen (KN) Design and Synthesis of Catalytic Interfaces via Selective	C-IN- 3	Prof. ByungChan Han (IN) Multiscale computational platform for characterizing materials properties of hybrid interfaces	D-KN-	Prof. Masaharu Shiratani (KN) Nanopaticia composita films: fabrication and functions		
5:40-16:55	A-IN- 4	Dr. Sayaka Suzuki (IN) Flux growth and exfoliation of layered niobate crystals for photocatalytic application	B-IN- 5	Prof. Soon-Yong Kwon (IN) Single-crystalline 1d tungsten ditelludire (WTe2) nanobelts grown from eutectic alloy reservoir	KN-2	Design and Synthesis of Catalytic Interfaces via Selective Atomic Layer Deposition	C-4	Prof. Yongchul Chung Computational Screening of Nanoporous Materials for Hexane and Heptane Isomer Separation	2	Nanoparticle composite tilms: rabincation and functions		
6:55-17:10	A-4	Dr. Yosuke Moriya Feasibility study on TIO(OH)2 as a lithium-ion sieve in terms of thermodynamic stability	B-5	Dr. Jae Young Park Photoactive Self-Cleaning Applications of Porous TiO2 thin films using Sol-gel Method	G-4	Dr. Eun-Ae Choi Implementation of superior metal interface performances via first principle calculations	C-5	Dr. Heechae Chol One-step hydrothermal synthesis of highly active photocatalyst: Significant roles of thermodynamic immiscibility and staggered band alignments	D-IN- 3	Prof. Yukihiro Sakamoto (IN) Preparation of B-doped diamond using mode conversion typerior microwave plasma CVD		
7:10-17:25	A-IN- 5	Prof. Nobuyuki Zettsu (IN) Mixed anion effects on high-voltage spinel manganese cathodes	B-IN- 6	Prof. Seong-Ju Hwang (IN) Extoliated 2D Inorganic Nanosheets as Versatile Building Blocks for Functional Nanohybrids	G-IN- 3	Prof. Rodrigo Savio Pessoa (IN) Emerging applications of plasma sources in nanotechnology and biomedical engineering	C-6	Min Jae Park Thermal Insulation of iFLASH System Infilled with PCM by Small-scale Heating Test	D-IN- 4	Prof. Qimin Wang (IN) Developing nano-layered coatings for application on high speed cutting tools		
				Prof. Moon-Ho Ham (IN)	G-IN-	Dr. Rungthiwa Methaapanon (IN) Portable Atomic Layer Deposition Chambers for In Situ	C-7	G. Navaneethakrishnan Implementation of Deep Learing Method on Estmation Of Fatique Properties from Monotonic Mechanical Properties	D-4	Prof. Dooho Choi Investigation of Tungsten, Molybdenum and Nickel for Next generation Interconnects for Semiconductor Devices		
7:25-17:40	A-5	Dr. Susanta Bera Development of metal oxide nanostructured thin films for photoanode application	B-IN- 7	Engineering Graphene and TMDCs for Nanoelectronic Device Applications	4	Synchrotron-based X-ray Analyses		rangue Properties from Monotonic Mechanical Properties		5		
7:25-17:40 7:40-17:55	A-5 A-IN- 6	Development of metal oxide nanostructured thin films for		Engineering Graphene and TMDCs for Nanoelectronic Device		Synchrotron-based X-ray Analyses Prof. Bonggeun Shong (IN) Quantum chemical studies on surface chemical reactions during thin film deposition	C-IN-	Dr. Elta Tochigi (IN) Core structures of 1/3 dislocation and impurity segregation in a -alumina	D-IN- 20	Dr. Ippel Tanaka Effects of process gas on the relationship between the film		
	A-IN-	Development of metal oxide nanostructured thin films for photoanode application Dr. Teruaki Fuchigami (IN) Surface modification of magnetic nanoparticles with thermo-	7	Engineering Graphene and TMDCs for Nanoelectronic Device Applications Byeong-Ung Hwang Stretchable and transparent capacitive touch/force sensor as a	4 G-IN-	Synchrotron-based X-ray Analyses Prof. Bonggeun Shong (IN) Quantum chemical studies on surface chemical reactions	C-IN-	Dr. Elta Tochigi (IN) Core structures of 1/3 dislocation and impurity segregation in α	D-IN-	Dr. Ippel Tanaka Effects of process gas on the relationship between the film structure and mechanical properties of SHDLC films prepare by tMVP Prof. Yasushi Inoue (IN) Electrochronic proceeties of microvillus-structured indium-		
7:40-17:55	A-IN- 6	Development of metal oxide nanostructured thin films for photoanode application Dr. Teruski Fuschigami (IN) Surface modification of magnetic nanoparticles with thermoresoprose polymer for cancer cell capture and release Dr. Takaski Tsurucka Morphology Control of Metal-Organic Frameworks by an interfacial Synthetic Approach using Neel Ion-Opped Polymer	7 B-6 B-IN-	Engineering Graphene and TMDCs for Nanoelectronic Device Applications Byeong-Ung Hwang Stretchable and transparent capacitive touch/force sensor as a multi-functional input device for wearable electronics Dr. Dongshi Chi (IN) 2D semiconducting TMDCs for future electronics and smart	G-IN- 5	Synchrotron-based X-ray Analyses Prof. Bonggeun Shong (IN) Quantum chemical studies on surface chemical reactions during thin film deposition Dr. Il-Kwon Oh (IN)	C-IN- 4	Dr. Elta Tochigi (IN) Core structures of 1/3 dislocation and impurity segregation in a -alumina Oh Chungik	D-IN- 20 D-IN-	Dr. Ippel Tanaka Effects of process gas on the relationship between the film structure and mechanical properties of SI-DLC films prepare by MVP Prof. Yasushi Inoue (IN) Electrochronic properties of microsillus-structured indum- mitride films fabricated by glacina-gaile deposition in reach		
7:40-17:55 7:55-18:10	A-IN- 6 A-6	Development of metal code nanostructured thin films for photoanous application Dr. Teruski Fuchigami (IN) Surface modification of magnetic nanoparticles with thermoresponsive polymer for cancer cell capture and release Dr. Takaski Tsuruoka Morphology Control of Metal-Organic Frameworks by an Interfacial Synthetic Approach using Metal In-Opped Polymer Substrates Dr. Takaski Tsuruoka (IN)	7 B-6 B-IN-	Engineering Graphene and TMDCs for Nanoelectronic Device Applications Byeong-Ung Hwang Stretchable and transparent capacitive touchforce sensor as a multi-functional input device for wearable electronics Dr. Dongshi Chi (IN) 2D semiconducting TMDCs for future electronics and smart sensors: developing novel growth methods Kroekchal Innor	4 G-IN- 5 G-IN- 6	Synchrotron-based X-ray Analyses Prof. Bonggeun Shong (IN) Quantum chemical studies on surface chemical reactions during thin film deposition Dr. Il-Kwon Oh (IN) Reaction Mechanism of Area-selective Atomic Layer Deposition for Al2O3 Films Prof. Yeon Sit. Jung (IN) Dynamic Control of Hybrid Inferfaces Enables Deep Nanoscale	C-IN- 4 C-8	Dr. Elia Tochigi (IN) Core structures of 1/3 dislocation and impurity segregation in a -abumina Oh Chungik Effects of membrane thickness on the performance of CNT/Nation/CNT exit actuators Prof. Yongsup Yur (IN) Sterilization processing for the ballest water management	D-IN- 20 D-IN- 5	Dr. Ippel Tanaka Effects of process gas on the relationship between the film structure and mechanical properties of SPLC films prepare by MyP Prot. Yasushi inoue (IN) Electrochronic properties of microtillus-structured indiumnistic films barbeated by silm-chip-ungle deposition in neach environments Prot. Pung Reum Song (IN) Applications of transparent amorphous oude semiconductor		

				Techr	١ic	al Program Tabl	е			Keynote Invited		
Day						_			Ö	Oral		
Day Time						Tuesday, Nov. 7		>Poster Se	tting	Times		
8:00-09:00		Registration Registration (All posters should be prepared before 10:00 AM)										
		<room a=""> New Surface Materials & Process <i></i></room>		<room b=""> Applications of Hybrid Materials <i></i></room>	<room g=""> Hybrid Inteface Materials</room>		<room c=""> Computation and Characterization of Hybrid Materials</room>		<room d=""> Applications of Hybrid Materials <ii></ii></room>			
	Session	n Chairs : Prof. jung-Woo Lee, Prof. Katsuya Teshima	Sessio	n Chair : Dr. Jae-Hong Lim	Sessio	n Chair : Prof. Youngson Choe	Sessio	n Chair : Prof.Seungbum Hong	Sessio	on Chair : Dr. Jong San Chang		
09:00-09:15	A-KN- 2	Prof. Kensuke Akamatsu (KN) Fully Additive-Based Chemical Approach for Direst Fabrication of Inorganic Thin Films on Polymer Substrates	B-KN- 1	Prof. Nosang V. Myung (KN) High Density Chemical Sensor Arrays	G- KN-3	Prof. Keiji Tanaka (KN) Polymer Relaxation at Solid Interfaces	C-KN- 2	Dr. Young-Gi Lee (KN) Polymer Solution with Thiocropy for Organic-inorganic Hybrid Electrolytes Based on PVDF-HFP/HFC Slend for Flexible Lithium Rechargeable Batteries	D-KN- 3	Dr. Christian Serre (KN) From the synthesis of robust Meta(il(IIIV)) Organic Frameworks to their potential applications in energy, health and environment		
09:30-09:45	A-7	Dr. Sungmo Moon Ceramic coatings formed on Al1 050 alloy by plasma electrolytic oxidation method	B-IN- 9	Prof. Bong Young Yoo (IN) Unique mechanical properties of cu thin films contained ultra high defect density	G-IN- 9	Prof. Sangouk Kim (IN) Block copolymer nanopatterning interfaced with graphene substrates	C-IN- 6	Prof. Jong Min Yuk (IN) Topological defects in two-dimensional crystals and their application to liquid electron microscopy	D-IN- 7	Prof. Youn-Sang Bae (IN) Highly Efficient C3H6/C3H8 and CO/CO2 Separations Using Cu(I)-loaded Metal-Organic Frameworks		
09:45-10:00	A-IN- 9	Prof. Katsuya Teshima (IN) Flux crystal growth innovation for next-generation energy and environmental materials	B-9	Wantana Koetniyom Morphology improvement of ito substrate layer for low cost organic solar cells	G-IN- 10	Prof. Joona Bang (IN) Controlling the morphologies of block copolymer nanocomposites via organic/inorganic nanoparticles	C-9	Jimin Oh XPS analysis for solid-electrolyte interfaces with different Ni contents of layer-structured NCM-series cathodes	D-6	Dr. Tomoyo Goto Removal of cesium ion from aqueous water using titania nanotube		
10:00-10:15	A-8	Takashi Ohhashi Interfacial Synthetic Approach for Constructing Metal-Organic Framework Crystals Using Metal Ion-doped Polymer Substrate	B-10	Asif Ali Switching Mechanism of IGZO and SnO2 Heterojunction Hybrid Resistive Memory Devices	G-IN- 11	Dr. Sunesh Damodhadran (IN) Polymeric adhesion promoters for bonding hybrid interface materials	C-IN- 7	Prof. Yunseok Kim (IN) Mechanical force induced ionic behavior in electrochemical systems	D-IN- 8	Prof. Simon M. Humphrey (IN) Exploring the Solid-State Chemistry of Phosphine-Based MOFs		
10:15-10:30	Plenar	ry Session 3 Chair : Prof. Masaharu Shiratani				Coffee Break						
10:30-11:10	PL-3	<room a=""></room>				Shigeaki Zaima						
		Plenary Session 3 ry Session 4 Chair : Prof. Masaharu Shiratani		Development of GeSn-rela	ated	group-IV semiconductor thin films for futu	ıre si ı	nanolectronic applications				
11:10-11:50	Plenar	<room a=""></room>				Peter B. Littlewood						
11:50-12:50		Plenary Session 4		Contro	lling	caloric effects in oxides by tuning the elast	stic co	pupling				
	Sessio	Lunch Break on Chairs : Prof. Pung Keun Song										
12:40-14:20						Poster Session - II						
		<room a=""> New Surface Materials & Process <i></i></room>		<room b=""> Applications of Hybrid Materials <></room>		<room g=""> Hybrid Inteface Materials</room>	<room c=""> Computation and Characterization of Hybrid Materials <i></i></room>		<room d=""> Applications of Hybrid Materials <ii></ii></room>			
	Session	n Chairs : Dr.Sung mo Moon, Prof. Tatsuru Shirafuji	Session Chairs : Prof. Jeung Ku Kang, Prof. Hussain Manwar		Session Chair : Prof. Joona Bang		Sessio	n Chairs : Prof. Yoon Suk Choi, Prof. Steve Park	Sessio	on Chairs : Prof. Young-Rae Cho, Prof. Simon Humphrey		
14.00 / : ::			B-IN-	Prof. Manwar Hussain (IN)	G-IN-	Dr. Geon Tae Hwang (IN)	C-IN-	Dr. Quanshun Luo (IN)	D-IN-	Dr. Tae-Yeob Kim (IN)		
14:20-14:35	A-KN- 3	Prof. Hiroki Kondo (KN) Advanced plasma syntheses of carbon nanomaterials and nanocomposites for nano-bio applications	10	Trends of hybrid tactile sensor fabrication and its application Dr. Changhoon Lee	12 G-IN-	Multiferroic Magnetoelectric Coupling Effect with Optimized Adhesion Layer Dr. Se Gyu Jang (IN)	8 C-IN-	Using quantitative X-ray diffraction analyses to characterize nanoscale clusters, precipitates and multi-phases Prof. Steve Park (IN) Selective disparsion of semi-production carbon panetures	9 D-IN-	Development of a Wide PVD Pilot Plant in POSCO Prof. Dae-Won Park (IN)		
4:35-14:50		Prof. Kelichiro Sano (IN)	B-11	Relationship between orbital ordering and thermoelectric properties in Cs2AgF4; Density functional approach Prinva Lorchirachoonkul	13	Characteristic Correlation of Thermal Conduction Properties of Liquid Crystalline Epoxy Composites Dr. Jun-Ki Kim (IN)	9	Selective dispersion of semiconducting carbon nanotubes using conjugated polymers and their application to flexible thin- film transistors and tactile sensors Prof. Eun Ae Cho (IN)	10	Copper-aspartate metal organic framework as a catalyst for propylene carbonate synthesis Prof. Sung Hwa Jhung (IN)		
14:50-15:05	A-IN- 10	Reduction of odor from industrial material by using vegetable polyphenol and ozone water Prof. Tomohito Sudare (IN)	B-12	Synthesis and photoluminescence properties of alkali metal- doped zinc tungstates prepare by nitrate Dr. Santosh Jadhav	G-IN- 14	Adhesive Bonding Behavior of the CFRP-metal Joint in Automotive Body Dr. Jin-Woo Lee	C-IN- 10	Co/Mo2C Hybrid Catalyst for Oxygen Evolution Reaction in Alkaline Water Electrolysis	D-IN- 11	Removal of hazardous organics in liquid-phase by adsorption using metal-organic frameworks Dr. Young Kyu Hwang (IN)		
15:05-15:20	A-IN- 11	Fabrication of fluoroapatitle nanocrystals-activated carbon composite using atomospheric plasma process Prof. Akifumi Matsuda (IN)	B-13	Interesting physical properties Ce3+ substituted nano particles of Ni-Zn ferrites	G-5	Mode II interfacial fracture toughness of Carbon Fiber Reinforced Plastic Laminates with Halloysite Nanotubes Dr. Choons-Sun Lim (IN)	C-IN- 11	Prof. See Hyoung Chang (IN) In situ X-ray Studies of Functional Oxides for Energy Systems	D-IN- 12	Catalytic Transfer Hydrogenation of Biomass-derived Aldehyde to Ketones		
15:20-15:35	A-IN- 12	Laser-induced room-temperature epitaxy of wide-bandgap semiconductor thin films	B-KN- 2	Prof. Jeung Ku Kang (KN) Hybrid Materials/Device with High Energy and Power Densities	G-IN- 15	Improvements of Mechanical and Thermal Properties of Cured Epoxy Systems	C-KN-	Prof. Andrew Minor (KN) New modes of imaging for in situ TEM nanomechanical testing	D-IN- 13 Prof. Guillaume Maurin (IN) 13 Modelling of gas separation in Metal-Organic Fram			
15:35-15:50	A-IN- 13	Prof. Tatsuru Shirafuji (IN) Processing of materials using low temperature atmospheric pressure plasmas in contact with solid or liquid surfaces			G-6	Jong Young Park Surface Modification of Di-Electric Material using Photo Pretreament for FOWLP			D-IN- 14	Prof. Sung June Cho (IN) Preparation of small pore zeolite for water adsorption		
15:50-16:05	A-IN- 14	Prof. Suck Won Hong (IN) Lithographically patterned transparent, flexible, and stretchable metal electrode arrays for electronic device interconnections	B-IN- 11	Prof. Jun Kang (IN) A new strategy for maximizing the storage capacity of lithium in carbon materials	G-IN- 16	Prof. Junghoon Lee Nanoporous Composite Oxide Layer with Oil-Impregnation for Anti-Corrosion and Omniphobicity	C-IN- 12	Prof. Yoon Suk Choi (IN) Microstructural effects in modeling deformation behaviors of single crystal superalloys	D-IN- 15	Prof. Young-Rae Cho (IN) Thermal conductivity of multi-layered clad metal for cookware applications		
16:05-16:25		<room a=""></room>		<room b=""></room>	Coffee Break					«Room D»		
Social		New Surface Materials & Process <i></i>		Applications of Hybrid Materials <1>		Hybrid Inteface Materials		Computation and Characterization of Hybrid Materials <i></i>		New Surface Materials & Process <ii> on Chairs : Dr. Kuniko Urashima.</ii>		
		Prof. Chiaki Terashima	Sessio	n Chairs : Prof. Oi Lun Helena Li, Prof. Se-Hun Kwon		n Chairs : Prof. Mihail Barbolu, Prof. Junghoon Lee		n Chairs : Dr. Oden L. Warren, Prof. Dongchan Jang		Prof. Takahiro Ishizaki		
16:25-16:40	A-KN- 4	Prof. Takayuki Watanabe (KN) Thermal plasma processing for lithium ion battery application	B-KN-	Prof. Seung Soon Jang (KN) First-Principles Modeling Approach towards Quinone- Derivatives for Li ion battery: Effect of Molecular Architecture	G-IN- 17	Prof. Mihail Barboiu (IN) Dynamic Interactive Hybrid Materials Dr. Seung Zeon Han (IN)	C-IN- 13	Dr. Oden L. Warren (IN) Multiple approaches to high-temperature nanoindentation Dr. Jieun Park	D-IN- 16	Prof. Al Serizawa (IN) Tailored preparation of corrosion resistant AIOOH-LDH nanocomposite film on aluminum alloys Prof. Takahiro Ishizaki (IN)		
16:40-16:55		Prof. Motonobu Goto (IN)		on Electrochemical Properties Prof. Mu-Jeng Cheng (IN)	G-IN- 18	Development of high strengh and high ducility at alloy by control interface energy between proipitate and matrix Prof. Hyung Jun Kim (IN)	C-10	Mechanical behavior of nanostructures in various orders of dimension Prof. Dongchan Jang (IN)	D-IN- 17	Prof. Takaniro Ishizaki (IN) Preparation of corrosion resistant composite hydroxide film on magnesium alloys by steam coating Prof. Moon Kyung Man		
16:55-17:10	A-IN- 15	Synthesis of carbon nanoparticles by discharge plasma at ambient to pressurized gas/liquid interface	B-IN- 12	Quantum Mechanical Screening of Metal Surface- Organometallic Molecule Hybrid Electrocatalysts for CO2 Reduction Sooyoun Yu	G-IN- 19	Multiscale modeling of hybrid interface in energy conversion catalyst materials Woraphan Chaisriratanakul	C-IN- 14	Nanomechanical design of mechanical responses in 3D hollow ceramic nano-architectures Prof. Arief Budiman (IN)	D-7	Study on the Mechanical and Corrosion Characteristics of the Ductile Steel by Repeated Fatigue Cycle Prof. Tetsuya Yamamoto (IN)		
17:10-17:25	A-IN- 16	Prof. Syuji Fujii (IN) Stimuli-driven material delivery and release using liquid marble Prof. Chiaki Terashima (IN)	B-14	High-Efficiency Cellulolytic Enzymatic Fuel Cell via Multienzyme Cascade on DNA Scaffold	G-7	Chemical Composition and Characteristics of Polyvinyl Chloride (PVC) Ion-selective Membrane on Silicon Nitride for Nitrate ISFET Sensor Prof. Dong Woog Lee (IN)	C-IN- 15	Fracture at the nanoscales – in situ fracture observation in the nanoscale cu/nb multilayered composite materials Dr. Yunie Oh (Jason) (IN)	D-IN- 18	Enhancement of surface properties between inorganic and organic materials Wenhui Yao		
17:25-17:40	A-IN- 17	Nitrogen gas assisted solution plasma for the surface treatment of TiO2 nanoparticles Yohel Takashima	B-IN- 13	Progress in high-capacity gradient layered Li[NixCoyMnz]O2 cathodes for lithium-ion batteries Prof. Oi Lun Helena Li (IN)	G-IN- 20	Prof. Joing Woog Lee (III) Bio-inspired adhesives triggered by polyelectrolyte complexation and composite surface priming Naren Raja	C-IN- 16	In-Situ SEM Nanomechanical Testing of Diffusion Aluminide Coating and 3D Materials at Elevated Temperature	D-8	Formation of multi-functional water repellent coatings on the flexible polymer Tie-Gang Wang (IN)		
17:40-17:55	A-9	Immobilization of an Activated Rh Complex Catalyst in a Metal- Organic Framework for Hydrogenation under Low H2 Pressure Prof. Shin-ichi Kondo (IN)	B-IN- 14	Nitrogen-doped Carbon-Carbon Nano Fiber Composite as a New Approach for Metal-Free Cxygen reduction Catalyst Hongjun Kim	G-8	Optimization of Room Temperature Fabrication of Calcium Phosphate Scaffold for Hard Tissue Regeneration. Dewu Yue	C-IN- 17	Dr. Seong-Woong Kim (IN) New understanding of deformation in TiAl alloys Chung Su Hong	D-IN- 19	A comparison of the structure and properties of Zr-B-N coatings deposited by pulsed do and high power impulse magnetron sputtering Prof. Kwang-Hee Im		
17:55-18:10	A-IN- 18	Stimuli responsible polymeric micelle using amphiphilic block copolymer synthesized by mechanochemical solid-state polymerization	B-15	Phosphotungstic acid-Nafion composite membranes for direct ethanol fuel cells Dr. Hyung Mo Jeong (IN)	G-9	Polymeric Ohmic Contact for Two-dimensional Semiconductor devices with Benzyl Viologen Prof. Se-Hun Kwon (IN)	C-11	Fracture-Resistant Sn Micropillars as Anode for Lithium Ion Batteries Dr. Naoki Fujisawa (IN)	D-9	Characterization of teraheriz wave penetration on conducting and non-conducting frp composite materials Junwoo Lee		
8:10-18:25			B-IN- 15	Advanced Materials for Electrochemical Energy Storage Devices	G-IN- 21	Effect of Al2O3 Interlayer Addition on the Corrosion Behavior of CrN Coatings by a Hybrid HIPIMS/ALD Process	C-IN- 18	Extracting the substrate-independent stress-strain curves of cermic thin films by nanoindentation	D-10	Characterization of Thermodynamic and Kinetic Aging on ZPP through Humidity Aging		

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Day Time													
08:00-09:00		Registration											
		<room a=""> New Surface Materials & Process</room>	<room b=""> Applications of Hybrid Materials</room>	<room g=""> Hybrid Inteface Materials</room>			<room c=""> Hybrid Manufacturing Technology</room>						
	Sessio	n Chairs : Prof. Jun Kang, Prof. Hideyuki Kanematsu	Session Chairs : Prof. Yao He, Prof. Min-Kyu Song		Session Chairs : Dr. Jungo Ryu, Dr. Jong San Chang		Sessio	on Chairs : Prof. Jinyoung Lee					
09:00-09:15	A-IN- 19	Dr. Tatsuo Nagai (IN) Development and industrial applications of electrolyzed sulfuric acid technology	B-IN- 16	Prof. Min-Kyu Song (IN) Functional Hybrid Materials for Electrochemical Energy Storage Applications	G-IN- 22	Dr. Jong San Chang (IN) Development of Porous Metal-Organic Framework Materais as Water Adsorbents for Adsorption-Driven Thermal Battery	C-KN-	Prof. Hisayuki Suematsu (KN) Preoaration of passivated base and alkaline earth metal					
09:15-09:30	A-10	Dr. Yoshio Horiuchi Effect of flash lamp annealing on electroless nickel plating film	B-IN- 17	Dr. Marco Favaro (IN) Understanding Energy Materials at the Solid/Liquid Interface using Operando Ambient Pressure Electron Spectroscopies	G-10	Faisal Ahmed Energy Dissipation in multilayer Black Phosphorus Field Effect Transistor	4	particles by pulsed wire discharge					
09:30-09:45	A-11	Yohel Suzuki Relationship between the pH of the Gold Catalyst Solution and Selective Adsorption to the PEN film	B-16	Dr. Mahesh Peddigari Lead-free 0.942(K0.480Ns0.535)Nb03-0.058LiNbO3 thick films for high energy density capacitor applications	G-IN- 23	Prof. Sung Heum Park (IN) Effective methods for improving device performance of organic-inorganic hybrid perovskite solar cells	C-12	Jee Hwan Kim Novel stereolithography for multi-material additive manufacturing					
09:45-10:00	A-IN- 20	Dr. Kuniko Urashima (IN) Which technology developping better future by using materials & process	B-IN- 18	Prof. Kyung Min Choi (IN) Supercapacitors of nanocrystalline metal-organic frameworks	G-11	Zheng Yang Achieve Ambipolar MoS2 through 1D Electrical Contact	C-13	Dr. JunWoo Song Bonding mechanism of ferritic-martensitic steel joint in magnetic pulse welding					
10:00-10:15	A-IN- 21	Prof. Ryoichi Ichino (IN) Development of metal-carbonous nanomaterials composite plating by wet process	B-17	Dr. Suhas Gajre A multiple beaker inspired room-temperature chemical synthesis of Bi2O3 nanotlakes for assembling penoil-type asymmetric electrochemical supercapacitor cell	G-IN- 24	Prof. Yong-Hoon Kim (IN) Computational Study of Graphene-based Interfaces for the Collaborative Development of Next-Generation Energy and Electronic Devices	C-14						
10:15-10:30						Coffee Break							
10:30-10:45	A-IN- 22	Prof. Ryo Teranishi (IN) Direct fabrication of CdS/PbS/ZnS composite ceramics films patterned by on-site ink-jet reaction at room temperature	B-IN- 19	Dr. Youngkook Kwon (IN) Electrocatalytic CO2 Reduction toward Enhanced Ethylene Selectivity	G-IN- 25	Dr. Jungho Ryu (IN) Magnetoelectric Composite with Anisotropic Piezoelectric and Magnetostrictive Materials for Magnetic Energy Harvesters	C-IN- 19	Prof. Tadachika Nakayama (IN) Advanced Particle Control Technology by 3D Nano Printer and Motion Control by Electric Field					
10:45-11:00	A-IN- 23	Prof. Kazuya Nakata (IN) Applications of photocatalysis in biology	B-IN- 20	Dr. Nikolai Tsvetkov (IN) Defect engeneering at surfaces and interfaces for efficient energy conversion technologies	G-12	Prof. Soon-Gil Yoon Large-Scale High Quality Monolayer Graphene Grown Directly at 150 C via Plasma-Assisted Thermal CVD without Transfer Process	C-IN- 20	Prof. Hung-Yin Tsai (IN) Study on field emission characteristics of nano-diamond tips growth on AAO templates with different aspect ratios					
11:00-11:15	A-IN- 24	Prof. Hideyuki Kanematsu (IN) Materials' Surfaces and Evaluation of Their Biofouling Characteristics	B-18	Dr. Shuxing Wu Solvothermal synthesis of nickel-aluminum layered double hydroxide nanosheet arrays on nickel foam as binder-free electrodes for supercapacitors	G-IN- 26	Dr. Jae-Hong Lim (IN) Electrochemical synthesis of thermoelectric materials with nano-precitates	C-15	Dr. Haris Rudianto Consolidation of Gas Atomized Al-Si-SiC Composite Powder					
11:15-11:30	A-12	Yoorim Rho High-strength glass ceramic with CaO-B2O3-SiO2 glass ceramic doped with nucleating agent ZrO2	B-IN- 21	Prof. Yao He (IN) Optical Silicon Nanomaterials for Bioimaging and Sensing Analysis	G-IN- 27	Prof. Youngson Choe (IN) Adhesion and toughening effects of star-shaped polymers in high performance structural adhesives	C-16	Dr. Su-Jin Lee Weld plume behavior during aluminium and titanium disimilar lap welding using single mode fiber laser					
	Plena	ry Session 5 Chair : Prof. Nagahiro Saito											
11:30-12:00	PL-5	<room a=""> Plenary Session 5</room>		Chemically	Pro	Sanjay Mathur cessed Nanomaterials for Energy Harvest	ing A	pplications					
12:00~				Clo	osing	g Remarks (Photo, Souvenir & Lottery e	tc.)						
	Excursion & Tour												