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**Session Title:** Poster Session  
**Date & Time:** November 2, 2016 (Web) / 18:30~20:30  
**Room:** I (Room 110)

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211-1

**New Organic Electro-Optic Crystals with Acentric Core Structure for Efficient THz Generation**

Jae-Hyun Han, Seung-Heon Lee, Seung-Chul Lee, and O-Pil Kwon  
Ajou University, Korea

211-2

**Supramolecular Assemblies of Naphthalene Diimide with Aromatic Side-Chains**

Chan-Uk Jeong, Jong-Wan Ryu, Seung-Chul Lee and O-Pil Kwon  
Ajou University, Korea

211-3

**Selective Dispersion of Semiconducting Carbon Nanotubes Using Conjugated Polymers for Flexible Thin Film Transistors**

Dongseob Ji and Yong-Young Noh  
Dongguk University, Korea

211-4

**“Green” Novel Biocolloidal Materials Loaded with a Natural Optical Probe**

Barbinta Patrascu M. E.<sup>1</sup>, Badea N.<sup>2</sup>, Zorila F. L.<sup>3</sup>, Bacalum M.<sup>3</sup>, and Rau I.<sup>2</sup>  
<sup>1</sup>University of Bucharest, Romania, <sup>2</sup>University POLITEHNICA of Bucharest, Romania, <sup>3</sup>Horia Hulubei National Institute of Physics and Nuclear Engineering, Romania

211-5

**Effect of UV Irradiation on Biomimetic Membranes Labelled with Bioporphyrins**

Barbinta Patrascu M. E.<sup>1</sup>, Badea N.<sup>2</sup>, Iordache S. M.<sup>1</sup>, Milenković Petrović S.<sup>3</sup>, and Rau I.<sup>2</sup>  
<sup>1</sup>University of Bucharest, Romania, <sup>2</sup>University POLITEHNICA of Bucharest, Romania, <sup>3</sup>University of Nish, Serbia

212-6

## Electrically Switchable Structural Color BCP in Aqueous System

Han Sol Kang and Cheolmin Park  
Yonsei University, Korea.

212-7

## Design of Indocyanine Green-Containing Biocompatible Nanocomposites for Fluorescence Imaging and Photothermal Therapy

Ga Young Kim<sup>1,2</sup>, Youngsun Kim<sup>1</sup>, Yong-Deok Lee<sup>1</sup>, Keunsoo Jeong<sup>1</sup>, Seo Young Jeong<sup>2</sup>, and Sehoon Kim<sup>1</sup>  
<sup>1</sup>KIST, Korea, <sup>2</sup>Kyung Hee University, Korea

212-8

## Physical Immobilization of Reactive Functional Groups on Surface of $\Pi$ -Conjugated Polymer Nanoparticles through Physical Nanoassembly with Polystyrene-Based Copolymers

Hyun Jun Kim<sup>1,2</sup>, Keunsoo Jeong<sup>1</sup>, Geonchang Lee<sup>2</sup>, Jungahn Kim<sup>2</sup>, and Sehoon Kim<sup>1</sup>  
<sup>1</sup>KIST, Korea, <sup>2</sup>Kyung Hee University, Korea

212-9

## Two-Dimensional Metal Nanoparticles Substrate for High Resolution Fluorescence Imaging

Shihomi Masuda<sup>1</sup>, Yuhki Yanase<sup>2</sup>, Eiji Usukura<sup>3</sup>, Sou Ryuzaki<sup>1</sup>, Koichi Okamoto<sup>1</sup>, and Kaoru Tamada<sup>1</sup>  
<sup>1</sup>Kyushu University, Japan, <sup>2</sup>Hiroshima University, Japan, <sup>3</sup>Nagoya University, Japan

212-10

## Water-Dispersible Carbon Nitride Nano-Dots for Bioimaging

Junghoon Oh and Sungjin Park  
Inha University, Korea

212-11

## Benefits of Alkaline Water Consumption in Chronic Inflammatory Patyology.

Gabriela Lili<sup>1</sup>, Manuela R. Apetroaei<sup>2</sup>, Laura Condur<sup>1</sup>, Elena-Olga Lili<sup>3</sup>, and Verginica Schroder<sup>1</sup>  
<sup>1</sup>"Ovidius" University of Constanta, Romania, <sup>2</sup>aval Academy "Mircea cel Bătrân", Romania, <sup>3</sup>"Carol Davila" University of Medicine and Pharmacy Bucharest, Romania

212-12

## Promising Bioactive Material Obtained from Marine Gasteropoda Eggs Capsule Walls

Schröder Verginica<sup>1</sup>, Manuela Apetroaei<sup>2,3</sup>, Ana Maria Manea<sup>3</sup>, Gabriela Lili<sup>1</sup>, and Ileana Rau<sup>3</sup>  
<sup>1</sup>"Ovidius" University of Constanta, Romania, <sup>2</sup>"Mircea cel Bătrân" Naval Academy Constanța, Romania, <sup>3</sup>University POLITEHNICA Bucharest, Romania

212-13

## Synthesis of Two-Photon Uncaging Dye for Bio-imaging

Jaeseo Seok<sup>1</sup>, Jawon Shin<sup>2</sup>, Jong Hun Hong<sup>1</sup>, Prem Prabhakaran<sup>1</sup>, and Kwang-Sup Lee<sup>1</sup>  
<sup>1</sup>Hannam University, Korea, <sup>2</sup>KIST, Korea

212-14

## Linear and Nonlinear Optical Properties of New Materials Based on DNA-CTMA and Aromatic Compounds

Cosmina Andreea Lazar<sup>1</sup>, François Kajzar<sup>1,2</sup>, Ileana Rau<sup>1</sup>, and Ana-Maria Manea<sup>1</sup>  
<sup>1</sup>University POLITEHNICA of Bucharest, Romania, <sup>2</sup>Université Claude Bernard, France

212-15

## Fluorescence, Optical Absorption and Third-Order Nonlinear Optical Properties of Terbium (III) Complex Embedded into DNA-CTMA Matrix

Cosmina Andreea Lazar<sup>1</sup>, François Kajzar<sup>1,2</sup>, Ileana Rau<sup>1</sup>, and Ana-Maria Manea<sup>1</sup>  
<sup>1</sup>University POLITEHNICA of Bucharest, Romania, <sup>2</sup>Université Claude Bernard, France

212-16

## Application of Photo-Thermal Conducting Polymer for Harvesting of Cell Sheet with Protein Layer

Jongbeom Na, Minsu Han, Chihyun Park, and Eunkyong Kim  
Yonsei University, Korea

213-17

## Using Low Temperature Photoluminescence Spectroscopy to Investigate CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> Hybrid Perovskite Degradation

Khaoula Jemli, Hiba Diab, Ferdinand Lédée, Gaëlle Trippé-Allard, Damien Garrot, Bernard Geffroy, Jean-Sébastien Lauret, Emmanuelle Deleporte, and Pierre Audebert  
Université Paris-Saclay, France

213-18

## Modification of ZnO/Polymer Interfaces for Efficient Bilayer-type Polymer/Inorganic Hybrid Solar Cells

Seung Hun Eom<sup>1</sup>, In Hwan Jung<sup>1</sup>, Sung Cheol Yoon<sup>1</sup>, and Soo-Hyoung Lee<sup>2</sup>  
<sup>1</sup>KRICT, Korea, <sup>2</sup>Chonbuk National University, Korea

213-19

## Influence of Acid Treatment and Water Content of PEDOT:PSS Thin Films on Their Electrical Conductivity

Dong-uk Kim and Felix Sunjoo Kim  
Chung-Ang University, Korea

213-20

## **Aqueous Soluble Conjugated Polymers as Electron-Transporting Layers for OLEDs**

Hee Yeon Jeong and Tae-Dong Kim  
Hannam University, Korea

213-21

## **Double-Capable Conjugated DPP Polymers for Optoelectronic Applications**

Youngmin Oh and Tae-Dong Kim  
Hannam University, Korea

213-22

## **High Performance ITO-Free Organic Optoelectronic Devices Based on Highly Conductive Polymeric Transparent Electrodes**

Joo Won Han and Yong Hyun Kim  
Pukyong National University, Korea

213-23

## **Solution Processed Perovskites for Charge Injection Layer in Polymer Field-Effect Transistor**

Eung-Been Lee<sup>1</sup>, Myung-Kwan Song<sup>2</sup>, and Yong-Young Noh<sup>1</sup>  
<sup>1</sup>Dongguk University, Korea, <sup>2</sup>KIMS, Korea

213-24

## **Low-Crystallinity Conducting Polymers Exhibiting Fast Charge Transport**

Sung Yun Son and Taiho Park  
Department of Chemical Engineering, Korea

213-25

## **Study Regarding the Effects Generated in Vitro on Different Forms of Leukaemia Diseases under Action of Bioproduct Obtained from Consortia of Probiotic Microorganisms**

Nicoleta Radu<sup>1</sup>, Viviana Roman<sup>2</sup>, Marinela Bostan<sup>2</sup>, and Ciprian Tanasescu<sup>3</sup>  
<sup>1</sup>National Institute for Research and Development in Chemistry and Petrochemistry, Romania,  
<sup>2</sup>Romaniana Academy, Romania, <sup>3</sup>University Lucian Blaga, Romania

214-26

## **Perovskite Solar Cells Using Polymer Electrolytes**

I.M. Noor, L. Shamsuddin, and A.K. Arof  
University of Malaya, Malaysia

214-27

## **Engineered Doping of Carbon Materials for Enhanced Thermoelectric Properties of Tellurium-PEDOT:PSS Hybrid Composite**

Eun Jin Bae, Young Hun Kang, Changjin Lee, and Song Yun Cho  
KRICT, Korea

214-28

## **Synthesis of Diketopyrrolopyrrole-Derivatized Small Molecule Acceptor for Photovoltaics**

Jong Hun Hong<sup>1</sup>, Eren Durkale<sup>2</sup>, Prem Prabhakaran<sup>1</sup>, and Kwang-Sup Lee<sup>1</sup>  
<sup>1</sup>Hanam University, Korea, <sup>2</sup>Mainz University, Germany

214-29

## **Tellurium-Doped Graphene Nanoplatelets as Outstanding Electrocatalysts With an Extreme Electrochemical Stability for Cobalt Reduction Reaction in Dye-Sensitized Solar Cells**

In-Yup Jeon<sup>1</sup>, Hong Mo Kim<sup>1</sup>, Do Hyung Kweon<sup>1</sup>, Sun-Min Jung<sup>1</sup>, Jeong-Min Seo<sup>1</sup>, Sun-Hee Shin<sup>1</sup>, In Taek Choi<sup>2</sup>, Yu Kyung Eom<sup>2</sup>, Sung Ho Kang<sup>2</sup>, Hwan Kyu Kim<sup>2</sup>, Myung Jong Ju<sup>1</sup>, and Jong-Beom Baek<sup>1</sup>  
<sup>1</sup>UNIST, Korea, <sup>2</sup>Korea University, Korea

214-30

## **$\Pi$ -Stacking Assisted High Density Assembly of QDs on to Graphene Sheets**

Sung-Hyun Kim, Eunbi Jeong, Prem Prabhakaran, Juhjung Jung, Xuecheng Teng, and Kwang-Sup Lee  
Hannam University, Korea

214-31

## **Fabrication of the Layer-by-Layer Structured SSWCNT/PEDOT:PSS Nanocomposite Films with a High Thermoelectric Performance Using Micronizing Process**

WooHwa Lee<sup>1,2</sup>, Young Hun Kang<sup>1</sup>, Jun Young Lee<sup>2</sup>, and Song Yun Cho<sup>1</sup>  
<sup>1</sup>Korea Research Institute of Chemical Technology, Korea, <sup>2</sup>Sunhyunkwan University, Korea

214-32

## **Regioregular D<sub>1</sub>-A-D<sub>2</sub>-A Multi-Donor Terpolymer with Nonhalogenated Processing Solvents for High-Efficiency Polymer Solar Cells**

Hyojung Heo, Honggi Kim, Lyeojin Ban, Seokhoon Jang, and Youngu Lee  
DGIST, Korea

214-33

## **Highly Conductive Graphene-Polymer Fiber Supercapacitors**

Suchithra Padmajan Sasikala, Kyung Eun Lee, and Sang ouk Kim  
KAIST, Korea

214-34

## **Surface Charge Density Modification by Self-Assembled Monolayer for Triboelectric Nanogenerator**

Chanho Park, Giyoung Song, Sung Hwan Cho, Richard Hahnkee Kim, and Cheolmin Park  
Yonsei University, Korea

214-35

## **A- $\pi$ -D- $\pi$ -A Type Oligomer Based on Carbazole Derivative for Solution Processed Organic Solar Cells**

Nadhila Sylvianti, Youn Hwan Kim, Mutia Anissa Marsya, and Joo Hyun Kim  
Pukyong National University, Korea

214-36

## **Inverted Polymer Solar Cell Based on Non-Conjugated Zwitter Ionic Compound Based on Viologen as the Cathode Interlayer**

Youn Hwan Kim, Nadhila Sylvianti, Mutia Anissa Marsya, and Joo Hyun Kim  
Pukyong National University, Korea

215-37

## **One-Step Electrochemical Synthesis of Graphene Oxide-TiO<sub>2</sub> Nanotubes for Improved Visible Light Activity**

Imran Ali, Kyungmin Park, and Jong-Oh Kim  
Hanyang University, Korea

215-38

## **Current-Voltage Characteristics of Single-Walled Carbon Nanotube Bundle Field-Effect Transistors**

Daniel S. Choi, Govind Mallick, and Shashi P. Karna  
Georgetown University, USA

215-39

## **Synthesis of Eco-Friendly Core/Shell Quantum Dots without Cadmium**

Sumin Jeon, Xue-Cheng Teng, Sung Hyun Kim, Juhyoung Jung, Deepak Chandran, Prem Prabhakaran, and Kwang-Sup Lee  
Hannam University, Korea

215-40

## **Transparent Conducting Electrodes Based on Highly Stable and Conductive Copper Nanowire@Graphene Core@Shell Nanostructure**

Yumi Ahn, Youngjun Jeong, Donghwa Lee, and Youngu Lee  
Daegu Gyeongbuk Institute of Science and Technology, Korea

215-41

## **Micro/nano Fabrication of Gold Nanorod/Polymer Composite**

Kyoko Masui<sup>1</sup>, Satoru Shoji<sup>2</sup>, and Satoshi Kawata<sup>1</sup>

<sup>1</sup>Osaka University, Japan, <sup>2</sup>The University of Electro-Communications, Japan

215-42

## **Functionalized Cylinder Structure Thin Film via Supramolecular Assembly**

Suk Man Cho and Cheolmin Park

Yonsei University, Korea

215-43

## **Synthesis and Characterization of Pyrrolo-pyridazine Based Copolymer with Methoxy-Bithiophene as Side Chains for Organic Thin Film Transistors**

Gyujin Park<sup>1</sup>, Heesu Kim<sup>1</sup>, Gunel Huseynova<sup>2</sup>, Yong-Young Noh<sup>2</sup>, and Do-Hoon Hwang<sup>1</sup>

<sup>1</sup>Pusan National University, Korea, <sup>2</sup>Dongguk University, Korea

215-44

## **Photopatterning of Quantum Dots through Thiol-Ene Click Reaction**

Seung-Kyu Park, Juhyoung Jung, Xue-Cheng Teng, Prem Prabhakaran, and Kwang-Sup Lee

Hannam University, Korea

215-45

## **Influence of Capping Agents on the Morphology of WO<sub>3</sub> Nanorods Synthesized Hydrothermal Methods**

Soo-Min Park<sup>1</sup>, Seung-Myung Yoo<sup>1</sup>, and Chughee Nam<sup>1</sup>

<sup>1</sup>Hannam University, Korea

215-46

## **The Enhanced Photocatalytic Performances Using Metal-Free Composite: Graphite Oxide and Oxidized Carbon Nitride nanodots.**

Sunghee Park, Seung Yeon Kim, and Sungjin Park

INHA University, Korea

215-47

## **The Result of KOH Treatment on the Chemical Structure and Electrocatalytic Activity for Oxygen Reduction Reaction of Reduced Graphene Oxide Based Materials**

Dawoon Jang, Sujin Kim, and Sungjin Park

INHA University, Korea

215-48

## **Electrocatalyst for Oxygen Reduction Reaction with Heteroatom-Containing N-Doped Reduced Graphene Oxides**

Yunseok Shin, Yeonjun Shim, and Sungjin Park  
INHA University, Korea

215-49

## **Wetting Transitions in Polymer Nanograsses and Restoring Superhydrophobicity by Skin Shedding**

Roland Hönes, Vitaliy Kondrashov, Haosu Huai, and Jürgen Rühle  
University of Freiburg, Germany

215-50

## **Solution Processable and Photopatternable Environment Friendly Cadmium-Free InZnP/ZnS Quantum Dots**

Minki Ryu, Juhyoung Jung, Xue-Cheng Teng, Sung-Hyun Kim, Seung-Kyu Park, Prem Prabhakran, and Kwang-Sup Lee  
Hannam University, Korea

215-51

## **Ionic Liquid Based Bistable Smart Windows**

Chihyun Park, Haijin Shin, Jongbeom Na, Woojae Lee, Jinbo Kim, and Eunyoung Kim  
Yonsei University, Korea

217-52

## **Co-Delivery of Chemosensitizing Sirna and an Anticancer Agent via Multiple Monocomplexation-Induced Hydrophobic Association**

Jeongmin Park<sup>1,2</sup>, Eunshil Choi<sup>1</sup>, and Sehoon Kim<sup>1</sup>  
<sup>1</sup>KIST, Korea, <sup>2</sup>Korea University, Korea

217-53

## **Neural Differentiations Extended from EB in Hydrogels**

Sang Hyeon Bok, You Kyung Lee, Jin A Lee, and Yang Ho Na  
Hannam University, Korea

217-54

## **Self-Assembled Nanoparticles of the Hydrophobically-Modified Poly(Oxyethylene Galactaramide)s (HPEGA)s as a Sugar-Based Polymeric Nanocarrier for Tumor-Targeted Drug Delivery**

Hyeonjong Park<sup>1,2</sup>, Keunsoo Jeong<sup>1</sup>, Jungahn Kim<sup>2</sup>, and Sehoon Kim<sup>1</sup>  
<sup>1</sup>KIST, Korea, <sup>2</sup>Kyung Hee University, Korea



217-55

## **Self-Healing Properties of Oppositely Charged Polyelectrolyte Hydrogels**

Dae Sung Lee and Yang Ho Na  
Hannam University, Korea

217-56

## **Herbal Medicine-Loaded PVA/Alginate Hydrogel for the Treatment of Atopic Dermatitis**

Hye Ri Lee<sup>1</sup>, Tae Ho Kim<sup>1</sup>, Se Heang Oh<sup>2</sup>, and Jin Ho Lee<sup>1</sup>  
<sup>1</sup>Hannam University, Korea, <sup>2</sup>Dandook University, Korea

217-57

## **Plasmid DNA-Loaded Injectable Bulking Agent System for the Treatment of Vocal Fold Paralysis**

Mi Ri Park<sup>1</sup>, Tae Ho Kim<sup>1</sup>, Seong Keun Kwon<sup>2</sup>, Se Heang Oh<sup>3</sup>, Young Joo Jang<sup>3</sup>, and Jin Ho Lee<sup>1</sup>  
<sup>1</sup>Hannam University, Korea, <sup>2</sup>Seoul National University Hospital, Korea, <sup>3</sup>Dankook University, Korea

217-58

## **Effects of Biomaterials Obtained from Consortia of Probiotic Microorganism in Submerged Biosynthesis on THP 1 Cells Line.**

Nicoleta Radu<sup>1</sup>, Viviana Roman<sup>2</sup>, Marinela Bostan<sup>2</sup>, and Ciprian Tanasescu<sup>3</sup>  
<sup>1</sup>National Institute for Research and Development in Chemistry and Petrochemistry, Romania,  
<sup>2</sup>Romaniana Academy, Romania, <sup>3</sup>University Lucian Blaga, Romania

217-59

## **Study Regarding the Effects Generated in Vitro, on Different Forms of Leukaemia Diseases, Under Action of Bioproduct Obtained from Consortia of Probiotic Microorganisms.**

Nicoleta Radu<sup>1</sup>, Viviana Roman<sup>2</sup>, Marinela Bostan<sup>2</sup>, and Ciprian Tanasescu<sup>3</sup>  
<sup>1</sup>National Institute for Research and Development in Chemistry and Petrochemistry, Romania,  
<sup>2</sup>Romaniana Academy, Romania, <sup>3</sup>University Lucian Blaga, Romania

217-60

## **Biomaterial with Antioxidant and Antifungal Activities, Obtained from Indigenous Plants**

Nicoleta Radu<sup>1</sup>, Mariana Voicescu<sup>2</sup>, Elena Radu<sup>1</sup>, and Ciprian Tanasescu<sup>3</sup>  
<sup>1</sup>National Institute for Research and Development in Chemistry and Petrochemistry, Romania,  
<sup>2</sup>Romaniana Academy, Romania, <sup>3</sup>University Lucian Blaga, Romania

217-63

## **Functional Cryogel Micro-Structures Prepared by Light Induced Cross-Linking of a Benzophenone Containing Copolymer**

Marc Zinggeler, Niklas Schönberg, Patrick Fosso, Thomas Brandstetter, and Jürgen Rühle  
University of Freiburg, Germany

217-64

## **Modeling the Drugs Release from Composite Materials Based on Collagen**

Cristiana Luminița Gîjju<sup>1</sup>, Daniel Dumitru Dinculescu<sup>1</sup>, Ileana Rau<sup>1</sup>, Gratiela Tihan<sup>2</sup>, and Mihaela Ghica<sup>2</sup>

<sup>1</sup>University POLITEHNICA of Bucharest, Romania, <sup>2</sup>Carol Davila University of Medicine and Pharmacy, Romania

218-65

## **Cotton Fibers and Blends with Flax, Linen and Bamboo – Card Engineering for Extracting Optimized Performances for Dyeing and Coloration of the Fabric**

Debashish Banerjee<sup>1</sup>

<sup>1</sup>Blackstone Synergy Consulting Group Limited, Kenya

218-66

## **Evaluation of Mechanical Properties of Polypropylene and Palm Pruning Tree Composite**

Martin Kássio Leme da Silva, Maria Beatriz Sartor, Rodrigo Fernandes Sitta e Souza, Helen de Matos Prosdocini, Ivana Cesarino, and Alcides Lopes Leão  
Sao Paulo State University, Brazil

218-67

## **Production and Evaluation of Mechanical Properties of a Biocomposite Made of PHB and Palm Waste. Production and Evaluation of Mechanical Properties of a Biocomposite Made of PHB and Palm Waste.**

Helen de Matos Prosdocini, Maria Beatriz Sartor, Rodrigo Cardoso Sitta e Souza, Martin Kassio Leme Silva, Ivana Cesarino, and Alcides Lopes Leao  
Sao Paulo State University, Brazil

218-68

## **Use of Moringa Oleifera Seeds Pod in the Production and Mechanical Characterization of Polyhydroxybutyrate (PHB) Composite**

Rodrigo Fernandes Sitta e Souza, Maria Beatriz Sartor., Helen de Matos Prosdocini, Martin Kássio Leme da Silva, Ivana Cesarino, and Alcides Lopes Leão  
Sao Paulo State University, Brazil

218-69

## **Production and Mechanical Characterization of Polypropylene (PP) Composite with Palm Runing Waste**

Maria Beatriz Sartor, Rodrigo Fernandes Cardoso Sitta e Souza, Helen de Matos Prosdocini, Martin Kássio Leme da Silva, Ivana Cesarino, and Alcides Lopes Leão  
Sao Paulo State University, Brazil

216-70

## DNA-DODA-based Polymer Electrolytes for Dye Sensitized Solar Cells

David E. Q. Jimenez<sup>1</sup>, Ana F. Nogueira<sup>2</sup>, Francois Kajzar<sup>4,5</sup>, Jerzy Kanicki<sup>6</sup>, and Agnieszka Pawlicka<sup>1</sup>  
<sup>1</sup>Trabalhador Sãocarlense, Brazil, <sup>2</sup>Universidade do Minho, Portugal, <sup>3</sup>IQ-UNICAMP, Brazil, <sup>4</sup>FACMS-UPB, Romania, <sup>5</sup>CL, France, <sup>6</sup>University of Michigan, USA.

216-71

## Influence of Molybdenum Trioxide Thin Film Thickness on its Electrochemical Properties

R.M.J. Lemos<sup>1</sup>, J.C.B. Alcázar<sup>1</sup>, N.L.V. Carreño<sup>1</sup>, J. Andrade<sup>2</sup>, A. Pawlicka<sup>2,3</sup>, J. Kanicki<sup>3</sup>, A. Gundel<sup>4</sup>, C.F. Azevedo<sup>1</sup>, and C.O. Avellaneda<sup>1</sup>  
<sup>1</sup>Federal University of Pelotas, Brazil, <sup>2</sup>Trabalhador Sãocarlense, Brazil, <sup>3</sup>University of Michigan, USA.

217-72

## Study of Ionically Conducting Nanocomposites for Electrochromic Devices

Franciani Sentanin<sup>1</sup>, Rodrigo Sabadini<sup>1</sup>, Carla C. Schmitt<sup>1</sup>, Jerzy Kanicki<sup>2</sup>, and Agnieszka Pawlicka<sup>1</sup>  
<sup>1</sup>São Paulo University, Brazil, <sup>2</sup>University of Michigan, USA

215-73

## Synthesis and Photocatalytic Properties of Nanocomposites ZnO(hybrid)/MoS<sub>2</sub>

Eglantina Benavente<sup>1,4</sup>, Flor Duran<sup>1</sup>, Clivia Sotomayor<sup>2</sup>, and Guillermo González<sup>3,4</sup>  
<sup>1</sup>Universidad Tecnológica Metropolitana, <sup>2</sup>Catalan Institute of Nanotechnology, Spain, <sup>3</sup>Universidad de Chile, Chile

211-74

## Growth and Analysis of Nanostructured CuInS<sub>2</sub>-ZnIn<sub>2</sub>S<sub>4</sub> Solid Solutions

Vaidotas Kazukauskas<sup>1</sup>, Vilius Vertelis<sup>1</sup>, V.V. Bozhko<sup>2</sup>, A.V. Novosad<sup>2</sup>, V.R. Kozer<sup>2</sup>, and O.V. Parasyuk<sup>2</sup>  
<sup>1</sup>Vilnius University, Lithuania, <sup>2</sup>Lesya Ukrainka Eastern European National University, Ukraine

211-75

## Charge Transport in TIBr Related to Nano-Defects and Ionic Transport

Vaidotas Kazukauskas<sup>1</sup>, Vilius Vertelis<sup>1</sup>, Vladimir Gostilo<sup>2</sup>, Mihail Shorohov<sup>2</sup>, Vasilij Kozlov<sup>3</sup>, and Vladimir Bozhko<sup>4</sup>

<sup>1</sup>Vilnius University, Lithuania, <sup>2</sup>Baltic Scientific Instruments, Latvia, <sup>3</sup>University of Helsinki, Finland, <sup>4</sup>Lesya Ukrainka Eastern European National University, Ukraine

211-76

## Development of Solution-Processed Non-Fullerene Derivatives for Organic Solar Cells

Yeon-Hee Ha<sup>1</sup>, Yu Jin Kim<sup>2</sup>, Jun-Hwa Lee<sup>1</sup>, Chan Eon Park<sup>3</sup>, and Yun-Hi Kim<sup>1</sup>  
<sup>1</sup>Gyeongsang National University, Korea, <sup>2</sup>Pohang University of Science and Technology, Korea

211-77

## Structural Designing of Donor-Acceptor Copolymers for Organic Solar Cells

Ye Seul Lee<sup>1</sup>, Seyeong Song<sup>2</sup>, Yun-Ji Lee<sup>1</sup>, Soon-Ki Kwon<sup>1</sup>, Jin Young Kim<sup>2</sup>, and Yun-Hi Kim<sup>1</sup>  
<sup>1</sup>Gyeongsang National University, Korea, <sup>2</sup>UNIST, Korea

211-78

## Synthesis and Properties of Liquid Crystalline Organic Semiconductors Based on Metalloporphyrin

Mijin Choi<sup>1,2</sup>, Yun Ho Kim<sup>1</sup>, Jinsoo Kim<sup>1</sup>, Kwang-Sup Lee<sup>2</sup>, and Jae-Won Ka<sup>1</sup>  
<sup>1</sup>Research Center for Information and Electronics Materials Korea Research Institute of Chemical Technology, Korea, <sup>2</sup>Hannam University, Korea

211-79

## Synthesis and Properties of Photo-Induced Refractive Index Change Polymers

Inhye Jeon<sup>1,2</sup>, Mijin Choi<sup>1</sup>, Jinsoo kim<sup>1</sup>, Mi Hye Yi<sup>1</sup>, Hak Rin Kim<sup>3</sup>, Jinhan Cho<sup>2</sup>, and Jae-won Ka<sup>1</sup>  
<sup>1</sup>KRICT, Korea, <sup>2</sup>Korea University, Korea, <sup>3</sup>Kyungpook National University, Korea

211-80

## The Helical Axis Inversion of Binaphthyl-Azobenzene Chiral dopant by Light and Their Synthesis

Hye In Jung<sup>1,2</sup>, Eunok Lee<sup>1</sup>, Mijin Choi<sup>1</sup>, Inhye Jeon<sup>1</sup>, Yun-Ho Kim<sup>1</sup>, Jinsoo Kim<sup>1</sup>, Eunkyong Kim<sup>2</sup>, and Jae-Won Ka<sup>1</sup>  
<sup>1</sup>KRICT, Korea, <sup>2</sup>Yonsei University, Korea

216-81

## Development of Microlayer Feedblocks for High Performance Film Application Which Have Sixteen and Thirty-Two layers

Hyun-Sang Kim<sup>1</sup>, Sunwoong Choi<sup>1</sup>, and Myung-Ho Kim<sup>1,2,3</sup>  
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217-82

## Characterization of High Strength Alloy Steel for Penetration Projectile

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215-83

**Enhanced Power-Conversion Efficiency in Organic Photovoltaics by Using Conjugated Poly Electrolytes**

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