

Students List

< Material > Oral

No.	Name	Affiliation	Title	Page
C01	Wenchao Ji	SJTU	First principles study of elemental mercury (Hg^0) adsorption on low index $CoMnO_3$ surfaces	6
C02	Soonok Kim	PNU	Local atomic structure and physic-chemical property of tungsten doped ceria-titania catalyst for low temperature SCR	8
C03	Kentaro Nakamura	KU	Improvements in crystallinity and long-term stability of hydrothermally grown ZnO nanowires via atmosphere-controlled annealing	10
C04	Congyang Zhang	SJTU	Conversion synthesis of luminescent perovskite nanocrystals from metal organic frameworks	12
C05	Hanji Park	PNU	Microstructural aspects of hydrogen embrittlement for low carbon FCA steel welds applied in cathodic protection	14
C06	Mohammad Tawheed Kibria	KU	Investigation of magnetic dead layer on iron silicide surfaces	16
C07	Gongji Yang	SJTU	Effect of notch depth on the mechanical behavior of $Cu_{50}Zr_{50}$ metallic glasses revealed by molecular dynamics simulations	18
C08	Jae-Hyun Yu	PNU	Metal embedding process to achieve ultra wear-proof for casting products	20
C09	Kentaro Tanaka	KU	Investigation of local tensile strain technique with SiN film stressor for Ge optical devices	22
C10	Wenlong Chen	SJTU	Ultrathin iron-platinum nanosheet with low loading of atomically dispersed platinum for efficient and highly CO-tolerant oxygen reduction reaction	24
C11	Yeong-Kwan Jo	PNU	Minimizing interface crack in cladding process by applying preheating process	26
C12	Tadahiko Inoue	KU	Growth of oxynitride $LaTiO_2N$ thin films by RF magnetron sputtering	28
C13	Hongzhang Zhai	SJTU	Particle size distribution function of nascent soot in premixed flames of gasoline and its surrogate	30
C14	Dongseok Kang	PNU	Basic research on unit cell structures for high strength-lightweight design	32
C15	Koki Nagata	KU	Simulation of crystal growth using CML model	34

< Energy > Oral

No.	Name	Affiliation	Title	Page
N01	Zhidong Wei	SJTU	Bismuth-based layered perovskite oxychlorides for photocatalytic hydrogen evolution	36
N02	Vikrant Chalgeri	PNU	Two-phase air-water flow regime and transition criteria for vertical upward and vertical downward flow direction in a narrow rectangular channel	38
N03	Ryo Sakamoto	KU	Local structure of highly concentrated electrolyte for aqueous sodium-ion battery	40

N04	Aiming Wu	SJTU	N-doped graphene as efficient oxygen cathode for Li-O ₂ batteries	42
N05	Kiwook Kim	PNU	Steam condensation heat transfer on chromium ion implanted aluminum surfaces	44
N06	Shazia Hanif	KU	Study on solid desiccant system for low-temperature drying applications	46
N07	Wentao Tang	SJTU	A solvent-and vacuum-free route to large-area perovskite films for efficient solar modules	48
N08	Chang-Seok Park	PNU	Heat transfer characteristics of sessile droplets on freezing surface	50
N09	Shinichiro Kojima	KU	Design of multi soft x-ray measurement system for high temperature plasma on QUEST	52
N10	Yangge Guo	SJTU	Promotion induced by iridium on Pd-based electrocatalyst for direct ethanol fuel cells in alkaline media	54
N11	Kim Jeonggeon	PNU	A simple method for predicting effective thermal conductivity of particulate composites	56
N12	Seiya Manabe	KU	Supply voltage dependence of muon-induced SEUs on 65-nm UTBB SOI SRAMs	58
N13	Ke Liu	SJTU	Catalytic combustion of lean methane assisted by electric field over Co-Mn catalyst at low temperature	60
N14	Raihan Choudhury	PNU	Study of a high-power DCFC system: Reducing the cathode resistance via new design approach	62
N15	Tetsushi Ono	KU	Statistical analysis on the effect of outdoor air temperature history on occupants' usage of air-conditioners in dwellings	64

< Environment > Oral

No.	Name	Affiliation	Title	Page
H01	Jin Shi	SJTU	Promotion effect of tungsten and iron co-addition on the catalytic performance of MnO _x /TiO ₂ for NH ₃ -SCR of NO _x	66
H02	Jintu Francis Kurisingal	PNU	Microwave-assisted synthesis of a bimetallic metal organic framework and its application as catalyst for cyclic carbonate synthesis	68
H03	Akiko Nishimura	KU	Temporal-spatial variation characteristics of urban heat island in Fukuoka metropolitan area, Japan	70
H04	Ming Chen	SJTU	Antagonistic effect of biochar nanoparticles on the transport of phosphate in acidic and alkaline soils	72
H05	Jinsu Kim	PNU	Removal of strontium in water by adsorbing ability of synthetic hydroxyapatites	74
H06	Yukun Wang	KU	Modeling of land-use changes and their environmental impacts in Kitakyushu-Fukuoka metropolitan area	76
H07	Jian Mei	SJTU	Morphology-dependent properties of Co ₃ O ₄ /CeO ₂ catalysts for low temperature dibromomethane (CH ₂ Br ₂) oxidation	78
H08	Tran Duong Thien Loc	PNU	Tungsten oxide nanosheet – A high efficiency material for photocatalytic activities	80
H09	Ji Woong Kim	KU	Visualization investigation of air flow pattern in nasal/oral cavities for monkey replica model	82
H10	Liuhua Su	SJTU	Electrochemical nitrate reduction by using a novel Co ₃ O ₄ /Ti cathode	84

H11	Sunah Kim	PNU	Impact of initial inoculum concentration on heterothrophic cultivation of <i>euglena gracilis</i> for paramylon production	86
H12	Tareq W M Amen	KU	Anaerobic digestion enrichment by iron-coated zeolite	88
H13	Yang Yang	SJTU	Highly efficient synthesis of hydrogen storage material of formate from bicarbonate and water with general zinc powder	90
H14	Donghyun Lee	PNU	Evaluation of DNA extraction methods and universal primer sets for PCR based detection of microalgae	92
H15	Nozomi Kobayashi	KU	Spatially-resolved velocity distribution functions of thermal spray droplets obtained using a velocity-divided Abel conversion of photographic data	94

< Material > Poster

No.	Name	Affiliation	Title	Page
P001	Yinhui Kan	SJTU	Near-perfect broadband mid-infrared absorber based on hBN/metal gratings	97
P002	Ning Wang	SJTU	N-doped catalytic graphitized hard carbon for high-performance lithium/sodium-ion battery anodes	99
P003	Hao Shan	SJTU	Nanoscale kinetics of asymmetrical corrosion in core-shell nanoparticles	101
P004	Minjie Shi	SJTU	The integration of sustainable wind power harvesting and flexible wire-shaped super capacitors with high energy density	103
P005	Tiancheng Huang	SJTU	Negative refraction in three dimensional metamaterials based on dielectric spherical particles	105
P006	Ga-Hyeong Kim	PNU	Inverse relation between dimensionality and catalytic activity in CO ₂ transformation	107
P007	Tae Yang Bang	PNU	Effect of cold rolling and heat treatment on microstructure and thermal properties of 3003 aluminum alloy	109
P008	Seen Chan Kim	PNU	Short-term DB based long-term creep life predictability of P91 and P92	111
P009	Hyeon Uk Park	PNU	Finite element analysis of formation behavior of surface compressive residual stress using ultrasonic nano-crystalline surface modifications (UNSM)	113
P010	Sungyu Kim	PNU	Porous characterization of pre-transition oxide formed on zirconium alloy cladding under various Zn and dissolved hydrogen concentrations	115
P011	Young-Wok Cho	PNU	Effects of oxi-nitrocarburizing on corrosion and wear properties of low carbon steel	118
P012	Dohyung Kim	PNU	High-efficiency heat-radiating coating for improved heat dissipation of aluminum alloy	120
P013	Sanghyup Park	PNU	Effect of prestrain on corrosion properties of super duplex stainless steel UNS S 32750	122
P014	JungHyun Park	PNU	Effect of γ' phase and M ₂₃ C ₆ carbide formation on corrosion resistance for Ni-based superalloys	124
P015	Byung-Hyun Shin	PNU	Effect of annealing temperature on corrosion behavior after annealing low temperature of super duplex stainless steel	126

P016	Myungwon Hwang	PNU	Effect of Al infiltration on lifetime of Fe crucible	128
P017	Dongbin You	PNU	A fundamental study on Nanosecond-laser-induced nanostructure fabrication on the surface of brass thin films	130
P018	Hyesu Kim	PNU	The micro-scale patterning and electrical conductivity measurement on the polyimide film using 355 nm UV pulsed laser	132
P019	Dan Hee Yun	PNU	A study on laser interference lithography aided 360 nm CW laser	134
P020	Jun-Hyeon Bae	PNU	Production of the Cu@SiO ₂ core-shell nanoparticle and antibacterial property	136
P021	Dae-Geol Jong	PNU	Synthesis of core-shell by sol-gel processing to control the release rate of core	138
P022	Pin Zhao	PNU	Characteristics of ITO/Ag/ITO and IZO/Ag/IZO multilayer thin films prepared by magnetron sputtering for flexible transparent film heaters	140
P023	Hokon Kim	PNU	Preparation and electrochemical application of electrolytic iron phosphides	142
P024	Byung Rok Moon	PNU	Creep properties of squeeze infiltrated carbon nanotube and aluminum borate whisker reinforced AS52 MG metal matrix composites	144
P025	Yukinori Inoue	KU	Hybrid semiconductor and electro-optic polymer waveguide modulator	146
P026	Daisuke Yoshizawa	KU	Molecular design and synthesis of 9,9'-biphenanthrene derivatives and their impact on helicity induction of liquid crystal	148
P027	Takuya Morishita	KU	Phase transition behavior and electro-optical properties of polymer-stabilized blue phases including a liquid crystal molecule with large birefringence	150
P028	Hiroshi Anzai	KU	True vapor–liquid–solid process suppresses unintentional carrier doping of single crystalline metal oxide nanowires	152
P029	Daiki Sakai	KU	Impact of precise control of zinc complex concentration on face selective enhancement of hydrothermal ZnO nanowire growth	154
P030	Chie Nakamura	KU	Discrimination of single carbon difference of straight chain-aldehyde molecules on ZnO nanowire surface	156
P031	Yuya Akihiro	KU	Effect of acetone addition on hydrothermal zinc oxide nanowire growth	158
P032	Kentaro Nakamura	KU	Influence of seed layers on crystallinity of metal oxide nanowires grown by hydrothermal synthesis	160
P033	Naofumi Nishikawa	KU	Minority carrier lifetimes in nitrogen-doped ultrananocrystalline diamond/hydrogenated amorphous carbon composite films	162
P034	Hiroki Yamashita	KU	Dual impact of tungstate ion addition on hydrothermal ZnO nanowire growth	164
P035	Hiroki Yamashita	KU	Emergent synthesis of highly ordered nanostructures by addition of tungsten oxide salt in hydrothermal ZnO nanowire growth	166
P036	Hao Zeng	KU	Long-term stability of oxide nanowire sensors via heavily-doped oxide contact	168
P037	Zetao Zhu	KU	Rational concept for reducing growth temperature in vapor–liquid–solid process of metal oxide nanowires	170
P038	Masanori Izumoto	KU	CVD growth and transport properties of SnS-MoS ₂ heterostructures	172

P039	Yuki Uchida	KU	Epitaxial chemical vapor deposition growth of boron nitride atomic sheet over Cu(111)/sapphire substrate	174
P040	Hyun Goo Ji	KU	Hydrogen-induced epitaxial growth of monolayer WS ₂ and orientation-dependent grain boundary structures	176
P041	Kenshiro Suenaga	KU	In-plane TMDC-graphene heterostructures	178
P042	John Duckworth	KU	Mechanical properties and packing of brushite cement/PLCL fibre composite with varying PLCL fibre length, using micro-CT imaging	180
P043	Yoshitugu Endo	KU	Development and characterization of biodegradable microfiber scaffold	182
P044	Tatsuya Takaki	KU	Basic property of carbon fiber composite materials by VaRTM	184
P045	Keisuke Yamashita	KU	Fabrication and mechanical property evaluation of hybrid FRP	186
P046	Ryuta Tsurunaga	KU	Strength evaluation of joint between CFRP and Al adhered by VaRTM	188
P047	Taichi Suehiro	KU	Effect of lay-up patterns on bending properties of CFRP	190
P048	Hiroomi Chono	KU	Breakup of a superfluid torus by gravitational instability	192
P049	Taichi Ogawana	KU	Reflection coefficient of quantum wave scattered by generalized Cantor-like potential and its multifractality	194
P050	Wataru Itaya	KU	Alleviation of extrinsic state and S-factor for metal/Ge contact by amorphous interlayer and N atom	196
P051	Taisei Sakaguchi	KU	Dependence of channel mobility on substrate impurity concentration for metal source/drain Ge n- and p-MOSFETs	198
P052	Kohei Nakae	KU	Fabrication of Ge-on-insulator substrate by using direct wafer bonding and smart cut techniques	200
P053	Kazuki Kudo	KU	Magnetoresistance effects in Fe/nanodiamond/Fe ₃ Si trilayered junctions at room temperature	202
P054	Ali Abdelgawad	KU	Negative bias effects on the growth and mechanical properties of ultrananocrystalline diamond/amorphous carbon films deposited on cemented carbide substrates by coaxial arc plasma deposition	204
P055	Akane Inomata	KU	Interpretation of complicated stripe contrasts in SEM observations for periodic microstructure	206
P056	Masataka Kondo	KU	Microstructure and magnetic properties of Nd-Fe-B/Mo/ α -Fe or Fe-B multilayer thin film	208
P057	Md. Kabiruzzaman	KU	Surface alloy formation by coadsorption of Pb and (Bi/Sb/Sn) on Cu(001): investigation by low energy electron diffraction	210
P058	Satoru Shirane	KU	Selectivity of olefin polymerization with metallocene catalyst and the effects of produced polymers on its mechanism	212

< Energy > Poster

No.	Name	Affiliation	Title	Page
P059	Jie Chen	SJTU	The near-field thermal radiation of the assembled spherical systems	214

P060	Xiaojing Cheng	SJTU	The influences of the operating conditions on the local O ₂ transport in proton exchange membrane fuel cells (PEMFCs)	216
P061	Yao Zhang	SJTU	Hollow porous bowl-shaped lithium-rich cathode material with high electrochemical performances for lithium-ion batteries	218
P062	Jinyeong Bak	PNU	Local bubble size model for the prediction of bubbly flow with CMFD code	220
P063	Byeonggeon Bae	PNU	Experimental study for droplet entrainment and deposition rates in a horizontal rectangular channel	222
P064	Kibeom Kim	PNU	Combined impacts of Co-firing woody biomass with coal and air staging in a pulverized coal-fired furnace	224
P065	Hyeong-Jun Kim	PNU	Experimental verification of local machining control logic of VRF system through field test	226
P066	Xinzhuo Li	PNU	Effect of the change of coal particle size on flame structure and combustion characteristics in a swirl-stabilized pulverized coal burner	228
P067	Myeong-su Shin	PNU	Analysis of mechanical loss of a twin rotary compressor with variation of operating conditions	230
P068	Hongsu Ju	PNU	Effects of stack configurations and flow characteristics on the performance of reversible solid oxide fuel cell	232
P069	Han-Gyeol Ji	PNU	Heat transfer analysis on moving parts of linear compressor	234
P070	Yun-Hyuk Choi	PNU	Experimental study on performance of domestic refrigerator/freezer using oil-less linear compressor	237
P071	Ga-Eun Lee	PNU	Measurement of refrigerant characteristic in the non-equilibrium state	239
P072	Hyo In Lee	PNU	Effect of refrigerant pressure loss on heat transfer performance during evaporation and condensing condition	241
P073	Mehdi Rasti	PNU	Development new empirical correlation for prediction refrigerant mass flow rate through capillary tubes	243
P074	Yong-Jin Seo	PNU	An experimental study on heat transfer performance of the vapor compression refrigeration system using R600A in the fin-tube evaporator with oil circulation rate and enhanced heat transfer area	245
P075	Hyun-Mo Ku	PNU	Experimental investigation of pressure drop characteristics for open-cell porous metal	247
P076	Malarkodi Duraivel	PNU	Effect of sulfur doped-rGO electrode material for high performance supercapacitor	249
P077	Jin-Soo Bak	PNU	Hydrothermal synthesis of a V ₂ O ₅ nanorod electrode for enhanced electrochemical energy storage	251
P078	Thirumalasetty Naga Vamsi Krishina	PNU	Photovoltaic water heating system with a simple single phase inverter topology	253
P079	Inho Cho	PNU	Time optimization of metal chlorides nanoplatelets thin film structure for application in QDSSCs, super-capacitor through solution	255
P080	Chandu Nagaraju	PNU	Design of open framework based smart ESS profile for PV-ESS and UPS-ESS	257
P081	Putta Hima Sree	PNU	Design of single phase inverter topology for photovoltaic applications	259
P082	Changhwa Lee	PNU	A study of capacity payment considering economic evaluation of new generation in power resource planning	261
P083	Chang Ho Kim	PNU	Investigation of micro-discharge in capacitively coupled plasma with device structure variation	263

P084	Hakdeok Kim	PNU	Study on flame characteristics of post combustion gas of gas generator	264
P085	Damin Lee	PNU	Correlation analysis between surface and electrical properties of Ni-material array and urea content as positive electrode for high-performance supercapacitors	266
P086	Hyeonji Hong	PNU	Measurement of blood viscosity using micro particle image velocimetry	268
P087	Mirae Kim	PNU	Large eddy simulation of 45° oblique round jet impingement onto a circular cylinder	270
P088	Taewook Ha	PNU	Modification of subcooled boiling model in MARS at low pressure and velocities	272
P089	Bo Zhu	PNU	A study on ultrasonic guided wave propagation characters by considering attenuation and decay	275
P090	Gilnam Kang	PNU	A Study on CRDM nozzle weld defect size by the use of finite element analysis	277
P091	Donggon Kang	PNU	Evaluation of microcantilever characteristics using finite element analysis	279
P092	Seonggyun Jeong	PNU	A feasibility study of nonlinear guided wave inspection technique to corroded state on aluminum plate	281
P093	Seongyeop Kang	PNU	Design of heat exchanger tube with diamond pattern groove using reverse spiral forming ball	283
P094	Sae-Rom So	PNU	Fabrication of arbitrarily curved sheet for human interface device using 3D printing technique	285
P095	Shunsuke Sato	KU	Improvement of generalized evaporation model based on analysis of isotope production in proton- and deuteron-induced spallation reactions on LLFPs	287
P096	Masaharu Fukuyama	KU	Adaptive-array electron cyclotron emission diagnostics using phased-array waveguide- and looped-antenna	289
P097	Miu Yunoki	KU	Design of quasi-optical mirror antenna system of interferometer for electron density measurement in QUEST	291
P098	Kotaro Zaizen	KU	Enhancement of hydrogen production rate in methane steam reforming by using selective hydrogen recovery system	293
P099	Tomotsugu Ohno	KU	Analysis of parameter dependency of ion-temperature-gradient instability using a gyro-fluid model in linear devices	295
P100	Emika Abe	KU	Flow structure of neutral particles in the HYPER-II device	297
P101	Kenta Shiotsuka	KU	Cathode properties of vanadium oxide composites with alkali metal oxide as sacrificial salt	298
P102	Akimasa Fujii	KU	Electrochemical performance of indenofluorenedione derivatives for Na-ion battery	300
P103	Junichiro Anegawa	KU	Analysis of internal structure of diesel spray injection water-emulsified fuel	302
P104	Masafumi Sano	KU	Effects of pre-chamber configuration on combustion behavior in gas engines	304
P105	Baowei Xie	KU	Cathode properties of Na ₃ MnPO ₄ CO ₃ prepared by mechanical milling method for Na-ion battery	306
P106	Meng Xianhong	KU	Experimental and simulation research on aluminum honeycomb solar air heaters	308

< Environment > Poster

No.	Name	Affiliation	Title	Page
P107	Zhiwen Cheng	SJTU	Characteristics and difference of oxidation and coagulation mechanisms for the removal of organic compounds by quantum parameter analysis in Fenton process	310
P108	Hongchao Wang	SJTU	In situ synthesis novel multifunctional C@MnO catalyst for enhanced catalytic removal of formaldehyde and ozone	312
P109	Binbin Jin	SJTU	Photocatalytic oxidation of glucose into formate on nano titanium dioxide catalyst	314
P110	Cong Xu	SJTU	Study of fate and transport of emerging contaminants in QINGCAOSHA reservoir through field investigation and numerical simulation	316
P111	Wenbing Wang	SJTU	Sequential coupling of bioaugmented permeable reactive barriers for remediation of 1,1,1-trichloroethane contaminated groundwater	318
P112	Deming Han	SJTU	Non-polar organic compounds in aerosols in a typical city, Eastern China: Partitioning and source apportionment	320
P113	Lianqin Zhao	SJTU	Preparation of functional graphene sponge adsorbents and their application in waste water remediation	322
P114	Miji Lee	PNU	CO ₂ gasification reaction of various types of coal and biomass	324
P115	Heejeong Park	PNU	Occurrence and exposure assessment of perfluoroalkyl substances (PFASs) in drinking water from South Korea	326
P116	Zequi Li	PNU	Carbon monoxide oxidation over CuO nanoparticle/MOF under low temperature and high humidity	328
P117	Juheon Kim	PNU	Synthesis of hydroxyapatite with high specific surface area and evaluation of methylene blue adsorption performance	331
P118	Su-Jin Choi	PNU	Measurement of CO ₂ uptake in granulated mine tailings using MgO/GGBS binder	334
P119	Tae June Park	PNU	Development of a Filter-Free Air Purifier for High-Concentration PM 2.5 Ultrafine Particles	336
P120	Yuki Inoue	KU	Effect of active oxygen species in atmospheric DBD plasma on Osteoclast precursor cells	338
P121	Kyota Yamamoto	KU	Sterilization of fruit surface using active oxygen species produced by atmospheric air plasma	339
P122	Shigeya Hori	KU	Pressure dependence of sterilization in RF oxygen plasma sterilizer	340