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Scientific Program

8th International Conference and Exhibition on

Materials Science and Engineering

May 29-31, 2017 Osaka, Japan



Hosting Organization: Conference Series LLC

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Day 1 May 29, 2017

8:00-9:00 Registrations

Sapphire

conferenceseries.com **09:00-09:25 Opening Ceremony**

Keynote Forum

09:25-09:30 **Introduction**

09:30-10:10 **Title: Molecular dynamics analysis of thermodynamic and kinetic properties of surfaces and interfaces of Pdhx**

Xiaowang Zhou, Sandia National Laboratories, USA

10:10-10:50 **Title: Energy-saving fabrication of Ag2Te-Te and Co1-x-yNixFey thermoelectric materials**

Chia-Jyi Liu, National Changhua University of Education, Taiwan

Group Photo

Networking and Refreshments Break @ Foyer 10:50-11:10

11:10-11:50 **Title: Syntesis and properties of metal doped zno nanostructures for devices applications**

Sirikanjana Thongmee, Kasetsart University, Thailand

Session:
Materials for Energy Applications | Metallurgy and Materials Science | Materials in Research | Nanomaterials

Session Introduction

Session Chair: Xiaowang Zhou, Sandia National Laboratories, USA
Session Co-Chair: Chia-Jyi Liu, National Changhua University of Education, Taiwan

11:50-12:20 **Title: Ceramic structures made by additive manufacturing**

Jun Ding, National University of Singapore, Singapore

12:20-12:50 **Title: The mechanism of Mn, Si, Al, O segregation in FSW of DH36 steel**

Montadhar Almoussawi, Sheffield Hallam University, UK

Lunch Break @ Regency-DE 12:50-13:40

13:40-14:10 **Title: Dynamic decellularization and recellularization of vascular grafts**

Jana Zarubova, Institute of Physiology of the Czech Academy of Sciences, Czech Republic

14:10-14:40 **Title: Prospects of nanostructured semiconductor thin films and composites for solar hydrogen energy conversion and storage**

Meng Nan Chong, Monash University, Malaysia

Session:
Materials in Research | Materials Science & Engineering | Materials for Energy Applications | Nanomaterials | Nanotechnology in Materials Science

Session Introduction

Session Chair: Sirikanjana Thongmee, Kasetsart University, Thailand
Session Co-Chair: Meng Nan Chong, Monash University, Malaysia

14:40-15:10 **Title: Magnetic properties of Titanium dioxide – Reduce Graphene Oxide composite**

Dusadee Khamboonrueang, Kasetsart University, Thailand

15:10-15:40 **Title: A feasibility study of raak kaew energy plant as fuel on the sustainable electricity biomass generation**

Somkiat kruaysawat, Sripatum University, Thailand

15:40-16:10 **Title: Magnetic properties in multi-layer ferrite thin films via spin-spray deposition**

Hyoung Woo Yang, Korea Electronics Technology Institute, Republic of Korea

Networking and Refreshments Break @ Foyer 16:10-16:30

16:30-17:00 **Title: Synthesis and magnetic behavior of Fe-Co nanoparticles**

Pimsiri Potpattanapol, Kasetsart University,Thailand

17:00-17:30 **Title: 3,4 -Dihydro-1,3-2H-Benzoxazine: Novel Reducing Agent for Ag(I) Ion toward Nano Metallic Silver and its Applications**

Attaphon Kaewvilai, Kasetsart University, Thailand

17:30-18:00	**Title: Preparation of grapheme aerogel for absorption radionuclide form Iodine in water** **Tanate Suksompong,** Kasetsart University, Thailand

Panel Discussion

Day 2 May 30, 2017

Sapphire

Keynote Forum

09:30-10:10	**Title: Fabrication and application of microlattices made by additive manufacturing** **Jun Ding,** National University of Singapore, Singapore
10:10-10:50	**Title: Crystallography of the corneal nanonipple structure on butterfly eyes** **Uwe Erb,** University of Toronto, Canada

Networking & Refreshments Break @ Foyer 10:50-11:10

11:10-11:50	**Title: Study of Mechanical behavior of cryogenic rolled pure metals** **Osvaldo Mitsuyuki Cintho,** UEPG, Brazil

Session:
Catalytic Materials | Materials Science and Engineering | Nanomaterials | Materials in Research | Materials for Energy Applications

Session Introduction

Session Chair: Jun Ding, National University of Singapore, Singapore
Session Co-Chair: Uwe Erb, University of Toronto, Canada

11:50-12:20	**Title: Applications of chalcogenide Ge-Sb-Se glass used for the molded lens of thermal camera using far infrared** **June Park,** Photonics Technology Institute, Republic of Korea
12:20-12:50	**Title: Impact of Molecular Dynamics (MD) simulations in materials research** **Xiaowang Zhou,** Sandia National Laboratories, USA

Lunch Break @ Regency-DE 12:50-13:40

13:40-14:10	**Title: Enhanced 1.53 µm emission from Er/Yb fluorophosphate glasses for optical amplifiers** **Ganesh Agawane,** Photonics Technology Institute, Republic of Korea
14:10-14:40	**Title: Synthesis of novel copolymer based butylimidazolium ionic liquid and polybenzimidazole as anion exchange membrane for fuel cell application** **Amina OUADAH,** BIT, China
14:40-15:10	**Title: Diamond-like carbon thin film deposition by filtered cathodic vacuum arc source for wear resistance improvement of zirconia toughened alumina** **Ju Hyeon Choi,** Photonics Technology Institute, Republic of Korea

Young Researchers Forum

Session Chair: Uwe Erb, University of Toronto, Canada
Session Co-Chair: Sirikanjana Thongmee, Kasetsart University, Thailand

15:10-15:30	**Title: A novel ternary eRGO/NiO/α-Fe_2O_3 nanostructured photoanode with enhanced charge transfer properties for efficient solar hydrogen energy conversion in a photoelectrochemical cell** **Yi Wen Phuan,** Monash University, Malaysia
15:30-15:50	**Title: Insight into controllable synthesis of zinc oxide-based nanomaterials and their toxicity effects on biological wastewater treatment processes** **Jang Sen Chang,** Monash University, Malaysia
15:50-16:10	**Title: Enhanced catalytic activity of Ag-Ni alloyed nanoparticles immobilized in –COOH functionalized SBA-16 for the reduction of 4-nitrophenol** **Canggih Budi,** National Central University, Taiwan

Networking & Refreshments Break @ Foyer 16:10-16:30

16:30-16:50	**Title: Fabrication of a heterojunction V_2O_5/$BiVO_4$ photoanode with improved photoelectrochemical performance for water splitting reaction** **Chong Siang Yaw,** Monash University, Malaysia

16:50-17:10	**Title: Development of molybdenum trioxide-based photoanodes with charge storage capacity for photoelectrochemical water oxidation under illuminated and non-illuminated conditions** **Chun Yuan Chot,** Monash University, Malaysia

Poster Presentations 16:30-18:00

Poster Judge: Xiaowang Zhou, Sandia National Laboratories, USA

MSC101	**Title: Cobalt nanoparticles immobilized in 3D mesoporous silica KIT-6 for excellent catalytic hydrogen generation from ammonia borane** **Mu-Hsin Lee,** National Central University, Taiwan
MSC102	**Title: Bipolar resistive switching in cobalt oxide thin film studied by I-V characterization and conductive atomic force microscopy** **JIAN YANG,** University of New South Wales, Sydney, Australia
MSC103	**Title: Development of ion adsorbent from polybenzoxazine-based nanoporous materials** **Chanapon Pongteeraporn,** Chulalongkorn University, Thailand
MSC104	**Title: Thermally stable, organosoluble of co-polynaphthalimides based on 1,4,5,8-naphthalene tetracarboxylic dianhydride, 9,9-bis(4-aminophenyl)fluorine, and various aromatic diamines** **Yung-Chung Chen,** National Kaohsiung University of Applied Sciences, Taiwan
MSC105	**Title: Direct fabrication of micro-patterned conductive polymer device using spray coating with metal shadow mask** **Yi-Ting Lee,** National Kaohsiung University of Applied Sciences, Taiwan
MSC106	**Title: Novel Thermo-responsive Hydrogel from Gellan Gum and Methylcellulose for Use as Advanced Wound Dressing** **Nattakarn Wankama,** Chulalongkorn University, Thailand
MSC107	**Title: Optimal shell thickness for Al_2O_3-encapsulated Ag NPs for enhancing polaron generation in P3HT** **Wei Peng Goh,** Nanyang Technological University, Singapore
MSC108	**Title: Controlling crystal formation for more efficient and reproducible perovskite solar cells** **Siew Lay Lim,** Institute of Materials Research and Engineering, Singapore
MSC109	**Title: Tuning the electroluminescence of an ionic small molecules in light-emitting electrochemical cells** **Shanmugasundaram Kanagaraj,** Pusan National University, Republic of Korea
MSC110	**Title: Evaluation of high quality steel plate plates in FCAW steel plate** **Hyun soo song,** Ulsan technopark, Republic of Korea
MSC111	**Title: The preparation and photocatalytic water splitting of NdVO4-V2O5 powders** **Tzu Hsuan Chiang,** National United University, Taiwan
MSC112	**Title: Shape-shifting 3D protein microstructures with programmable directionality via quantitative nanoscale stiffness modulation** **Mian Rong Lee,** Nanyang Technological University, Singapore
MSC113	**Title: Electrochemical characteristics of PFO based pitch prepared by chemical activation for lithium ion battery** **Jin Ung Hwang,** Chungbuk National University, Republic of Korea
MSC114	**Title: Porous silica/polymer composite films for antireflective coatings** **Ting-Hsuan Lin,** National Cheng Kung University, Taiwan
MSC115	**Title: Synthesis of poly(l-lysine)-based star polypeptides as potent antimicrobial agents combating multidrug-resistant bacteria** **Ying Da Lai,** National Cheng Kung University, Taiwan
MSC116	**Title: Synthesis of miserite glass-ceramics by controlled crystallization heat treatment** **Young Ju Song,** Soonchunhyang University, Korea
MSC117	**Title: Fabrication and characterization of SiO_2-CaO-Na_2O-K_2O-MgO-P_2O_5 based glass coatings** **Si-Won Seong,** Soonchunhyang University, Republic of Korea
MSC118	**Title: Casting Characteristics of A356 aluminum alloy on Sn addition** **Seoyeong Kim, Sugun Lim,** Gyeongsang National University, Republic of Korea
MSC119	**Title: Characterization of the structural and optical properties of ZnO nanostructures by X-ray diffraction** **Ya-Fen Wu,** Ming Chi University of Technology, Taiwan

MSC120	**Title: Comparison of EMI shielding effectiveness for polymer/carbon fiber composites prepared by different processing methods** **Jae Young Kim,** Korea University, Republic of Korea
MSC121	**Title: EMI shielding effectiveness of polypropylene/poly(lactic acid)/carbon fiber/MWCNT composites prepared by injection molding and screw extrusion** **Myung Geun Jang,** Korea University, Republic of Korea
MSC122	**Title: The study on correlation among electric potential of different materials of crown in different corrosion status(artificial saliva)** **Huey-Er Lee, Ju-Hui Wu, Yan-Ting Pan, Yu-Ting Jhong,** Kaohsiung Medical University, Taiwan
MSC123	**Title: The Study of Pull off Adhesion for Aluminum Wire Grade 1350 on Carbon Steel ASTM A36 by Thermal Wire Arc Spray** **Trinet Yingsamphancharoen,** King Mongkut's University of Technology, Thailand
MSC124	**Title: Collagen/poly(D,L-lactic-co-glycolic acid) composite fibrous scaffold prepared by independent nozzle control multi-electrospinning apparatus** **Heung Jae Chun, Yang D H, You S J, Kim J K, Ko J H, Park Y H,** The Catholic University of Korea, Republic of Korea
MSC125	**Title: Utilization of blast furnace by-product in application of high ductile fiber-reinforced cement-free composites** **Chang-Geun Cho,** Chosun University, Republic of Korea

Panel Discussion

Award Ceremony

Day 3 May 31, 2017

Panel Discussions and Networking Lunch @ 12:00-13:30

