



Session Title	[ThP] Poster Session III
Date / Time	Jul. 5 (Thu.), 2018 / 19:00-21:00
Place	2F, Lobby

ThP-001

Design and Photophysical Characterization of Novel NIR Dyes for DSSCs Using Cobalt Electrolytes

Anusha Pradhan, Gaurav Kapil, Shuzi Hayase, and Shyam Sudhir Pandey
Kyushu Inst. of Tech., Japan

ThP-002

Enhanced Field-Effect Mobility of Dioctylbenzothienobenzothiophene-Based Top-Gate Organic Transistors with Channel Length of 5 μm Using Solution-Processed MoO_3 Hole Injection Layers

Tomoya Aiba¹, Takashi Nagase¹, Takashi Kobayashi¹, Yuichi Sadamitsu², and Hiroyoshi Naito¹

¹*Osaka Prefecture Univ., Japan*, ²*Nippon Kayaku Co., Ltd., Japan*

ThP-003

Optical Memory Characteristics of Solution-Processed Top-Gate Organic Transistors with Molecular Floating Gates

Hayato Abe, Fumiya Shiono, Takashi Nagase, Takashi Kobayashi, and Hiroyoshi Naito
Osaka Pref. Univ., Japan

ThP-004

Design, Synthesis and Characterization of Narrow Bandgap Small Molecules based on Naphthalenediimide Core for Ambipolar Charge Transport Properties

Teng Teng¹, Piotr Sleczkowski², David Kreher¹, Lydia Sosa-Vargas¹, Jean-Charles Ribierre³, and Fabrice Mathevet¹

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ThP-005

A-D-A Type Semiconducting Small Molecules for Ambipolar Organic Thin-Film Transistors

Yujeong Lee¹, Young Woong Lee¹, Min Je Kim², Jeong Ho Cho², and Han Young Woo¹

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ThP-006

2D Molecular Crystals for Fast Response Phototransistors

Jin Hong Kim and Soo Young Park
Seoul Nat'l Univ., Korea

ThP-007

Thermal Gradient Assisted Directional Crystallization of Hybrid Perovskites Effected on Alkylammonium Formate

Juho Kim¹, Namchul Cho², and Tae-dong Kim¹

¹*Hannam Univ., Korea*, ²*Soonchunhyang Univ., Korea*



ThP-008

Modulation Charge Transport in Diketopyrrolopyrrole Based Polymers from Hole to Electron by Incorporation of Cyano Group

Hee Su Kim¹, Huseynova Gunel², Yong-Young Noh², and Do-Hoon Hwang¹

¹Pusan Nat'l Univ., Korea, ²Dongguk Univ., Korea

ThP-009

Synthesis, Molecular, and Photovoltaic/Transistor Properties of Acenedithiophene Derivatives

Shao-Ling Chang¹, Chih-Wen Lu¹, Fong-Yi Cao¹, Yu-Ying Lai², and Yen-Ju Cheng¹

¹Nat'l Chiao Tung Univ., Taiwan, ²Nat'l Taiwan Univ., Taiwan

ThP-010

Photo-Crosslinkable and Low-Temperature Processable Polyimide Gate Insulators for Thin-Film Transistors

Gyeongmin Ki and Taek Ahn

Kyungsoong Univ., Korea

ThP-011

Synthesis and Thin Film Properties of A Thermally Curable Trifluorovinyl Substituted Polyimide for Gate Insulator in Thin Film Transistor

Gyeongmin Ki and Taek Ahn

Kyungsoong Univ., Korea

ThP-012

Enhanced Charge Injection Properties of Organic Field Effect Transistors by Doping Through Solid State Diffusion

Youngrok Kim¹, Wang-Taek Hwang¹, Kyoungjune Cho¹, Younggul Song¹, Woocheol Lee¹, Daekyoung Yoo¹, Heebeom Ahn¹, Henning Sirringhaus², Keehoon Kang¹, and Takhee Lee¹

¹Seoul Nat'l Univ., Korea, ²Univ. of Cambridge, UK

ThP-013

Alkyl Chain Length Dependence of Negative Differential Resistance in Tricyanovinyl-Substituted Carbazole-Based Thin Film Transistors

Marta Reig¹, Joaquim Puigdollers², Cristobal Voz², and Dolores Velasco¹

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ThP-014

The Effect of The Substitution Patterns of The Triindole Core on The Thin Film Crystallinity for High Performance Organic Thin-Film Transistors

Marta Reig¹, Alba Cuadrado¹, Roger Bujaldón¹, Joaquim Puigdollers², and Dolores Velasco¹

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ThP-015

Photo-Generated Field-Effect Transistors Using Two-Dimensional MoS₂/Rubrene Hybrid

Cheol-Joon Park¹, Hyeon Jung Park¹, Jae Yoon Lee¹, Chul-Ho Lee¹, Jeongyong Kim², Kwang-Sup Lee³, and Jinsoo Joo¹

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ThP-016

Organic Field-Effect Transistors based on α -Substituted Thienoisindigo Derivatives

Dongho Yoo, Tsukasa Hasegawa, Minoru Ashizawa, Tadashi Kawamoto, Hidetoshi Matsumoto, and Takehiko Mori
Tokyo Inst. of Tech., Japan

ThP-017

Fabrication of 2D Molecular Layer Mott FET toward Room Temperature Operation

Masayuki Suda and Hiroshi M. Yamamoto
Inst. for Molecular Science, Japan

ThP-018

Micro-Patterned Crystallization of TIPs-PEN Using the Capillary Force Lithography with PUA Mold

Hyeok-jin Kwon and Chan Eon Park
POSTECH, Korea

ThP-019

Effects of Solvent Mixtures on The Performance of Polymer Field-Effect Transistors

Min Soo Park and Felix Sunjoo Kim
Chung-Ang Univ., Korea

ThP-020

Nanoscale Optical Characteristics and Field-Effect Transistors Using Two-Dimensional Inorganic/Organic n-p Hetero-Structure

Hyeon Jung Park¹, Cheol-Joon Park¹, Jeongyong Kim², and Jinsoo Joo¹
¹Korea Univ., Korea, ²Sungkyunkwan Univ., Korea

ThP-021

Development of High-Performance Polymer Field-Effect Transistors with Environmentally Benign Solution Processing

Hae Rang Lee¹, Sang Myeon Lee², A-Reum Han¹, Junghoon Lee², Changduk Yang², and Joon Hak Oh¹
¹POSTECH, Korea, ²UNIST, Korea

ThP-022

High Mobility Diphenylethenyl-Substituted Triphenylamines as Effective Organic Semiconductors

Jurate Simokaitiene¹, Monika Cekaviciute¹, Gjergji Sini², Joaquim Puigdollers³, Dmytro Volyniuk¹, and Juozas Vidas Gražulevičius¹
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ThP-023

Flexible Organic Field Effect Transistors, Produced by Direct Multi - Printing Process

Olga Solomeshch, Nir Tessler, Yacov Shneider, Tatiana Beker, Svetlana Yofis, and Arkady Gavrilov
Technion, Israel



ThP-024

High Mobility and Green-Solvent Processable Plastic Transistors Enabled by Irregular Structure in Terpolymers

So-Huei Kang¹, A Young Jeong², Hae Rang Lee², Joon Hak Oh², and Changduk Yang¹
¹UNIST, Korea, ²POSTECH, Korea

ThP-025

Reproducible and Air Stable Gas Sensor based on Organic Field Effect Transistor Using Indacenodithiophene-Co Benzothiadiazole Polymer with Additives

Eun-Sol Shin and Yong-Young Noh
Dongguk.Univ., Korea

ThP-026

Iridium(III) Cyclometalates Containing Different Number of o-Carboranyl Ligands for High-Efficiency Phosphorescent OLEDs

Sujith Surendran, Nghia Nguyen Van, Heechai Lee, Ajay Kumar, and Min Hyung Lee
Univ. of Ulsan, Korea

ThP-027

Deep-Red Amplified Spontaneous Emission from Cis-Configured Squaraine

Hao Ye, Linsong Cui, Toshinori Matsushima, Chuanjiang Qin, and Chihaya Adachi
Kyushu Univ., Japan

ThP-028

High-Performance Blue Thermally Activated Delayed Fluorescent OLEDs based on Ortho-Carbazole-Appended Triarylboron Emitters

Young Hoon Lee, Heechai Lee, Juhee Kim, and Min Hyung Lee
Univ. of Ulsan & EHSRC, Korea

ThP-029

Thermal Annealing Dependent Emission Colour and Efficiency of Isophthalonitrile-Based TADF Emitters with Different Donors

Dmytro Volyniuk, Eigirdas Skuodis, Ausra Tomkeviciene, Karolis Leitonas, Oleksandr Bezikonnyi, Viktorija Mimaite, and Juozas Grazulevicius
Kaunas Univ. of Tech., Lithuania

ThP-030

Highly-Efficient Down-Conversion White OLEDs with Color-Conversion Light Outcoupling Structures

Joo Won Han¹, Chul Woong Joo², Jonghee Lee², and Yong Hyun Kim¹
¹Pukyong Nat'l Univ., Korea, ²ETRI, Korea

ThP-031

TADF and RTP Properties of Simple D-A and D-A-D Systems

Piotr Pander¹, Radoslaw Motyka², Joanna Oleksa², Heather Higginbotham¹, Fernando Dias¹, Andrew Monkman¹, and Przemyslaw Data²
¹Durham Univ., UK, ²Silesian Univ. of Tech., Poland



ThP-032

Wavelength-Selective and Photo-Switchable π -Electronic Microlasers

Daichi Okada¹, Stefano Azzini², Hiroki Nishioka³, Hayato Tsuji⁴, Fumio Sasaki⁵, Eiichi Nakamura³, Cyriaque Genet², Thomas Ebbesen², Zhang-hong Lin⁶, Masakazu Morimoto⁷, Jer-shing Huang⁶, Takeo Minari⁸, Tadaaki Nagao⁸, Masahiro Irie⁷, and Yohei Yamamoto¹
¹Univ. of Tsukuba, Japan, ²Univ. of Strasbourg, ISIS, France, ³Univ. of Tokyo, Japan, ⁴Kanagawa Univ., Japan, ⁵AIST, Japan, ⁶Leibniz Inst. of Photonic Tech., Germany, ⁷Rikkyo Univ., Japan, ⁸NIMS, Japan

ThP-033

Spin-Dependent Energy Transfer to A Dendritic Fluorophore in Solution-Processed Organic Light-Emitting Diodes Using Thermally Activated Delayed Fluorescence

So Shikita, Naoya Aizawa, and Takuma Yasuda
Kyushu Univ., Japan

ThP-034

Highly Efficient Blue Organic Light-Emitting Diodes from Pyrimidine-Based Thermally Activated Delayed Fluorescence Emitters

Bowen Li¹, Zhiyi Li², Yong Zhang¹, and Ying Wang²
¹Harbin Inst. of Tech., China, ²Technical Inst. of Physics and Chemistry, Chinese Academy of Sciences, China

ThP-035

Blocking Energy-Loss Pathways for Ideal Fluorescent Organic Light-Emitting Diodes with Thermally Activated Delayed Fluorescent Sensitizers

Xiaozeng Song, Dongdong Zhang, Minghan Cai, and Lian Duan
Tsinghua Univ., China

ThP-036

Hydrogen Bonded Thermally Activated Delayed Fluorescent Materials with Narrow Spectra: from Design to Manipulation

Minghan Cai, Yong Qiu, and Lian Duan
Tsinghua Univ., China

ThP-037

Achieving High-Performance Solution-Processed Orange OLEDs with The Phosphorescent Cyclometallated Trinuclear Pt(II) Complex

Xiaolong Yang¹, Bo Jiao¹, Jing-Shuang Dang¹, Yuanhui Sun¹, Yong Wu¹, Guijiang Zhou¹, and Wai-Yueng Wong²
¹Xi'an Jiaotong Univ., China, ²The Hong Kong Polytechnic Univ., China

ThP-038

Introducing Ir complexes as Donor Materials: Investigation on Triplet State in Organic Solar Cells

Yingzhi Jin¹, Jie Xue², Juan Qiao², and Fengling Zhang¹
¹Linköping Univ., Sweden, ²Tsinghua Univ., China



ThP-039

Design and Synthesis of Hole-Blocking Materials with Hightriplet Energy and Glass Transition Temperature for Blue Phosphorescent Organiclight-Emitting Diodes

Seokhoon Jang and Youngu Lee
DGIST, Korea

ThP-040

Electronic Transport in Organic Light-Emitting Diodes Studied by Impedance Spectroscopy

Makoto Takada, Takashi Nagase, Takashi Kobayashi, and Hiroyoshi Naito
Osaka Prefecture Univ., Japan

ThP-041

The Importance of Vibronic Coupling and Solid State Solvation on Thermally Activated Delayed Fluorescence Molecules.

Beth Alexandra Laidlaw, Jamie Gibson, Jessica Stacey, Thomas Northey, and Thomas Penfold
Newcastle Univ., UK

ThP-042

Electrochemical Polymerized Ultrahigh-Resolution PMOLED Display

Rong Wang, Linlin Liu, and Yuguang Ma
South China Univ. of Tech., China

ThP-043

Synthesis and Characterization of Donor-Acceptor OLED Emitters with New Electron Donating Units

Xiaofeng Tan, Dmytro Volyniuk, and Juozas. V. Grazulevicius
Kaunas Univ. of Tech., Lithuania

ThP-044

Pyridal[2,1,3]thiadiazoleas Strong Electron-Withdrawing and Less Steric Hindrance Acceptor For Highly Efficient Donor-Acceptor Type NIR Materials

Dehua Hu and Yuguang Ma
South China Univ. of Tech., China

ThP-045

Efficient Blue Light-Emitting Polymers Containing Fluorene[2,3-b]Benzo[d]Thiophene-S,S-Dioxide Unit

Wei Yang, Feng Peng, Lei Ying, and Yong Cao
South China Univ. of Tech., China

ThP-046

Semi-Orthogonal Solution-Processed Polyfluorene Derivative for Multilayer Polymer Light-Emitting Diodes

Zhiming Zhong and Lei Ying
South China Univ. of Tech., China



ThP-047

Synthesis of New Heteroleptic Iridium(III) Complexes Consisting of Bipyridine for Vacuum-Deposited Organic Light-Emitting Diodes

Jae-Ho Jang, Do-Hoon Hwang, Jeong Yong Park, and Hea Jung Park
Pusan Nat'l Univ., Korea

ThP-048

Theoretical Simulations of Molecular Packing and Electronic Processes in Organic Solar Cells

Guangchao Han and Yuanping Yi
Inst. of Chemistry, Chinese Academy of Sciences, China

ThP-049

Diblock Copolymer PF-b-PDMAEMA as Effective Cathode Interfacial Material in Polymer Solar Cells

Ligang Yuan, Yi Zhou, and Yongfang Li
Soochow Univ., China

ThP-050

Optimal Light Absorption in Polymer Solar Cells Using Tunable Plasmonic Ag Quantum Dot Arrays

Seyeong Song, Sang Kyu Kwak, and Jin Young Kim
UNIST, Korea

ThP-051

High Performance Oxide Buffer Free Organic Bulk-Heterojunction Solar Cells

DoHui Kim and Shinuk Cho
Univ. of Ulsan, Korea

ThP-052

Bulk Heterojunction Organic Solar Cells Including Donor-Acceptor Type Small Molecules

Wataru Genno, Kana Nakamura, Takashi Okubo, Yoshihiro Yamaguchi, Masahiko Maekawa, and Takayoshi Kuroda-Sowa
Kindai Univ., Japan

ThP-053

Semitransparent Polymer Solar Cells with Solution Processible Oxide/Metal/Oxide Electrodes

Jeonghoon Seo and Shinuk Cho
Univ. of Ulsan, Korea

ThP-054

Polymer Solar Cells with Enhanced Efficiency by Modifying PEDOT:PSS Surface

Sujung Park and Shinuk Cho
Univ. of Ulsan, Korea



ThP-055

Tunable Dual Wavelength Organic Near-Infrared Photodetectors

Yazhong Wang¹, Zheng Tang², Bernhard Siegumund¹, Zaifei Ma², Johannes Benduhn¹,
Donato Spoltore¹, Karl Leo¹, and Koen Vandewal³

¹TU-Dresden, Germany, ²Donghua Univ., China, ³Hasselt Univ., Belgium

ThP-056

Two-Dimensional Mo_{1.33}C MXene-Assisted Hole Transport Layer for High Performance Organic Solar Cells

Yanfeng Liu, Yingzhi Jin, Quanzheng Tao, Johanna Rosen, Zaifang Li, and Fengling Zhang
Linköping Univ., Sweden

ThP-057

Porphyrin Based Materials for Organic Photovoltaics

Mariza Mone and Ergang Wang
Chalmers Univ. of Tech., Sweden

ThP-058

Highly Soluble Donor-Acceptor Polymers based on Carbazole Units with Alkoxy Substituents at The 4-Position for Photovoltaic Cells

Takeshi Yasuda¹, Kosuke Shibasaki², and Masashi Kijima²

¹NIMS, Japan, ²Univ. of Tsukuba, Japan

ThP-059

Electronic Structure and Exciton Dynamics of Organic Donor/Acceptor Interface Depending on Molecular Orientation Controlled by Templating Layer

Heeseon Lim¹ and JeongWon Kim²

¹KAIST, Korea, ²KRISS, Korea

ThP-060

A Twisted Thieno[3,4-b]thiophene-Based Electron Acceptor Featuring A 14-Pi-Electron Indenoindene Core for High-Performance Organic Photovoltaics

Shengjie Xu and Xiaozhang Zhu
Inst. of Chemistry Chinese Academy of Sciences, China

ThP-061

An Electron-Rich 2-Alkylthieno[3,4-b]thiophene Building Block with Excellent Electronic and Morphological Tunability toward Efficient Small-Molecule Solar Cells

Zichun Zhou and Xiaozhang Zhu
Inst. of Chemistry, Chinese Academy of Sciences, China

ThP-062

All-in-One Small Molecular Solar Cells based on Oligothiophene-Fullerene Conjugate

Thanh Luan Nguyen¹, Tack Ho Lee², Bhoj Gautam³, Song Yi Park², Kenan Gundogdu³, Jin Young Kim², and Han Young Woo¹

¹Korea Univ., Korea, ²UNIST, Korea, ³North Carolina State Univ., USA



ThP-063

Influence of The Crystalline Nature of Small Molecules on The Efficiency and Stability of Organic Optoelectronics

Na Gyeong An, Kyu Cheol Lee, Jungwoo Heo, Changduk Yang, and Jin Young Kim
UNIST, Korea

ThP-064

Comparison Study of Polymer Solar Cells with Alkoxybenzothiadiazole-Based Semi-Crystalline Polymers for Indoor Photovoltaic Applications

Song Yi Park¹, Yuxiang Li², Jaewon Kim¹, Tack Ho Lee¹, Bright Walker¹, Han Young Woo², and Jin Young Kim¹
¹*UNIST, Korea*, ²*Korea Univ., Korea*

ThP-065

Design, Synthesis and Optoelectronic Properties of Novel Unsymmetric Diketopyrrolopyrrole Conjugated Copolymers

Kenta Aoshima, Marina Ide, and Akinori Saeki
Osaka Univ., Japan

ThP-066

Physical Effects of Ultra-Thin Hafnium Oxide Tunneling Layer on The Dark Current of Organic Photodiode

Kee Tae Kim, Chan Hyuk Ji, Da Hee Song, and Se Young Oh
Sogang Univ., Korea

ThP-067

Non-Fullerene Polymer Solar Cells Using a High-Molecular-Weight Thieno[3,4-c]pyrrole-4,6-(5H)-Dione Based Conjugated Polymer with over 11% Efficiency.

Jong Baek Park, Jong-Woon Ha, and Do-Hoon Hwang
Pusan Nat'l Univ., Korea

ThP-068

Structure-Property Relationships in Fullerene and Nonfullerene Solar Cells Incorporating DTBDT-Based Small Molecule Donors

Jisu Hong¹, Hyojung Cha², James R. Durrant², Tae Kyu An³, Soon-Ki Kwon⁴, Yun-Hi Kim⁴, and Chan Eon Park¹
¹*POSTECH, Korea*, ²*Imperial College London, UK*, ³*Korea Nat'l Univ. of Transportation, Korea*, ⁴*Gyeongsang Nat'l Univ., Korea*

ThP-069

Construction of Layered Structure of Anion-Cations to Tune the Work Function of AZO for Inverted Polymer Solar Cells

Weitao Ma
South China Univ. of Tech., China



ThP-070

Side Chain Heteroatom Effect on Morphology and Photovoltaic Performance of The ATT-Based Non-Fullerene Solarcells

Jiayun Zhang and Xiaozhang Zhu
Chinese Academy of Sciences, China

ThP-071

Regioregular Conjugated Polymers Comprising Two-Dimensional Benzodithiophene for High-Efficiency Organic Photovoltaics

Honggi Kim¹, Bogyu Lim², Hyojung Heo¹, Geonik Nam¹, Hyungjin Lee², Ji Young Lee², Jaechol Lee², and Honggi Kim¹
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ThP-072

Crosslinkable Non-Conjugated Polyelectrolytes as polymer Interlayers for Optoelectronic Applications

Yoon Kim, Hee Yeon Jeong, and Tae Dong Kim
Hannam Univ., Korea

ThP-073

Optimizing the Charge Mobility and Phase Separation of Thick PTB7:PC₇₁BM Films by Modified Graphene Oxide

Chengkun Lv, Fei Zheng, and Xiaotao Hao
Shandong Univ., China

ThP-074

Improving the Compatibility of Donor Polymers in Efficient Ternary Organic Solar Cells via Post-Additive Soaking Treatment

Xiaoyu Yang, Jianqiang Liu, and Xiaotao Hao
Shandong Univ., China

ThP-075

Improving Stability and Performance in Organic Photovoltaics Device with Thick Activelayers Incorporating Insulating Polymer Frames

Zhenchuan Wen, Pengqing Bi, Xiaoyu Yang, and Xiaotao Hao
Shandong Univ., China

ThP-076

Improving Performance of Ternary Organic Solar Cells by Incorporating Non-Fullerene Acceptors with Different Crystallinity

Kangning Zhang, Pengqing Bi, Zhenchuan Wen, and Xiaotao Hao
Shandong Univ., China

ThP-077

Regulating The Vertical Phase Distribution by Fullerene-Derivative in High Performance Ternary Organic Solar Cells

Peng-Qing Bi and Xiao-Tao Hao
Shandong Univ., China



ThP-078

Charge Transfer Induced Open-Circuit Voltage Losses in Non-Fullerene Organic Solar Cells

Zhihao Chen, Pengqing Bi, Kangning Zhang, and Xiaotao Hao
Shandong Univ., China

ThP-079

Molecular Packing and Electron Transport of Perylenediimide Derivatives: Theoretical Insight into The Impact of Alkyl Functionalization and Covalent Dimerization

Yuan Guo, Guangchao Han, Ruihong Duan, and Yuanping Yi
Inst. of Chemistry Chinese Academy of Sciences, China

ThP-080

Interfacial Engineering via Inserting Functionalized Water-Soluble Fullerene Derivative Interlayers for Enhancing Performance of Perovskite Solar Cells

Tiantian Cao, Peng Huang, Kaicheng Zhang, Ziqi Sun, Ning Chen, and Yongfang Li
Chemical Engineering and Mate, China

ThP-081

Efficiency Enhancement of Perovskite Solar Cells via Water-Soluble Fullerenol C₆₀(OH)₁₆ Interlayers

Kang Chen, Tiantian Cao, Ziqi Sun, Ning Chen, and Yongfang Li
Chemical Engineering and Mate, China

ThP-082

Improvement in Performance of p-i-n Perovskite Based Solar Cells Using Zr Doped TiO_x as An Electron Transport Layer

Chan Hyuk Ji, Hae Seong Kim, and Se Young Oh
Sogang Univ., Korea

ThP-083

Perovskite Based Light Emitting Solar Cells

Hak-Beom Kim¹, Young Jin Yoon¹, Jaeki Jeong¹, Jungwoo Heo¹, Hyungsu Jang¹, Jung Hwa Seo², Bright Walker¹, and Jin Young Kim¹
¹UNIST, Korea, ²Dong-A Univ., Korea

ThP-084

The Effect of Interaction between CuSCNdopant and Dimethylsulfoxide Mediated Intermediate Phase on the Methylammonium Leadiodide Perovskite Solar Cells

Donghee Kang¹, Dongguen Shin¹, Junkyeong Jeong¹, Jisu Yoo¹, Kiwoong Kim¹, Hyunbok Lee², and Yeonjin Yi¹
¹Yonsei Univ., Korea, ²Kangwon Nat'l Univ., Korea

ThP-085

Interfacial Energy Level Alignment between Mixed Perovskite and Organic Materials

Dongguen Shin¹, Wanjung Kim¹, Junkyeong Jeong¹, Do Hyung Chun¹, Jong Hyeok Park¹, Hyunbok Lee³, and Yeonjin Yi¹
¹Yonsei Univ., Korea, ²Kangwon Nat'l Univ., Korea



ThP-086

Photoemission Studies of Buried Interface TiO₂/MAPbI₃: Chemical Change and Energy Level Alignment

Junkyeong Jeong¹, Dongguen Shin¹, Do Hyung Chun¹, Wanjung Kim¹, Jong Hyeok Park¹, Hyunbok Lee², and Yeonjin Yi¹

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ThP-087

Ligand Exchange Inquaternary Alloyed Nanocrystals Ag-In-Zn-S

Kamil Kotwica¹, Piotr Bujak¹, Zbigniew Wrobel², and Adam Pron¹

¹Warsaw Univ. of Tech., Poland, ²Inst. of Organic Chemistry PAS, Poland

ThP-088

Solvent-Induced Crystallization of Cs₄PbBr₆ for Light Conversion

Van Quyet Le and Soo Young Kim
Chung-Ang Univ., Korea

ThP-089

Origin of Shape-Dependent Fluorescence Polarization from CdSe Nanoplatelets

Da-Eun Yoon¹, Whi Dong Kim¹, Dahin Kim¹, Dongkyu Lee¹, Sungjun Koh¹, Wan Ki Bae², and Doh Chang Lee¹

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ThP-090

Colloidal Quantum Dots with Near-Uncertainty Quantum Yield and Suppressed Blinking

Byeong Guk Jeong¹, Jun Hyuk Chang², Wan Ki Bae³, and Doh Chang Lee¹

¹KAIST, Korea, ²Seoul Nat'l Univ., Korea, ³SungKyunKwan Univ., Korea

ThP-091

Highly Efficient Top Emitting Quantum Dot Light Emitting Diodes

Changhee Lee and Taesoo Lee
Seoul Nat'l Univ., Korea

ThP-092

Two-Step Annealing Effect on Highly Efficient PbS-Colloidal Quantum Dot Solar Cells

Changjo Kim, Se-Woong Baek, and Jung-Yong Lee
KAIST, Korea

ThP-093

Energy Levels Alignment of P3HT-PbS and P3HT-CdS Hybrid Interface for Photovoltaic Applications

Phuong Thao Nguyen and Ji Hoon Shim
POSTECH, Korea



ThP-094

A Doped Organic Layer for Efficient and Stable Quantum Dot Solar Cells

Sang-Hoon Lee¹, Se-Woong Baek¹, Jung Hoon Song², Changjo Kim¹, Ye-Seol Ha¹,
Hyeyoung Shin¹, Hyungjun Kim¹, Sohee Jeong², and Jung-Yong Lee¹

¹KAIST, Korea, ²KIMM, Korea

ThP-095

Role of Polymeric Nucleation Layers in Fabricating Large-area, Flexible, and Transparent Electrodes for Printable Electronics

Soyeong Jeong, Suhyun Jung, Hongkyu Kang, Dasol Lee, Sang-Bae Choi, Seok Kim,
Byoungwook Park, Kilho Yu, Jinho Lee, and Kwanghee Lee

GIST, Korea

ThP-096

Donor-Antimony(V) Lewis Acid for OFF-ON Fluorescence Sensing of Fluoride

Ajay Kumar, Juhee Kim, Sujith Surendran, and Min Hyung Lee

Univ. of Ulsan, Korea

ThP-097

Etchant-Free Photolithographic Patterning of Silver Nanowires Using UV Curable Resins and Ultra-Sonication

Seonwoo Lee, Kyunsik An, and Changhee Lee

Seoul Nat'l Univ., Korea

ThP-098

Comparative Investigation on Electrical Transport Properties of Self-Assembled Monolayers Formed by Benzenethiol, Cyclohexanethiol, and Adamantanethiol

Jun Woo Kim, Hyunhak Jeong, Wang-Taek Hwang, Yeonsik Jang, Jeongmin Koo, and Takhee Lee

Seoul Nat'l Univ., Korea

ThP-099

PFN and Ba(OH)₂ Dipole Materials as Electron Transport Layers on n-Type Crystalline Silicon Semiconductor

Zaira Barquera, Pablo Ortega, Gerard Masmitjà, Isidro Martín, Luis Guillermo Gerling,
Joaquim Puigdollers, Cristobal Voz, and Ramon Alcubilla

Univ. Politècnica Catalunya, Spain

ThP-100

Cycloalkyl Modified Ionic Liquids for Electrochromic Polymer Windows

Jinbo Kim, Chihyun Park, Younghoon Kim, Woojae Lee, Minsu Han, and Eunkyong Kim

Yonsei Univ., Korea

ThP-101

Near Infrared Whispering Gallery Mode Photoluminescence from Conjugated Polymer Blend Microsphere Resonators

Osamu Oki¹, Soh Kushida¹, Annabel Mikosch², Kota Hatanaka³, Youhei Takeda³, Satoshi Minakata³, Junpei Kuwabara¹, Takaki Kanbara¹, Thang Dao⁴, Satoshi Ishii⁴, Tadaaki Nagao⁴, Alexander Kuehne², Felix Deschler⁵, Richard Friend⁵, and Yohei Yamamoto¹

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ThP-102

Crystal Structure and Physical Properties of [Ni(dmit)₂] Salts with Pyridazinium or Pyrazinium- Dibenzo[24]Crown-8 Supramolecular Cations

Yuki Shirakawa¹, Kiyonori Takahashi¹, Shin-ichiro Noro¹, Tomoyuki Akutagawa², and Takayoshi Nakamura¹

¹Hokkaido Univ., Japan, ²Tohoku Univ., Japan

ThP-103

Ferromagnetic [Mn^{II}Cr^{III}(oxalate)₃] Salts with Supramolecular Cations based on Benzo[18]crown-6

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Molecular Rotation in Semiconducting (3-Fluoroadamantylammonium)(trans-syn-trans-dicyclohexano[18]crown-6)[Ni(dmit)₂]•CH₃CN

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ThP-105

Electrochemical and Spectroelectrochemical Investigation of Differently Substituted pyridine by Phenoxazine or Phenothiazine Units

Vasylieva Marharyta, Czichy Malgorzata, Motyka Radoslaw, Data Przemyslaw, and Lapkowski Mieczyslaw

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Study on The Charge Transfer Process Between Silver Nanoparticles and Organic Semiconductors in Non-Volatile Memories by Surface Enhanced Raman Scattering

Cong Wang, Linlin Liu, and Yuguang Ma

South China Univ. of Tech., China

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D-A-D BODIPY Dye with Restricted Intramolecular Charge Transfer State: Highly Emissive in Solution and Crystal

Hongcheng Gao, Zengqi Xie, and Yuguang Ma

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Approaches for Enhancing Light Upconversion Efficiency in Diphenylanthracene Compounds

Karolis Kazlauskas, Steponas Raisys, Povilas Adomenas, and Saulius Jursenas

Vilnius Univ., Lithuania

ThP-109

High Voltage Organic Cathode Materials for Lithium-Ion Batteries

Kyu Nam Lee, Ji Eon Kwon, and Soo Young Park

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ThP-110

Fabrication of Flexible Electrodes Using Electrospun PVDF-HFP Nanofiber Web and Application to MnO₂ Supercapacitor.

Soojung Lee, Sung Hee Kim, and Jun Young Lee
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ThP-111

All Organic Nano-Templates for Visible Light Driven Hydrogen Evolution from Water

Hyun-Jun Lee, Jae-Kwan Kim, and Soo Young Park
Seoul Nat'l Univ., Korea

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Coral-Like Mesoporous Polyaniline with High Surface Area: Self-Assembly, Characterization and Improved Electrochemical Capacitance Performance

Wei Lyu, Mengting Yu, Jiangtao Feng, and Wei Yan
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Phosphorescence of New Benzophenone and Diphenylsulfone Compounds in Amorphous Polymer Matrice at Room Temperature

Ausra Tomkeviciene, Asta Dabuliene, Ramunas Lygaitis, and Juozas Vidas Grazulevicius
Kaunas Univ. of Tech., Lithuania

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Zinc-Phosphorus Complex Working as an Atomic Valve for Colloidal Growth of Monodisperse Indium Phosphide Quantum Dots

Sungjun Koh and Doh Chang Lee
KAIST, Korea

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High-Performance Pressure Sensors Based on Three-Dimensional Electrospun Core/Shell Nanofiber Structures

O Young Kweon, Sang Jin Lee, and Joon Hak Oh
POSTECH, Korea

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Chiral Functionalized Graphene-Based Sensor for Enantioselective Chemical Sensing

Cheol-Hee Park¹, Xiaobo Shang¹, Gwan Yeong Jung², Sang Kyu Kwak², and Joon Hak Oh¹
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Direct Cd-to-Pb Cation Exchange into CdSe/PbSe Axial Heterojunction Nanorods

Dongkyu Lee, Whi Dong Kim, Seokwon Lee, and Doh Chang Lee
KAIST, Korea



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Synthesis and Charge-Transport Properties of Thiophene-Fused Nanographene for Organic Field-Effect Transistors

Yuka Kojiguchi, Kyohei Matsuo, and Takuma Yasuda
Kyushu Univ., Japan

ThP-119

Optimizing the Nano and Electronic Structures in the Active Layer of Polymer Solar Cells

Han Yan
Xi'an Jiaotong Univ., China

ThP-120

Morphology Stabilization Using Stamping Transferprocess via Controlled PUA Mold for Perovskite and Organic Optoelectric Devices

Woongsik Jang and Dong Hwan Wang
Chung-Ang Univ., Korea

ThP-121

Unravelling the Ideal Morphology of Small Molecules-Based Bulk Heterojunction for OPV

Julien Gorenflot¹, Obaid Alqahtani², Maxime Babics¹, Victoria Savikhin³, Thomas Ferron², Ahmed H. Balawi¹, Andreas Paulke⁴, Zhipeng Kan¹, Michael Pope², Dieter Neher⁴, Mike F. Toney³, Frédéric Laquai¹, Pierre M. Beaujuge¹, and Brian A. Collins²
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Flexible PANI Electrodes for NFC-pH Sensor

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ThP-123

Quantifying Generation and Losses Yields and Dynamics in Bulk Heterojunction Solar Cells with Fluorine-Substituted Polymer Donors: What Happens? How Fast? How Much?

Julien Gorenflot¹, Andreas Paulke², Fortunato Piersimoni², Jannic Wolf¹, Zhipeng Kan¹, Federico Cruciani¹, Abdulrahman El Labban¹, Dieter Neher², Pierre M. Beaujuge¹, and Frédéric Laquai¹
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ThP-124

A Triphenylamine-based Push-Pull – σ – C60 Dyad as Photoactive Molecular Material for Single-Component Organic Solar Cells: Characterizations and Photophysical Properties

Antoine Labrunie¹, Julien Gorenflot², Maxime Babics², Ahmed H. Balawi², Olivier Alévêque¹, Sylvie Dabos-Seignon¹, Eric Levillain¹, Piétrick Hudhomme¹, Frédéric Laquai², Clément Cabanetos¹, Pierre Beaujuge², and Philippe Blanchard¹
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ThP-125

Synthesis of Ag/Mn Co-Doped CdS/ZnS (Core/Shell) Nanocrystals with Controlled Dopant Concentration and Spatial Distribution, and Dynamics of Excitons and of Energy Transfer between Co-Dopants

Wonseok Lee¹, Juwon Oh², Woosung Kwon³, Sanghyeon Lee², Dongho Kim², and Sungjee Kim¹

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ThP-126

Systematic Study of Doped OFETs with Selectively Sorted Single-walled Carbon Nanotubes Using Conjugated Polymers

DongSeong Yang¹, Jihong Kim², Min-hye Lee³, and Dong-Yu Kim¹

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ThP-127

Molecular Energy Control of Poly(triarylamine) for Improved Efficiency of Perovskite Solar Cells Based on Enhanced Open-Circuit Voltage

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A Fast and Simple Preparation of Perovskite Solar Cells via Scalable and Roll-to-Roll Compatible Processes

Young Yun Kim, Tae-Youl Yang, Eun Young Park, Eui Hyuk Jung, and Jangwon Seo
KRICT, Korea

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Dual-Modal Photodetector Based on Organic Crystals

Seokho Kim¹, Jinho Choi², Bo-hyun Kim¹, Dong Hyuk Park², and Sunjong Lee¹

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ThP-130

Ultrafast Processes in Polymer:ITICBulk Heterojunction Solar Cells Investigated by Time Resolved Spectroscopy

Jafar Iqbal Khan, Yuliar Firdaus, Pierre Beaujuge, and Frederic Laquai

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ThP-131

Highly Efficient Solar Cells Based on Donor Polymers with Temperature - Dependent Aggregation Properties

Han Yu and He Yan

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Study of Multilayer Dielectric Mirror-Integrated Colored Perovskite Solar Cells

Sung Kyun Lim and Kyu-Tae Lee

Inha Univ., Korea



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PEDOT:PSS – Tungsten Oxide Composite Holeextraction Layer for Efficient Planar Perovskite Solar Cells

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Highly Efficient Blue Light-Emitting Polymers for Single-layer PLEDs

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