

Carbon 2014

World Conference on Carbon

Carbon Materials for Ubiquitous and Sustainable Life

June 29(Sun) ~ July 4(Fri), 2014

International Convention Center Jeju (ICC Jeju), Jeju, Korea

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Organized by  한국탄소학회
KOREAN CARBON SOCIETY

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Oral Sessions Day 3 (July 2, 2014, Wednesday)

- 9:10-9:30 [ORT2-14] Influence of the Reactor Temperature Profile on the Catalyst Particle Size Distribution during Carbon Nanotube Production via the Floating Catalyst Method
*Franziska TONI**, *Karl-Ernst WIRTH* (Friedrich-Alexander-University of Erlangen-Nuernberg, Germany)
- 9:30-9:50 [ORT2-15] Synthesis of Carbon Nanomaterials by Thermal Decomposition of Hydrocarbons
*Bakhytzhant. LESBAYEV**, *Gauhar T. SMAGULOVA*, *Meruyert NAZHIPKYZY*, *Nikolay G. PRIKHODKO*, *Ayagoz Y. BAKKARA*, *Guimira O. TURESHEVA*, *Zulhair A. MANSUROV* (Institute of Combustion Problems, Kazakhstan)
- 9:50-10:10 [ORT2-16] Volumetric Adsorption Study of Purification and Debundling Processes on Single-Walled Carbon Nanotube Bundles
Sébastien FONTANA, *Emeline REMY*, *Jean-François MARÉCHÉ*, *Brigitte VIGOLO*, *Claire HÉROLD*, *Fabrice VALSAQUE** (Universite de Lorraine(CNRS), France)
- 10:10-10:30 [ORT2-17] Enhanced X-Ray Absorption Property of Au-Doped Double Wall Carbon Nanotubes
Fitri KHOERUNNISA^{1}*, *Ryusuke FUTAMURA²*, *Daiiki MINAMI²*, *Takehisa KONISHI³*, *Toshihiko FUJIMORI²*, *Toru NOGUCHI²*, *Takashi FUJIKAWA³*, *Katsumi KANEKO²*(¹UPI, Indonesia, ²Shinshu University, ³Chiba University, Japan)

T3: Precursors, Carbon Fibers, and Composites [Room: SAMDA]

Chair: Vesna MISKOVIĆ-STANKOVIĆ (University of Belgrade, Serbia)
Kyong Yop RHEE (Kyung Hee University, Korea)

- 8:30-9:00 [ILT3-05] Dispersion and Properties of Carbon Nanotubes Thermoplastic Polymer Composites
*Gi Dae CHOI**, *Yeon Sik CHOI*, *Chang Hun YUN* (LG Chem. LTD., Korea)
- 9:00-9:30 [ILT3-06] Electrochemical Biocomposite Graphene/Hydroxyapatite Coatings on Titanium Aimed for Medical Applications
Vesna MIŠKOVIĆ-STANKOVIĆ^{1,2}*, *Ana JANKOVIĆ¹*, *Vivek DHAND²*, *Kyong Yop RHEE²* (¹University of Belgrade, Serbia, ²Kyung Hee University, Korea)
- 9:30-9:50 [ORT3-25] Preparation and Characterization of Carbon Fiber by Melt Spinning of PAN Based Copolymer Precursor
Min Hye JUNG¹, *Hyun Do SONG^{1,3}*, *Samsuddin Faisal MAHMOOD²*, *Benjamin L. BATCHELOR²*, *Hyun Kyu SHIN¹*, *Shin Jae KANG^{1,3}*, *Dennis W. SMITH. Jr²*, *Duck Joo YANG^{2*}* (¹Korea Institute of Carbon Convergence Technology, Korea, ²The University of Texas at Dallas, USA, ³Chonbuk National University, Korea)
- 9:50-10:10 [ORT3-26] Exergetic Analysis of the Stabilisation and Carbonisation Process in Carbon Fibre Production
*Andreas DE PALMENAER**, *M. WARNECKE*, *T. HOLTERMANN*, *G. SEIDE*, *T. GRIES* (Institut fuer Textiltechnik RWTH, Aachen University, Germany)

Oral Sessions Day 4 (July 3, 2014, Thursday)

Chair: Bin DING (Donghua University, China)
Seong-Ho YOON (Kyushu University, Japan)

- 13:10-13:40 [ILT3-07] Development of Pitch Based Isotropic Carbon Fiber for Car Body Application
Seong-Ho YOON^{1}, Byung-Jun KIM¹, Youngho EOM², Osamu KATO¹, Jin MIYAWAKI¹, Byoung Chul KIM², Isao MOCHIDAD¹, (¹Kyushu University, Japan, ²Hanyang University, Korea)*
- 13:40-14:10 [ILT3-08] Flexible Carbon Nanofibers: Controllable Fabrication and Hierarchical Porous Structure
Bin Ding (Donghua University, China)
- 14:10-14:30 [ORT3-32] Bio-Based Tailored Precursors for Advanced Carbons and Applications
Hanne WIKBERG^{}, Pirjo HEIKKILÄ (VTT Technical Research Centre of Finland, Finland)*
- 14:30-14:50 [ORT3-33] Getting Hydrophobic Sand Based on Soot
Meruyert NAZHIPKYZY^{}, Bakhytzhana T. LESBAYEV, Milana G. SOLOVYOVA, Nikolay G. PRIKHODKO, Gaukhar T. SMAGULOVA, Togzhan MASHAN, Zulhair A. MANSUROV (Institute of Combustion Problems, Kazakhstan)*

T5: Porous Carbons, Carbons for Health and Environmental Protection [Room: 303]

Chair: Indrek KULAOTS (Brown University, USA)
Seok KIM (Pusan National University, Korea)

- 8:30-8:50 [ORT5-35] Activated Carbons from Biomass and Coal Treatment Products as Catalysts for Methanol Decomposition
Mehmet Ferhat YARDIM^{1}, Boyko TSYNTSARSKI², Isabela GENOVA², Temenuzhka BUDINOVA², Bilyana PETROVA², Momtchil DIMITROV², Tanya TSONCHEVA², Daniela KOVACHEVA², Hristo KOLEV², Conchi Ovin ANIA³, Nartislav PETROV², Ivan MITOV² (¹Istanbul Technical University, Turkey, ²Bulgarian Academy of Sciences, Bulgaria, ³Instituto Nacional del Carbon INCAR-CSIC, Spain)*
- 8:50-9:10 [ORT5-36] Carbon Foam Production from Bio-Pitch
Murat KILIC^{}, Ayşe E. PÜTÜN (Anadolu University, Turkey)*
- 9:10-9:30 [ORT5-37] Carbon-Coated Alumina Films with Parallel Nanochannels as Enzymatic Bio-Electrodes
Alberto CASTRO-MUNIZ^{1}, Yasuto HOSHIKAWA¹, Hiroshi KOMIYAMA¹, Wataru NAKAYAMA¹, Hanako TAWATA¹, Takashi KYOTANI¹, Tetsuji ITOH², Kouichi NOZAKI³, Yoshihiko AMANO³ (¹Tohoku University, ²National Institute of Advanced Industrial Science and Technology (AIST), ³Shinshu University, Japan)*
- 9:30-9:50 [ORT5-38] Biofuels, Chemicals and Catalysts from Biomass via Hydrothermal Carbonization
Filoklis D. PILEIDIS^{}, Maria-Magdalena TITIRICI (Queen Mary University of London, UK)*
- 9:50-10:10 [ORT5-39] Biomass-Derived Fluorescent Carbon Quantum Dots as Solar Cell Sensitizers
Adam MARINOVIC^{}, Joe BRISCOE, Steve DUNN, Maria-Magdalena TITIRICI (Queen Mary University of London, UK)*

Poster Presentation Day 1 (July 1, 2014, Tuesday)

- POT1-11 Synthesis of Co-Doped Graphene Nano-Platelets Using Solution Process and Electrochemical Catalytic Properties
Jongwoo HAN¹, Jae Yeong CHEON², Seungjun LEE¹, Gyutae PARK¹, Sang Hoon JOO², Sungjin PARK^{1} (¹Inha University, ²Ulsan National Institute of Science and Technology, Korea)*
- POT1-12 Colloidal Suspensions of N-modified Graphene Nano-Platelets in Water and Organic Solvent/Water Mixed Systems
Gyutae PARK¹, Seungjun LEE¹, Jeffrey R. POTTS², Junghoon OH¹, Jongwoo HAN¹, Sungjin PARK^{1} (¹Inha University, Korea, ²The University of Texas at Austin, USA)*
- POT1-13 Electrolysis Decomposition Behaviors of Dye Wastewater Using Graphene Electrodes
Dong-Su LEE, Mi-Hwa CHONG, Soo-Jin PARK (Inha University, Korea)*
- POT1-14 Generation of B-Doped Graphene Nanoplatelets Using a Solution Process and Their Supercapacitor Applications
Kwangrok CHOI¹, Jongwoo HAN¹, Li Li ZHANG², Seungjun LEE¹, Junghoon OH¹, Gyutae PARK¹, Kyoung-Seok LEE³, Jeffrey R. POTTS², Junyi JI², Xin ZHAO², Rodney S. Ruoff², Sungjin PARK^{1} (¹Inha University, Korea, ²The University of Texas at Austin, USA, ³Center for Analytical Chemistry and Korea Research Institute of Standards and Science, Korea)*
- POT1-15 Solution-Based Production of Graphene Nano-Platelets Containing Extremely Low Amounts of Heteroatoms
Seung Yeon KIM¹, Jongwoo HAN¹, Seungjun LEE¹, Li Li ZHANG², Junghoon OH¹, Gyutae PARK¹, Jeffrey R. POTTS², Richard D. PINER², Rodney S. RUOFF², Sungjin PARK^{1} (¹Inha University, Korea, ²The University of Texas at Austin, USA)*
- POT1-16 Application Graphenes for Increasing Efficiency of Solar Cells
Bakhytzhhan T. LESBAYEV, Moldir AUYELKHANKYZY, Aidos. B. LESBAYEV, Gauhar T. SMAGULOVA, Nikolay G. PRIKHODKO, Meruyert NAZHIPKYZY, Zulkhair A. MANSUROV (Institute of Combustion Problems, Kazakhstan)*
- POT1-17 Synthesis of Graphene at Low Pressure in the Flame
Nikolay G. PRIKHODKO, Moldir AUYELKHANKYZY, Bakhytzhhan T. LESBAYEV, Zulkhair A. MANSUROV (Institute of Combustion Problems Kazakhstan)*
- POT1-18 Preserving the Lateral Size of Graphene Oxide Sheets during Exfoliation of Coke and Graphite Oxides by a Multi-Step Sonication Procedure
Patricia ÁLVAREZ, Uriel SIERRA, Clara BLANCO, Marcos GRANDA, Ricardo SANTAMARÍA, Rosa MENÉNDEZ (Instituto Nacional del Carbón, Spain)*
- POT1-19 Hydroxylic Functionalization of Graphene Oxides with Iridium N-Heterocyclic Carbenes for Catalytic Applications
Patricia ÁLVAREZ^{1}, Matías BLANCO¹, Clara BLANCO¹, M. Victoria JIMÉNEZ², Jesús J. PÉREZ-TORRENTE², Luis A. ORO², Rosa MENÉNDEZ^{1*} (¹Instituto Nacional del Carbón, ²Instituto de Síntesis Química y Catálisis Homogénea, Spain)*
- POT1-20 Repairing Defects in Reduced Graphene Oxide Films by Means of Graphitization Treatments
Juan M.D. TASCÓN, Rubén ROZADA, Juan I. PAREDES, Silvia VILLAR-RODIL, Amelia MARTÍNEZ-ALONSO (Instituto Nacional del Carbón, Spain)*

Poster Presentation Day 1 (July 1, 2014, Tuesday)

POT2-23	Influence of Ozone Treatment on Thermal and Mechanical Properties of Biodegradable Epoxy/Multi-walled Carbon Nanotubes Composites <i>Yoon-Ji YIM, Soo-Jin PARK* (Inha University, Korea)</i>
POT2-24	Synthesis of Polyethyleneimine Impregnated Multi-walled Carbon Nanotubes for CO ₂ Capture <i>Min-Sang LEE, Soo-Jin PARK* (Inha University, Korea)</i>
POT2-25	Influence of Carbon Nanotubes on Thermal Conductivity of Carbonized Glass Fibers Composites <i>Min-Sang LEE, Yong-Ook SHIN, Soo-Jin PARK* (Inha University, Korea)</i>
POT2-26	Influence of Heat Treatment on Thermal Conductivity of Electrolessly Nickel-plated MWCNTs <i>Jeong-Ran CHOI, Soo-Jin PARK* (Inha University, Korea)</i>
POT2-27	Facile Synthesis and Field Emission of Metal Nanoparticle Decorated Vertical N-Doped Carbon Nanotube/Graphene Hybrid Films <i>Dong Sung CHOI^{1,2}, Duck Hyun LEE³, Sang Ouk KIM^{1,2*} (¹Institute for Basic Science, ²KAIST, Korea, ³University of Michigan, Ann Arbor, USA)</i>
POT2-28	Direct Synthesis of Polyaniline/Nitrogen-Doped Carbon Nanotubes Composites <i>Gil Yong LEE^{1,2}, Atta Ul HAQ², Joonwon LIM^{1,2}, Sang Ouk KIM^{1,2*} (¹IBS, ²KAIST, Korea)</i>
POT2-29	The Synthesis of Carbon Nanotubes by Thermal Pyrolysis of Hydrocarbons <i>Gaukhar T. SMAGULOVA*, Bakhytzhan T. LESBAYEV, Ayagoz Y. BAKKARA, Zulkhair A. MANSUROV (The Institute of Combustion Problems, Kazakhstan)</i>
POT2-30	Thermal, Electrical, and Mechanical Properties of Aligned Multiwalled Carbon Nanotubes and Poly Lactic Acid Composites <i>Seong-Beom PARK^{1,2}, Min Ye KOO^{1,3}, Young-Soo PARK¹, Byung-Joo KIM¹, Kay-Hyeok AHN¹, Won-Seok KIM^{1*} (¹Korea Institute of Carbon Convergence Technology, ²Jeonju University, ³Chonbuk National University, Korea)</i>
POT2-31	Large Scale Carbon Nanotube Network Field-Effect Transistors <i>Jingqi LI (King Abdullah University, Saudi Arabia)</i>
POT2-32	Synthesis and Characterization of β -Ga ₂ O ₃ /Diamond-Like Carbon Core-Shell Heterostructure Nanowires <i>Hye-Lan KIM, Eunjeong SHIN, Young Boo LEE, Woong-Ki HONG, Se Jin LEE, Tae-Sung BAE, Hee-Suk CHUNG* (Korea Basic Science Institute, Korea)</i>
POT2-33	Synthesis and Optical Property of ZnS Nanowires Sheathed with Diamond-Like Carbon <i>Hee-Suk CHUNG^{1*}, Seul Cham KIM², Do Hyun KIM², Kyu Hwan OH², Young Boo LEE¹, Woong-Ki HONG¹, Tae-Sung BAE¹ (¹Korea Basic Science Institute, ²Seoul National University, Korea)</i>
POT2-34	Layer-by-Layer Assemble of Polyelectrolyte onto Multiwalled Carbon Nanotubes for Ultra-high Loading of Multimetallic Nanoparticles and Its Application <i>Md. Shahinul ISLAM¹, Hyokyung JEON¹, Tae Sung BAE¹, Young Boo LEE¹, Ha-Jin LEE^{1*}, Won San CHOI^{2*} (¹Korea Basic Science Institute, ²Hanbat National University, Korea)</i>