

Smart Materials and Surfaces - SMS Korea 2016 Conference Program

March 23rd, 2016

Session I: Smart Materials and surfaces design, formulation and processing

Conference Room 113/114

Session Chairs: Dr Hyungwoo Kim, Pennsylvania State University, USA

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| 08:00-09:30 | Registration | |
| 09:30-10:15 | Development of High-Strength Carbon Nanotube Fibers A.Jung, H.J.Kim, J.Lee, Y.-O.Im, S.-H. Lee and K.-H.Lee | Prof Kun-Hong Lee , Pohang University of Science and Technology, Rep. of Korea |
| 10:15-10:45 | Coffee Break / Posters Session | |
| 10:45-11:15 | Synthesis, Characterization and Application of a New Form of Three-Dimensional Graphene V. Shanov , L. Zhang, N. Alvarez, M. Zhang, M. Haase, R. Malik and D. Mast | Dr. Vesselin Shanov , University of Cincinnati, USA |
| 11:15-11:45 | Fabrication of carbon fiber-oriented Al-C composite and investigation of its thermal conductivity T. Tokunaga , K. Takahashi, K. Matsuura, M. Ohno, K. Sasaki and T. Imanishi | Dr Toko Tokunaga , Hokkaido University, Japan |
| 11:45-12:00 | Synthesis of low-temperature radio frequency plasma enhanced chemical vapour deposition transfer-free graphene M. Othman , R. Ritikos, N.H.Khanis, N. M. A. Rashid and S. A. Rahman | Mrs. Maisara Othman , University of Malaya, Malaysia |
| 12:00-12:15 | Wafer-scale single-crystalline-like polycrystalline graphene with ZnO stitching B. Cho and M.M. Sung | Mr. Boram Cho , Hanyang University, Rep. of Korea |
| 12:15-12:30 | A New Series of Porous Lanthanide-2,6-Pyridinedicarboxylate Frameworks: Synthesis, Structures and Photoluminescence Properties T.Chuasaard , P. Rodlamul and A. Rujiwatra | Mr. Thammanoon Chuasaard , Chiang Mai University, Thailand |
| 12:30-12:45 | Synthesis of Zinc Oxide Crystal Scaffolds with Strong Near Band Edge Emissions S.K.Sharma and R.Jagannathan | Dr Sudhir Kumar Sharma , New York University Abu Dhabi, UAE |
| 12:30-14:00 | Break / Posters Session | |

Conference Room 113

**Session Chairs: Dr. Vesselin Shanov, University of Cincinnati, USA
Prof Kun-Hong Lee, Pohang University of Science and Technology, Rep. of Korea**

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| 14:00-14:30 | Signal Amplification in Polymeric Materials Using Self-Propagating Responses and Continuous Head-To-Tail Depolymerization Hyungwoo Kim and Scott T. Phillips | Dr Hyungwoo Kim , Pennsylvania State University, USA |
| 14:30-15:00 | Dielectric properties of novel lead-free Polyvinylidene fluoride-trifluoroethylene-Bi _{0.5} Na _{0.5} TiO ₃ nanocomposite thin films R.I. Mahdi, W.C.Gan, N.A.Halim, T.S.Velayutham and W.H.Abd.Majid | Prof. Wan Haliza Abd. Majid , University Malaya, Malaysia |
| 15:00-15:15 | Effect of Sc and Heat treatment on the microstructure and mechanical properties of A356 Aluminium alloy A. Masita, Y. P. Lim and W. H. Yeo | Dr Lim Ying Pio , Universiti Tunku Abdul Rahman, Malaysia |

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| 15:15-15:30 | Dry ice blasting as a substitution for conventional electroplating pre-treatment processes E. Uhlmann, E. M. Baira and R. Jaczkowski | Mr. El Mustapha Baira , Institute for Machine Tools and Factory Management, Technische Universität, Berlin, Germany |
| 15:30-15:45 | Effect of processing parameters on the morphology and wetting of electrospun mats R. Kurusu and N. Demarquette | Mr. Rafael Kurusu , École de Technologie Supérieure, Canada |
| 15:45-16:00 | Low-temperature plasma modification of fillers for advanced polymer composites M. Sicinski | Dr Mariusz Sicinski , Lodz University of Technology, Poland |
| 16:00-16:30 | Coffee Break / Posters Session | |
| 16:30-16:45 | The Square-Wave Galvanostatic Pulsed Co-electrodeposition of Ni-Zn Alloy on Steel Substrate: Effect of Duty Cycles P. Kamnerdkhag and A.Rodchanarowan | Mr. Parunyoo Kamnerdkhag , Kasetsart University, Thailand |

Conference Room 114

Session Chairs: Dr Toko Tokunaga, Hokkaido University, **Japan**
Prof Taleb H. Ibrahim, American University of Sharjah, **UAE**

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| 14:00-14:30 | Smart Materials Analysis as a Medium of Protection in Aircraft Fuselage I.R.W Perdana, A.A Al-Hadi and M.Z Bukhari | Prof. Mohabattul Zaman Bukhari , Malaysia Perlis University- Malaysia |
| 14:30-14:45 | Highly Stable Water-Soluble Platinum Nanoparticles Stabilized by Hydrophilic N-Heterocyclic Carbenes E. A. Baquero , S. Tricard, Y. Coppel, J. C. Flores, E. de Jesús B. Chaudret | Dr Edwin Arley Baquero Velasco , INSA Toulouse, France |
| 14:45-15:00 | New Colored Zinc Borophosphate Glasses C. Tupberg and C. Randorn | Mr. Chayopas Tupberg , Chiang Mai University, Thailand |
| 15:00-15:15 | Tailored chemically patterned surfaces for the control of the frictional behavior at polymer-polymer interfaces I. Ben Ali , G. Pallares, P. Cassagnau, J. Scheibert and S. Al Akhrass | Mr Imed Eddine Ben Ali , Claude-Bernard Lyon 1 University, France |
| 15:15-15:30 | Carbon nanowalls prepared by home-built plasma assisted hot wire chemical vapor deposition N. H. Khanis , R. Ritikos, N. M. A. Rashid, M. Othman, W. S. Chiu and S. A. Rahman | Mrs. Noor Hamizah Khanis , University of Malaya, Malaysia |
| 15:30-15:45 | The Wear Behavior of Al7075-T651 Coated with Micro Arc Oxidation Method M. E. Özcan , L. Özler and E.E.Sukuroglu | Mr. Mehmet Erbil Ozcan , Firat University- Turkey |
| 15:45-16:00 | Fabrication of self-healing porous concrete to eliminate failure caused by alkaline-silica reaction (ASR) N.Jaroonvechatam , T.Meesak, S. Sujjavanich and O. Jongprateep | Ms. Napamas Jaroonvechatam , Kasetsart University- Thailand |
| 16:00-16:30 | Coffee Break / Posters Session | |
| 16:30-16:45 | Subsolidus phase equilibria and electrical properties of pyrochlores in the Bi ₂ O ₃ -CuO-Ta ₂ O ₅ ternary system M. P. Chon, K. B. Tan , C. C. Khaw, Z. Zainal, Y. H. Taufiq-Yap, S. K. Chen and P.Y. Tan | Dr. Kar Ban Tan , Putra University Malaysia- Malaysia |

March 24th , 2016

Session II: Smart Materials for Energy Harvesting and storage / Environment / Electronics

Conference Room 113/114

Session Chairs: Prof. Elias Siores, Bolton University, United Kingdom

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| 09:00-9:45 | Smart Functional Materials for energy: from laboratory to commercialization E. Siores | Prof. Elias Siores , Bolton University, United Kingdom |
| 09:45-10:30 | Tunability and piezoelectric properties of $Ba_{1-x}Ca_xTi_{1-y}Zr_yO_3$ based thin film capacitors C.J.M. Daumont, Q. Simon, S. Paya, J.L. Longuet, B. Negulescu, M. Maglione and J. Wolfman | Dr. Jerome Wolfman , Tours University- CNRS, France |
| 10:30-11:00 | Coffee Break / Posters Session | |
| 11:00-11:30 | Ultra-high mobility graphene through support-layer engineering Ya-Ping Hsieh, Mario Hofmann and Jhin-Lun Kuo | Mr. Jhin-Lun Kuo , National Chung Cheng university, Taiwan |
| 11:30-11:45 | Strategy towards alignment of conjugated polymer chain for high-mobility transistors A.K.K Kyaw | Dr Aung Ko Ko Kyaw , Institute of Materials Research and Engineering, Singapore |
| 11:45-12:00 | Terahertz magneto-absorption and faraday rotation in electrostatically control graphene and graphene anti-dot J. M. Poumirol , P. Q. Liu, J. Faist and A. B. Kuzmenko | Dr. Jean-Marie Poumirol , University of Geneva, Switzerland |
| 12:00-12:15 | Enhanced carrier transport in ad-layer-covered graphene Ya-Ping Hsieh, Mario Hofmann and Ting-Wei Chen | Mr. Ting-Wei Chen , National Chung Cheng University, Taiwan |
| 12:15-12:30 | Surface Engineering of Pt submonolayer on Au Nanostructure by ion adsorption-in situ electrochemical reduction for Fuel Cell Application K-F. Yung | Dr Ka-Fu Yung , The Hong Kong Polytechnic University, Hong Kong |
| 12:30-14:00 | Lunch Break / Posters Session | |

Conference Room 113

Session chairs: Dr. Jerome Wolfman, Tours University, CNRS- France
Prof. Elias Siores, Bolton University, United Kingdom

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| 14:00-14:15 | Fabrication and Structural Optimization of Porous Single-crystal α -Fe ₂ O ₃ Microrices for High-Performance Lithium-ion Battery Anode B. Yu and Z. Ren | Mr. Bao Zhi Yu , Northwest University, China |
| 14:15- 14:30 | Nanoelectrode Array Formation by Electrolytic Nanoparticle Impacts T.R.Bartlett , S.V. Sokolov, J.Holter, N. Young and R. G. Compto | Mr. Thomas Bartlett , University Of Oxford, United Kingdom |
| 14:30-14:45 | ZnFe ₂ O ₄ nanoparticles synthesis by laser pyrolysis: interest as new anode material for lithium-ion batteries S.Bourrioux , L.P.Wang, Y.Leconte, M.Srinivasan, Z.J. Xu and A.Pasturel | Ms Samantha Bourrioux , CEA Saclay, France |
| 14:45-15:15 | Synthesis of Binder free Graphene@MnO ₂ /PANI nanocompsite for electrode material in high performance supercapacitors M. Asif , T. Yi, L. Pan and M. Rashad | Dr. Muhammad Asif , Dalian University of Technology, China |
| 15:15-15:30 | Scalable production of graphene with adjustable electronic properties by electrochemical intercalation and exfoliation Y. Hsieh, M. Hofmann and W. Chiang | Ms. Wan-Yu Chiang , National Chung Cheng University, Taiwan |

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| 15.30-15:45 | Pyroelectric, ferroelectric, piezoelectric and dielectric properties of Na _{0.5} Bi _{0.5} TiO ₃ ceramic processed by sol-gel method N.A. Halim, T.S. Velayutham, W.H. Abd. Majid | Mrs. Nurain Ab. Halim , University of Malaya, Malaysia |
| 15:45-16:00 | ZnO-based UV detector performance improvement Khakhulin D.A. , Jong-Gul Yoon, Ageev O.A., Zamburg E.G., Varzarev Yu.N. | Mr. Daniil Khakhulin , Southern Federal University, Russia |
| 16:00-16:30 | Coffee Break / Posters Session | |
| 16:30-16:45 | Quaternized Polyphenylene oxide/TiO ₂ anionic composite membranes for application in alkaline polymer electrolyte fuel cells P.Msomi , P.Nonjola and J.Ramotja | Mr. Phumlani Msomi , University of Johannesburg, South Africa |

Conference Room 114

Session chairs: Dr. Joo Eun Chung, Institute of bioengineering and Nanotechnology, **Singapore**

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| 14:00-14:30 | Oil Removal from Produced Oil Using Graphene T.H. Ibrahim , L. AbouChacra, M. Khamis and Y.EISayed | Prof. Taleb H. Ibrahim , American University of Sharjah, United Arab Emirates |
| 14:30-14:45 | Humidity Sensing Investigation of Copper-Palladium Nano-structures A.K.Jaiswal and R.R. Yadav | Mr. Aashit Kumar Jaiswal , Univeristy of Allahabad, India |
| 14:45-15:00 | Smart Heat Absorbers based on Phase Change Materials for Energy Storage in Bioclimatic Buildings H. Abdelrazeq , I. Krupa, M. Al-Maadeed, A.S. Luyt, M. Ouederni and I. Belharouak | Ms. Haneen Abdelrazeq , Qatar University, Qatar |
| 15:00-15:15 | Gas Sorption Kinetics in the Confined Space of Nano-Pores of Metal-Organic Frameworks L. Li and X.Zhao | Dr. Liangjun Li , China University of Petroleum (East China), China |
| 15:15-15:30 | Effect of pH on Adsorption Capabilities and Magnetic Properties of MnFe ₂ O ₄ Nanoparticles for Removal of Dye Pollutants U.Lamdab , K.Wetchakun, S.Phanichphant, W.Kangwansupamonkon and N. Wetchakun | Ms. Umaporn Lamdab , Chiang Mai University, Thailand |
| 15.30-15:45 | Fabrication of ZnWO ₄ /Bi ₂ WO ₆ Composite Films as Efficient Photocatalyst for Degradation of Dye Pollutants S. Issarapanacheewin, K. Wetchakun, S. Phanichphant, W. Kangwansupamonkon and N. Wetchakul | Ms. Sudarat Issarapanacheewin , Chiang Mai University, Thailand |
| 15:45-16:00 | Ultrathin Mussel-inspired Solvent Resistant Nanofiltration Membranes L. Pérez-Manríquez , A.R Bezhad and K-V. Peinemann | Ms. Liliana Perez-Manriquez , King Abdullah University of Science and Technology, Saudi Arabia |
| 16:00-16:30 | Coffee Break / Posters Session | |
| 16:30-16:45 | Graphene/Polymer Nanocomposites Modified Substrates for Sensitive Biomolecular Detection N.Rodthongkum , R.W. Vachet and O. Chailapakul | Dr. Nadnudda Rodthongkum , Chulalongkorn University, Thailand |
| 16:45-17:00 | Increasing the volume fraction of La(Fe,Si) ₁₃ phase in La-Fe-Si magnetocaloric alloys by directional solidification L. Yang , Y.Huang and J.Li | Mr. Liang Yang , Shanghai Jiao Tong University- China |

March 25th , 2016

Session III: Smart Materials for Bio-applications

Conference Room 113/114

Session chairs: Prof Kwang S. Kim, Ulsan National Institute of Science and Technology, Rep. of Korea

Dr. Joo Eun Chung, Institute of bioengineering and Nanotechnology, Singapore

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| 09:00-9:45 | Targeted Drug Delivery to Brain Tumours Using Porous Silicon Nanoparticles N.H. Voelcker | Professor. Nicolas Voelcker , University of South Australia, Australia |
| 09:45-10:30 | Organic/Graphene Based Nanomaterials and Nanodevices K.S. Kim | Prof Kwang S. Kim , Ulsan National Institute of Science and Technology, Rep. of Korea |
| 10:30-11:00 | Coffee Break | |
| 11:00-11:30 | Green Tea-Sourced Micellar Nanocomplex for Protein Delivery that Achieves Synergistic Effects J.E. Chung, S. Tan, S;J. Gao, N. Yongvosoontorn, M.Kurisawa and J.Y. Ying | Dr. Joo Eun Chung , Institute of bioengineering and Nanotechnology, Singapore |
| 11:30-11:45 | Effects of Synthesis Techniques and Initial Reagents on Chemical Compositions and Microstructure of Hydroxyapatite J. Palomas and O.Jongprateep | Mr. Jednupong Palomas , Kasetsart University, Thailand |
| 11:45-12:00 | Effect of calcium from eggshell addition on bioactivity properties of metakaolin/calcium hydroxide blended geopolymer C.Tippayasam , K.Amornratthamrong, T.Padthamkul, P.Thavorniti, P.Chindaprasirt and D.Chaysuwan | Ms. Chayanee Tippayasam , Kasetsart University, Thailand |
| 12:00-12:15 | Dendrimer mediated bioadhesion of PLGA to soft tissues. Gao Feng , Vishal Mogal, Richard O'Rorke, Ivan Djordjevic and Terry W. J. Steele | Mr. Gao Feng , Nanyang Technological University, Singapore |
| 12:15-12:30 | pEDOT:Vitamin K composites: proton bonding conducting polymer +quinoid thin film electrodes D. Mayevsky and B.Winther-Jensen | Mr. David Mayevsky , Monash University, Australia |
| 12:30-12:45 | Non and Woven flax Fiber for use in reinforced poly(butylene Adipate-coterephalate) biocomposites. S. Siengchin , P. Boonyasopon and R. Srisuk | Professor. Suchart Siengchin , King Mongkut's University of Technology North Bangkok, Thailand |
| 12:45-13:00 | Stress Analysis of Long fractures on human leg bone combined with internal fixation S. Erdem , M.Gur and M.O. Kaman | Mr Serkan Erdem , Firat University, Turkey |
| 13:15-13:45 | Closing Ceremony | |

Posters Session, March 23rd and 24th, 2016

Conference Room 115

| N. | Title | Author/Affiliation/Country |
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| 1 | Investigation of ionic liquid based-carboxymethyl cellulose biopolymer electrolytes for potential application in electrochemical devices M.S.A. Rani , A. Ahmad and N.S. Mohamed | Mr Mohd Saiful Asmal Rani , University of Malaya, Malaysia |
| 2 | Highly Efficient Carbon-nanotube/Platinum Based Microrockets R. Dong and B.Ren | Mr. Renfeng Dong , South China University of Technology, China |
| 3 | Rapid Heat Treatment Synthesis of Reduced Graphene Oxide Uniformly Decorated with Nickel Oxide Nanoparticles for Antioxidant Activities A.M. Noor and H.N. Ming | Mr. An amt Mohamed Noor , University of Malaya, Malaysia |
| 4 | Solution-processable Low-bandgap 3-Fluorothiopheno[3,4-b]thiophene-2-carboxylate-based Conjugated Polymers for Electrochromic Applications Zugui Shi , Wei Teng Neo, Ting Ting Lin, Hui Zhoua and Jianwei Xua | Dr. Zugui Shi , Institute of Materials Research and Engineering, Singapore |
| 5 | Co3O4/nitrogen-doped graphene/carbon nanotubes: An innovative ternary composite with enhanced electrochemical performance Z. Ren and B. Yu | Professor. Zhao Yu Ren , Northwest University, China |
| 6 | Synthesis of 57Co diffused Rh composite for application of Mössbauer source Y.Rang Uhm , S.M. Choi and M.G. Hur | Dr. Young Rang Uhm , Korea Atomic Energy Research Institute (KAERI), Rep. of Korea |
| 7 | Structural Characteristics of Rolled-up Si Micro/nanotubes Prepared by Anodization T.Shimizu , T.Suzuki, M. Niwa and M.Motohashi | Mr. Tomoki Shimizu , Tokyo Denki University, Japan |
| 8 | Synthesis of Nanoparticulate Ti-doped ZnO by Solution Combustion Technique O.Jongprateep, P.Deedit and R.Puranasamriddhi | Ms Pathitta Deedit , Kasetsart University, Thailand |
| 9 | Single Crystalline Hematite (α -Fe2O3) Nanocubes Prepared by One-Pot Hydrothermal Approach: The Structural and Optical Properties N.M.A.Rashid , W.S. Chiu, C.Y. Haw, N.H.Khanis, A.Rohaizad, P.S.Khiew and S.A. Rahman | Ms. Nur Maisarah Abdul Rashid , University of Malaya, Malaysia |
| 10 | Preparation of self-cleaning TiO2/SiO2 double layer thin films by sol-gel method H.M. Yadav , B-M. Kim and J-S. Kim | Dr. Hemraj Yadav , University of Seoul, Rep. of Korea |
| 11 | Ni-Ti Shape Memory Alloy Sheet Part Stretch Formed at Room Temperature K.-J. Fann and J.-Y. Su | Prof. Kuang-Jau Fann , National Chung Hsing University, Taiwan |
| 12 | Titanate Nanobelts Modified by Metal Intercalation for Photovoltaic Applications C-T.Wang , Y-C.Han and J-K. Jhang | Prof Chien-Tsung Wang National Yunlin University of Science and Technology, Taiwan |
| 13 | Graphene-Based Nano Materials Development for Thermal Insulation Applications S.A.Mofid , B.P. Jelle and T.Gao | Mr Sohrab Alex Mofid , Norwegian University of Science and Technology (NTNU), Norway |
| 14 | Improvement in Ni (II) adsorption capacity by using Fe-nano zeolite P-T. Huong , B-K. Lee , J. Kim and C-H. Lee | Ms Pham-Thi Huong , University of Ulsan, Rep. of Korea |
| 15 | Enhancement of CO ₂ capture by using synthesized Cu-nano-zeolite P-T. Huong , B-K. Lee , C-H. Lee and J. Kim | Prof. Byeong-kyu Lee , University of Ulsan, Republic of Korea |
| 16 | Facile Preparation of Hexagonal Tungsten Oxide Nanoflowers: Their Characterization and Probability of Optical and Electrochemical Detection of H ₂ O ₂ C.Y.Park , J.M.Seo, H.Ill Jo, J.H. Park, K.M. Ok and T.J. Park | Mr. Chan Yeong Park , Chung-Ang University, Rep. of Korea |

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| 17 | Novel Donor-Acceptor Conjugated Polymers with Tunable Hues for Electrochromic Displays W.T.Neo and J. Xu | Ms. Wei Teng Neo , Institute of Materials Research and Engineering, Singapore |
| 18 | Frequency Study of the Polymer Coated SAW Micro-sensor to the Chemical Agent Simulant B.Seo , J.H. Kim and Y-J. Lee | Dr Seo Byung-il , Agency for Defense Development-Inha University, Rep. of Korea |
| 19 | SnO ₂ -ZnO-CuO multilayered sensor structure for H ₂ S detecting M. Sarfi , M.ghadimi ,A. Babaee | Mr. Mohammad Hossein Sarfi , Mofid High School, Tehran, Iran |
| 20 | Proton Beam Writing (PBW) of Polymeric Micro-cantilever based RF-MEMS switch S. Al-Shehri , V. Palitsin, R.P. Webb and G.W. Grime | Dr. Saad Alshehri , University of Surrey, United Kingdom |
| 21 | Novel Pyrrolophthalazine dione-Based Conjugated Polymers for Electrochromic Applications W.T. Neoa, Q.Ye and J.Xu | Dr. Qun Ye , Institute of Materials Research and Engineering, Agency for Science, Technology and Research (A*STAR), Singapore |
| 22 | Synthesis of Ultrahighly Electron-Deficient Pyrrolo[3,4-d]pyridazine-5,7-dione by Inverse Electron Demand Diels–Alder Reaction and Its Application as Electrochromic Materials H.Zeng , Q. Ye and J. Xu | Dr. Huining Zeng , Institute of Materials Research and Engineering, Agency for Science, Research and Engineering (A*STAR), Singapore |
| 23 | TiO ₂ Nanorod thin films embedded with Gold nanoparticles for enhanced photocatalytic activity D.Raval , I. Mukhopadhyay and A. Ray | Mr. Dhyyey Raval , Pandit Deendayal Petroleum University, India |
| 24 | Fabrication, Characterization and Gas Sensing of Cobalt Antimony Oxide Nanospheres Prepared via Sol-Gel Method A. Singh and P.Tandon | Mr Ajendra Singh , University of Lucknow, India |
| 25 | Fabrication of Heterostructure of 3-D Photonic Crystals of Polystyrene Microspheres by Self-Assembly Routes D. Liao, M.Tsai, K. Tsai and R-F.Louh | Dr. Louh Rong-Fuh , Feng Chia University, Taiwan |
| 26 | Influence of eplating formulations on microstructure and corrosion resistance of electrodeposited zinc coatings K.Saengkiattiyut , P.Rattanawaleedirojn, A.Thueploy, J.Wanichsampan and Y.Boonyongmaneerat | Ms. Kanokwan Saengkiattiyut , Chulalongkorn University, Bangkok, Thailand |
| 27 | Silver Nanoparticles Inkjet Printing on Polyurethane Nano-fiber for Water Purification Application S.J. Lee , M. Heo, N. Su A Park and Il Keun Kwon | Mr. Sang Jin Lee , Kyung Hee University, Rep. of Korea |
| 28 | Development of CT/NIRF Dual Imaging Probe to Detect Thrombosis S.H. Lee , S-H. Lee, I-C. Sun, J-Y. Kim, D-E. Kim, , K. Kim and C-H. Ahn | Mr. Seon Ho Lee , Seoul National University, Rep. of Korea |
| 29 | Acrylate copolymers containing urushiol as the active com-pound for antibacterial and antifouling application. N. Lone and J.Joo | Ms. Nasreena Lone , Kyungpook National University, Rep. of Korea |
| 30 | Core-shell structured upconversion luminescent nanocomposites conjugated with graphene oxide quantum dots for photodynamic therapy S.H.Baek , S.Y. Choi and T.J. Park | Mr. Baek Seung Hoon , Chung-Ang University, Rep. of Korea |
| 31 | Nanographene-Coated Double Nanoemulsion for Image-Monitored Controlled Drug Delivery X.He, V.Shanov and Y.Park | Dr. Yoonjee Park , University of Cincinnati, USA |
| 32 | Direct synthesis of vertically standing graphene film on various substrates by electron cyclotron resonance plasma Jin-ha Shin , HyunJae Park, Yong-ho Jung, Yong-sup Choi, Young Il Song, Su Jeong Suh | Mr Jin-ha Shin , Sungkyunkwan University, Korea |