### [P1] Nano Photonics & Nano Materials I

<table>
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<tr>
<th>Date / Time</th>
<th>November 7, 2013 (Thursday) / 09:00-10:30</th>
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<tbody>
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<td>Room</td>
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**P1-1 09:00-10:30**  
**Study of Air-gap Structure for the Improvement of Light Extraction in AlGaInP-Based LED**  
Hwa Sub Oh\(^1\), Ho-Soung Ryu\(^1\), Sueng Ho Park\(^1\), Young Jin Kim\(^2\), Hyung Joo Lee\(^1\), Young Dae Cho\(^2\), Joon-Seop Kwak\(^3\), and Jong Hyeob Baek\(^1\)  
\(^1\)KOPTI, Korea, \(^2\)AUK Corp., Korea, \(^3\)Sunchon Nat’l Univ., Korea

**P1-2 09:00-10:30**  
**Effects of n-Type AlGaAs Layer on Efficiency Improvement of Omnidirectional Reflective AlGaInP Light Emitting Diodes**  
Hyung Joo Lee\(^1\), Young Dae Cho\(^1\), Young Jin Kim\(^1\), In Kyu Jang\(^1\), Seong Un Kim\(^1\), Choong Hun Lee\(^2\), Jae Hoon Kim\(^3\), Hwa Sub Oh\(^3\), and Su Chang Ahn\(^3\)  
\(^1\)AUK Corp., Korea, \(^2\)Wonkwang Univ., Korea, \(^3\)KOPTI, Korea

**P1-3 09:00-10:30**  
**A Study of the Phosphorescent Light Emitting using the Cyclometalated Pt(II) Complexes**  
Seokhwan Son\(^1\), Hwangyu Lee\(^1\), Cheehun Kwak\(^1\), Jihoon Lee\(^2\), Hogeun Ahn\(^1\), and Minchul Chung\(^1\)  
\(^1\)Sunchon Univ., Korea, \(^2\)Korea Nat’l Univ. of Transportation, Korea

**P1-4 09:00-10:30**  
**Fabrication Characteristics of Silicon Nanowires via Electrochemical Electroless Etching Method**  
ByeongSu Kang\(^1\), Chae Hwan Jeong\(^1\), Changheon Kim\(^1\), Bum Ho Choi\(^1\), Moo Sung Lee\(^2\), and Ho-Sung Kim\(^1\)  
\(^1\)KITECH, Korea  
\(^2\)Chonnam Nat’l Univ., Korea

**P1-5 09:00-10:30**  
**Photoluminescence Properties and Site Occupation of Eu\(^{3+}\) in Nanorod Bundles Crystal Ln4O(OH)9NO3:1\%Eu (Ln=Y, Lu)**  
Ling Li\(^1,2\), Hyeon Mi Noh\(^2\), Byung Kee Moo\(^2\), Byung Chun Choi\(^2\), and Jung Hyun Jeong\(^2\)  
\(^1\)Hubei Univ., China, \(^2\)Pukyong Nat’l Univ., Korea
P1-6 09:00-10:30  Crystal Growth and Luminescence Investigations of Ce, Eu co-doped YAG Nanocomposite Powders for Warm WLED  
Hyun Kyoung Yang¹, Hyeon Mi Noh², and Jung Hyun Jeong²  
¹KIER, Korea, ²Pykyong Nat’l Univ., Korea

P1-7 09:00-10:30  Photoluminescence Properties and Site Occupation of Eu3+ in Nanorod Bundles Crystal Ln4O(OH)9NO3:1%Eu (Ln=Y, Lu)  
Ling Li, Hyeon Mi Noh, Byung Kee Moon, Byung Chun Choi, and Jung Hyun Jeong, Pukyong Nat’l Univ., Korea

P1-8 09:00-10:30  Effect of Sapphire Substrate Thickness on the Characteristics of 450nm InGaN/GaN Multi-Quantum Well Light-Emitting Diodes  
Wael Z. Tawfik¹,², Seo-Jung Bea¹, and June Key Lee¹  
¹Chonnam Nat’l Univ., Korea, ²Beni-Suef Univ., Egypt

P1-9 09:00-10:30  A New Anthracene Derivative Containing t-Butyl Group for Solution Process OLEDs  
Jaehyun Lee, Seungho Kim, Soo-kang Kim, and Jongwook Park  
The Catholic Univ. of Korea, Korea

P1-10 09:00-10:30  Preparation and Characterization of Al-doped Zinc Oxide Films Deposition by Ion Beam Assisted Molecular Beam Epitaxy  
Sung Jin Kim¹, Kyooh Choi², and Se-young Choi³  
¹Yonsei Univ., Korea, ²KICET, Korea

P1-11 09:00-10:30  Rapid Thermal Annealing Effects on the Electrical and Structural Properties of the AZO Thin Film Deposited at a Room Temperature  
Sung Jin Kim¹, Kyooh Choi², and Se-young Choi³  
¹Yonsei Univ., Korea, ²KICET, Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
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<tbody>
<tr>
<td>P1-12</td>
<td>09:00-10:30</td>
<td>Rapid Thermal Annealing Effects of the ITO Thin Film Deposited at a Room Temperature</td>
<td>Sung Jin Kim(^1), Kyoob Choi(^2), and Se-young Choi(^1)</td>
<td>Yonsei Univ., Korea, KICET, Korea</td>
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<tr>
<td>P1-13</td>
<td>09:00-10:30</td>
<td>Photoluminescence Enhancement of Silole-Capped Silicon Quantum Dots Based on FRET</td>
<td>Seongwoong Kim, Bomin Cho, and Honglae Sohn</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P1-14</td>
<td>09:00-10:30</td>
<td>Effects of Nickel Cobalt Oxide Nanoparticles on Luminous Efficiency of Light-Emitting-Diodes</td>
<td>Do-Hyun Kim, G.Mohan Kumar, Seung-hwan Yeon, Tae-Joon Son, and Jinsub Park</td>
<td>Hanyang Univ., Korea</td>
</tr>
<tr>
<td>P1-15</td>
<td>09:00-10:30</td>
<td>Improvement of Light Extraction Efficiency of InGaN/GaN Blue Light Emitting Diodes using ZnO Nanostructure Arrays</td>
<td>Jong-Hyun Jeon(^1), Seung-Jong Oh(^1), Pan-Ju Choi(^1), Young-Jin Kang(^1), Ja-Yeon Kim(^2), and Min-Ki Kwon(^1)</td>
<td>Chosun Univ., Korea, KOPTI, Korea</td>
</tr>
<tr>
<td>P1-16</td>
<td>09:00-10:30</td>
<td>Highly Efficient White OLEDs using New Blue Fluorescence Emitter</td>
<td>Seungho Kim, Beomjin Kim, Jaehyun Lee, and Jongwook Park</td>
<td>The Catholic Univ. of Korea</td>
</tr>
<tr>
<td>P1-17</td>
<td>09:00-10:30</td>
<td>Current Efficiency Enhancements of Organic Light-Emitting Devices Fabricated Utilizing Phosphonic Functional Group Self-Assembled Monolayers</td>
<td>Min Sung Kim, Young Pyo Jeon, Young Woo Kim, Jae Geun Noh, and Tae Whan Kim</td>
<td>Hanyang Univ., Korea</td>
</tr>
<tr>
<td>P1-18</td>
<td>09:00-10:30</td>
<td>Luminance Mechanisms for White Organic Light-Emitting Devices Fabricated Utilizing a Tungsten Oxide Interlayer</td>
<td>Ki Hyun Kim, Young Pyo Jeon, Dong Chul Choo, and Tea Whan Kim</td>
<td>Hanyang Univ., Korea</td>
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<td>P1-19</td>
<td>09:00-10:30</td>
<td>Investigation on p-type Doping of InAs Nanowires Grown via Vapor-Liquid-Solid and Vapor-Solid Growth Mechanism</td>
<td>Jeongwoo Hwang¹, Ari Lee¹, Myung Sang Kim¹,², Sang Jun Lee³, and Jae Cheol Shin¹ ¹KOPTI, Korea, ²Chonnam Nat’l Univ., Korea, ³KRISS, Korea</td>
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<td>P1-20</td>
<td>09:00-10:30</td>
<td>Improvement of Light Extraction in Blue GaN Based Light-Emitting Diodes Structures by using Polystyrene/SiO₂ Core-Shell Nanospheres</td>
<td>Seung Hwan Yeon, Do-Hyun Kim, and Jinsub Park  Hanyang Univ., Korea</td>
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<td>P1-21</td>
<td>09:00-10:30</td>
<td>Blue Phosphorescent Organic Light Emitting Diodes with Efficient Charge Balance by Two Types of Mixed Layers</td>
<td>Hyung Jin Yang¹, Ho Won Lee¹, Seok Jae Lee¹, Song Eun Lee¹, Yong Sun¹, Ja Ryong Koo¹, Woo Young Kim², and Young Kwan Kim¹ ¹Hongik Univ., Korea, ²Hoseo Univ., Korea</td>
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<td>P1-22</td>
<td>09:00-10:30</td>
<td>Fabrication of AlN Nano-Structure for Deep-Ultraviolet Light Emitting Diodes</td>
<td>Daeyong Eom, Jinwan Kim, Kyungjae Lee, Minhwan Jeon, Cheon Heo, Jaedo Pyeon, and Okhyun Nam  Korea Polytechnic Univ., Korea</td>
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<tr>
<td>P1-23</td>
<td>09:00-10:30</td>
<td>Improvement of Light Extraction Efficiency using Nanoimprint Lithography and Semitransparent Conductor on Organic Light-Emitting Diodes</td>
<td>Ho Won Lee¹, Sang Jun Park⁶, Hyung Jin Yang¹, Song Eun Lee³, Seok Jae Lee³, Jae Woo Lee⁴, Yong Sun¹, Ja Ryong Koo¹, Woo Young Kim³, Heon Lee⁵, and Young Kwan Kim¹ ¹Hongik Univ., Korea, ²Korea Univ., Korea, ³Hoseo Univ., Korea</td>
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<td>P1-24</td>
<td>09:00-10:30</td>
<td>Enhanced Quality (11-22) Semipolar GaN with Sidewall Lateral Epitaxial Overgrowth</td>
<td>Dae-Woo Jeon, Jae-Chul Song, Tae Hoon Jeong, Tak Jeong, Sang-Heung Lee, Jong Hyeob Baek, and Jin-woo Ju  KOPTI, Korea</td>
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<td>P1-25</td>
<td>09:00-10:30</td>
<td>Fabrication of Silicon Nanowire Array by Metal-Assisted Chemical Etching</td>
<td>Jeongwoo Hwang¹, Ari Lee¹, Sang Jun Lee², and Jae Cheol Shin¹</td>
<td>¹KOPTI, Korea, ²KRISS, Korea</td>
</tr>
<tr>
<td>P1-26</td>
<td>09:00-10:30</td>
<td>Structural and X-ray Photoelectron Spectroscopy Properties of Al-doped Zinc Oxide Thin Films on Si Substrate</td>
<td>Jin Jeong and Bong Ju Lee</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P1-27</td>
<td>09:00-10:30</td>
<td>Reverse Current Characteristics of InP Gunn Diodes for W-band Waveguide Applications</td>
<td>Hyun-Seok Kim, Jun-Woo Heo, Seok-Kyu Choi, Dong-Sik Ko, and Jin-Koo Rhee</td>
<td>Dongguk Univ., Korea</td>
</tr>
<tr>
<td>P1-28</td>
<td>09:00-10:30</td>
<td>Synthesis and Characteristics of Fullerene Derivative Having a Hexyl Perylene Moiety Type as an N-type Material in Organic Solar Cell</td>
<td>Seong Hun Han, Gyu Min Kim, and Se Young Oh</td>
<td>Sogang Univ., Korea</td>
</tr>
<tr>
<td>P1-29</td>
<td>09:00-10:30</td>
<td>Optimal Fabrication of Organic Solar Cells using DMDCNQI as N-type Dopant</td>
<td>Seong Hun Han, Ae Na Lee, and Se Young Oh</td>
<td>Sogang Univ., Korea</td>
</tr>
<tr>
<td>P1-30</td>
<td>09:00-10:30</td>
<td>A Study of Structural and Photoluminescence for Al-doped CdO Thin Films</td>
<td>Jin Jeong and Bong Ju Lee</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P1-31</td>
<td>09:00-10:30</td>
<td>Highly Efficient Quantum Dot Light Emitting-Devices using a Tris[3-(3-pyridyl)-mesityl]borane Electron Transport Layer</td>
<td>Jae-Geon Choi, Min-Ji Jo, and Dae-Gyu Moon</td>
<td>Soonchunhyang Univ., Korea</td>
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<tr>
<td>P1-32</td>
<td>09:00-10:30</td>
<td><strong>Highly Efficient Quantum Dot Light Emitting-Devices by Dispersing Red Emitting CdSe/ZnS Nanoparticles into Poly(N-vinylcarbazole) Layer</strong></td>
<td>Kang-Hee Kim, Jong-Cheol Jun, and Dae-Gyu Moon, Soonchunhyang Univ., Korea</td>
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<tr>
<td>P1-33</td>
<td>09:00-10:30</td>
<td><strong>Synthesis of ZnS Microsphere by Template-Free Hydrothermal Method for Photocatalytic Reaction</strong></td>
<td>Seo-Jin Park¹, Ju-Young Park¹,¹², Do-Young Choi¹, Kyung-Jun Hwan³, Soon-Do Yoo¹, and In-Hwa Lee¹, ¹Chosun Univ., Korea, ²Seoul Nat’l Univ., Korea, ³Univ. of California at San Diego, USA, ⁴Chonnam Nat’l Univ., Korea</td>
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<td>P1-34</td>
<td>09:00-10:30</td>
<td><strong>Preparation, Characterization and Photocatalytic Activity of Hollow CeO₂ Structures using Biomass Template</strong></td>
<td>Ju-Young Park¹,², Kyung-Jun Hwang³, Sungho Jin³ and In-Hwa Lee¹, ¹Chosun Univ., Korea, ²Seoul Nat’l Univ., Korea, ³Univ. of California at San Diego, USA</td>
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<td>P1-35</td>
<td>09:00-10:30</td>
<td><strong>Fabrication and Characterization of Ag Doped TiO₂ Nanofibers for Photocatalytic Decomposition of 2-Chlorophenol using near-UV LED Process</strong></td>
<td>Ju-Il Kim¹, Ju-Young Park¹,², and In Hwa Lee¹, ¹Chosun Univ., Korea, ²Seoul Nat’l Univ., Korea</td>
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</tr>
<tr>
<td>P1-38</td>
<td>09:00-10:30</td>
<td><strong>Growth Behavior of Cyclic Chemical Vapor Deposited Al₂O₃ Layer for Passivation of OLEDs Lighting Devices</strong></td>
<td>Ha Jun Jang¹,², Jae Seok An¹, Cheol Young Park¹, Jong Ho Lee¹, and Bum Ho Choi¹, ¹KITECH, Korea, ²Chonnam Nat’l Univ., Korea</td>
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<td>P1-39</td>
<td>09:00-10:30</td>
<td><strong>Blue Fluorescent Materials Composed of Anthracene-Aryl Amine-Anthracene Derivatives for OLEDs</strong></td>
<td>Seul Bee Lee¹, Ji Young Song¹, Hyung Jin Yang², Young Kwan Kim², and Seung Soo Yoon¹, ¹Sungkyunkwan Univ., Korea, ²Hongik Univ., Korea</td>
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</table>
P1-40 09:00-10:30  Blue Emitters Based on Anthracene-Aryl-Anthracene Moieties End-Capped with 1-naphthyl Groups for Organic Light-Emitting Diodes
Su Na Park¹, Hye Jeong Kim¹, Seok Jae Lee², Song Eun Lee², Young Kwan Kim², and Seung Soo Yoon¹
¹Sungkyunkwan Univ., Korea, ²Hongik Univ., Korea

P1-41 09:00-10:30  Various Blue Emitting Materials Based on Pyrene Derivatives for Organic Light-Emitting Diodes
Hyeon Gu Kim¹, Jhin-yeong Yoon¹, Seok Jae Lee², Ho Won Lee², Young Kwan Kim², and Seung Soo Yoon¹
¹Sungkyunkwan Univ., Korea, ²Hongik Univ., Korea

P1-42 09:00-10:30  Study on CuPc for Hole Injection Layer in OLED Devices
Hyeongi Lee, Youngwook Hwang, and Taeyoung Won
Inha Univ., Korea

P1-43 09:00-10:30  Numerical Study on Organic Light Emitting Diodes with Distributed Bragg Reflector
Young Wook Hwang, Hyeon Gi Lee, and Tae Young Won
Inha Univ., Korea

P1-44 09:00-10:30  Enhancement of Light Extraction Efficiency of Nonpolar a-Plane GaN Based LED by using Plasma Damage-Free Sputtering
Min Joo Park and Joon Seop Kwak
Sunchon Nat'l Univ., Korea

P1-45 09:00-10:30  Combined Effect of Carrier Localization and Polarity in Polar and Semipolar InGaN/GaN Quantum Wells
Hyeong-Young Hwang, Sang-Bae Choi, Dong-Seon Lee, and Young-Dahl Jho
GIST, Korea

P1-46 09:00-10:30  Topological Analysis of Photoluminescence in ZnO Nanoneedles.
Keung-ji Choi¹, Dong-min Kim¹, Hyeonjun Baek², Gyu-Chul Yi², and Young-dahl Jho¹
¹GIST, Korea, ²Seoul Nat’l Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1-52</td>
<td>09:00-10:30</td>
<td>Molecular Dynamics Study of a Graphene Nanodisk Pressure Sensor</td>
<td>Sun-Young Kim, Ki-Sub Kim, and Jeong-Won Kang</td>
<td>Korea Nat’l Univ. of Transportation, Korea</td>
</tr>
<tr>
<td>P1-53</td>
<td>09:00-10:30</td>
<td>Fabrication, Structure, and Luminescence Properties of ZnTiO3/ZnO Coaxial Nanowires</td>
<td>Sunghoon Park, Soyeon An, Youngho Mun, and Chongmu Lee</td>
<td>Inha Univ., Korea</td>
</tr>
<tr>
<td>P1-54</td>
<td>09:00-10:30</td>
<td>UV-Enhanced Gas Sensing Properties of ZnTiO3</td>
<td>Sunghoon Park, Hyunsung Ko, Soyeon An, and Chongmu Lee</td>
<td>Inha Univ., Korea</td>
</tr>
<tr>
<td>P1-55</td>
<td>09:00-10:30</td>
<td>Influence of Types of Magnetic Domain Walls on the Electrical Properties in NiFe Nanowires</td>
<td>Chunghee Nam</td>
<td>Hannam Univ., Korea</td>
</tr>
<tr>
<td>P1-56</td>
<td>09:00-10:30</td>
<td>Complete Oxidation of Benzene OverCuO-CeO2 Catalysts Prepared using Different Process</td>
<td>Seong-Soo Hong</td>
<td>Pukyong Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P1-57</td>
<td>09:00-10:30</td>
<td>Photocatalytic Decomposition of Methylene Blue over MIL-53 (Fe) Prepared using Microwave-assisted Process under Visible Light Irradiation</td>
<td>Nguyen Duy Trinh and Seong Soo Hong</td>
<td>Pukyong Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P1-58</td>
<td>09:00-10:30</td>
<td>Fabrication and Characterization of Thermoelectric CrSi2 Compound by MA and Spark Plasma Sintering,</td>
<td>Min-young An, Young Kim, and Chung-Hyo Lee</td>
<td>Mokpo Nat’l Univ., Korea</td>
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E-mail : icnst2013@geni-pco.com / Web : http://www.icnst.com/icnst2013/
P1-59 09:00-10:30 Influence of Al Doping on Optical Band Gap Energy of Al-TiO2 Thin Films
Deuk Yong Lee¹, Young-Hun Kim², In-Kyu Lee², Myung-Hyun Lee³, and Nam-Ihn Cho⁴
¹Daelim Univ., Korea, ²Korea Aerospace Univ., Korea, ³KICET, Korea, ⁴Sun Moon Univ., Korea

P1-60 09:00-10:30 Local Structural Properties and Growth Mechanism of ZnO Nanorods on SrTiO3
Zhenlan Jin, C.-I. Park, I.-H. Hwang, and S.-W. Han
Chonbuk Nat’l Univ., Korea

P1-61 09:00-10:30 High-Temperature Corrosion of Nano-Multilayered TiAlSiN Thin Films in Ar-0.2%SO2 Gases
Jae Chun Lee¹ and Dong Bok Lee²
¹Myongji Univ., Korea, ²Sungkyunkwan Univ., Korea

P1-62 09:00-10:30 Microstructure and Mechanical Properties of Nanostructured 1050/6061 Aluminum Alloy Fabricated by Four-Layer Stack Accumulative Roll Bonding
Seong-Hee Lee, Jung-Han Kim, and Seong Ro Lee
Mokpo Nat’l Univ., Korea

P1-63 09:00-10:30 Fabrication and Evaluation of CNT Reinforced Aluminum Matrix Composite by a Powder in Sheath Rolling Method
Seong-Hee Lee and Dong-Min Hong
Mokpo Nat’l Univ., Korea

P1-64 09:00-10:30 Redox-Induced Abnormal and Asymmetric Transport Properties of Ferrocene-Alkanethiolate Molecular Devices on Rigid and Flexible Substrates
Hyunhak Jeong, Dongku Kim, Hanki Lee, Wang-Taek Hwang, and Takhee Lee
Seoul Nat’l Univ., Korea
P1-65 09:00-10:30  Schematics and Simulation of Nanoelectromechanical Relay Switch Based Graphene Nanoribbon  
Sun-Young Kim, Ki-Sub Kim, and Jeong-Won Kang  
Korea Nat’l Univ. of Transportation, Korea

P1-66 09:00-10:30  Statistical Analysis of Length Dependent Electrical Properties of Alkanethiols in PEDOT:PSS-Electrode Molecular Junctions.  
Hanki Lee, Hyunhak Jeong, Dongku Kim, and Takhee Lee  
Seoul Nat’l Univ., Korea

P1-67 09:00-10:30  Impact of Nano-Pore Structure in Harden Non-Sintering Cement  
Kyoung-Ju Mun¹, Won-Chun Park², Hyung-Sun Yoon¹, Hyun-Mi Eum², Sang-Chai Kim³, and Seong-Gyu Seo⁴  
¹Construction Materials Doctors Group Co., Ltd., Korea, ²Dae Woong Co., Ltd., Korea, ³Mokpo Nat’l Univ., Korea, ⁴Chonnam Nat’l Univ., Korea

P1-68 09:00-10:30  Dispersion Effect Achievable on Electrical Resistivity of Graphite/PVB/CNT Composite Film Prepared via a Tape-Casting Process  
Min-Young Kim¹, Bum Ho Choi², Moo Sung Lee², Hee Sook Noh³, and Ho-Sung Kim¹  
¹KITECH, Korea, ²Chonnam Nat’l Univ., Korea, ³Energy and Air Condition, Korea

P1-69 09:00-10:30  Non-Covalent Functionalization of Multi-Walls Carbon Nanotubes with Biodegradable and Thermal Responsive Block Copolymer  
Thi Nga Tran¹, Thanh Binh Mai¹, Yeong-Soon Gal², and Kwon Taek Lim¹  
¹Pukyong Nat’l Univ., Korea, ²Kyungil Univ., Korea

P1-70 09:00-10:30  Dual Type High Density Plasma System Operating at Extremely Low Pressure Below 0.1Pa  
Cheol Young Park¹, Ha Jun Jang¹², Jae Seok An¹, Bum Ho Choi¹, and Jong Ho Lee¹  
¹KITECH, Korea, ²Chonnam Nat’l Univ., Korea
P1-71 09:00-10:30 Preparation of High Density, High Uniformity Insulator Film at Extremely Low Pressure Below 1mTorr
Jae Seok An\textsuperscript{1}, Cheol Young Park\textsuperscript{1}, Ha Jun Jang\textsuperscript{1,2}, Jong Ho Lee\textsuperscript{1}, and Bum Ho Choi\textsuperscript{1}
\textsuperscript{1}KITECH, Korea, \textsuperscript{2}Chonnam Nat’l Univ., Korea

P1-72 09:00-10:30 Photocatalytic Properties of Silver Core/TiO\textsubscript{2} Shell Nano-Wires Grown on the Glass Substrate using the Glycothermal Process Assisted by a Photochemical Reaction
Duck-hyun Song and Tetsuji Hirato
Kyoto Univ., Japan

P1-73 09:00-10:30 Titanium Silicon Oxide Nanoparticles Added Polymerization and Application as Ophthalmological Material
Min-jae Lee, Dong-Hyun Kim, Seon-Ahr Cho, Jung-Won No, and A-Young Sung
Sehan Univ., Korea

P1-74 09:00-10:30 Optical Application of Polymer Containing Silicon 2,9,16,23-Tetra-Tert-Butyl-29H31H-Phthalocyanine Dihydroxide and Titanium Silicon Oxide Nano Particles
Duck-Hyun Kim\textsuperscript{1}, Seon-Ahr Cho\textsuperscript{1}, Tae-Hun Kim\textsuperscript{2}, and A-Young Sung\textsuperscript{1}
\textsuperscript{1}Sehan Univ., Korea, \textsuperscript{2}Baekseok Univ., Korea

P1-75 09:00-10:30 Preparations of Platinum Nanoparticles and Their Catalytic Performances
Sang Chai Kim\textsuperscript{1}, Seong Won Nahm\textsuperscript{1}, Young Kwon Park\textsuperscript{2}, Sang Chul Jung\textsuperscript{3}, and Seong Gyu Seo\textsuperscript{4}
\textsuperscript{1}Mokpo Nat’l Univ., Korea, \textsuperscript{2}Univ. of Seoul, Korea, \textsuperscript{3}Sunchon Nat’l Univ., Korea, \textsuperscript{4}Chonnam Nat’l Univ., Korea

P1-76 09:00-10:30 Temperature Dependence of Nonradiative Relaxation and Auger Recombination in Cd\textsubscript{x}Zn\textsubscript{1-x}Te/ZnTe Quantum Dots
Minh Tan Man and Hong Seok Lee
Jeju Nat’l Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| P1-78   | 09:00-10:30 | Relation between Polymerization Rate and Fracture Strength of Ceramic Core in Gel-Casting Process | Eun-Hee Kim1, Geun-Ho Cho1, Yoon Suk Oh2, Je-Hyun Lee4, and Yeon-Gil Jung1  
1Changwon Nat’l Univ., Korea, 2KICET, Korea |
| P1-79   | 09:00-10:30 | Self-Assembly of CdTe Nanoparticles into Nanowires by a Specific Wavelength | Seung-Min Lee1, Hee Won Kim2, Suh-Eun Hyeon1, Ki-Sun Lee3, Jeong Won Kang3, Jong-Ho Cha3, and Ki-Sub Kim3  
1Korea Nat’l Univ. of Transportation, Korea, 2Nat’l Energy Tech. Lab., USA |
| P1-80   | 09:00-10:30 | Preparation of Aluminum Nanoparticles using Bipolar Pulsed Electrical Discharge in Water | Heon Lee1, Sun-Jae Kim2, Minchul Chung1, Ho-Geun Ahn1, Byung Hoon Kim3, and Sang-Chul Jung1  
1Sunchon Nat’l Univ., Korea, 2Sejong Univ., Korea, 3Chosun Univ., Korea |
| P1-81   | 09:00-10:30 | Preparation and Characterization of Titanium Dioxide Nanoparticles by Liquid Phase Plasma Process | Sang-Chai Kim1, Sun-Jae Kim2, Byung Hoon Kim3, Heon Lee4, Sung Hoon Park4, and Sang-Chul Jung4  
1Mokpo Nat’l Univ., Korea, 2Sejong Univ., Korea, 3Chosun Univ., Korea, 4Sunchon Nat’l Univ., Korea |
| P1-82   | 09:00-10:30 | Extended Last-Passage Algorithms for the Charge Density on a Conducting Surface with a Charge | Chi-Ok Hwang, Youngwon Kim, and Sunggeun Lee GIST, Korea |
Improvement of Pd/C Catalyst Supporting Characteristic on Carbon Black with Various Dispersion Methods
Ji Sun Kim1,2, Jae Ho Baek1, Hyun-Woo Kim1, Seong-Soo Hong2, and Man Sig Lee1
1KITECH, Korea, 2Pukyong Nat’l Univ., Korea

Crystallographic Wet Chemical Etching of Semipolar GaN (11-22) Grown by MOCVD
Jae-Kwan Kim1, Sung-Nam Lee2, Keun-Man Song3, Jae-Sik Yoon4, and Ji-Myon Lee1
1Sunchon Nat’l Univ., Korea, 2Korea Polytechnic Univ., Korea, 3KANC, Korea, 4KBSI, Korea

Characteristics of the Mg-Doped Cr-Deficient CuCr0.97O2 Delafossite Thin Films Prepared by using Pulsed Laser Deposition
Umar Sidik, Hee-Young Lee, and Jai-Yeoul Lee
Yeungnam Univ., Korea

Carbon Coated Cu Nanopowders by Plasma Arc Discharge Technique
KIMS, Korea

Glycerol Steam Reforming over Ni Based Catalyst : Influence of Promotor
Yoo-jin Go, Kyu-am Lee, Nam-cook Park, and Young-chul Kim
Chonnam Nat’l Univ., Korea

Kinetic Study of the Catalytic Reforming of Methane with CO2-Steam Reforming over Ni/La/Al2O3 Catalyst
Myung-Hee Park, Yoon-Hwa Park, and Young-Chul Kim
Chonnam Nat’l Univ., Korea

Effect of Modified Ni-Cr Catalysts for Steam-CO2 Reforming of Methane under High Pressure
Bong-Kwan Choi, Nam-Cook Park, and Young-Chul Kim
Chonnam Nat’l Univ., Korea
P1-90 09:00-10:30  Electrical and Photocatalytic Property Change of Solution-Combusted ZnO Nanopowder by Heat-Treatment  
Sung Park1, Byoung-Ho Yoo1, Youn Cheol Kim2, Ju-Hyeon Lee3, and Jae Chun Lee4  
1Myongji Univ., Korea, 2Kongju Nat’l Univ., Korea, 3Sunmoon Univ., Korea

P1-91 09:00-10:30  Evaluation of Catalytic Performance of Nanoporous Catalysts for the Pyrolysis of Wild Reed  
Myung Lang Yoo1, Young-Kwon Park2, and Sung Hoon Park1  
1Sunchon Nat’l Univ., Korea, 2Univ. of Seoul, Korea

P1-92 09:00-10:30  Effects of Acid Characteristics of Nanoporous SBA-15 on the Pyrolysis Product Distribution of Waste Pepper Stem  
Young-Kwon Park1, Myung Lang Yoo2, and Sung Hoon Park2  
1Univ. of Seoul, Korea, 2Sunchon Nat’l Univ., Korea

P1-93 09:00-10:30  Fabrication of Nano-Sized Powders using Thermal Plasma Method  
KIMS, Korea

P1-94 09:00-10:30  A Comparative Study on Structural, Morphological and Luminescence Characteristics of Gd2MoO6:Sm3+ Phosphor Prepared via Molten-Salt and Solid-State Reaction  
Ruijin Yu1,2,3, Kiwan Jang2, Hyeon Mi Noh3, Byung Kee Moon3, Byung Chun Choi3, and Jung Hyun Jeong3  
1Northwest A&F Univ., Korea, 2Changwon Nat’l Univ, Korea 3Pukyong Nat’l Univ., Korea

P1-95 09:00-10:30  Carrier Transport Mechanisms of Nonvolatile Memory Devices Based on Nanocomposites Consisting of Self-Assembled Au Nanoparticles Embedded in a Polystyrene Layer  
Dong Yeol Yun1, Yang Zhou1, Hak Seong Kim2, Sang Wook Lee2, and Tae Whan Kim1  
1Hanyang Univ., Korea, 2Konkuk Univ., Korea
P1-96 09:00-10:30  The Structure and Properties of ICP Assisted Magnetron Sputtered Nanocrystalline CrN Coatings in Corrosion Protective Die Casting Molds
Sang-Won Park and Sung-Yong Chun
Mokpo Nat’l Univ., Korea

P1-97 09:00-10:30  Synthesis of Co-Based Catalyst Supported on Nanoporous SiC-Al2O3 Supports Including Nanowire Architectures
Chang Min Lee¹, Byung-hyuk Kim¹, Inho Kim¹², Dong Ju Moon¹,
Kyung Won Seo², and Sang Woo Kim¹
¹KIST, Korea, ²Ajou Univ., Korea

P1-98 09:00-10:30  Electro-Enhanced Remediation of Cr(VI)-Contaminated Wastewater using Nano-Mineral Doped Carbon Cloth Electrodes
Hyunhee Seo and Yul Roh
Chonnam Nat’l Univ., Korea
### [NM1] Nano Processing I

**Date / Time**  
November 7, 2013 (Thursday) / 11:40-12:40

**Room**  
Room A

<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>NM1-1</td>
<td>11:40-11:55</td>
<td>Transport Properties of Sub-10 nm Graphene Nanoribbon Array Field Effect Transistors Prepared by Block Copolymer Nanolithography</td>
<td>Myungnwoo Son¹, Jeong Gon Son², and Moon-Ho Ham¹</td>
<td>¹GIST, Korea, ²KIST, Korea</td>
</tr>
<tr>
<td>NM1-2</td>
<td>11:55-12:10</td>
<td>Strain Evolution in Poly(3-Hexylthiophene) Crystals in an Organic Photovoltaic Thin Films</td>
<td>Hyo Jung Kim¹ and Hyun Hwi Lee²</td>
<td>¹Pusan Nat’l Univ., Korea, ²Pohang Accelerator Lab., Korea</td>
</tr>
<tr>
<td>NM1-3</td>
<td>12:10-12:25</td>
<td>Directional Terahertz Radiation from GaInP Lateral Superlattice</td>
<td>Kyoung-Jin Song, Jong-Hyuk Yim, Kwang Wook Park, Seokjin Kang, Yong-Tak Lee, and Young-dahl Jho</td>
<td>GIST, Korea</td>
</tr>
</tbody>
</table>
### [NM2] Nano LED

**Date / Time**  
November 7, 2013 (Thursday) / 11:40-12:40

**Room**  
Room B

<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| NM2-1   | 11:40-11:55 | Polarized Terahertz Waves Emitted from In0.2Ga0.8As Nanowires | Jong-Hyuk Yim\(^1\), Kyoung-Jin Song\(^1\), Jin-Dong Song\(^2\), and Young-Dahl Jho\(^1\)  
\(^1\)GIST, Korea, \(^2\)KIST, Korea |
| NM2-2   | 11:55-12:10 | Gate Bias Stress-Induced Threshold Voltage Instability of MoS2 Field Effect Transistors | Kyungjune Cho, Woanseo Park, Tae-Young Kim, and Takhee Lee  
Seoul Nat’l Univ., Korea |
| NM2-3   | 12:10-12:25 | A Study on Adhesive for High Efficiency LED Light using Nano Silver | Hyunbum Park\(^1\) and Sungsu Kim\(^2\)  
\(^1\)Howon Univ., Korea, \(^2\)ADCOM, LTD, Korea |
| NM2-4   | 12:25-12:40 | The Comparison of Characteristics in GaN-Based Blue LEDs Grown on Si(111) and Sapphire Substrates | K.S. Jeon\(^1\), J.H. Sung\(^1\), M.W. Lee\(^1\), Y.H. Shin\(^1\), W.H. Park\(^1\), J.T. Oh\(^2\), J.H. Song\(^2\), H.Y. Ryu\(^3\), M.G. Kang\(^1\), Y.H. Choi\(^1\), and J.S. Lee\(^1\)  
\(^1\)LG Electronics, Korea, \(^2\)LG Innotek, Korea, \(^3\)Inha Univ., Korea |

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E-mail : icnst2013@geni-pco.com / Web : http://www.icnst.com/icnst2013/
### NP1-1 14:00-14:30

**[Invited] Growth of Polar, Semipolar and Nonpolar ZnO Thin Films by Atomic Layer Deposition and Study on Shape-Dependent Localized Surface Plasmon Enhanced UV-Emission**  
Ying Lin, Ti Wang, Hao Wu, and Chang Liu  
Wuhan Univ., China

### NP1-2 14:30-14:45

**Effect of Light Absorption in InGaN/GaN Vertical Light-Emitting Diodes**  
Junho Sung, Ki-Seong Jeon, Min Woo Lee, Eun Ah Lee, Seon Ock Kim, Hooyoung Song, Hwanjoon Choi, Mingu Kaing, Yoon-Ho Choi, and Jeong Soo Lee  
LG Electronics, Korea

### NP1-3 14:45-15:00

**Enhanced Optical Output Power of InGaN/GaN Vertical Light-Emitting Diodes by ZnO Nanorods on N-face n-GaN**  
Young-Chul Leem1, Na-Yeong Kim1, Chan M. Lim2, Sung-Tae Kim2, and Seong-Ju Park1  
1GIST, Korea, 2Samsung Electronics Co. Ltd., Korea

### NP1-4 15:00-15:15

**Photoluminescence Properties of Red-Emitting Ca3Sr3-x(PO4)4xEu3+ Phosphors for White Light-Emitting Diodes**  
A. Hakeem and K. Park  
Sejong Univ., Korea
[NM3] Nano Processing II

Date / Time: November 7, 2013 (Thursday) / 14:00-15:15

Room: Room B

NM3-1  14:00-14:30  [Invited] Fabrication, Characterization, and Application of All-Graphene p-n Vertical Tunneling Diodes
Suk-ho Choi
Kyung Hee Univ., Korea

NM3-2  14:30-15:00  [Invited] Synthesis of Spherical and Non-Spherical Gold Nanoparticles with Biochemicals from Plants
Yeoung-Sang Yun
Chonbuk Nat’l Univ., Korea

NM3-3  15:00-15:15  Facile One-Pot Synthesis of α-Fe2O3 (Hematite) Nanowires Coated with Zinc Oxide and Silver Nanoparticles for Efficient Removal of Water Pollutants.
Aguilar Ludwig Erik, Amarjargal Altangerel, Reyes Mark Kenneth, and Cheol Sang Kim
Chonbuk Nat’l Univ., Korea
### Nano Photonics II

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>November 7, 2013 (Thursday) / 15:25-16:40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room</td>
<td>Room A</td>
</tr>
</tbody>
</table>

#### NP2-1 15:25-15:55 [Invited] Localized Surface Plasmon Enhanced Quantum Efficiency of InGaN/GaN Quantum Wells by Ag/SiO2 Nanoparticles

In-Hwan Lee  
Chonbuk Nat’l Univ., Korea

#### NP2-2 15:55-16:10 Performance of Inverted Hybrid Light-Emitting Diodes Depending on the Condition of ZnO Electron Transporting Layer Deposited by RF Sputtering

Na-Yeong Kim, Pham Thi Thu Phuong, Su-Hyun Jung, Jang-Won Kang, Hyo-Wook Kim, Kwang-Hee Lee, and Seong-Ju Park  
GIST, Korea

#### NP2-3 16:10-16:25 Enhancement of Surface Plasmon Resonance of Specialty Optical Fiber Incorporated with Au Nano-Particles in Cladding Region

Seongmin Ju, Onyu Kim, Seongmook Jeong, Youngwoong Kim, and Won-Taek Han  
GIST, Korea

#### NP2-4 16:25-16:40 Synthesis and Luminescence Properties of Blue Na(Sr1-x-xyCax)PO4:yEu2+ Phosphors for White LED Applications

A. Hakeem and K. Park  
Sejong Univ., Korea
**[NM4] Nano Catalysts**

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>November 7, 2013 (Thursday) / 15:25-16:40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room</td>
<td>Room B</td>
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<th>Time</th>
<th>Title</th>
<th>Authors</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NM4-1</td>
<td>15:25-15:40</td>
<td>Studies on the Production of Higher Alcohols over Nanoparticles Supported Catalysts</td>
<td>Mikyoung Park¹, Jin Hee Lee⁴, Ramesh S¹, Sang Woo Kim⁴, Byoung Sung Ahn², and Dong Ju Moon⁴</td>
<td>¹KIST, Korea, ²UST, Korea</td>
</tr>
<tr>
<td>NM4-2</td>
<td>15:40-15:55</td>
<td>Modified Nano-Particulate Perovskite Catalyst for Steam and CO2 Reforming of Methane</td>
<td>Daeil Park¹, Dong Ju Moon⁴, and Taegyu Kim¹</td>
<td>¹Chosun Univ., Korea, ²KIST, Korea</td>
</tr>
<tr>
<td>NM4-3</td>
<td>15:55-16:10</td>
<td>Syngas Production by Steam CO2 Reforming of Methane over Hydrotalcite Catalysts</td>
<td>Na-young Kim¹, Eun hyeuk Yang⁴, Mi kyung Park¹, Yoon ju Lee³, Hyun Jin Kim³, and Dong Ju Moon⁴</td>
<td>¹KIST, Korea, ²UST, Korea, ³DSME, Korea</td>
</tr>
<tr>
<td>NM4-4</td>
<td>16:10-16:25</td>
<td>Selective Hydrogenolysis of Glycerol to 1,2-Propanediol over Hydrotalcite Catalysts</td>
<td>Sang-yong Lee¹, Jae-Son Jung⁴, Eun hyeok Yang⁴, Seung-hoon Kim¹⁴, Seung-hwan Lee³, and Dong-Ju Moon⁴</td>
<td>¹KIST, Korea, ²UST, Korea, ³JNK Hearters Co., Ltd., Korea, ⁴Korea Univ., Korea</td>
</tr>
<tr>
<td>NM4-5</td>
<td>16:25-16:40</td>
<td>Studies on the Fischer-Tropsch Synthesis over Co-Based Catalysts Supported on Modified SBA-15</td>
<td>Jae Suk Lee¹⁴, Jae Sun Jung⁴, Ga-ram Choi¹³, Kwan-young Lee⁴, and Dong Ju Moon¹²³⁴</td>
<td>¹KIST, Korea, ²UST, Korea, ³Yonsei Univ., Korea, ⁴Korea Univ., Korea</td>
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E-mail: icnst2013@geni-pco.com / Web: http://www.icnst.com/icnst2013/

Date / Time: November 7, 2013 (Thursday) / 16:40-18:10
Room: Room D

P2-1 16:40-18:10 Synthesis of a Novel Tricalcium Phosphate/Hydroxyapatite
Seung-Chan Jin, Jun-Sik Son, Zhenggang Piao, Jae-Sung Kim, Jisu Oh, Jae-Seek You, and Su-Gwan Kim
Chosun Univ., Korea

P2-2 16:40-18:10 Evaluation of Bone Regeneration of Hydroxyapatite/Alumina Bilayered Scaffold in a Canine Tibia Model
Jong Min Kim¹, Jun Sik Son², Seong Soo Kang¹, Gonhyung Kim³, and Seok Hwa Choi³
¹Chungbuk Nat’l Univ., Korea, ²Korea Textile Development Inst., Korea, ³Chonnam Nat’l Univ., Korea

P2-3 16:40-18:10 Development of Collagen Grafted Bone Particle as a Novel Bone Graft Substitutes
Youn-Mook Lim¹, Se Eun Kim¹, Kwang Sik Jang³, Kyung Mi Shim¹, Seok Hwa Choi², Sung In Jeong³, Jin-oh Jeong³, and Seong Soo Kang¹
¹Chonnam Nat’l Univ., Korea, ²Chungbuk Nat’l Univ., Korea, ³KAERI, Korea

P2-4 16:40-18:10 Manufacture of Duck-Beak Bone Particles with Gamma-Ray Irradiation for Bone Graft
Se Eun Kim¹, Ga Hoi Choi², Kyung Mi Shim¹, Seok Hwa Choi², Youn-Mook Lim¹, Sung In Jeong³, Jong-Young Lim³, Jun Sik Son⁴, and Seong Soo Kang¹
¹Chonnam Nat’l Univ., Korea, ²Chungbuk Nat’l Univ., Korea, ³KAERI, Korea, ⁴Korea Textile Development Inst., Korea

P2-5 16:40-18:10 The Effect of Novel Sulfur Silane Systems on Resin Bond Strength to Dental Noble Metal Alloys
Yangho Lee¹, Jun Sik Son², Eunkyung Lee³, Kyo-Han Kim¹, and Tae-Yub Kwon¹
¹Kyungpook Nat’l Univ., Korea, ²Korea Textile Development Inst., Korea
P2-6 16:40-18:10 The Variations of Thermal Expansion Coefficient of Bioactive Glass on the Weight of Na2O
Gyejung Oh, Kyungjun Jang, Minkyung Ji, Jihyun Kim, Hyunpil Lim, Kwidug Yun, and Sangwon Park
Chonnam Nat’l Univ., Korea

P2-7 16:40-18:10 The Infiltration Effect of Different Particle Size of Bioactive Glass into Zirconia
Kyungjun Jang, Gyejung Oh, Minkyung Ji, Jihyun Kim, Hyunpil Lim, Kwidug Yun, and Sangwon Park
Chonnam Nat’l Univ., Korea

P2-8 16:40-18:10 Nano-Structured Bio-Ceramic Hydroxyapatite Coating using Aerosol Deposition Process for Medical Applications
Dae-Geun Kim1,2, Myeong-No Lee1, Hyeonu Hong1, Ju-hui Jung1, Hyeong-Bok Lee1, and Jae-Hyuk Park1
1IONES Co., Ltd, Korea, 2Myongji Univ., Korea

P2-9 16:40-18:10 Evaluation of Bone Defect Healing in the Area around Implants after Transplanting Autogenous Tooth Powder Treated with Various Acid Etching Processes
Byung-Won Kang, Han-Seung Jang, Su-Gwan Kim, Ji-Su Oh, Jae-Seek You, Seung-Chan Jin, and Sung-Chul Lim
Chosun Univ., Korea

P2-10 16:40-18:10 A Comparative Study on the Bone Formation Capacity of Autogenous Tooth Graft Materials with Toothash Powder Grafted to the Tooth Extraction Socket of Adult Dogs
Seong-Soo Yang, Su-Gwan Kim, Ji-Su Oh, Jae-Seek You, and Sung-Chul Lim
Chosun Univ., Korea

P2-11 16:40-18:10 Comparative Evaluation of Implant Stability According to the Surfaces of Implants in the Mandibles of Adult Dogs
Yu-ri Choi and Su-Gwan Kim
Chosun Univ., Korea
P2-12 16:40-18:10  Comparison of Bone Healing Ability on CMC- and HA-Based Bone Grafts in a Rabbit Segmental Defect Model
Jong Min Kim, Seong Soo Kang, Jun Sik Son, and Seok-hwa Choi
1Chungbuk Nat’l Univ., Korea, 2Chonnam Nat’l Univ., Korea
3Korea Textile Development Inst., Korea

P2-13 16:40-18:10  Fluorescent Nano Particle Assembly of Quinoline for Biosensor Application
Sangjun Jin and Hyong-Jun Kim
Kongju Nat’l Univ., Korea

P2-14 16:40-18:10  Fatigue Test of Cytochrome c Self-Assembled on a 11-MUA Layer Based on Electrochemical Analysis for Bioelectronic Device
Taek Lee, Jinho Yoon, Yong-Ho Chung, Junhong Min, and Jeong-Woo Choi
1Sogang Univ., Korea, 2Chung-Ang Univ., Korea

P2-15 16:40-18:10  Biotransformation and Its Application: Biogenic Nano-Catalyst and Metal-Reducing Bacteria to Remediate Cr(VI)-Contaminated Water
Hyunhee Seo and Yul Roh
Chonnam Nat’l Univ., Korea

P2-16 16:40-18:10  Bioavailability of the Nano-unit 14C-Chemical on Various Water Potential Conditions
Sang-Chul Jung, Hangun Kim, Ho-Geun Ahn, and Do-Jin Lee
Sunchon Nat’l Univ., Korea

P2-17 16:40-18:10  Preosteoblast Cell Response on Polycaprolactone (PCL) 3D Scaffolds Formed Hyaluronic Acid Nano Layer
Byung Hoon Kim, Seong Won Yang, and Yeong Mu Ko
1Chosun Univ., Korea, 2Chosun Univ. College of Medicine, Korea

P2-18 16:40-18:10  O2/Ar Plasma Treatment for Enhancing the Biocompatibility of Hydroxyapatite Nanopowder and Polycaprolactone Composite Film
Sung-Woon Myung, Yeong-Mu Ko, and Byung-Hoon Kim
Chosun Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2-19</td>
<td>16:40-18:10</td>
<td>In Vitro Bioactivity of Chitosan-Gelatin-Hyaluronan/Nanohydroxyapatite Composite Scaffolds for Bone Tissue Engineering</td>
<td>Young Sun Hwang, Yeong Mu Ko, Seong-Won Yang, and Byung Hoon Kim</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P2-20</td>
<td>16:40-18:10</td>
<td>Plasma Polymerization of 1, 2-Diaminocyclohexane for Covalent Bonding of Bone Morphogenic Protein-2 on Titanium Surface</td>
<td>Geon Soo Shin, Sung Woon Myung, Young Hyoun Hwang, Yeong Mu Ko, and Byung Hoon Kim</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P2-22</td>
<td>16:40-18:10</td>
<td>Fabrication of 3D Scaffolds with Nano-Hydroxyapatite for Improving the Preosteoblast Cell-Biological Performance</td>
<td>Hee-Sang Roh, Young-Hyoun Hwang, Yeong-Mu Ko, and Byoung-Hoon Kim</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P2-23</td>
<td>16:40-18:10</td>
<td>Roles of Different Polymeric Nano Layers for Improving the Biocompatibility of CO2 Gas Foaming/Salt Leaching Porous Scaffolds</td>
<td>Tae-Yeong Bak, Sung Woon Myung, Young Hyoun Hwang, Yeong Mu Ko, and Byung Hoon Kim</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P2-24</td>
<td>16:40-18:10</td>
<td>The Effect on Antibacterial Activity and Cell Compatibility of Titanium/Zirconium Nitride Coating on Titanium</td>
<td>Min-kyung Ji, Mong-sook Vang, Hong-so Yang, Sang-won Park, Kwi-dug Yun, Kyung-ku Lee, Gye-jeong Oh, Ga-hyun Kim, and Hyun-pil Lim</td>
<td>Chonnam Nat’l Univ., Korea</td>
</tr>
</tbody>
</table>
P2-25 16:40-18:10  The Effect of GRGDS Peptide Coating on TiO2 Nanotube by Chemical Immobilized Method  
Ga-Hyun Kim, Il-Shin Kim, Sang-Won Park, Kwang-Min Lee, Kwi-Dug Yun, Mong-Sook Vang, Hong-So Yang, Jeong-Tae Koh, Gye-Jeong Oh, Min-Kyung Ji, and Hyun-Pil Lim  
Chonnam Nat'l Univ., Korea

P2-26 16:40-18:10  Preparation and Characterization of Low Molecular Weight Heparin by Liquid Phase Plasma Method  
Do-Jin Lee¹, Hangun Kim¹, Byung Hoon Kim², Heon Lee¹, and Sang-Chul Jung³  
¹Sunchon Nat’l Univ., Korea, ²Chosun Univ., Korea

P2-27 16:40-18:10  Hydroxyapatite Coating on Nanotubular Ti-25Ta-xZr Alloys by Electrochemical and Physical Deposition Methods  
Hyun-Ju Kim, Yeong-Mu Ko, and Han-Cheol Choe  
Chosun Univ., Korea

P2-28 16:40-18:10  Morphology Changes of Mn/HA Coated Films on Nanotube-formed Ti-35Ta-xNb Alloys  
Chae-Ik Jo, Yeong-Mu Ko, and Han-Cheol Choe  
Chosun Univ., Korea

P2-29 16:40-18:10  Surface Morphology of Zn-HA Coated Nanotubular Ti-Nb-Hf Alloy  
Sung-Hwan Kim, Yeong-Mu Ko, and Han-Cheol Choe  
Chosun Univ., Korea

P2-30 16:40-18:10  Electrochemical Deposition of Nano-Sized Si-Ca/P on Beta Ti Alloy by Cyclic Voltammetry Method  
Yong-Hon Jeong¹ and Han-Cheol Choe²  
¹The Ohio state Univ., USA, ²Chosun Univ., Korea

P2-31 16:40-18:10  Silicon-Hydroxyapatite Coating on Nanotube Formed Ti-30Nb-xTa Alloys for Biocompatibility  
Eun-Sil Kim, Yeong-Mu Ko, and Han-Cheol Choe  
Chosun Univ., Korea
P2-32 16:40-18:10  In Vitro Evaluation of Hydroxyapatite-Coated Titanium Implant with Atmospheric Plasma Treatment
Hyo-Jin Lee¹, Tae-Yub Kwon¹, Kyo-Han Kim¹, Seong Soo Kang², Seok Hwa Choi³, Soon-Taek Kwon⁴, Dae-Hyun Cho⁴, and Jun Sik Son⁴
¹Kyungpook Nat’l Univ., Korea, ²Chonnam Nat’l Univ., Korea
³Chungbuk Nat’l Univ., Korea, ⁴Korea Textile Development Inst., Korea

P2-33 16:40-18:10  Preparation and Characterisation of Hydroxyapatite Coatings on Nanotubular TiO2 Surface Obtained by Sol–Gel Process
Jin-ho Shin¹, Jeong-Tae Koh¹, Hyun-Pil Lim¹, Gye-Jeong Oh¹, Seok-Woo Lee², Kwang-min Lee¹, Kyung-Ku Lee², and Sang-Won Park¹
¹Chonnam Nat’l Univ., Korea, ²R&D Center for Titanium and Special Alloys, Korea

P2-34 16:40-18:10  Characterization of Shewanella Oneidensis MR-1 Mutant for the Understanding of the Growth Mechanisms of Tellurium Nanorods
Gukyoung Kwon, Dong-Hun Kim, Taeyang Kim, and Hor-Gil Hur
GIST, Korea

P2-35 16:40-18:10  Microbial Synthesis of Iron Sulfide (FeS) and Siderite (FeCO3) Nanoparticles during Anoxic Bioreduction of Acid Mine Drainage (AMD)
Yumi Kim, Yuri Lee, and Yul Roh
Chonnam Nat’l Univ., Korea

P2-36 16:40-18:10  Microbial Synthesis and Characterization of Superparamagnetic Zn-Substituted Magnetite Nanoparticles
Yumi Kim and Yul Roh
Chonnam Nat’l Univ., Korea

P2-37 16:40-18:10  Effects of Oxide Layer on the Bonding Strength of Ni-Cr Alloys with Porcelain Ceramics
Won Uk Park¹, Sung Heon Jung¹, Jingming Zhao¹, Kyu Hong Hwang¹, and Jong kook Lee²
¹Gyeongsang Nat’l Univ., Korea, ²Chosun Univ., Korea
**P2-38 16:40-18:10** Determination of C-Terminal δ-Catenin Responsible for Inducing Dendritic Morphogenesis
Ho-Bin Lee¹, Yongfeng He², Gyeong-Su Yang³, Jin-A Oh¹, Ji-Seon Ha³, Oh-Hyuen Song¹, Do-Jin Lee¹, Sang-Chul Jung¹, Kyung Keun Kim², Kwonseop Kim², and Hangun Kim¹
¹Sunchon Nat’l Univ., Korea, ²Chonnam Nat’l Univ., Korea

**P2-39 16:40-18:10** Liquid Crystal Formulation and Optimization of Anti-Microbial Polyherbal Ointment
Jae-Hwan Choi¹, Cheong-Weon Cho¹, Jae-Hun Kim³, Soo Hyun Park³, Suhwan Chang⁴, and Young-Beob Yu⁵
¹Chungnam Nat’l Univ., Korea, ²KAERI, Korea, ³Chonnam Nat’l Univ., Korea, ⁴Univ. of Ulsan college of Medicine, Korea, ⁵Nambu Univ., Korea

**P2-40 16:40-18:10** Ethosomes and Transfersomes for Topical Delivery of Ginsenoside Rh1 from Red Ginseng: Characterization and in Vitro Evaluation
Jae-Hwan Choi¹, Young-Beob Yu², Sun-Hang Cho³, Mi-Ja Chung⁴, Je-jung Yun⁵, and Cheong-Weon Cho¹
¹Chungnam Nat’l Univ., Korea, ²Nambu Univ., ³KRICT, Korea, ⁴Gwangju Univ., Korea, ⁵Nano Bio Research Inst.

**P2-41 16:40-18:10** Preparation and Decoration of Gold and Silver Nanoparticles on L-Phosphatedylcholine Functionalized Carbon Nanotubes
Pratap Kotte, Yu-lim Ko, and Yeoung Sang Yun
Chonbuk Nat’l Univ., Korea

**P2-42 16:40-18:10** The Role of Magnesium Ion Substituted Biphasic Calcium Phosphate Spherical Microscaffolds in Osteogenic Differentiation of Human Adipose Tissue-Derived Mesenchymal Stem Cells
Dong-Hyun Kim¹, Keun-Koo Shin¹, Jin Sup Jung¹, Ho Hwan Chun¹, Jong Kook Lee², and Seog-Young Yoon¹
¹Pusan Nat’l Univ., Korea, ²Chosun Univ., Korea

**P2-43 16:40-18:10** The Effect of Thymosin β4 for Osteoblast Adhesion on Titanium Surface
Baik-Dong Choi¹, Soon-Jeong Jeong¹, Hye-Yon Lee³, Do-Seon Lim², and Moon-Jin Jeong¹
¹Chosun Univ., Korea, ²Eulji Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2-44</td>
<td>16:40-18:10</td>
<td>660 nm Red LED Induces Secretory Leukocyte Protease Inhibitor (SLPI) in LPS-Stimulated RAW264.7 Cell</td>
<td>Soon-Jeong Jeong¹, Baik-Dong Choi¹, Hye-Yon Lee¹, Young-Hyun Hwang¹, Byung-Hoon Kim¹, Yong-Ick Cho², and Moon-Jin Jeong¹</td>
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<td>¹Chosun Univ., Korea, ²KOPTI, Korea</td>
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<tr>
<td>P2-45</td>
<td>16:40-18:10</td>
<td>RhBMP-2 Effect of the Functionally Graded Nano-Micro Titanium Implants on Vertical Bone Defect Model</td>
<td>Kwidug Yun¹, Seongsoo Kang¹, Hyunpil Lim¹, Mongsook Vang¹, Hongso Yang¹, Gyejeong Oh¹, Hyunseung Kim¹, Gabwoon Hwang¹, Jeongtae Koh¹, Kyungku Lee¹, Kwangmin Lee¹, Jaesam Ban¹, and Sangwon Park¹</td>
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<td>¹Chonnam Nat’l Univ., Korea, ²Megagem Implant R&amp;D Center, Korea, ³Songwon Univ, Korea, ⁴Gwangju Technopark, Korea</td>
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<tr>
<td>P2-46</td>
<td>16:40-18:10</td>
<td>Self-Assembled Nanoparticles for Targeting of CD44 Receptor</td>
<td>Young-Il Jeong, Jong-Ho Hwang, Chung Wook Chung, and Dae Hwan Kang</td>
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<td>Pusan Nat’l Univ., Korea</td>
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<tr>
<td>P2-47</td>
<td>16:40-18:10</td>
<td>Evaluation of Electrospun PU/propolis Nanofibrous Polymer Patch for Antiinflammation and Wound Healing</td>
<td>Jeongin Kim, Afeesh Rajan Unnithan, and Cheolsang Kim</td>
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<td>Chonbuk Univ., Korea</td>
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<tr>
<td>P2-48</td>
<td>16:40-18:10</td>
<td>Nanoaggregates of Polysaccharides and Its Biological Activity</td>
<td>Ki-Choon Choi¹, Kyung Dong Lee², Da Hye Kim¹, and Young-Il Jeong¹</td>
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<td>¹Rural Developement Administration, Korea, ²Dongsin Univ., Korea, ³Pusan Nat’l Univ., Korea</td>
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<tr>
<td>P2-49</td>
<td>16:40-18:10</td>
<td>Biological Synthesis of Tellurium Nanostructures by Shewanella Oneidensis MR-1</td>
<td>Dong-Hun Kim, Sunhwa Park, Younggun Yoon, and Hor-Gil Hur</td>
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International Conference on Nano Science and Nano Technology
ICNST 2013
November 7-8, 2013 / Chosun University, Gwangju, Korea

P2-50 16:40-18:10  Fabrication of Optical Fiber pH Sensor Based on NIR Quantum Dots
Seshadri Reddy Ankireddy and Jongsung Kim
Gachon Univ., Korea

P2-51 16:40-18:10  Characterizations of Bone-like Apatite Powder Fabricated using Modified Simulated Body Fluid
Ji-Hae Ahn, Ok-Sung Han, Hyun-Joo Moon, Yeong-Joon Park, and Ho-Jun Song
Chonnam Nat’l Univ., Korea

P2-52 16:40-18:10  Antioxidative Activity of Platinum Nanocolloid and Its Protective Effect against Hepatic Cellular Damage
Mi-Ran Choi1, Le Thanh DoX1, Yong-Hoon Chung2, Teruo Kawada4, Hoon Yoo3, and Rina Yu1
1Ulsan Univ., Korea, 2SOLCO NANOADVANCE Co., Korea, 3Chosun Univ., Korea, 4Kyoto Univ., Japan

P2-53 16:40-18:10  Surface Characterization and Osteoconductivity Evaluation of Micro/Nano Surface Formed on Titanium using Anodic Oxidation Combined with H2O2 Etching and Hydrothermal Treatment
Eun-Jin Park, Yo-Han Song, Moon-Jin Hwang, Ho-Jun Song, and Yeong-Joon Park
Chonnam Nat’l Univ., Korea

P2-54 16:40-18:10  Regenerable, Label-free Localized Surface Plasmon Resonance (LSPR) Aptasensor for Ochratoxin A Detection
Jin-Ho Park1, Ju-Young Byun1, Hyoyoung Mun2, Won-Bo Shim1, Yong-Beom Shin2, Taihua Li1 and Min-Gon Kim1
1GIST, Korea, 2KRIIBB, Korea

Young Jin Do and Jong Sung Kim
Gachon Univ., Korea
<table>
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<th>Time</th>
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<tbody>
<tr>
<td>P2-56</td>
<td>16:40-18:10</td>
<td>Enhancement of Pyrrhotite Bioleaching through Bacterial Adaptation and Direct Biological Oxidation</td>
<td>Nag-Choul Choi¹, Song-Bae Kim¹, Bong-Ju Kim², Kang-Hee Cho², Su-Ji Oh², and Cheon-Young Park²</td>
</tr>
<tr>
<td>P2-57</td>
<td>16:40-18:10</td>
<td>Influence of Glyoxal on Preparation of Poly(vinyl Alcohol)(PVA)/Poly(acrylic acid)(PAA) Blend Film</td>
<td>Ju-Heon Lee¹, Ju-Il Kim¹, Ju-Young Park¹,², and In Hwa Lee¹</td>
</tr>
<tr>
<td>P2-58</td>
<td>16:40-18:10</td>
<td>Fabrication and Characterization of Antimicrobial Ethyl Cellulose Nanofibers using Electrospinning Techniques</td>
<td>Dae-Geun Kim¹, Ju-Young Park¹,², and In Hwa Lee¹</td>
</tr>
<tr>
<td>P2-60</td>
<td>16:40-18:10</td>
<td>Effect of Nanofillers on Properties of Glass Composite Sealants</td>
<td>Dong-Hoon Jang¹, Bong-Soo Kim¹, Sung Park¹, Dong Bok Lee², Jong-Ho Lee³, Hae-Weon Lee³, and Jae Chun Lee¹</td>
</tr>
<tr>
<td>P2-61</td>
<td>16:40-18:10</td>
<td>Effects of Water Purge Time on the Formation of Zinc Oxide Thin Films Grown by Atomic Layer Deposition</td>
<td>Hui Kyung Park and Jaeyeong Heo</td>
</tr>
<tr>
<td>P2-62</td>
<td>16:40-18:10</td>
<td>Synthesis of Tricyclopentadiene over Nanoporous MCM-41 Catalysts</td>
<td>Eunseo Park¹, Jinhan Kim¹, Jin-Heong Yim¹, Jeongsik Han², Young-Kwon Park³, and Jong-Ki Jeon¹</td>
</tr>
<tr>
<td>P2-63</td>
<td>16:40-18:10</td>
<td>Synthesis of Nanoporous Adsorbents using Alum Sludge</td>
<td>Nayoung Park¹, Junghyun Bae¹, Goun Kim¹, Jong-Ki Jeon¹, Young-Kwon Park², and Choul-Ho Lee³</td>
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<tr>
<td>P2-64</td>
<td>16:40-18:10</td>
<td>Nano-Structures Constructed by Self Assembly of Amphiphilic Rod-Coil Block Copolymer</td>
<td>Chang-Geun Chae, Ho-Bin Seo, In-Kyu Park, Mohammad Changez, Haeng-Deog Koh, and Jae-Suk Lee</td>
</tr>
<tr>
<td>P2-65</td>
<td>16:40-18:10</td>
<td>Synthesis of Magnetite Nanoparticles and Their Surface Modification for Hyperthermia Application</td>
<td>Eun-Hee Lee and Chang-Yeoul Kim</td>
</tr>
<tr>
<td>P2-66</td>
<td>16:40-18:10</td>
<td>Fast Responsive Gas Sensor of Vertically Aligned Fluorine-Doped Tin Oxide Nanorod Thin Film</td>
<td>Chang-Yeoul Kim</td>
</tr>
<tr>
<td>P2-67</td>
<td>16:40-18:10</td>
<td>Microbially Mediated-Precipitation of Strontium Carbonate Nanoparticles</td>
<td>Serku Kang and Yul Roh</td>
</tr>
<tr>
<td>P2-68</td>
<td>16:40-18:10</td>
<td>Formation and Characterization of Ni Nanofiber Catalysts on a Nickel Metal Foam by Electrospinning Process</td>
<td>Hee Chul Yeom, Dong Ju Moon, Kwan Young Lee, and Sang Woo Kim</td>
</tr>
<tr>
<td>P2-69</td>
<td>16:40-18:10</td>
<td>Exploration of the Mechanism for Self-Emulsion Polymerization and Synthesis of Polymeric Nanoparticles from Amphiphilic Homopolymer</td>
<td>Santosh Kumar, Dong-Woo Kim, Hong-Joon Lee, Mohammad Changez, Tae-Ho Yoon, and Jae-Suk Lee</td>
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</tbody>
</table>

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ICNST 2013
November 7-8, 2013 / Chosun University, Gwangju, Korea

P2-70 16:40-18:10  Effect of Gold Nanoparticles Addition to CuO-ZnO/Al2O3 Catalyst in Conversion of CO2 to CH3OH
Won-Ju Ahn¹, Hwan-Gyu Lee¹, Myeong-Won Ahn¹, Seok-Hwan Son¹, Hong-Hee Kim¹, Hyeong-Hyeon Kim¹, Min-Chul Chung¹, Kwon-Pil Park¹, Byeong-Mo Kang², Woon-Jo Jeong¹, Do-Jin Lee³, Bo-Kyun Sohn¹, and Ho-Geun Ahn¹
¹Sunchon Nat’l Univ., Korea, ²OT&T, INC., Korea

P2-71 16:40-18:10  Preparation of Nanosized TiO2 Powder from Spent Titanium Chip by Sol-Gel Method
Hwan-Gyu Lee¹, Won-Ju Ahn¹, Seong-Kyung Kim¹, Byeong-Mo Kang², Woon-Jo Jeong¹, Min-Chul Chung¹, and Ho-Geun Ahn¹
¹Sunchon Nat’l Univ., Korea, ²OT&T, INC., Korea

P2-72 16:40-18:10  Bimetallic Pt-Au Nanocatalysts on ZnO/Al2O3/Monolith for Air Pollution Control
Ho-Guen Ahn¹ and Ki-Joong Kim²
¹Sunchon Nat’l Univ., Korea, ²Oregon State Univ., USA

P2-73 16:40-18:10  Nanosized CuO-ZnO/TC Catalyst for Conversion of Carbon Dioxide to Methyl Alcohol
Won-Ju Ahn¹, Min-Chul Chung³, Kwon-Pil Park¹, Bo-Kyun Sohn¹, Ki-Joong Kim², Woon-Jo Jeong³, Sang-Chul Jung³, Do-Jin Lee³, Byeong-Kwon Ahn³, and Ho-Geun Ahn¹
¹Sunchon Nat’l Univ., Korea, ²Oregon State Univ., USA, ³OT&T, INC., Korea, ⁴Chodang Univ., Korea

P2-74 16:40-18:10  Experimental Investigation on Graphene Modification using 3-Aminopropyltriethoxysilane
Dae-Sung Kim, Vivek Dhand, and Kyong Yop Rhee
Kyung Hee Univ., Korea

P2-75 16:40-18:10  MMT Addition Effect on Mechanical Behavior of Basalt/Polyester Composites
Tae-Kyung Kim and Kyong-Yop Rhee
Kyung Hee Univ., Korea
P2-76  16:40-18:10  Study on Graphene Agglomeration Reduction Due to Cryogenic Milling Process  
Deok-Soo Kang and Kyong-Yop Rhee  
Kyung Hee Univ., Korea

P2-77  16:40-18:10  The Characteristics of an Antibacterial TiAgN Thin Film Coated by PVD Technique  
Byeong-Mo Kang¹, Woon-Jo Jeong², Ho-Geun Ahn³, and Yeong-Seog Lim¹  
¹Chonnam Nat’l Univ., Korea, ²OT&T Inc., Korea, ³Sunchon Nat’l Univ., Korea

P2-78  16:40-18:10  Synthesis and Characterisation of Silica-Modified Titania for Photocatalytic Decolouration of Crystal Violet  
Mohammad Shahid¹, Ibrahim El Saliby¹, Andrew McDonagh¹, Se Min Park², Ho Kyong Shon¹, and Jong-Ho Kim²  
¹Univ. of Tech., Australia, ²Chonnam Nat’l Univ., Korea

P2-79  16:40-18:10  Enhancement of Mechanical Properties and Flame Retardancy of HDPE Composite Containing Nanoclay Prepared by Electron Beam Irradiation  
Jong Seok Park, Seung Jun Lee, Phil Hyun Kang, and Young Chang Nho  
KAERI, Korea

Jong Seok Park, Jong Bae Choi, Young Min Shin, Sung In Jeong, Hui Jeong Gwon, Youn Mook Lim, Phil Hyun Kang, and Young Chang Nho  
KAERI, Korea

Ngoc Tam Le and Jong Sung Kim  
Gachon Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2-82</td>
<td>16:40-18:10</td>
<td>Long and Short Range Order Structural Analysis of In situ Formed Biphasic Calcium Phosphates</td>
<td>Dong-Hyun Kim¹, Gi-Yeop Kim¹, Ho Hwan Chun¹, Si-Young Choi², Hong-Chae Park¹, and Seog-Young Yoon¹ ¹Pusan Nat’l Univ., Korea, ²KIMS, Korea</td>
</tr>
<tr>
<td>P2-83</td>
<td>16:40-18:10</td>
<td>Ac2O/HCl Modulated Fluorescence on-off Model Based on Arlymaleimide</td>
<td>Xiaoqian Li¹, Jae-Young Lee², and Young-A Son² ¹Henan Normal Univ., China, ²Chungnam Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P2-84</td>
<td>16:40-18:10</td>
<td>Spectral Switching of Naphthalimide-Coumarin Dye</td>
<td>Xiaoqian Li¹, Ji-Yong Hwang², and Younga Son² ¹Henan Normal Univ., China, ²Chungnam Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P2-86</td>
<td>16:40-18:10</td>
<td>High Frequency Induction Heated Synthesis and Consolidation of Nanostructured TaSi2-WSi2 Composite and Its Mechanical Properties</td>
<td>In-Jin Shon and Hyun-Su Kang  Chonbuk Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P2-87</td>
<td>16:40-18:10</td>
<td>Highly Ordered Superhydrophobic Pillars using Carbon Nanotubes Regrowth</td>
<td>Ung Hui Shin, Jong-Man Kim, and Hyung Woo Lee  Pusan Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P2-88</td>
<td>16:40-18:10</td>
<td>Quantitative Effects of Amino Acid on the Synthesis of Perovskite using Microwave-Induced Solution Combustion Synthesis</td>
<td>Choong-Hwan Jung, Young-Min Han, and Yeon-Ku Kim  KAERI, Korea</td>
</tr>
</tbody>
</table>
### P2-89 16:40-18:10  
Detection of Organic Vapors Based on Photoluminescent DBR Porous Silicon Interferometer  
Jihoon Ahn, Bomin Cho, and Honglae Sohn  
Chosun Univ., Korea

### P2-90 16:40-18:10  
Seawater Absorption Effect on Tensile Properties of Vinylester/MMT/Glass Composites  
Ji Il Ryu¹ and Kyong-Yop Rhee¹  
Kyung Hee Univ., Korea

### P2-91 16:40-18:10  
Ring Opening of Naphthenic Molecules over Metal Containing Mesoporous Y Zeolite Catalyst  
Eun Sang Kim, You-Jin Lee, Kwang-Eun Jeong, Tae-Wan Kim, Joo-Wan Kim, Chul-Ung Kim, and Soon-Yong Jeong  
KRICT, Korea

### P2-92 16:40-18:10  
Structural and Photoluminescence Properties of Eu2+ Doped Alkaline Earth Aluminates  
Yeon Woo Seo¹, Byung Kee Moon¹, Byung Chun Choi², and Jung Hyun Jeong¹  
Pukyong Nat’l Univ., Korea

### P2-93 16:40-18:10  
Preparation and Luminescence of LaF2 Based Transparent Glass-Ceramics  
Hai Guo¹², XiaoMan Li¹, Hyeon Mi Noh², Byung Kee Moon², Byung Chun Choi², and Jung Hyun Jeong²  
¹Zhejiang Normal Univ., China, ²Pukyong Nat’l Univ., Korea

### P2-94 16:40-18:10  
Zn Effect of the Mg-Zn Alloy for the Biomedical Implant  
Jihyun Kim¹, Mongsook Vang¹, Hongso Yang¹, Sangwon Park¹, Hyunpil Lim¹, Gyejung Oh¹, Minkyung Ji¹, Kyungjun Jang¹, and Kwidug Yun¹  
¹Chonnam Nat’l Univ., Korea

### P2-95 16:40-18:10  
Piezoelectric Ternary Oxide Nanowire/Nano-Tube Fabricated using Solution-Based Method  
Gil Woong Kim, Hyun Jun Lee, Hye Jung Lee, Sung Su Lee, Eun Young Park, Jung Hun Kwak, and Ji Young Jo,  
GIST, Korea
P2-96  16:40-18:10  Synthesis and Characteristics of NiCo-Y2O3 Nano-Composite Particles by Polyvinly Alcohol Solution Route at Low Temperature
Young-Min Han¹, Sang-Jin Lee², Yeon-Ku Kim¹, Jinsung Jang¹, and Choong-Hwan Jung¹
¹KAERI, Korea, ²Mokpo Nat’l Univ., Korea

P2-98  16:40-18:10  Synthesis and Spectral Analysis of Ag2S/ZnS Core/Shell NIR Quantum Dots
Fei Zhao and Jongsung Kim
Gachon Univ., Korea
### [NM5] Nanoparticles

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>November 8, 2013 (Friday) / 09:00-10:15</th>
</tr>
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<tbody>
<tr>
<td>Room</td>
<td>Room B</td>
</tr>
</tbody>
</table>

| NM5-1       | 09:00-09:30  | [Invited] Free Energy Theory of Sintering for Nano Powder Technology  
|             |             | Hidehiko Tanaka  
|             |             | NIMS, Japan      |

| NM5-2       | 09:30-09:45  | P-type Transfer Electrical Characteristic of Amorphous Indium Gallium Zink Oxide  
|             |             | Teresa Oh  
|             |             | Cheongju Univ., Korea          |

| NM5-3       | 09:45-10:00  | Realization of High Quality White Emission using Non-Toxic Carbon Dots and ZnAgInS Nanocrystals  
|             |             | Wonkeun Chung, Hyunchul Jung, and Sung Hyun Kim  
|             |             | Korea Univ., Korea              |

| NM5-4       | 10:00-10:15  | Quantitative Analysis of Carbon Nanostructure of Soot Particles Generated from Microgravity Droplet Flames  
|             |             | Seuk-Cheun Choi$^1$ and Seul-Hyun Park$^2$  
|             |             | $^1$KITECH, Korea  
<p>|             |             | $^2$Chosun Univ., Korea           |</p>
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</tbody>
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**NB1-1 09:00-09:15**

**Wound-Dressing Materials with Antibacterial Activity from Electrospun Bioactive Composite Mats**

Afeesh Rajan Unnithan, R. S. Arathyram, and Cheol Sang Kim
Chonbuk Nat’l Univ., Korea

**NB1-2 09:15-09:45**

**[Invited] Bioinformatic Analysis of Metabolite Profiling Data to Identify miRNA-155 Related Metabolites in NCI-60 Cancer Cells**

Je-keun Rhee, Sinae Kim, Chanjoo Yeom, Young-beob Yu, and Suhwan Chang
Univ. of Ulsan College of Medicine, Korea

**NB1-3 09:45-10:15**

**[Invited] Water-Soluble Conjugated Polyelectrolyte-Based Chemo- and Biosensors**

Han Young Woo
Pusan Nat’l Univ., Korea
[NM6] Nanoceramics

**Date / Time**  November 8, 2013 (Friday) / 11:15-12:30
**Room**  Room B

**NM6-1  11:15-11:45** [Invited] Electric-Field Assisted Sintering of Nanoceramics
Young-Hwan Han
Yeungnam Univ., Korea

**NM6-2  11:45-12:15** [Invited] The Microscaffold Based on Nanostructured Calcium Phosphate Bioceramics for Application in Bone Tissue Engineering
Seog-Young Yoon
Pusan Nat’l Univ., Korea

**NM6-3  12:15-12:30** Bioinspired Fabrication of Silica Thin Films on Histidine-Terminated Self-Assembled Monolayer
Ji Hun Park\textsuperscript{1}, Juno Lee\textsuperscript{1}, Sung Ho Yang\textsuperscript{2}, and Insung S. Choi\textsuperscript{1}
\textsuperscript{1}KAIST, Korea
\textsuperscript{2}Korea Nat’l Univ. of Education, Korea
[NE1] Nano Energy I

Date / Time           November 8, 2013 (Friday) / 11:15-12:30
Room                   Room C

NE1-1  11:15-11:45       [Invited] Facile Fabrication of Ordered TiO2 Nanotubes with Both Ends Opened via a Selective Etching Process
Taiho Park
POSTECH, Korea

NE1-2  11:45-12:00       Multi-Step Annealing Method for Prevention of Se Segregation in Cu(In,Ga)Se2 Thin Film Solar Cells
Chaehwan Jeong and Kwon Hyeok
KITECH, Korea

NE1-3  12:00-12:15       Fabrication of CIGS Single Target by using Spark Plasma Sintering (SPS) Method and Its Application to Thin Films Process
Tae-Won Kim, Jae-Cheol Park, Hyun-Kuk Park, and Ik-Hyun Oh
KITECH, Korea
[NM7] Nano Processing III

Date / Time           November 8, 2013 (Friday) / 13:30-14:45
Room                   Room B

NM7-1  13:30-13:45       Preparation of Ga Doped ZnO Thin Films Prepared by Metal
                        Organic Molecular Beam Epitaxy
                        Chaehwan Jeong and Seongjae Park
                        KITECH, Korea

NM7-2  13:45-14:15       [Invited] Vacuum Technology for Functional Nanoparticle
                        Synthesis
                        Tae Joo Park
                        Hanyang Univ., Korea

NM7-3  14:15-14:45       [Invited] Nano-Engineering of Ionic Liquids and their
                        Applications to Material Processing in Vacuum
                        Yuji Matsumoto
                        Tohoku Univ., Japan
NE2-1 13:30-14:00 [Invited] Blue Ocean for Blue Biotechnology – Marine Bioenergy Production in Korea
Choul-gyun Lee
Inha Univ., Korea

NE2-2 14:00-14:15 Plasmonic Solar Cell and Its Absorption Enhancement Analysis using Cylindrical Ag Nano-Particle Model Based on F D T D
Gye-Choon Park¹, Seung-Hee Yu¹, Jin Lee¹, Kil-Ju Na², Yong Jun Park³, and Richard S. Kim⁴
¹Mokpo Nat’l Univ., Korea, ²Mokpo Science College, Korea, ³Pohang Accelerator Lab., Korea, ⁴AFRL/RYDP and NRC, USA

Date / Time
November 8, 2013 (Friday) / 14:55-16:25

Room
Room D

P3-1  14:55-16:25  Fabrication Characterization of 1Ce10ScSZ Electrolyte Prepared by Co-Precipitation and Hydrothermal Treatment for Solid Oxide Fuel Cells
Young Mi Kim1, Jong-Ho Lee1, Ik-Hyun Oh1, Moo Sung Lee2, and Ho-Sung Kim1
1KITECH, Korea, 2Chonnam Nat’l Univ., Korea

P3-2  14:55-16:25  Polymer Electrolyte Membranes with Ionic Channels for High Proton Conductivity in Fuel Cell Application
Su-Bin Lee, Kwan-Soo Lee, Myung-Hwan Jeong, Young-Jea Kim, Cheong-Min Min, Min-Kyoon Ahn, Mi-Jeong Kim, and Jae-suk Lee
GIST, Korea

P3-3  14:55-16:25  Nanostructure Developments of TiO2 Nanocrystals and Aerogels and Their Dye-Sensitized Solar Cell Application
Chang-Yeoul Kim
KICET, Korea

P3-4  14:55-16:25  Fabrication of Pd Micro-Membrane Supported on Nano-Porous Anodized Aluminum Oxide for Hydrogen Separation
Taegyu Kim
Chosun Univ., Korea

Walaa Elsawy1, Chang-lyoul Lee1, Shinuk Cho2, Seung-hwan Oh3, Seung-hyeon Moon1, Ahmed Elbarbary4, and Jae-suk Lee1
1GIST, Korea, 2Univ. of Ulsan, 3KAERI, Korea, 4Tanta Univ., Egypt
P3-6 14:55-16:25  Synthesis of Graphene via Wet-Chemical Method and Their Application as an Electrocatalyst Support for Methanol Oxidation Reaction.
Yu Seong Noh, Youngmin Kim, Eun Ja Lim, Seonhwa Lee, and Won Bae Kim
GIST, Korea

P3-7 14:55-16:25  Ni/MgO-MgAl2O4 Catalysts with Bimodal Pore Structure for Steam-CO2-Reforming of Methane
Byung-hyuk Kim, Dong-ju Moon, and Sangwoo Kim
KIST, Korea

Dae-Han Seo and Sung-Yong Chun
Mokpo Nat’l Univ., Korea

Soo Hyung Kim, Hyung Woo Lee, and Ji Young Ahn
Pusan Nat’l Univ., Korea

P3-10 14:55-16:25  Synthesis and Optical Properties of CuInS2 Nano-Particles on TiO2 Thin Film for Absorption Layer of Solar Cell by Solvothermal Method
Gye-Choon Park1, Seung-Hee Yu1, Soon-Youl So1, Kil-Ju Na2, Yong Jun Park3, and Richard S. Kim4
1Mokpo Nat’l Univ., Korea, 2Mokpo Science College, Korea
3Pohang Accelerator Lab., Korea, 4AFRL/RYDP and NRC, Korea
Seung-Hee Yu1, Gye-Choon Park1, Soon-Youl So1, Jin Lee1, Yong Jun Park2, and Richard S. Kim3
1Mokpo Nat’l Univ., Korea, 2Pohang Accelerator Lab., Korea
3AFRL/RYDP and NRC, Korea

P3-12 14:55-16:25 Improving the Electrochemical Properties of LiMnPO4 by Glucose-Assisted Polyol Reaction
Jinju Song, Jihyeon Gim, Sungjin Kim, Wangeun Park, Jeonggeun Jo, and Jaekook Kim
Chonnam Nat’l Univ., Korea

P3-13 14:55-16:25 High Lithium Storage Performance of Fe2O3/Graphene Nanocomposite as an Anode Material for Secondary Lithium Ion Battery
Alok Kumar Rai, Trang Vu Thi, and Jaekook Kim
Chonnam Nat’l Univ., Korea

P3-14 14:55-16:25 Fabrication N, F, and N/F-Doped TiO2 Photoelectrodes for Dye-Sensitized Solar Cells Application
Su Kyung Park, Tae Kwan Yun, and Jae Young Bae
Keimyung Univ., Korea

P3-15 14:55-16:25 Synthesis of High Capacity Amorphous Carbons for Advanced Lithium-Ion Battery
Seong Hun Jeong, Tae Jeong Kim, Jeong Yoon Koh, Eun Hee Kim, and Yongju Jung
Korea Univ. of Tech. and Education, Korea

P3-16 14:55-16:25 Optimization of Characteristics CIS Absorber Layers Fabricated by One-Step Sputtering Process
Jeon-Ryang Lee1, Eun Mi Han2, Seung-Hyun Lee1, Jae-Cheol Park1, and Tae Won Kim1
1KITECH, Korea, 2Chonnam Nat’l Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3-17</td>
<td>14:55-16:25</td>
<td>Synthesis of Ni-Doped LiFePO4 Electrode Materials using Simple Solid State Reaction</td>
<td>Sungjin Kim, Jungwon Kang, Jihyeon Gim, Jinju Song, Alok Kumar Rai, and Jaekook Kim</td>
<td>Chonnam Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P3-19</td>
<td>14:55-16:25</td>
<td>Application of Porous Materials to Sulfur Cathode for Enhanced Cycle Properties of Lithium-Sulfur Batteries</td>
<td>Tae Jeong Kim, Seong Hun Jeong, Jeong Yoon Koh, Eun Hee Kim, and Yongju Jeong</td>
<td>Korea Univ. of Tech. and Education, Korea</td>
</tr>
<tr>
<td>P3-20</td>
<td>14:55-16:25</td>
<td>Rapid Polyol-Assisted Microwave Synthesis of Nanocrystalline LiFePO4/C Cathode for Lithium-Ion Batteries</td>
<td>Baboo Joseph Paul, Jihyeon Gim, Sora Baek, Jungwon Kang, Jinju Song, Sungjin Kim, and Jaekook Kim</td>
<td>Chonnam Nat’l Univ., Korea</td>
</tr>
<tr>
<td>P3-21</td>
<td>14:55-16:25</td>
<td>Optical and Structural Properties of a ZnS Thin Film Fabricated with RF Magnetron Sputtering System</td>
<td>Dong-Chan Shin, Bo-Ra Koo, and Yong-Taeg Oh</td>
<td>Chosun Univ., Korea</td>
</tr>
<tr>
<td>P3-22</td>
<td>14:55-16:25</td>
<td>Laser-Printed Thin-Film Electrodes for Cu(In,Ga)Se2 Thin-Film Photovoltaic Applications</td>
<td>Doyeon Cho, Jwoong Kim, Hwanmin Jeong, Young-Kil Jun, and Nam-Hoon Kim</td>
<td>Chosun Univ., Korea</td>
</tr>
</tbody>
</table>
Ji-Hye Lee¹, Kyun Ahn¹, Soo Hyung Kim¹, Jong Man Kim¹, Se-Young Jeong¹, Jong-Sung Jin², Euh Duck Jeong³, and Chae-Ryong Cho³  
¹Pusan Nat’l Univ., Korea, ²KBSI, Korea

P3-24  14:55-16:25  Structural and Optical Properties of Cu-Poor CIGS Thin Films Fabricated by One-Step Sputtering Employing a Single Target  
Jae-Cheol Park¹, Young-Jun Lee¹, Joo-Hyung Kim², and Tae-Won Kim¹  
³KITECH, Korea, ²Inha Univ., Korea

Ho Chang, Mu-Jung Kao, and Zhi-Lun Chen  
Nat’l Taipei Univ. of Tech., Taiwan

P3-26  14:55-16:25  Successive Adsorption of Natural Dyes for Light Harvesting over a Wide Range of Avelengths in Dye-Sensitized Solar Cells  
Jung-Hoon Kim¹, Tae-Young Kim², Kyung-Hee Park¹, and Jae-Wook Lee¹  
¹Chosun Univ., Korea, ²Chonnam Nat’l Univ., Korea

P3-27  14:55-16:25  Ion Selectivity of Alkali- and Alkaline-Earth Cations on Activated Carbon Electrodes  
Jung-Hoon Kim¹, Tae-Young Kim², Kyung-Hee Park¹, and Jae-Wook Lee¹  
¹Chosun Univ., Korea, ²Chonnam Nat’l Univ., Korea

P3-30  14:55-16:25  Property of Multifunctional TiO2-Fly Ash/Polyurethane Electrospun Nanofiber  
Han Joo Kim¹, Hem Raj Pant¹, Jun Hee Kim¹, Nag Jung Choi¹, and Cheol Sang Kim¹  
¹Chonbuk Nat’l Univ., Korea, ²Tribhuvan Univ., Nepal
P3-31 14:55-16:25 Investigation on Physicochemical Surface Properties of Polycarbonate Surface Modified by using DBD Plasma Treatment
Do Hee Lee, Tae Hyung Kim, Bo Sang Hwang, In Gi Kim, and Cheol Sang Kim
Chonbuk Nat’l Univ., Korea

P3-32 14:55-16:25 Influence of Lactic Acid on Degradation of Electrospun Poly(ε-Caprolactone) Fibers
Eun Kyo Kim¹, Hem Raj Pant¹,², Seung-Ji Kang¹, In-Gee Kim¹, Chan-Hee Park¹, and Cheol Sang Kim¹
¹Chonbuk Nat’l Univ., Korea, ²Tribhuvan Univ., Nepal

P3-33 14:55-16:25 Simple and Rapid Synthesis of Nanosheet-Based ZnO Hierarchical Structure Decorated with Highly Mono-Dispersed Ag Nanoparticles
Uyanga Dashdorj¹, Altangerel Amarjargal¹,², and Cheol Sang Kim¹
¹Chonbuk Nat’l Univ., Korea, ²Mongolian Univ. of Science and Tech., Mongolia

P3-34 14:55-16:25 Effect of the Dielectric Material Inserted into the Transition Metal in the Unipolar Resistive Random Access Memory Devices
Ju Tae Ryu, Sung Hwan Jang, and Tae Whan Kim
Hanyang Univ., Korea

P3-35 14:55-16:25 Schottky Barrier Lowering Effect in Ni Contacts with Embedded Nanoparticles to AlGaN/GaN Heterojunction SBDs
Sang-Mo Koo and Min-Seok Kang
Kwangwoon Univ., Korea

P3-36 14:55-16:25 Growth of Non-Polar ZnO Nano Structure On (1-102) R-Plane Sapphire Substrates by Hydrothermal Synthesis
J. Jang, S.J. Bak, G. Park, Y. Ko, H. Bae, and J.-S. Ha
Chonnam Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| P3-37   | 14:55-16:25 | Electrical and Optical Properties of Transparent IZTO/Ag/IZTO Multilayer Films Deposited on Glass Substrates | Dohyun Oh\(^1\), Nam Hyun Lee\(^1\), Woon-Jo Cho\(^2\), and Tae Whan Kim\(^1\)  
\(^1\)Hanyang Univ., Korea, \(^2\)KIST, Korea |
| P3-38   | 14:55-16:25 | Characteristics of Flexible Composite Films using a Mechanoluminescence Studies. | Jeong-pyo Oh\(^1\), In Seok Choi\(^2\), and Gi-seok Heo\(^3\)  
\(^1\)Chonnam Nat’l Univ., Korea, \(^2\)Dongshin Univ., Korea, \(^3\)KITECH, Korea |
| P3-39   | 14:55-16:25 | Study of the Characteristics of Transfer Graphene by Rapid CVD Deposition. | In Seok Choi, Jeong-pyo Oh, and Gi-seok Heo  
In Seok Choi(Department of Electrical Engineering, DongShin Univ.),  
Jeong-pyo Oh(Department of Physics, Chonnam Nat’l Univ.), and  
Gi-seok Heo(Nat’l Center for Nanoprocess and Equipments, KITECH) |
| P3-40   | 14:55-16:25 | Enhancement of Electric Characteristics of the Charge Trap Flash Memory Device with a High-k Structure | Sung Yun Shin, Ju Tae Ryu, and Tae Whan Kim  
Hanyang Univ., Korea |
| P3-41   | 14:55-16:25 | Effect of the Dielectric Material in the Fin to the Distribution of the Channel Region in n-Channel FinFETs | Hyun Soo Jung, Ju Tae Ryu, and Tae Whan Kim  
Hanyang Univ., Korea |
Pukyoung Nat’l Univ., Korea |
P3-43  14:55-16:25  Effects of Substrate Temperature on the Structural, Optical and Electrical Characteristics of Ti-In-Zn-O Films Deposited by RF Magnetron Sputtering
Eun Mi Kim¹, Yu-ri Lee², Dong-chan Shin², and Gi-seok Heo¹
¹KITECH, Korea, ²Chosun Univ., Korea

P3-44  14:55-16:25  Surface Oxidation and Sonication Exfoliation of Graphite to Afford Graphenes without Reduction Process
Eun-Sil Kang, Hyoung-Ju Yoon, and Tae-Ho Yoon
GIST, Korea

P3-45  14:55-16:25  Nano Copper Powders Synthesized by a Polymer Solution Method at Low Temperature
Young-Min Han¹, Choong-Hwan Jung¹, and Sang-Jin Lee²
¹KAERI, Korea, ²Mokpo Nat’l Univ., Korea

Changheon Kim¹,², Sungjae Park¹, Sangwoo Lim², and Chaehwan Jeong¹
¹KITECH, Korea, ²Yonsei Univ., Korea

P3-47  14:55-16:25  Optical and Electrical Properties of TIZO/Ag/TIZO Multilayer Films Deposited by RF Magnetron Co-Sputtering
Yu-Ri Lee¹, Eun-Mi Kim², Gi-Seok Heo², and Dong-Chan Shin¹
¹Chosun Univ., Korea, ²KITECH, Korea

P3-48  14:55-16:25  Catalytic Co-Pyrolysis of Particle Board and Polypropylene over Nanoporous Al-MCM-48
Hyung Won Lee¹, Suek Joo Choi¹, Sung Hoon Park², Sang-Chul Jung², Jong-Ki Jeon³, Sang Chai Kim⁴, and Young-Kwon Park¹
¹Univ. of Seoul, Korea, ²Sunchon Nat’l Univ., Korea, ³Kongju Nat’l Univ., Korea, ⁴Mokpo Nat’l Univ., Korea
P3-49  14:55-16:25  Catalytic Gasification of Lignin over Nanoporous Ni/MSU-F
Kyung Seon Park¹, Hyeon Koo Kang¹, Sung Hoon Park², Sang-Chul Jung², Seong-Soo Kim³, Jong-Ki Jeon⁴, Sang Chai Kim⁵, and Young-Kwon Park¹
¹Univ. of Seoul, Korea, ²Sunchon Nat’l Univ., Korea, ³KIER, Korea

P3-50  14:55-16:25  Catalytic Conversion of Korea Giant Miscanthus over Nanoporous Silica Material
Sung Ho Jin¹, Hyung Won Lee¹, Eun Wha Lee¹, Sung Hoon Park², Sang-Chul Jung², Changkook Ryu³, Jong-Ki Jeon⁴, Sang Chai Kim⁵, and Young-Kwon Park¹
¹Univ. of Seoul, Korea, ²Sunchon Nat’l Univ., Korea, ³Sungkyunkwan Univ., Korea, ⁴Kongju Nat’l Univ., Korea, ⁵Mokpo Nat’l Univ., Korea

P3-51  14:55-16:25  Catalytic Combustion of VOC over Metal Nanoparticle Loaded Mesoporous Silica
Hyung Won Lee¹, Sung Hoon Park², Sang-Chul Jung², Jongsoo Jurng³, Gwi-Nam Bae³, Jong-Ki Jeon⁴, Sang Chai Kim⁵, and Young-Kwon Park¹
¹Univ. of Seoul, Korea, ²Sunchon Nat’l Univ., Korea, ³Kongju Nat’l Univ., Korea, ⁴Mokpo Nat’l Univ.

P3-52  14:55-16:25  Nano-Structural Analysis of Geopolymer Made of Municipal Incineration Slag
Yongsung Kim and Seunggu Kang
Kyonggi Univ., Korea

P3-53  14:55-16:25  Tunneling Behavior and P-type Transfer Characteristic of Organic Pentacene Thin Film Transistor and Gate Insulator
Teresa Oh
Cheongju Univ., Korea

Hyun-Sig Kil, Yong-Jin Jung, Jung-In Moon, Jeong-Hwan Song, Dae-Young Lim, and Seung-Beom Cho
Paichai Univ., Korea
Chan Ho Yoo and Tae Whan Kim
Hanyang Univ., Korea

P3-56 14:55-16:25  Effect of Nano Structure on the Thermal Properties of Sintered BN with Low-Melting Glass
Man-Hyung Han and Seung-gu Kang
Kyonggi Univ., Korea

P3-57 14:55-16:25  Optical and Electrical Properties of ITO/Ag NW/ITO TCO Thin Films for Application of OLED Lighting Device
Woo-Jin Yeon, Yong-Taeg Oh, and Dong-Chan Shin
Chosun Univ., Korea

P3-58 14:55-16:25  Epitaxial Growth of Hexagonal LaFeO3 Thin Films using Pulsed Laser Deposition
S. S. Lee, E. Y. Park, H. J. Lee, G. W. Kim, and J. Y. Jo
GIST, Korea

P3-59 14:55-16:25  Electrical and Thermal Properties of Nanocomposites Based on Epoxy Resin and Silver Nanowires Modified by Thiols
Gwang-seok Song and Dai-soo Lee
Chonbuk Nat’l Univ., Korea

P3-60 14:55-16:25  Synthesis and Characterization of the Comb-Shaped Poly(2-Hydroxyethyl Methacrylate)-g-Poly(ε-Caprolactone) on the Surface of Hydroxyapatite Nanoparticles via Combination of RAFT and ROP
Xuan Thang Cao and Kwon Taek Lim
Pukyong Nat’l Univ., Korea

P3-61 14:55-16:25  Structural and Optical Properties of Al-doped ZnO Nanostructures Synthesized by using an Electrochemical Deposition Method
Jong Ho Lee, Ki Hyun Kim, Dohyun Oh, and Tae Whan Kim
Hanyang Univ., Korea
The Effect of Annealing Treatment of AGZO Thin Films Deposited by DC Moving Magnetron Sputtering on the Thermal Stability
Jong-Ho Kang1,2, Juran Kim1, Myung-Hyun Lee1, Young Soo Lim1, Won-Seon Seo1, and Heon-Jin Choi2
1KICET, Korea, 2Yonsei Univ., Korea

Study of Nano Structure and Thermal Properties of Diposide/ZnO Grain Composites using LTCC Process
Jimin Kang and Seunggu Kang
Kyonggi Univ, Korea

Ji-hwan Won and Seung-gu Kang
Kyonggi Univ, Korea

Upconversion White Emission in LiNbO3 Triply-Doped Er3+, Yb3+, Tm3+ Phosphors
Sung-Jun Park, Dong-Kyun Kim, Dong-Hwa Kang, Deok-Jwa Kang and Sung-Soo Lee
College of Silla, Korea

Observation of Nano Structure of Cordierite Fabricated by HF Treatment and Glass-Ceramics Process
Yu-Na Lee and Seung-Gu Kang
Kyonggi Univ, Korea

Performance of AlGaN/GaN MISHEMT with Optimized Ohmic Contact
Dong-Hyeok Son, Young-Woo Jo, Hee-Sung Kang, Do-Kywn Kim, Dong-Seok Kim, Chul-Ho Won, Vodapally Sindhuri, Sang-Min Jeon, Ji-Hyun Kim, Young-Jo Kim, Jun-Hyeok Lee, Ki-Sik Im, and Jung-Hee Lee
Kyungpook Nat’l Univ., Korea
P3-68  14:55-16:25  Synthesis of Carbon Encapsulated Fe-Nanoparticles using an Electron Beam Irradiation
Hyun Bin Kim, Yeong Ju Lee, Joon Pyo Jeun, Seung Hwan Oh, and Phil Hyun Kang
KAERI, Korea

P3-69  14:55-16:25  Preparation and Study on Nickel Oxide Reduction of Polyacrylonitrile-Based Carbon Nanofibres by Thermal Treatment
Yeong-Ju Lee¹,², Hyun-Bin Kim¹, Joon-Pyo Jeun¹, Dai-Soo Lee², and Phil Hyun Kang¹
¹KAERI, Korea, ²Chonbuk Nat’l Univ., Korea

P3-70  14:55-16:25  Template Synthesis of Caged Complexes and Their Multidimensional Structures and Photochemical Properties
Enkhuzul Otgonbaatar, Chee-Hun Kwak, and Min-Chul Chung
Sunchon Nat’l Univ., Korea

P3-71  14:55-16:25  Nanoscale Self-Assembled Metal-Organic Frameworks Obtained from the Combination of Non-Cyclic Polyaza Molecules and Metal Ions
Enkhuzul Otgonbaatar, Chee-Hun Kwak, and Min-Chul Chung
Sunchon Nat’l Univ., Korea

P3-72  14:55-16:25  Effects of Electron Beam Irradiation on the Electrospinning of Polyacrylonitrile
Joon-Pyo Jeun¹,², Hyun-Bin Kim¹, Seung-Hwan Oh¹, Jung-Ki Park², and Phil-Hyun Kang¹
¹KAERI, Korea, ²KAIST, Korea

P3-73  14:55-16:25  Influence of Starting Materials on the Hydroxyapatite Coatings Fabricated by Room Temperature Spraying Method
Jong Kook Lee¹, Kyu Hong Hwang², Byung Dong Hahn³, and Seog Young Yoon⁴
¹Chosun Univ., Korea, ²Gyeungsang Nat’l Univ., Korea, ³KIMS, Korea, ⁴Pusan Nat’l Univ., Korea
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3-74</td>
<td>14:55-16:25</td>
<td>Effect of Heat-Treatment Temperature on Crystallization of OLED Materials by Ionic Liquid</td>
<td>Yong-Taeg Oh and Dong-Chan Shin, Chosun Univ., Korea</td>
</tr>
<tr>
<td>P3-75</td>
<td>14:55-16:25</td>
<td>Combining Surface Initiated RAFT Polymerization, Thiol-Ene Click Chemistry and Coordination Chemistry for the Design of a Novel Photoluminescent Hydroxyapatite Nanohybrids</td>
<td>Long Giang Bach¹,², Xuan Thang Cao¹, Thanh Binh Mai¹, Tran Thi Nga¹, Md. Rafiqul Islam¹, and Kwon Taek Lim¹, ¹Pukyong Nat’l Univ., Korea, ²Nguyen Tat Thanh Univ., Viet Nam</td>
</tr>
<tr>
<td>P3-76</td>
<td>14:55-16:25</td>
<td>Microstructure of Hydroxyapatite Coatings on Zirconia by Sol-Gel Method</td>
<td>So Dam Jin, Sang Cheol Eum, and Jong Kook Lee, Chosun Univ., Korea</td>
</tr>
<tr>
<td>P3-77</td>
<td>14:55-16:25</td>
<td>Fabrication and Microstructure of Hydroxyapatite Coatings on Zirconia by Room Temperature Spray Method</td>
<td>Hak Cheol Chae and Jong Kook Lee, Chosun Univ., Korea</td>
</tr>
<tr>
<td>P3-78</td>
<td>14:55-16:25</td>
<td>Effect of Molding Condition on Lap Joint of GP</td>
<td>Jin-Woo Kim and Dong-Gi Lee, Chosun Univ., Korea</td>
</tr>
<tr>
<td>P3-79</td>
<td>14:55-16:25</td>
<td>Impact Characteristics of CP Square Structure Member According to Change the Stacking Conditions</td>
<td>Ju-Ho Choi and In-Young Yang, Chosun Univ., Korea</td>
</tr>
<tr>
<td>P3-80</td>
<td>14:55-16:25</td>
<td>The Relationship between Stress and Temperature Distribution during Tension Test of GP by Fibre Orientation Variation</td>
<td>Jin-Woo Kim and Hyoung-Seok Kim, Chosun Univ., Korea</td>
</tr>
<tr>
<td>Session</td>
<td>Time</td>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
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<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>P3-81</td>
<td>14:55-16:25</td>
<td>Formation of Au Nanoparticles on ZnO Nanowires by X-Ray Induced Wet Process</td>
<td>M. S. Lee, J. H. Kim, and H. C. Kang</td>
</tr>
<tr>
<td>P3-83</td>
<td>14:55-16:25</td>
<td>Solvent Effects on the Formation of Surface Nanostructure in P3HT:PCBM Systems during Thermal Annealing</td>
<td>Hyo Jung Kim¹ and Hyun Hwi Lee²</td>
</tr>
<tr>
<td>P3-85</td>
<td>14:55-16:25</td>
<td>Effect of Al and Y2O3 on Mechanical Properties in Mechanically Alloyed Nanograin Ni-Based Alloys</td>
<td>Chung-Seok Kim</td>
</tr>
<tr>
<td>P3-86</td>
<td>14:55-16:25</td>
<td>Morphology Controlled Synthesis of Bi2Te3 Nanotubes and Their Thermoelectric Properties</td>
<td>Ha-Yeong Kim¹, Mi-Kyung Han¹², and Sung-Jin Kim¹</td>
</tr>
<tr>
<td>P3-87</td>
<td>14:55-16:25</td>
<td>Effect of Indium Content on the Microstructure, Mechanical Properties, and Corrosion Behavior of Ti Alloys</td>
<td>Mi-Kyung Han, Jae-Bong Im, Hae-Young Kim, Ho-Jun Song, and Yeong-Joon Park</td>
</tr>
</tbody>
</table>
P3-88 14:55-16:25  Studies on the Characteristics of Vertical Organic Transistor with Nano Patterned Gate using Block Copolymer
Hyo Bum Song, Seong Bin Lim, and Se Young Oh
Sogang Univ., Korea

P3-89 14:55-16:25  Synthesis of Cauliflower-like ZnS Microsphere using One-Step Assembly Method and Hydrothermal Reaction
Seo-Jin Park¹, Ju-Young Park¹,², Cheol-Ho Hwang¹, Kyung-Jun Hwang³, Do-Young Choi¹, and In Hwa Lee¹
¹Chosun Univ., Korea, ²Seoul Nat’l Univ., Korea, ³Univ. of California at San Diego, USA

P3-90 14:55-16:25  Structural Effect of Palladium on Carbon Catalyst on HFP Hydrogenation
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P3-91 14:55-16:25  Effect of Ionic Liquids on Synthesis of Ag/TiO₂ Catalyst in Water Electrolysis
Eun Ran Gong, Mi-kyung Kim, and Kye Sang Yoo
Seoul Nat’l Univ. of Science and Tech., Korea

P3-92 14:55-16:25  Synthesis of Hierarchical Ag/CuO Nanocomposites via a Facile Hydrothermal Technique
Mark Kenneth Reyes, Altangerel Amarjargal, Ludwig Erik Aguilar, and Cheol Sang Kim
Chonbuk Nat’l Univ., Korea

P3-93 14:55-16:25  Enhancement of the Gate-All-Around Twin Si Nanowire Field-Effect Transistors
Dong Hun Kim, Sung Hwan Jang, and Tae Whan Kim
Hanyang Univ., Korea