

Session Title [TuP] Poster Session
Date September 16, 2010 (Thursday)
Time 13:30~15:30

- TuP-1** **13:30~15:30** **Hollow Type Cu/Ni Ultrafine Microfiber Embedded Polymer Epoxy Composites**
W. Lee, J.-W. Yi, M.-K. Um, and J.-H. Byun (KIMS, Korea)
- TuP-2** **13:30~15:30** **Preparation and Evaluation of Degradable Poly(lactic acid) Composite Dressings**
C. W. Lou, C. T. Lu (Central Taiwan Univ. of Sci. and Tech., Taiwan), S. P. Wen (Feng Chia Univ., Taiwan), C. W. Lin (Ling Tung Univ., Taiwan), C. Y. Chao, and J. H. Lin (Feng Chia Univ., Taiwan)
- TuP-3** **13:30~15:30** **Research of Structure and Characterization on Natural Rubber/Multi-Walled Carbon Nanotube Composites**
Z. Peng, C. Feng, Y. Luo, Y. Li (Chinese Academy of Tropical Agricultural Sci.s, China), and L. Kong (Deakin Univ., Australia)
- TuP-4** **13:30~15:30** **Study on the Preparation and Properties of EVA-g-PU/OMMT Nanocomposites**
Y.-Q Zhang, Y.-X He, L. Zhang, and J.-X Li (Henan Univ. of Sci. and Tech., China)
- TuP-5** **13:30~15:30** **Gel Polymer Composite Electrolyte based on Heteropolyacid (HPA) and Polyethylene Oxide (PEO) for Solid-State Dye-sensitized Solar Cell**
M. S. Akhtar, J.-G. Park, U.-Y. Kim, and O.-B. Yang (Chonbuk Nat'l Univ., Korea)
- TuP-6** **13:30~15:30** **Fabrication and Electromagnetic Properties of TiO₂ Coated Fe-Co Nanofibers**
S.-B. Lee, J.-W. Yi, J.-B. Kim, S.-K. Lee (KIMS, Korea), and Y.-H. Cho (Hanyang Univ., Korea)
- TuP-7** **13:30~15:30** **Preparation of Poly(diallyldimethyl ammonium chloride) (PDDA)/Au Nanocomposite Film by in Situ Electrochemical**

Reduction and its Electrocatalytic Properties

H. Shi, L. Zhang, C. Wang, And K. Zhang (Suzhou Univ, China)

- TuP-8** **13:30~15:30** **Preparation and Properties of P-type Transparent Conductive NiO Films**
S. C. Chen, T. Y. Kuo, Y. C. Lin, and C. L. Chang (MingChi Univ. of Tech., Taiwan)
- TuP-9** **13:30~15:30** **Fabrication of Novel Wound Dressing**
C. Y. Chao (Feng Chia Univ., Taiwan), C. W. Lou (Central Taiwan Univ. of Sci. and Tech., Taiwan), H. W.Sung (Nat'l Tsing Hua Univ., Taiwan), Y. S. Chen (China Medical Univ., Taiwan), and J. H. Lin (Feng Chia Univ., Taiwan)
- TuP-10** **13:30~15:30** **Highly Transparent and Conductive Graphene Electrode**
S.-Y Bae, I.-Y Jeon, and J.-B Baek (UNIST, Korea)
- TuP-11** **13:30~15:30** **Synthesis of Magnetic TiO₂ Nanoparticles as Bactericidal Photocatalyst**
C. M. Chin (Nat'l Central Univ., Taiwan), Y.-J Chang, G.-J Weng (Taipei Municipal Univ. of Education, Taiwan), and C.-Y Shen (Nat'l Central Univ., Taiwan)
- TuP-12** **13:30~15:30** **Anisotropic Nanofiber Fabrication with Sunset-Yellow FCF**
Y.-J. Kim, S.-E. Kim, J.-H. Lee, C. Nah, M.-H. Lee, J. H. Lee and K.-U. Jeong (Chonbuk Nat'l Univ., Korea)
- TuP-13** **13:30~15:30** **Effects of Process Conditions on the Growth of Well-Organized Carbon Nanotube Structures**
Y. W. Jang (Chonbuk Nat'l Univ., Korea), H. Moon (Nano Solution, Inc., Korea), J.-S. Kim, and I.-T. Im (Chonbuk Nat'l Univ., Korea)
- TuP-14** **13:30~15:30** **Ceramifying Fire-retardant and Fire-barrier Unsaturated Polyester Composites**
R. A. Shanks, S. Wong (RMIT Univ., Australia), and C. M. L. Preston (CSIRO, Australia)

- TuP-15** **13:30~15:30** **Poly(styrene-b-butadiene-b-styrene) – Dye-coupled Polyhedral Oligomeric Silsesquioxanes**
S. Spoljaric and R. A. Shanks (RMIT Univ., Australia)
- TuP-16** **13:30~15:30** **Synthesis of Carbon-encapsulated Metal(Fe,Co,Ni) Nanoparticles by Detonation Decomposition of Composite Explosives**
X.-J Li, N. Luo, H.-H Yan, and X.-H Wang (Dalian Univ. of Tech., China)
- TuP-17** **13:30~15:30** **Synthesis of Ferrite Nanoparticle and Ferrite-gold Heterostructures**
F.-H Lin and R.-A Doong (Nat'l Tsing Hua Univ., Taiwan)
- TuP-18** **13:30~15:30** **Photoelectrocatalytic Degradation of Isopropyl Alcohol by TiO₂/Ti Thin-film Electrode**
K.-Y Cheng (Central Taiwan Univ. of Sci.s and Tech., Taiwan) K.-S Yao (Nat'l Taitung Junior College, Taiwan), H.-H Lo (Central Taiwan Univ. of Sci.s and Tech., Taiwan), C.-Y Chang (Nat'l Taitung Junior College, Taiwan), and P.-H Chen (Ming Dao Univ., Taiwan)
- TuP-19** **13:30~15:30** **Azo Dye-Yellow 17 Wastewater Photocatalytic Degradation of by UV/TiO₂ Combined with Ultrasonic Procedure**
C.-Y Chang (Nat'l Taitung Junior College, Taiwan), Y.-J Chang (Tungnan Univ., Taiwan), Y.-H Hsieh (Nat'l Chung-Hsing Univ., Taiwan) C.-H Lin (Tungnan Univ., Taiwan), and S.-H Yen (Ming Dao Univ., Taiwan)
- TuP-20** **13:30~15:30** **Damping Capacity of SiCp/AZ61 Composites**
H. Yan, H. Xin, and Q. Hu (Nanchang Univ., China)
- TuP-21** **13:30~15:30** **Fabrication and Properties of 1-3-2 Piezoelectric Composites**
S. Huang, D. Xu, J. Chang, Y. Liu, and X. Cheng (Univ. of Jinan, China)
- TuP-22** **13:30~15:30** **Antistatic and Antiglare Surface Coating based on PEDOT/PSSA Microparticles**
S. Y. Park and M.-H. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-23** **13:30~15:30** **Advanced Conductive Composite Materials for Spacecraft Application**

H.-S Lee (Korea Aerospace Research Inst., Korea)

- TuP-24** **13:30~15:30** **Fabrication and Properties of La-Manganite/SnO₂ Composites**
G. W. Kim, Y. J. Seo, J. L. Bian, C. G. Lee, and B. H. Koo (Changwon Nat'l Univ., Korea)
- TuP-25** **13:30~15:30** **Influence of CoO Phase on Structural, Magnetic and Electrical Properties of La_{0.7}Ca_{0.3}MnO₃ and La_{0.7}Sr_{0.3}MnO₃**
J. L. Bian, Y. J. Seo, G. W. Kim, C. H. Sung, S. Kumar, C. G. Lee, and B. H. Koo (Changwon Nat'l Univ., Korea)
- TuP-26** **13:30~15:30** **Effects of Surfactant Content and Clay Content on Properties of NR Nanocomposites**
C. Keawkumay, K. Jarukumjorn, and N. Suppakam (Suranaree Univ. of Tech., Thailand)
- TuP-27** **13:30~15:30** **ZnO Porous Plate Films Application in Quantum Dot Sensitized Solar Cells**
X. Lü, X. Zou, J. Cheng, G. Teng (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), Z. Sun, G. Yang, C. Wei, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ.)
- TuP-28** **13:30~15:30** **Preparation of Organic-inorganic Core-shell Particles and Influence on Corrosion Resistance of Cement**
Q. Wang, Z. Liu, P. Song, and L. Tian (Univ. of Jinan, China)
- TuP-29** **13:30~15:30** **Properties of Biodegradable Poly (lactic acid)/Poly (butylene adipate-co-terephthalate)/Calcium Carbonate Composites**
A. Teamsinsungvon, Y. Ruksakulpiwat, and K. Jarukumjorn (Suranaree Univ. of Tech., Thailand)
- TuP-30** **13:30~15:30** **Rapid Consolidation of Nanocrystalline Al₂O₃ Reinforced Cr Composite from Mechanically Alloyed Powders by Pulsed Current Activated Sintering**
I.-J Shon, H.-S Kang, D.-M Lee, K.-I Na, and I.-Y Ko (Chonbuk Nat'l Univ., Korea)
- TuP-31** **13:30~15:30** **Simultaneous Synthesis and Densification of Nanostructured NbSi₂-SiC-Si₃N₄ by Rapid Sintering**

I.-J. Shon, H.-S. Kang, S.-K. Bae, and I.-Y. Ko (Chonbuk Nat'l Univ., Korea)

- TuP-32** **13:30~15:30** **Flammability and Mechanical Properties of Sisal Fiber/Polypropylene Composites: Effect of Combination of Flame Retardants**
R. Jeenchan, N. Suppakarn, and K. Jarukumjorn (Suranaree Univ. of Tech., Thailand)
- TuP-33** **13:30~15:30** **Study on the Crystallization and Morphology of HDPE-g-GMA Modified PA66/UHMWPE Blends**
Z.-N. Zhao, W.-H. Zhang, and G.-Q. Lei (Tianjin Univ. of Sci. & Tech., China)
- TuP-34** **13:30~15:30** **Effect of Additives on the Performance of PU/SiO₂ Hybrid Membrane**
X.-X. Nie, Z.-N. Zhao, and X.-Y. Cheng (Tianjin Univ. of Sci. & Tech., China)
- TuP-35** **13:30~15:30** **Formation Mechanism and Properties of Polyvinylidene Fluoride (PVDF)/nano-silica Hybrid Membranes**
H.-L. Shen, H. Liao (Tianjin Univ. of Sci. & Tech., China), and C.-F. Xiao (Tianjin Polytechnic Univ., China)
- TuP-36** **13:30~15:30** **Room Temperature Growth of Cerium - Iron Oxide Nanorods**
N. S. Arul, D. Mangalaraj, N. Ponpandian (Bharathiar Univ., India), P. C. Chen (Lunghwa Univ. of Sci. and Tech., Taiwan), and J. Yi (Sungkyunkwan Univ., Korea)
- TuP-37** **13:30~15:30** **Thermal and Mechanical Properties of Transparent Epoxy Resins Modified with Carboxylate Terminated Butadiene-Acrylonitrile Rubber**
D. H. Nguyen, G. S. Song, and D. S. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-38** **13:30~15:30** **The Effect of Visible Light-Activated TiO₂ Thin Film on Nosocomial Pathogens**
C.-Y. Chang (Ming-Dao Univ., Thailand), S.-K. Hsu, C.-J. Chang (Central Taiwan Univ. of Sci. and Tech., Thailand), Y.-N. Shieh (Ming-Dao Univ., Thailand), C.-L. Chang, and H.-H. Lo (Central Taiwan Univ. of Sci. and Tech., Taiwan)

Tech., Thailand)

- TuP-39** **13:30~15:30** **The Inhibition Effect of TiO₂/Ag⁺ Thin Film on *Acinetobacter baumannii***
L.-L Hsieh (Central Taiwan Univ. of Sci. and Tech., Thailand), C.-Y Chang (Ming Dao Univ., Thailand), H.-L Shyu, C.-A Tsou, and H.-H Lo (Central Taiwan Univ. of Sci. and Tech., Thailand)
- TuP-40** **13:30~15:30** **Development of Bacterial Biosorbent Fibers for Recovery of Precious Metals from Actual Waste Solutions**
I. S. Kwak, S. W. Won, S. I. Park, and Y.-S. Yun (Chonbuk Nat'l Univ., Korea)
- TuP-41** **13:30~15:30** **The Study on the Decomposition of Azo Dye by La-modified TiO₂**
K.-S Yao (Nat'l Taitung Junior College, Thailand), Y.-H Hsieh (Nat'l Chung-Hsing Univ., Thailand) Y.-J Chang, C.-H Lin (Tungnan Univ., Thailand), C.-Y Chang (Nat'l Taitung Junior College, Thailand), and Y.-Chiang (Ming Dao Univ., Thailand)
- TuP-42** **13:30~15:30** **Effects of Organoclay on Rheological and Mechanical Properties of Unsaturated Polyester Resin**
D. W. Lee and D. S. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-43** **13:30~15:30** **Fracture Characterization of TiAl Matrix Composites by Addition of Fluoride Solid Lubricants**
L. Yang, S. Wang, Y. Wang, B. Zhu, and L. Hou (Univ. of Jinan, China)
- TuP-44** **13:30~15:30** **Effects of Mechanical Alloying on the Mechanical and Tribological Properties of Al-Cu-Mg Matrix Composites Reinforced by Sub-Micron Silicon Carbide Particles**
D. Xiaoyan (Northwest Univ. of Nat'lity, China), X. Jincheng, H. Wei, T. Liangliang, A. Lijun, and Z. Jie (Lanzhou Univ., China)
- TuP-45** **13:30~15:30** **Influence of Base Thickness on Performance of 1-3-2 Piezoelectric Composite**
S. Liao, S. Huang, L. Guo and X. Cheng, (Univ. of Jinan, China)
- TuP-46** **13:30~15:30** **Co₃Pt Nanocomposite Films for Perpendicular Magnetic Recording Media**

C. L. Shen, P. C. Kuo (Nat'l Taiwan Univ., Thailand), S. C. Chen, C. D. Chen (Ming Chi Univ. of Tech., Thailand), S. L. Hsu, G. P. Lin, and K. T. Huang (Nat'l Taiwan Univ., Thailand)

- TuP-47** **13:30~15:30** **Mechanical Properties of Epoxy-Clay Nanocomposites**
S. Ghafarloo and M. Kokabi (Tarbiat Modares Univ., Iran)
- TuP-48** **13:30~15:30** **Dispersion and Electromagnetic Interference Shielding Effectiveness of Carbon Nanotube/Polymer Composites**
Y. Xu, J. Wang, and G.-X. Chen (Beijing Univ. of Chemical Tech., China)
- TuP-49** **13:30~15:30** **A Study on the Composite Mechanics for Carbon Fiber Composites**
H. G. Kim (Jeonju Univ., Korea)
- TuP-50** **13:30~15:30** **The Rheological Properties of Epoxy Resin Filled with Mixtures of Different Silica at Various Temperatures**
I. H. Kang, S. S. Lee, and D. S. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-51** **13:30~15:30** **Periodicity of Piezoelectric Ceramic Rods on Properties of 1-3 Type Cement Based Piezoelectric Composite**
D. Xu (Shandong Univ., China), S. Huang, C. Ju, Z. Zhang (Univ. of Jinan, China), and M. Jiang (Shandong Univ., China)
- TuP-52** **13:30~15:30** **Hard Tissue Compatibility and Biostability of a Heat-Treated HA/Ti6Al4V ACL Anchor**
M. Y. Jung, L. D. Tijing, C.-H. Park, Y. Kim, and C. S. Kim (Chonbuk Nat'l Univ., Korea)
- TuP-53** **13:30~15:30** **Effects of Material on the Deployment of Coronary Stents**
S. Tammareddi and Q. Li (Univ. of Sydney, Australia)
- TuP-54** **13:30~15:30** **Nanoceramics Composite Biomaterials in the Calcium Carbonate - Hydroxyapatite System**
M. Goldberg, V. Smirnov, S. Kucev (Baikov Inst. of Metallurgy and Material Sci., Russia), N. Sergeeva, I. Sviridova, V. Kirsanova, S. Akhmedova (Moscow-Herzen Research Oncological Inst., Russia), and S. Barinov (Baikov Inst. of Metallurgy and Material Sci., Russia)

- TuP-55** **13:30~15:30** **Influence of the Size of Gold Nanoparticles Stabilized with Different Gelatin Concentration**
M. P. Neupane, Y. Bai., Y. K. Kim, I. S. Park, H. H. Park, M. H. Lee, and T. S. Bae (Chonbuk Nat'l Univ., Korea)
- TuP-56** **13:30~15:30** **Formation of Bioceramic Coatings Containing Hydroxyapatite on the Titanium Substrate by Micro-arc Oxidation Coupled with Electrophoretic Deposition**
Y. Bai, G. R. Kim, H. J. Ahn, M. P. Neupane, I. S. Park, H. H. Park, M. H. Lee, and T. S. Bae (Chonbuk Nat'l Univ., Korea)
- TuP-57** **13:30~15:30** **Fabrication and Characterization of RF Plasma Polymerized Thin Films from 3,7-Dimethyl-1,6-octadien-3-ol for Electronic and Biomaterial Applications**
K. Bazaka, M. V. Jacob (James Cook Univ., Australia), and R. A. Shanks (RMIT Univ., Australia)
- TuP-58** **13:30~15:30** **Dynamic Responses of Helical IPMC Actuator**
S.-L. Li, W.-Y. Kim(Chonnam Nat'l Univ., Korea), T.-H. Cheng(Wenzhou Univ.), and I.-K. Oh (Chonnam Nat'l Univ., Korea)
- TuP-59** **13:30~15:30** **Carboxymethyl Chitosan/ Hydroxyapatite Composite Scaffold for Bone Regeneration**
X. Bao, Y. Li, A. Teramoto, and K. Abe (Shinshu Univ., Japan)
- TuP-60** **13:30~15:30** **Removal of Cationic Dye From Aqueous Solution by Adsorption on Activated Carbon Developed From Xanthoceras Sorbifolia Bunge Hull**
Y. Hao, X. Wang, and F. Pang (Inner Mongolia Agricultural Univ., China)
- TuP-61** **13:30~15:30** **Tapping of Marine Resources for Biological Synthesis of Metal Nanoparticles**
S. Krishnamurthy and Y.-S. Yun (Chonbuk Nat'l Univ., Korea)
- TuP-62** **13:30~15:30** **Morphological Variations of Hydroxyapatite Nanostructures by Different Synthesis Methods**

A. J. Nathanael, D. Mangalaraj (Bharathiar Univ., Indina), and J. Yi (Sangkyunkwan Univ., Korea)

- TuP-63** **13:30~15:30** **Biocompatible Gold Nanoparticles: Microwave-Assisted Synthesis and Cytotoxicity**
Y. Lee and K. E. Geckeler (Gwangju Inst. of Sci. and Engineering, Korea)
- TuP-64** **13:30~15:30** **Study on Design and Evaluation Method for Transport Packaging Protection**
Y. Guo (Xi'an Univ. of Tech., China) and W. Xu (Beijing Inst. of Graphic Communication, China)
- TuP-65** **13:30~15:30** **Electrochemical Deposition of Metallic Lead Particle Film**
J. Cheng, X. Zou, X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Yang, X. Lü, C. Wei, Z. Sun, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-66** **13:30~15:30** **Curing Kinetics and Rheology of Diglycidylether of Bisphenol-A Modified by Poly(ethylene glycol) Flexible Chains**
D. Yao, K.-B Sun, P. Li, and J. H. Lee (Chobuk Nat'l Univ., Korea)
- TuP-67** **13:30~15:30** **Constructability and Performance of Prospective Materials for Repair of Airfield Damaged Concrete**
M.-J Lee, (Jen-Teh Junior College of Medicine, Taiwan), M.-G Lee, Y.-S Huang (Chaoyang Univ.of Tech., Taiwan), M. Tia (Univ. of Florida, U.S.A.)
- TuP-68** **13:30~15:30** **Preparation and Nanomechanical Characterisation of Metal Containing Amorphous Hydrogenated Carbon Nanocomposite Films**
P. V. Bharathy, D. Nataraj (Bharathiar Univ., India), Q. Yang (Univ. of Saskatchewan, Canada), D. Mangalaraj (Bharathiar Univ., India), and M.S.R.N. Kiran (Univ. of Hyderabad, India)
- TuP-69** **13:30~15:30** **Microstructure Analysis of TAN/CU Nanocomposite Coatings Deposited by Pulsed DC Magnetron Sputtering**
T. Elangovan, D. Mangalaraj (Bharathiar Univ., India), K. Prabakar (Pusan Nat'l Univ., Korea), S. Khan, and E. Mohandas (Indira Gandhi Centre for Atomic Research, India)

- TuP-70** **13:30~15:30** **Effective Cutoff Wavelength Measurement of Bend-insensitive Fiber by Longitudinal Misalignment Loss Method**
L. Htein, W. Fan , P. R. Watekar, and W.-T Han (GIST, Korea)
- TuP-71** **13:30~15:30** **Cross-Link Density and Mechanical Property Analysis of a Carbon Black Compounded EPDM Rubber Hose under Thermo-Oxidative Ageing**
S.-B. Kwak and N.-S. Choi (Hanyang Univ. Korea)
- TuP-72** **13:30~15:30** **Effect of Sigma Phase on Fatigue Crack Growth Behavior and Nondestructive Test in AISI 316L Alloy**
B. J. Kim (Dongyang Mirae Univ. Korea), J. W. Im, M. K. Kim, and B. S. Lim (Sungkyunkwan Univ. Korea)
- TuP-73** **13:30~15:30** **Preparation of Gold Electrode via Shaking Assisted Layer-by-Layer Deposition of Gold Nanoparticles**
F. Basarir and T.-H. Yoon (GIST, Korea)
- TuP-74** **13:30~15:30** **Thermal Resistivity Properties of LED Packages with Thermal Via**
H. S. Lee, H. W. Shin (Korea Institute of Industrial Tech., Korea), and S. B. Jung (Sungkyunkwan Univ., Korea)
- TuP-75** **13:30~15:30** **The Dependence of PET Layer on the Thermal Stability of PET-ITO Substrate for Mobile Electronics**
H. S. Lee, J. O. Bang, K. J. An (Korea Inst. of Industrial Tech., Korea), S. B. Jung (Sungkyunkwan Univ., Korea), and K. H. Chai (LG Innotek Co. Ltd, Korea)
- TuP-76** **13:30~15:30** **Improvement in Etching Factor of Micro Patterns by Controlling Residual Stress of Copper Thin Foil**
H.-S. Lee, H.-J Lee (Korea Inst. of Industrial Tech., Korea)
- TuP-77** **13:30~15:30** **Study for Bubble Dynamics of Nucleate Boiling in Narrow Channels**
L. Guo, S. Zhang, and L. Cheng (Inst. of Thermal Sci. & Tech. of Shandong Univ., China)
- TuP-78** **13:30~15:30** **The Effect of Thickness on the Magnetic Anisotropy and**

Magnetic Properties of Single-layered FePt films by in situ Annealing

S. C. Chen, T. H. Sun, C. L. Chang (Ming Chi Univ. of Tech., Taiwan), C. L. Shen, G. P. Lin, K. T. Huang, S. L. Ou, and P. C. Kuo (Nat'l Taiwan Univ., Taiwan)

TuP-79 13:30~15:30 Development of Advance Thermal Barrier Coating in Gas Turbine
C. J. Choi, J. K. Lee (Korea Electronics Tech. Inst., Korea), L. K. Kwac (Jeonju Univ., Korea), and J. Y. Kim (Chosun Univ., Korea)

TuP-80 13:30~15:30 Effects of Hot Isostatic Pressing on the Microstructure of The Ni-base Super-alloy
C. J. Choi, H. Y. Choi (Korea Electronics Tech. Inst., Korea), D. J. Yang (Gwangju Technopark, Korea), and J. Y. Kim (Chosun Univ., Korea)

TuP-81 13:30~15:30 Mold Development for Resin Transfer Molding with Dimension Variation and Deformation Compensation
C. Dong, S. Lynch (Curtin Univ. of Tech., Australia), and J. Li (Tsinghua Univ., China)

TuP-82 13:30~15:30 Effect of Process Condition in the Centrifugal Casting on the Mechanical Behavior of Cr Heat Resisting Steel
H. J. Chung (LS Cable, Korea), K. Y. Rhee (Kyunghee Univ., Korea)

TuP-83 13:30~15:30 Numerical Simulation of Flash Butt Welding of High Manganese Steel Crossing with Carbon Steel Rail
Y. Li and F. Zhang (Yanshan Univ., China)

TuP-84 13:30~15:30 Effects of Thermal Shock on Mechanical Properties of Bamboo/PBS Green Composites
Y.-H. Lee (Dong-Eui Univ., Korea), H. Takagi (The Univ. of Tokushima, Japan), K. Ohkita (Kagawa Prefectural Industrial Tech. Center, Japan), and H.-K. Yoon (Dong-Eui Univ., Korea)

TuP-85 13:30~15:30 An Investigation on the Local Structure of Silicon: Liquid to Undercooled Regime
S. Dalgic and M. Colakogullari (Trakya Univ., Turkey)

- TuP-86** **13:30~15:30** **Numerical Analysis on the Compressive Behaviors of Aluminum Foam Material Using Computed Tomography Imaging**
S. H. Kim (Kyunghee Univ., Korea), H. J. Chung (LS Cable, Korea), and K. Y. Rhee (Kyunghee Univ., Korea)
- TuP-87** **13:30~15:30** **Stress Intensity Factors for Cracks in Pore Channels Structures**
V. G. Borovik (Frantsevich Inst. for Problems of Materials Sci., Ukraine) and A. V. Borovik (Kyiv Polytechnic Inst., Ukraine)
- TuP-88** **13:30~15:30** **A Generic Model for Predicting the Permeability of Fiber Mats**
C. Dong and T. Y. Tang (Curtin Univ. of Tech., Australia)
- TuP-89** **13:30~15:30** **Formation of Resin-Rich Zones in Composites Processing**
C. Dong and T. C. Tsai (Curtin Univ. of Tech., Australia)
- TuP-90** **13:30~15:30** **Auto-disturbance-rejection Controller for Bending Response of IPMC Actuator in Underwater Application**
H.-L. Xing, J.-H. Jeon (Chonnam Nat'l Univ., Korea), T.-H. Cheng (Wenzhou Univ. China), and I.-K. Oh (Chonnam Nat'l Univ., Korea)
- TuP-91** **13:30~15:30** **Fracture Failure Analysis of Twin Rolling Casting Magnesium by Hot Compression**
S. Wang, L. Yang, R. Ma, and P. Guo (Univ. of Jinan, China)
- TuP-92** **13:30~15:30** **Determination of Number of Layers and Stacking Sequence of Composite Bicycle Frame**
H. Jung, J. Lee, K. Kim, and H. Chun (Yonsei Univ., Korea)
- TuP-93** **13:30~15:30** **Analytical Study of Fiber Orientation Effects in Short Fiber Composites**
H. G. Kim, L. K. Kwac, S. G. Oh, Y. W. Kang (Jeonju Univ., Korea)
Y. Hong., J. H. Song, and S. M. Young (Chonbuk Nat'l Univ., Korea)
- TuP-94** **13:30~15:30** **Optimal Design of the Aluminum Electrical Railcar Under Uncertainty of Material Property**
T. M. Cho, B. C. Lee (KAIST, Korea), and T. S. Kwon (Korea Railroad Research Inst., Korea)
- TuP-95** **13:30~15:30** **FEM Analysis of 1-3 Cement Based Piezoelectric Composites**

Z. Zhang, Y. Peng, D. Xu, and X. Cheng (Univ. of Jinan, China)

- TuP-96** **13:30~15:30** **Onion-Like Carbon Transformed from Nanodiamond**
Q. Zou, M. Wang, and Y. Li (Yanshan Univ., China)
- TuP-97** **13:30~15:30** **Lead Hydroxide Nanowires Obtained from Lead Nitrate Solution by Adding Chloride Ions**
J. Cheng, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Yang, X. Lü, C. Wei, Z. Sun, H. Feng and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-98** **13:30~15:30** **Electrochemical Deposition of Lead Oxide Nanorods**
J. Cheng, X. Zou, X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Yang, X. Lü, C. Wei, Z. Sun, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-99** **13:30~15:30** **Carbon Nanostructures of Multiple-Branched Fibers Obtained from Alcohol Flames**
J. Cheng, X. Zou, G. Yang, X. Lü, C. Wei, Z. Sun, H. Fang, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-100** **13:30~15:30** **Iron-Filled Carbon Nanotube Arrays Obtained by Floating Catalyst Chemical Vapor Deposition**
J. Cheng, X. Zou, G. Yang, X. Lü, C. Wei, Z. Sun, H. Fang, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-101** **13:30~15:30** **Synthesis of Well-Aligned Multi-Walled Carbon Nanotubes by Floating Catalyst Chemical Vapor Deposition**
J. Cheng, X. Zou, G. Yang, X. Lü, C. Wei, Z. Sun, H. Fang, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-102** **13:30~15:30** **Temperature Effects on Synthesis of Multi-Walled Carbon Nanotubes by Ethanol Catalyst Chemical Vapor Deposition**
J. Cheng, X. Zou, G. Yang, X. Lü, C. Wei, Z. Sun, H. Fang, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-103** **13:30~15:30** **Effect of Thicknesses on the Microstructure and Magnetic**

Properties of CoPt Thin Films

C. L. Shen, P. C. Kuo, G. P. Lin, Y. S. Li, S. L. Ou (Nat'l Taiwan Univ., Taiwan), and S. C. Chen (Ming Chi Univ. of Tech., Taiwan)

- TuP-104** **13:30~15:30** **Estimation of Cure and Thermal Degradation Kinetics of Epoxy/Organoclay Nanocomposite**
J.-Y Lee, B.-C Choi, and H.-K Lee (Woosuk Univ., Korea)
- TuP-105** **13:30~15:30** **Effect of Pd Nanoparticles on Thermal Degradation Kinetics of iPP/Pd Nanocomposite**
J.-Y Lee, B.-C Choi, J.-J Lee (Hydrogen Fuel Cells Parts and Applied Tech., Korea), S. Yang (Woosuk Univ., Korea), and H.-K Lee (Hydrogen Fuel Cells Parts and Applied Tech., Korea)
- TuP-106** **13:30~15:30** **Microstructure and Crystallization Mechanism of (GeSbSn)_{100-x}Fe_x Phase Change Optical Recording Films**
S.-L Ou, P.-C Kuo, S.-H Ma, C.-L Shen (Nat'l Taiwan Univ., Taiwan), D. Chiang (Nat'l Applied Research Laboratories, Taiwan), and W.-T Tang (Nat'l Tsing Hua Univ., Taiwan)
- TuP-107** **13:30~15:30** **Crystallization Mechanism of Si/Cu_{100-x}Zr_x Bilayer Film for Write-Once Blue Laser Optical Recording Media**
S.-L Ou, P.-C Kuo, S.-H Ma, C.-L Shen (Nat'l Taiwan Univ., Taiwan), D. Chiang (Nat'l Applied Research Laboratories, Taiwan), and W.-T Tang (Nat'l Tsing Hua Univ., Taiwan)
- TuP-108** **13:30~15:30** **Preparation and Characterization of Crystalline Praseodymium Oxide Nanorods: An Electrochemical Study**
M. S. Hassan, M. S. Akhtar, K.-B. Shim, and O.-B. Yang (Chonbuk Nat'l Univ., Korea)
- TuP-109** **13:30~15:30** **Characterization and Photocatalytic Activity of La_{1.6}Ln_{0.4}Zr₂O₇ (Ln= La, Nd, Dy, Er) Nanocrystals by Stearic Acid Method**
Y. Tong, S. Zhao, F. Li, and C. Li (North China Inst. of Water Conservancy and Hydroelectric Power, China)

- TuP-110** **13:30~15:30** **A Convenient Method for Preparing Well-dispersed Er₂Zr₂O₇ Nanocrystals**
Y. Tong, R. Zhang, S. Zhao, and C. Li (North China Inst. of Water Conservancy and Hydroelectric Power, China)
- TuP-111** **13:30~15:30** **One-step Process for the Exfoliation and Surface Modification of Graphene by Electrochemical Method**
P. Li, S.-H. Bae, Q.-Y. Zan, N.-H. Kim, and J.-H. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-112** **13:30~15:30** **Preparation of SiC/SiO₂ Core-shell Coaxial Nanostructure**
Y. Wang, (Anhui Sci. and Tech. Univ, China), Z. Guang, Z. Xiaoping, and C. Jin (Beijing Information Sci. and Tech. Univ., China)
- TuP-113** **13:30~15:30** **Electroactive Nano-composite Actuator based on Sulfonated Polyhedral Oligomeric Silsesquioxane (SPOSS) and Nafion**
L. Xu and I.-K. Oh (Chonnam Nat'l Univ., Korea)
- TuP-114** **13:30~15:30** **Magnetic Properties of Single-Layered Fe_{100-x}Pt_x Films by Rapid Thermal Annealing**
C. L. Shen (Nat'l Taiwan Univ., Taiwan), T. H. Sun, C. L. Chang, S. C. Chen (Ming Chi Univ. of Tech., Taiwan), G. P. Lin, K. T. Huang, S. L. Ou, P. C. Kuo (Nat'l Taiwan Univ., Taiwan)
- TuP-115** **13:30~15:30** **Exfoliation of Graphite via Edge-Functionalization with Carboxylic Acid-Terminated Hyperbranched Poly(ether-ketone)s**
I.-Y Jeon, S.-Y Bae, and J.-B Baek (UNIST, Korea)
- TuP-116** **13:30~15:30** **Selective Pattern Growth of ZnO Nanorods on Silicon Substrate**
E.-W. Lee, D.-Y. Kim, and Y.-B. Hahn (Chonbuk Nat'l Univ., Korea)
- TuP-117** **13:30~15:30** **Synthesis of Al-doped ZnO Nanowires and Their Electrical Characteristics of Back-and Top-gate Field Effect Transistors**
Y.-K. Park, C.-M. Choi, and Y.-B. Hahn (Chonbuk Nat'l Univ., Korea)
- TuP-118** **13:30~15:30** **Effect of Gold Addition on Electrical and Optical Properties of NiO Films by rf Sputtering**
S. C. Chen, Y. C. Lin, T. Y. Kuo, and C. L. Chang (Ming Chi Univ. of Tech., Taiwan)

- TuP-119** **13:30~15:30** **Effect of Post-Annealing on Electrical and Optical Properties of Al layer Inserted ZnO Thin Films by RF Sputtering**
J. Kim, C.-M. Choi, and Y.-B Hahn (Chonbuk Nat'l Univ., Korea)
- TuP-120** **13:30~15:30** **Characterization of N-doped ZnO Nanofilms by Plasma Enhanced Atomic Layer Deposition**
J.-H. Kim, J.-S. Kim, H.-S. Choi, and Y.-B. Hahn (Chonbuk Nat'l Univ., Korea)
- TuP-121** **13:30~15:30** **Effect of Pd QDs on the Growth of C-Based Materials for Solar Cell Applications**
R. Sharma, C. M. Choi, and Y.-B. Hahn (Chonbuk Nat'l Univ., Korea)
- TuP-122** **13:30~15:30** **Graphene-Nafion Nanocomposite Actuators**
V. Sridhar, J.-H. Jeon, and I.-K. Oh (Chonnam Nat'l Univ., Korea)
- TuP-123** **13:30~15:30** **A New Micro-Nano Rough Surface of Titanium by Sandblasting and Subsequent Anodization**
F. Gao, E. W. Zhang, S. C. Wei, and J. Fang (Peking Univ., China)
- TuP-124** **13:30~15:30** **Synthesis of Nanosized Phases from an Atomic Carbon**
V. Sobolev (Nat'l Mining Univ., Ukraine)
- TuP-125** **13:30~15:30** **Synthesis of Graphene Nanosheets via Thermal Exfoliation of Pretreated Graphite at Low Temperature**
L.-Y Meng and S.-J Park (Inha Univ., Korea)
- TuP-126** **13:30~15:30** **Hydrogen Storage Behaviors of Ni-loaded Activated Carbon Nanotubes**
S.-Y Lee and S.-J Park (Inha Univ., Korea)
- TuP-127** **13:30~15:30** **Fabrication and Characterization of Ag doped TiO₂ Nanoparticles by a Sol-Gel and Hydrothermal Process**
S. B. Bae (Korea Sci. Academy, Korea), M. Y. Kim, and D.- S. Bae (Changwon Nat'l Univ., Korea)
- TuP-128** **13:30~15:30** **Carbon Nanotubes Grown by Ethanol Catalytic Combustion with an Additive of Thiophene**

C. Wei, X. Zou, J. Cheng, Z. Yu, G. Yang, X. Lü, Z. Sun, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)

- TuP-129** **13:30~15:30** **Nano Structure and Properties of Beta-D-poly-glucopyranose**
O. Figovsky and M. Ioelovich (Polymate Ltd., Israel)
- TuP-130** **13:30~15:30** **Synthesis of Pd doped SiO₂ Thin Film by Sol-Gel Process for Photonics**
M. Y. Kim (Changwon Nat'l Univ., Korea), M.-C. Chu (CRISS, Korea), and D.-S. Bae (Changwon Nat'l Univ., Korea)
- TuP-131** **13:30~15:30** **Growth of Arrayed ZnO Nanorods from Aqueous Solution at 60°C**
G. Yang, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Teng, J. Cheng, Y. Su, X. Lü, C. Wei, Z. Sun, H. Feng, and Y. Yang (Beijing Information Sci. and Tech., China)
- TuP-132** **13:30~15:30** **Hydrous Ruthenium Oxide Coating on SWCNT Substrate for the Electrode of Supercapacitor**
Y. Lin, W.-Z. Peng, and C.-Y. Hsu (Chung Hua Univ., Taiwan)
- TuP-133** **13:30~15:30** **Effects of Concentration of Electrolyte on the Synthesis of PbO Nanostructure by Electrochemical Deposition**
Z. Sun, X. Zou, J. Cheng (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), C. Wei, G. Yang, X. Lü, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-134** **13:30~15:30** **Influence of Potassium Chloride on the Electrochemical Deposition of ZnO plate films**
X. Lü, X. Zou, J. Cheng, G. Yang, C. Wei, Z. Sun, H. Feng, Y. Yang, G. Teng (Beijing Information Sci. and Tech. Univ., China), and X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China)
- TuP-135** **13:30~15:30** **Consolidation and Mechanical Properties of Nanostructured SiC from Mechanically Activated Powder by High-Frequency Induction-Heated Sintering**
I.-J. Shon, H.-S. Kang, N.-R. Park, and I.-Y. Ko (Chonbuk Nat'l Univ.,

Korea)

- TuP-136** **13:30~15:30** **ZnO Nanorod Arrays and Nanowires by Hydrothermal Growth**
Y. Su, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Teng, G. Yang, and X. Lü (Beijing Information Sci. and Tech. Univ., China)
- TuP-137** **13:30~15:30** **2-D ZnO Nanostructures on Aluminum by Solution Method**
Y. Su, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), and G. Teng (Beijing Information Sci. and Tech. Univ., Korea)
- TuP-138** **13:30~15:30** **Improvement of the Hydrogen-Storage Properties of Mg by the Addition of Ni, Fe, and Fe₂O₃ and Reactive Mechanical Grinding**
S. H. Baek, D. S. Jung (Jeonbuk Techno Park Fuel Cell Tech. Research Center, Korea), and M. Y. Song (Chonbuk Nat'l Univ., Korea)
- TuP-139** **13:30~15:30** **Large-Scale Synthesize ZnO Micro/Nano Rods Fabricated from Aqueous Solutions at Low Temperature**
G. Yang, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Teng, J. Cheng, Y. Su, X. Lü, C. Wei, Z. Sun, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)
- TuP-140** **13:30~15:30** **Stabilization of Liquid Crystal Director with Polymer Chain on Nanoparticles Surface**
D. H. Kim, W. I. Kim, D. W. Kwon, H. Y. Gim, S. J. Shin, S. H. Lee (Chonbuk Nat'l Univ., Korea), Y. H. Jeong, J. J. Ryu, and K. H. Kim (LC Tech. Group, Korea)
- TuP-141** **13:30~15:30** **Fabrication of Arrays of Zinc Oxide MICRO/Nano Pillars in Aqueous Solution under an External Electric Current**
G. Yang, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), and G. Teng (Beijing Information Sci. and Tech. Univ., China)

- TuP-142** **13:30~15:30** **Synthesis and Controlled Growth of ZnO Nanorods Based Hybrid Device Structure by Aqueous Chemical Method**
P. Suresh kumar (Bharathiar Univ., India), J. Sundaramurthy (Nat'l Univ. of Singapore, Singapore), D. Mangalaraj (Bharathiar Univ., India), D. Rajarathnam, and M. P. Srinivasan (Nat'l Univ. of Singapore, Singapore)
- TuP-143** **13:30~15:30** **Gas Sensing Properties of Chemically Synthesized V₂O₅ Thinfilms**
A. D. Raj, D. Mangalaraj, N. Ponpandia (Bharathiar Univ., India), and J. Yi (Sungkyunkwan Univ., Korea)
- TuP-144** **13:30~15:30** **Research on the Nanoscale Additives to the Ni(OH)₂ Electrodes for High Power Ni/MH Batteries**
J. Wu and Y. Chen (Taizhou Univ., China)
- TuP-145** **13:30~15:30** **GeCu/Si Bilayer Thin Films for Write-Once Blue Laser Optical Recording Media**
S.-L. Ou, P.-C. Kuo (Nat'l Taiwan Univ., Taiwan), D. Chiang (Nat'l Applied Research Laboratories, Taiwan), C.-Y. Yeh (CMC Magnetics Corporation, Taiwan), S.-H. Ma (Nat'l Taiwan Univ., Taiwan), and W.-T. Tang (Nat'l Tsing Hua Univ., Taiwan)
- TuP-146** **13:30~15:30** **Fabrication of Ag Nanoparticles Colloids by Pulsed Laser Ablation in Liquid**
B. Xu and R.-G Song (Zhejiang Univ. of Tech., China)
- TuP-147** **13:30~15:30** **Nano Positioning Control for Ultra-precision Machining using Inverse Hysteresis Model**
L.-K. Kwac and H. G. Kim (Jeonju Univ., Korea)
- TuP-148** **13:30~15:30** **Effect of Nanostructured Ti Surface with UV Light Irradiation on the Disinfection of Water**
A. Altangerel, L. D. Tijing, M.-H. Yu, C.-H. Kim, C.-H. Park, and C. S. Kim (Chonbuk Nat'l Univ., Korea)
- TuP-149** **13:30~15:30** **The Effect of Holding Time on the Mechanical Properties and**

Microstructure of Sintered NbC Composite.

D.-S. Kang, K.-D. Woo, S.-H. Kim, I.-J. Shon, J.-Y. Kim, and S.-H. Park
(Chonbuk Nat'l Univ., Korea)

- TuP-150** **13:30~15:30** **Properties and Rapid Consolidation of Nanostructured Fe₃Al Compound by High Frequency Induction Heating**
I.-J. Shon, T.-W. Kim (Chonbuk Nat'l Univ., Korea), J.-M. Doh, J.-K. Yoon (KIST, Korea), K.-I. Na, and I.-Y. Ko (Chonbuk Nat'l Univ., Korea)
- TuP-151** **13:30~15:30** **Nondestructive Evaluation of Braided Carbon Fiber Composites Using High Tc SQUID**
Y. Shinyama, Y. Hatsukade, S. Tanaka (Toyohashi Univ. of Tech., Japan), Y. Takai, M. S. Aly-Hassan, A. Nakai, and H. Hamada (Kyoto Inst. of Tech., Japan)
- TuP-152** **13:30~15:30** **Measurement of Bridge Fundamental Frequency by Resistance Strain Gauges**
S. Zhao (North China Inst. of Water Conservancy and Hydroelectric Power, China), J. Chen, J. Yao (Univ. of Architecture & Tech., China), and S. Pei (North China Inst. of Water Conservancy and Hydroelectric Power, China)
- TuP-153** **13:30~15:30** **Thermal Insulation Test of RCCW with Inner Insulating Layer**
S. Zhao, S. Zhao, S. Yang, and X. Ma (North China Inst. of Water Conservancy and Hydroelectric Power, China)
- TuP-154** **13:30~15:30** **Terahertz Ray Nondestructive Characterizations in FRP Composites**
J.-W. Park (Chosun Univ., Korea), K.-H. Im (Woosuk Univ.), D. K. Hsu, C.-P. Chiou, and D. J. Barnard (Iowa State Univ., U.S.A.)
- TuP-155** **13:30~15:30** **Internal Defect Inspection of Composite Material Using Non-contact UT**
K. S. Song, S. Y. Na, and J. Y. Kim (Chosun Univ., Korea)
- TuP-156** **13:30~15:30** **A Nondestructive Study on Fiber Layup and Porosity Level in CFRP Composite Laminates Using Ultrasonic Pitch-Catch Method**
K.-H. Im (Woosuk Univ., Korea), J.-W. Park (Chosun Univ., Korea), D. K.

Hsu (Iowa State Univ., U.S.A.), S.-K. Kim (Chonbuk Univ., Korea), Y.-T. Cho (Jeonju Engineering, Korea), Y.-J. Yang, and I.-Y. Yang (Chosun Univ., Korea)

- TuP-157** **13:30~15:30** **Application of the Ultrasound-Infrared Thermography Technique for Non-destructive Evaluation of Defects in Shoe Bonding Parts**
S.-H. Choi (Chosun Univ., Korea), L.-K. Kwac (Jeonju Univ., Korea), and J.-Y. Kim (Chosun Univ., Korea)
- TuP-158** **13:30~15:30** **An Investigation on Vibration and Thermal Change of High Speed Lathe Processing Using Infrared Thermal Imaging Technique**
Y. H. Yang, S. H. Choi, J. Y. Kim, and Y. H. Cha (Chosun Univ., Korea)
- TuP-159** **13:30~15:30** **Aggregation, Isomerization and Thermo-optic Property of Azobenzene Polyelectrolyte**
F. Qiu, D. Yang, Q. Zhang, and G. Cao (Jiangsu Univ., China)
- TuP-160** **13:30~15:30** **Synthesis and Photophysics of Two Dipolar Copolymers Containing Hole-Transporting Unit and Alq₃ Unit**
J. X. Luo, L. Y. Liang, and M. G. Lu (Chinese Academy of Sci., China)
- TuP-161** **13:30~15:30** **Determination of Vibration Source Locations in Laminated Composite Plates Using Lamb Wave Analysis**
C. Du (Shinshu Univ., Japan), Q.-Q Ni (Dalian Maritime Univ., China), and T. Natsuki (Shinshu Univ., Japan)
- TuP-162** **13:30~15:30** **Behavior of Rahmen Bridge during Construction Stages using Embedded FBG Sensors**
W. Chung and D. Kang (Kyung Hee Univ., Korea)
- TuP-163** **13:30~15:30** **Degradation of Volatile Acetone by a Photocatalytic Reactor with TiO₂ Coated Sieve**
C.-Y. Chang (Nat'l Taitung Junior College, Taiwan), Y.-C Lee, C.-H Lin (Tungnan Univ., Taiwan), J.-W. Lee (Mingchi Univ., Taiwan), Y.-J. Chang (Taipei Municipal Univ. of Education, Taiwan), and J.-H. Chen (Tungnan Univ., Taiwan)
- TuP-164** **13:30~15:30** **Pt/Zelite Catalyst for the Treatment of High VOC-containing Wastewater**

M.-Y. Hwa, C.-H. Lin (Tungnan Univ., Taiwan), Y.-J. Chang (Taipei Municipal Univ. of Education Taiwan), Y.-C. Lee (Tungnan Univ., Taiwan), I.-R. Liu, and J.-R. Chang (Nat'l Chung Cheng Univ., Taiwan)

TuP-165 13:30~15:30 Photosensitization of Dye/TiO₂ Thin Films by Using Natural Dye of TCPP

C.-H. Lin (Tungnan Univ., Taiwan), C.-Y. Chang (Nat'l Taitung Junior College, Taiwan), Y.-J. Chang (Taipei Municipal Univ. of Education Taiwan), Y.-C. Lee, M.-Y. Hwa (Tungnan Univ., Taiwan), and Y.-S. Chang (Nat'l Taiwan Univ., Taiwan)

TuP-166 13:30~15:30 Investigation of Microstructure, Electrical and Optical Properties of WO₃ Film by RF Magnetron Sputtering with Ar/H₂

C.-T. Lee, P.-K. Chiu, C. N. Hsiao (Nat'l Applied Research Laboratories, Taiwan), C. L. Huang, T.-L. Chuang, and C.-Y. Hua (Metal Industries Research & Development Centre, Taiwan)

TuP-167 13:30~15:30 Magnetic Circuit Simulation for Magnetorheological (MR) Fluids Testing Rig in Squeeze Mode

I. Ismail (School of Mechanical and Manufacturing Engineering, Ireland), S. A. Mazlan (Univ. Tech., Malaysia), and A. G. Olabi (School of Mechanical and Manufacturing Engineering, Ireland)

TuP-168 13:30~15:30 Characteristics of PP/PET Bicomponent Melt Blown Nonwovens as Sound Absorbing Material

B. O. Lee, J. A. Ko (Korea Inst. for Knit Industry, Korea), and S. W. Han (Clean & Sci. Co., Ltd., Korea)

TuP-169 13:30~15:30 Electromagnetic Material Based Semi-passive Switching Shunt Damper

T.-H. Cheng (Wenzhou Univ., China), J.-H. Jung, and I.-K. Oh (Chonnam Nat'l Univ., Korea)

TuP-170 13:30~15:30 Photoconductivity of Nonlinear Optical Polyimides based on N,N'-Diethylamino-4-Tricyanoethenylbenzene

S.-W. Son, Y. K. Kim (Chonbuk Nat'l Univ., Korea) M. J. Moon, S. N. Lee (Bukyoung Nat'l Univ., Korea), and M.-H. Lee (Chonbuk Nat'l Univ., Korea)

TuP-171 13:30~15:30 Unusual Photodegradation of Aromatic Polyimide Accelerated by

Chloromethyl Side Unit

X.-D. Li (South-Central Univ. for Nationalities, China) P. Wen, Z. Zhong, Y. K. Kim, S. M. Kim, and M.-H. Lee (Chonbuk Nat'l Univ., Korea)

- TuP-172** **13:30~15:30** **Anomalous Change of the Viscosity and the Structure of Sn Melt with Temperature**
Z. Yang (Shandong Univ., China), H. Geng, and N. Zhang (Univ. of Jinan, China)
- TuP-173** **13:30~15:30** **Research on the Cement-based Smart Lost-circulation Control Material with Ti-Ni SMA**
Q. Wang, L. Tian, P. Song, and Z. Liu (Univ. of Jinan, China)
- TuP-174** **13:30~15:30** **Dimeric Liquid Crystalline Epoxy Resins Containing Azo Group: Mesogenic Behavior and Curing with Anhydride**
Z. Dewen, L. Liyan, and L. Mangeng (Chinese Academy of Sci., China)
- TuP-175** **13:30~15:30** **Simulation of Actuation and Sensitive Capability of 1-3 Cement Based Piezoelectric Composites**
Z. Ye, Z. Zhang, C. Ju, and S. Huang (Univ. of Jinan, China)
- TuP-176** **13:30~15:30** **Plasma Modification of Carbon Fibers and Its Effect on the Wear Behavior of Carbon/Epoxy Woven Composites**
J. S. Lee and K. Y. Rhee (KyungHee Univ., Korea)
- TuP-177** **13:30~15:30** **Study on the Wear-resisting Property of Wood Cu/Ni Electroplate Coating**
J.-T Huang, J. Jia, and K.-L Tie (Inner Mongolia Agricultural Univ., China)
- TuP-178** **13:30~15:30** **Tribological Properties of the Ceramic Coatings Prepared by Plasma Electrolytic Oxidation (PEO) on the Al6061 Alloy**
K. Wang, S. S. Beyun, B. H. Koo, Y. Q. Wang, and J. I. Song (Changwon Nat'l Univ., Korea)
- TuP-179** **13:30~15:30** **Effect of Phosphate and Nitrate Electrolytes on Growth of Ceramic Coatings on 2021 Al Alloys Prepared by Electrolytic Plasma Processing**
S. S. Byeon, K. Wang, C. G. Lee, Y. G. Jung, and B. H. Koo (Changwon

Nat'l Univ., Korea)

- TuP-180** **13:30~15:30** **Nd-YAG Laser Surface Melting of Aluminum Alloy 6013 for Improving Stress Corrosion Cracking Resistance**
L. Zhang (Shanghai Maritime Univ., China), W. Xu, and T. Yue (The Hong Kong Polytechnic Univ., Hong Kong)
- TuP-181** **13:30~15:30** **Tribological Effects of Nano-Copper with Different Diameters in Lubricants**
C. Gu, G. Zhu, X. Tian (Shanghai Maritime Univ., China), J. Shi, Y. Feng (Jiaozuo Banlv Nano Material Engineering Co. Ltd, China)
- TuP-182** **13:30~15:30** **Effects of Carbon Nanotubes on Electro-Optical Characteristics in Vertical Aligned Cell**
B. G. Kang, Y. J. Lim (Chonbuk Nat'l Univ., Korea), K. Lee, Y. H. Lee (Sungkyunkwan Univ., Korea), and S. H. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-183** **13:30~15:30** **A Study on Characteristics of Compensation Film using Reactive Mesogen in Twisted Nematic Mode**
D. W. Kwon, Y. J. Lim, E. J. Jeon, M.-H. Lee, and S. H. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-184** **13:30~15:30** **Effect of DBP Content on Attachment and Proliferation of Schwann Cell in DBP Sponge**
H. L. Kim, J. E. Song, S. J. Kim, H. Yoo, D. Lee, and G. Khang (Chonbuk Nat'l Univ., Korea)
- TuP-185** **13:30~15:30** **Preparation and Characterization of Silk Fibroin/Gelatin Hybrid Scaffolds for Tissue Engineering**
H. L. Kim, J. E. Song, S. J. Kim, H. Yoo, D. Lee, and G. Khang (Chonbuk Nat'l Univ., Korea)
- TuP-186** **13:30~15:30** **Poly(acrylic acid)-Modified Bacterial Biosorbent of Corynebacterium Glutamicum for the Efficient Binding of Cationic Metal**
J. Mao, S. W. Won, I.-S. Kwak, and Y.-S. Yun (Chonbuk Nat'l Univ., Korea)

- TuP-187** **13:30~15:30** **pH and Temperature Induced Gold Nanoplatelets Formation using Ocimum Sanctum Extract**
S. Y. Lee, S. Krishnamurthy, and Y.-S. Yun (Chonbuk Nat'l Univ., Korea)
- TuP-188** **13:30~15:30** **Thermal Properties of Epoxy Based Expanded Graphite Composite for Bipolar Plate of Polymer Electrolyte Fuel Cells**
J.-Y. Lee, J. Lee, H.-R. Rhim (Hydrogen Fuel Cells Parts and Applied Tech., Korea), J.-P. Shim (Kunsan Nat'l Univ., Korea), and H.-K. Lee (Hydrogen Fuel Cells Parts and Applied Tech., Korea)
- TuP-189** **13:30~15:30** **Synthesis and Electrochemical Performance of Porous Carbon/Carbon Electrode with Core/Shell Structure**
K.-S. Kim and S.-J. Park (Inha Univ., Korea)
- TuP-190** **13:30~15:30** **Preparation and Characterization of Porous Si/Carbon Fibers**
K.-H. Jung and S.-J. Park (Inha Univ., Korea)
- TuP-191** **13:30~15:30** **Synthesis and Characterization of Novel Photosensitive Sulfonated Poly(Arylene Ether Sulfone) for Direct Methanol Fuel Cell Application**
X.-D. Li (South-Central Univ. for Nationalities, China), M.-H. Lee, and P. Wen (Chonbuk Nat'l Univ., Korea)
- TuP-192** **13:30~15:30** **Effect of Carbon Fillers on the Performance of a Composite Bipolar Plate for Fuel Cells**
J. S. Lee (Chonbuk Nat'l Univ., Korea), G. H. Yoo (KCR Co. Ltd, Korea), N. H. Kim, and J. H. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-193** **13:30~15:30** **Classification of Glassy and Polymer Electrolytes for Lithium-ion Batteries by the Bond-Strength-Coordination Number Fluctuation Model**
J. L. Ndeugueu and M. Aniya (Kumamoto Univ., Japan)
- TuP-194** **13:30~15:30** **Testing the Applicability of an Expression for the Non-Arrhenius Ionic Conductivity in Solid Electrolytes**
T. Indoh and M. Aniya (Kumamoto Univ., Japan)
- TuP-195** **13:30~15:30** **Preparation of Primary-Amine Functionalized Poly (2,5-Benzimidazole) Membrane for Fuel Cells**

N. T. X. Hien, N. H. Kim (Chonbuk Univ., Korea), H. K. Lee (Woosuk Univ., Korea), and J. H. Lee(Chonbuk Univ., Korea)

- TuP-196** **13:30~15:30** **Behaviors of Metal Nano-Particles Prepared by Coaxial Vacuum Arc Deposition**
Y. Agawa, S. Endo, M. Matsuura, and Y. Ishii (ULVAC-RIKO,Inc, Japan)
- TuP-197** **13:30~15:30** **Study on Mechanical Properties of Wood Fiber/Polypropylene Composites**
A. Ashori (Iranian Research Organization for Sci. and Tech., Iran)
- TuP-198** **13:30~15:30** **Durability of Broken Concrete Specimens Strengthened with CFRP Sheets**
M.-J. Lee, (Jen-Tech Junior Colleage of Medicine, Taiwan) M.-G. Lee, Y.-S. Huang, and Y.-H. Liang (Chaoyang Univ. of Tech.)
- TuP-199** **13:30~15:30** **Interfacial Optimization of Lyocell Fabric/PLA with Silane Treatments**
M. Kim, B. S. Kim, J. R. Ha, S. K. Kim, J. W. Yi (KIMS, Korea), and J.-Y Lim (Dongguk Univ., Korea)
- TuP-200** **13:30~15:30** **Properties of Esterificated Wood with Oxalic Acid and Cetyl Alcohol**
X. Wang, M. Zhang, and X. Wang (Inner Mongolia Agricultural Univ., China)
- TuP-201** **13:30~15:30** **Mechanical Properties, Morphological Properties, and Cure Characteristics of Sisal Fiber/Natural Rubber Composites: Effects of Fiber and Compatibilizer Content**
W. Wongsorat, N. Suppakarn, and K. Jarukumjorn (Suranaree Univ. of Tech., Thailand)
- TuP-202** **13:30~15:30** **Fully Degradable Jute Fiber Reinforced Polylactide Composites Applicable to Car Interior Panel**
R.-H. Hu (Huanghe Sci. and Tech. College, China), M.-H. Jang, Y.-J. Kim, Y.-J. Piao, and J.-K. Lim (Chonbuk Nat'l Univ., Korea)

- TuP-203** **13:30~15:30** **Effects of Weave Type and Fiber Content on Physical Properties of Sisal Fiber/Epoxy Composites**
S. Srisuwan and P. Chumsamrong (Suranaree Univ. of Tech., Thailand)
- TuP-204** **13:30~15:30** **Mechanical Properties of Polylactic acid and Natural Rubber Blends using Vetiver Grass Fiber as Filler**
P. Juntuek (Suranaree Univ. of Tech., Thailand), C. Ruksakulpiwat (Khon Kaen Univ., Thailand), P. Chumsamrong, and Y. Ruksakulpiwat (Suranaree Univ. of Tech., Thailand)
- TuP-205** **13:30~15:30** **Preparation and Characterization of Cellulosic Fibre-Reinforced Polypropylene Foams**
M. Ardanuy, M. Antunes, and J. I. Velasco (Univ. Politècnica de Catalunya, Spain)
- TuP-206** **13:30~15:30** **Thermal Properties of Polypropylene Composites Reinforced with Different Vegetable Fibers**
S. M. Luz (Univ. de Brasília, Brazil), A. R. Gonçalves (Escola de Engenharia de Lorena, Brazil), A. P. Del'Arco Jr (Divisão de Materiais, Brazil), A. L. Leão (Universidade Federal Júlio Mesquita, Brazil), P. M. C. Ferrão (Instituto Superior Técnico, Portugal), and G. J. M. Rocha (Escola de Engenharia de Lorena, Brazil)
- TuP-207** **13:30~15:30** **Preparation of Flower-like Silica Microstructures**
W. Wang and Z. Peng (Anhui Key Lab. of Spin Electron and Nanomaterials, China)
- TuP-208** **13:30~15:30** **Effect of Heat Treated Sisal Fiber on Physical Properties of Polypropylene Composites**
S. Kaewkuk, W. Sutapun, and K. Jarukumjorn (Suranaree Univ. of Tech., Thailand)
- TuP-209** **13:30~15:30** **Study of Characteristic of Vetiver Fiber Before and After Alkaline Treatment**
W. Sutapun, N. Suppakarn, and Y. Ruksakulpiwat (Suranaree Univ. of Tech., Thailand)
- TuP-210** **13:30~15:30** **Fractal Carbon Films Prepared by Chemical Vapor Deposition**

J. Cheng, X. Zou, G. Yang, X. Lü, C. Wei, Z. Sun, H. Feng, and Y. Yang
(Beijing Information Sci. and Tech. Univ., China)

TuP-211 **13:30~15:30** **Effect of Silica Size on the Thermal, Mechanical and Biodegradable Properties of Polylactide/Silica Composite Material Prepared by Melt Blending**

T.-C Huang, J.-M Yeh (Chung-Yuan Christian Univ., Taiwan), and J.-C Yang (Chung-Shan Inst. of Sci. and Tech., Taiwan)

TuP-212 **13:30~15:30** **Lead Oxide Plate Precipitates from Lead Nitrate Solution**

G. Yang, X. Zou (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), J. Cheng, X. Lü, C. Wei, Z. Sun, H. Feng, and Y. Yang (Beijing Information Sci. and Tech. Univ., China)

TuP-213 **13:30~15:30** **β -PbO Plate Films Deposited on Cathode by Electrochemical Deposition**

X. Lü, X. Zou, J. Cheng, P. Ren (Beijing Information Sci. and Tech. Univ., China), X. Meng (Key Lab. of Photochemical Conversion and Optoelectronic Materials, China), G. Yang, C. Wei, and Z. Sun (Beijing Information Sci. and Tech. Univ., China)

TuP-214 **13:30~15:30** **Evaluation of Composites containing Hollow Ni/Fe-Co Fibers on Near-field Electromagnetic Wave Absorbing Properties**

J. W. Yi, S. B. Lee, J. B. Kim, S. K. Lee (KIMS, Korea), K. H. Kim (Yeungnam Univ., Korea), and O. O. Park (KAIST, Korea)

TuP-215 **13:30~15:30** **Effect of Si on the Mechanical Properties of WC-Ni Hard Metal**

K.-H Jang, S.-P Seo, C.-Y Kim, K.-Y Kim (Inst. of Hard Metal, High Material Corporation, Korea), and G.-G Lee (Pukyong Nat'l Univ., Korea)

TuP-216 **13:30~15:30** **Preparation and Corrosion Protection Effect of Electroactive Polyurethane Containing Amino-Capped Aniline Trimer**

C.-W Peng and J.-M Yeh (Chung Yuan Christian Univ., Taiwan)

TuP-217 **13:30~15:30** **Excessive Iron Source on the Structural and Electrochemical Properties of LiFePO₄/C Composite**

Y. Lin, J. Wu (Taizhou Univ., China), and Y. Yu (Zhejiang Taizhou Electric Power Bureau, China)

- TuP-218** **13:30~15:30** **Syntheses and Application of New Reactive Mesogens based on Thiol-ene System**
J.-H. Kim, H.-S. Kang, and M.-H. Lee (Chonbuk Nat'l Univ., Korea)
- TuP-219** **13:30~15:30** **Thermally Stable Polyimide/Silica Hybrid: Synthesis, Characterization and Optical Nonlinearity**
G. Wu, C. Yao (Nanjing Univ. of Tech., China), F. Qiu (Jiangsu Univ., China)
- TuP-220** **13:30~15:30** **The Characteristics of Niobium Powder for Solid Electrolytic Capacitor**
J. S. Yoon (Korea Basic Sci. Inst., Korea) and B. I. Kim (Suncheon Nat'l Univ., Korea)
- TuP-221** **13:30~15:30** **Fluorescence Properties of Pr³⁺ Doped calcium Fluoroborate Glasses**
J. S. Kumar, K. Pavani, T. Sasikala, B. C. Jamalaiah (Sri Venkateswara Univ., India), M. Jayasimhadri, K. Jang (Changwon Nat'l Univ., Korea), and L. R. Moorthy (Sri Venkateswara Univ., India)
- TuP-222** **13:30~15:30** **Preparation, Characterization and Thermal Properties of Green Polypropylene /Intumescant Flame Retardant Composites**
C.-F Kuan (Far East Univ., Thailand), S.-W Hsu (Hung-Kuang Univ., Thailand), W.-J Chen, Y.-L Li (Nat'l Tsing Hua Univ., Thailand), C.-H Chen, H.-C Kuan (Far East Univ., Thailand), and C.-L Chiang (Hung-Kuang Univ., Thailand)
- TuP-223** **13:30~15:30** **Studies of Natural Rubber Grafted with Acrylic Monomers**
S. Songprateepkul (Suranaree Univ. of Tech., Thailand) and P. Chumsamrong (Chulalongkorn Univ., Thailand)
- TuP-224** **13:30~15:30** **New Preparation Method of Coatable Polarizer Utilizing Photocurable Organic-based Lyotropic Chromonic Liquid Crystal Solution**
H.-J. Yang, Y.-J. Bae, K.-U. Jeong (Chonbuk Nat'l Univ., Korea), S.-H.

Shin (Korea Inst. of Industrial Tech., Korea), and M.-H. Lee (Chonbuk Nat'l Univ., Korea)

TuP-225 13:30~15:30 Effects of Solid Solution Treatment on the Microstructure and Properties of 7003 Aluminum Alloy

X. Chen and R. Song (Zhejiang Univ. of Tech., China)

TuP-226 13:30~15:30 Snap-through Dynamics of Curved IPMC Diaphragm for Bio-medical Micro-Pump

J. H. Jeon and I. K. Oh (Chonnam Nat'l Univ., Korea)