

## Technical Program

### • • • SUNDAY 14 OCTOBER • • •

- 15:00~18:00 Registration  
18:00~20:00 Welcome Reception

### • • • MONDAY 15 OCTOBER • • •

- 08:20~08:30 Opening Ceremony

#### PLENARY SESSION 1

LOCATION: ROOM A (EMERALD, B2) / 08:30 TO 09:50

Session Chair: **Seunghyup Yoo** (KAIST, Korea)

- 08:30~09:10 **Waiting for Act 2: What is the Future of Organic Electronics Beyond LED displays?**  
[Plenary Talk I] Stephen R. Forrest\* (Univ. of Michigan, USA)
- 09:10~09:50 **From TADF to SF and Lasers**  
[Plenary Talk II] Chihaya Adachi\* (Kyushu Univ., Japan)
- 09:50~10:20 Coffee Break

#### SESSION 1

LOCATION: ROOM A (EMERALD, B2) / 10:20 TO 11:50

#### OLED Materials I

Session Chairs: **Jian Li** (Arizona State Univ., USA);

**Yun Chi** (City Univ. of Hong Kong, Hong Kong and Nat'l Tsing Hua Univ., Taiwan)

- 10:20~10:45 **Key Material Technology for Future OLED Display**  
[Invited] S. Hwang\*, S. Ko, Y. Yoon, J. Sun, J. Ha, and J. Lyu (Samsung Display, Korea)
- 10:45~11:10 **Twistable Charge-Transfer States for Next Generation OLEDs**  
[Invited] Dan Credgington\* (Univ. of Cambridge, UK)
- 11:10~11:25 **Design of Deep Blue Thermally Activated Delayed Fluorescent Emitter with Boron Acceptor Moiety**  
Ju Young Lee, Dae Hyun Ahn, and Jang Hyuk Kwon\* (Kyung Hee Univ., Korea)
- 11:25~11:50 **Recent Advances in Organic Light-emitting Diodes based on Thermally Activated Delayed Fluorescence**  
[Invited] C. Fuentes-Hernandez, X. Zhang, Y. Zhang, M. W. Cooper, S. Barlow, Seth. R. Marder, and B. Kippelen\* (Georgia Institute of Technology, USA)
- 11:50~13:00 Lunch



## SESSION 2

LOCATION: ROOM A (EMERALD, B2) / 13:00 TO 14:30

### OLED Materials II

**Session Chairs:** Dan Credgington (Univ. of Cambridge, UK); B. Kippelen (Georgia Institute of Tech., USA)

- 13:00~13:25  
[Invited] **To TADF or not to TADF: Highly Efficient Two Coordinate Copper Carbene Complexes**  
Mark Thompson\*, Rasha Hamze, Shyuan Shi, Peter I. Djurovich (Univ. of Southern California, USA), Rodolphe Jazzar, Michele Soleilhavoup, and Guy Bertrand (Univ. of California San Diego, USA)
- 13:25~13:40 **Ortho-Carbazole-Appended Triarylboron TADF Emitters for Full Emission Color Tuning**  
Y. H. Lee (Univ. of Ulsan, Korea), S. Park (KAIST, Korea), J. Jung (Univ. of Ulsan, Korea), S. Yoo (KAIST, Korea), and M. H. Lee\* (Univ. of Ulsan, Korea)
- 13:40~14:05  
[Invited] **Blue Emitting Square Planar Metal Complexes for Displays and Lighting Applications**  
Jian Li\*, Zhiqiang Zhu, Linyu Cao, and Kody Klimes (Arizona State Univ., USA)
- 14:05~14:30  
[Invited] **Design and Application of Extreme OLED Phosphors**  
Yun Chi\* (City Univ. of Hong Kong, Hong Kong and Nat'l Tsing Hua Univ., Taiwan)
- 14:30~15:00 Coffee Break

## SESSION 3

LOCATION: ROOM A (EMERALD, B2) / 15:00 TO 16:30

### OLED Devices I

**Session Chairs:** Wolfgang Brütting (Univ. of Augsburg, Germany); Franky So (North Carolina State Univ., USA)

- 15:00~15:25  
[Invited] **Material Growth Optimized: Improving Efficiency and Lifetime of OLEDs with Ultrastable Glass Layers**  
Paul-Anton Will (Technische Universität Dresden, Germany), Joan Ràfols-Ribé (Universitat Autònoma de Barcelona, Spain), Christian Hänisch, Paulius Imbrasas (Technische Universität Dresden, Germany), Marta González-Silveira (Universitat Autònoma de Barcelona, Spain), Simone Lenk (Technische Universität Dresden, Germany), Javier Rodríguez-Viejo (Universitat Autònoma de Barcelona, Spain), and Sebastian Reineke\* (Technische Universität Dresden, Germany)
- 15:25~15:40 **TADF OLEDs with Circularly Polarized Luminescence**  
S. Feuillastre, M. Pauton, L. Gao, A. Desmarchelier (Université Paris Saclay, France), A. J. Riives, G. Muller (San José State Univ., USA), G. Clavier, D. Tondelier, B. Geffroy\*, and G. Pieters (Université Paris Saclay, France)
- 15:40~16:05  
[Invited] **Manipulating the Refractive Index in Organic Light Emitting Diodes**  
Franky So\* (North Carolina State Univ., USA)
- 16:05~16:30  
[Invited] **The Influence of Material Anisotropy on OLED Emission**  
Kristiaan Neyts\* and Michiel Callens (Ghent Univ., Belgium)
- 16:30~17:00 Break

## SESSION 4

LOCATION: ROOM A (EMERALD, B2) / 17:00 TO 18:20

### OLED Devices II

**Session Chairs:** Sebastian Reineke (Technische Universität Dresden, Germany);  
Jongwook Park (Kyung Hee Univ., Korea)

- 17:00~17:25  
[Invited] **New Insights on the Orientation of Phosphorescent Organometallic Emitters in OLEDs**  
Wolfgang Brütting\* (Univ. of Augsburg, Germany)
- 17:25~17:40 **Highly Efficient Blue Thermally Activated Delayed Fluorescent Emitters with High Horizontal Orientation**  
Sung Yong Byeon (Sungkyunkwan Univ., Korea), Jongchan Kim (Univ. of Michigan, USA), Dong Ryun Lee, Si Hyun Han (Sungkyunkwan Univ., Korea), Stephen R. Forrest\* (Univ. of Michigan, USA), and Jun Yeob Lee\* (Sungkyunkwan Univ., Korea)
- 17:40~17:55 **Unraveling the Key Parameters in Scattering for Highly Efficient Light Extraction in Organic Light-emitting Diodes**  
Jinouk Song, Woochan Lee, Taehyun Kim, and Seunghyup Yoo\* (KAIST, Korea)
- 17:55~18:20  
[Invited] **Developing Efficient TADF and Phosphorescent OLEDs by Promoting Both Internal Generation and External Extraction Efficiencies**  
Chung-Chih Wu\*, Yu-Hsin Huang, Hsin-Yu Lai, Pan Li, Kuan-Chung Pan, Wei-Kai Lee, Chuluo Yang, Shaolong Gong, and Ken-Tsung Wong (Nat'l Taiwan Univ., Taiwan)

## POSTER SESSION

LOCATION: ROOM B (SAPPHIRE, B2) / 18:20 TO 20:20

\*Detailed poster session can be checked from p.16

• • • TUESDAY 16 OCTOBER • • •

## PLENARY SESSION 2

LOCATION: ROOM A (EMERALD, B2) / 08:20 TO 09:40

**Session Chair:** Jun Yeob Lee (Sungkyunkwan Univ., Korea)

- 08:20~09:00  
[Plenary Talk III] **Electroluminescence of Doped Organic Thin Films**  
Ching W. Tang\* (Hong Kong Univ. of Science and Technology, Hong Kong)
- 09:00~09:40  
[Plenary Talk IV] **The Present and Future Vision of the OLED Industry**  
Soo-Young Yoon (LG Display Laboratory Director, Korea)
- 09:40~10:10  
Coffee Break



## SESSION 5

LOCATION: ROOM A (EMERALD, B2) / 10:10 TO 11:50

### OLED Physics and Materials I

**Session Chairs:** H. Kaji (Kyoto Univ., Japan); Ken-Tsung Wong (Nat'l Taiwan Univ., Taiwan)

- 10:10~10:35 **White OLEDs for Displays and General Lighting**  
[Invited] Junji Kido\* (Yamagata Univ., Japan)
- 10:35~11:00 **Vibrational Coupling in Thermally Activated Delayed Fluorescence, How Multiple Resonant Energy States Allow You to Beat Ir Triplet Harvesting**  
[Invited] Daniel de Sá Pereira and Andrew Monkman\* (Durham Univ., UK)
- 11:00~11:25 **TADF: The Next-generation of OLED Emitting Materials**  
[Invited] Thomas Baumann and Christian Kasperek\* (CYNORA, Germany)
- 11:25~11:50 **Dual Conformations in Activated Delayed Fluorescent (TADF) Emitters**  
[Invited] Chun-Sing Lee\* (City Univ. of Hong Kong, Hong Kong)
- 11:50~13:00 Lunch

## SESSION 6

LOCATION: ROOM A (EMERALD, B2) / 13:00 TO 14:30

### OLED Materials III

**Session Chairs:** Christian Kasperek (CYNORA, Germany); Tae-Woo Lee (Seoul Nat'l Univ., Korea)

- 13:00~13:25 **Designer Molecules for Enhanced Light Emission and Charge Transport**  
[Invited] Soo Young Park\* (Seoul Nat'l Univ., Korea)
- 13:25~13:50 **Novel Strategies to Achieve Highly Efficient and Stable OLEDs**  
[Invited] Sunghan Kim\* (Samsung Advanced Institute of Technology, Korea)
- 13:50~14:05 **Efficient Polarized Phosphorescence from Metallomesogens Based on Platinum and Iridium complexes**  
Xiugang Wu, Xuefeng Yang, Weiguo Zhu\*, and Yafei Wang\* (Changzhou Univ., China)
- 14:05~14:30 **TADF Materials, Multiscale Simulations, and Dynamic Nuclear Polarization NMR for OLEDs**  
[Invited] H. Kaji\* (Kyoto Univ., Japan)
- 14:30~15:00 Coffee Break

## SESSION 7

LOCATION: ROOM A (EMERALD, B2) / 15:00 TO 16:30

### Special Session: Modeling and Simulations for OLEDs

**Session Chairs:** Mat Halls (Schrödinger Inc., USA); Kristiaan Neyts (Ghent Univ., Belgium)

- 15:00~15:25 **Deep Neural Networks for Automated Molecular Discovery and Accelerated Atomistic Simulations**  
[Invited] Rafael Gomez-Bombarelli\* (MIT, USA)
- 15:25~15:50 **Multi-scale Simulations to Find Materials for Blue OLEDs**  
[Invited] Patrick J. G. Saris\* (Univ. of Southern California, USA)

- 15:50~16:05 **In Silico Prediction of Mechanical Responses and Solution Processing Characteristics for Novel OLED Materials**  
H. Shaun Kwak, Jeffrey M. Sanders, Thomas J.L. Mustard, Andrea R. Browning, and Mathew D. Halls\* (Schrodinger, Inc., USA)
- 16:05~16:30 **Rigorous Characterization and Predictive Modelling of Hole Transport in Amorphous Organic Semiconductors**  
[Invited]  
Naresh B. Kotadiya, Anirban Mondal (Max Planck Institute for Polymer Research, Germany), Shiyun Xiong (Max Planck Institute for Polymer Research, Germany and Soochow Univ., China), Paul W. M. Blom, Denis Andrienko\*, and Gert-Jan A. H. Wetzelaer (Max Planck Institute for Polymer Research, Germany)
- 16:30~17:00 Break

## SESSION 8

LOCATION: ROOM A (EMERALD, B2) / 17:00 TO 18:40

### QD and Perovskite LEDs

**Session Chairs:** Andrew Monkman (Durham Univ., UK); Chun-Sing Lee (City Univ. of Hong Kong, Hong Kong)

- 17:00~17:25 **Metal Halide Perovskite Emitters and Their Display Applications**  
[Invited]  
Young-Hoon Kim, Himchan Cho, Min-Ho Park, Su-Hun Jeong, Yeongjun Lee, and Tae-Woo Lee\* (Seoul Nat'l Univ., Korea)
- 17:25~17:50 **Interaction between Metal Halide Perovskite Surfaces and Molecular Dopants**  
[Invited]  
Antoine Kahn\* (Princeton Univ., USA)
- 17:50~18:15 **High Efficiency Vacuum-Processed Organic Solar Cells**  
[Invited]  
Ken-Tsung Wong\* (Nat'l Taiwan Univ., Taiwan)
- 18:15~18:40 **Emitting and Harvesting Light with Colloidal Double-Heterojunction Nanorod Light-Emitting Diodes**  
[Invited]  
Moonsub Shim\* (UIUC, USA)
- 19:00~21:00 Banquet

## • • • WEDNESDAY 17 OCTOBER • • •

## SESSION 9

LOCATION: ROOM A (EMERALD, B2) / 08:30 TO 10:00

### OLED Devices III

**Session Chairs:** M. C. Gather (Univ. of St Andrews, UK); Yafei Wang (Changzhou Univ., China)

- 08:30~08:55 **Investigating the Causes of the Limited Stability of Solution-processed OLEDs**  
[Invited]  
Yong Joo Cho, Hyeonghwa Yu, Elizabeth Salsberg, and Hany Aziz\* (Waterloo Univ., Canada)
- 08:55~09:10 **Degradation of Blue-Phosphorescent Emitting Layers Involves Exciton-induced Generation of Radical Ion Pair of Host and Dopant as Key Intermediate**  
Youngmin You\*, Sinheui Kim (Ewha Womans Univ., Korea), Soo-Ghang Ihn, and Sunghan Kim (Samsung Electronics, Korea)

- 09:10~09:35 **Blue Thermally Activated Delayed Fluorescence Emitters with Improved Efficiency and Stability**  
[Invited] Lian Duan\* (Tsinghua Univ., China)
- 09:35~10:00 **Fluorescent OLEDs Achieved by Radiative Coupling of Spatially Separated Electron-Hole Pairs**  
[Invited] Binbin Li, Dongcheng Chen, and Shi-Jian Su\* (South China Univ. of Technology, China)
- 10:00~10:30 Coffee Break

## SESSION 10

LOCATION: ROOM A (EMERALD, B2) / 10:30 TO 11:40

### OLED Physics and Materials II

**Session Chairs:** Lian Duan (Tsinghua Univ., China); Seunghyup Yoo (KAIST, Korea)

- 10:30~10:55 **Improved Performances of Thermally Activated Delayed Fluorescence based Organic Light-emitting Devices**  
[Invited] Hong sik Yoon, Jin joo Kim, Mounngon Kim, Wan Pyo Hong\*, and Ok-Keun Song (LG Chem, Korea)
- 10:55~11:10 **Highly Efficient Fluorescent Blue-light Emitter with More Than 30,000 Hour-Long Lifetime**  
Jongwook Park\* (Kyung Hee Univ., Korea)
- 11:10~11:25 **Study on Relationship between Hole and Electron Currents for Alq3-Based OLEDs**  
M. Oobayashi, S. Anan, Y. Seike, and T. Mori\* (Aichi Institute of Technology, Japan)
- 11:25~11:40 **Analysis of Charge Transfer Complex at the Interface between Organic and Inorganic Semiconductors**  
J.-H. Lee\*, S.-H. Lee, and Y.-J. Lim (Hanbat Nat'l Univ., Korea)
- 11:40~12:50 Lunch

## SESSION 11

LOCATION: ROOM B (SAPPHIRE, B2) / 10:30 TO 11:40

### Solution-Processed OLEDs

**Session Chairs:** Hany Aziz (Waterloo Univ., Canada); Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea)

- 10:30~10:55 **Tuning Charge Carrier Injection and Balance in Solution-processed PLEDs**  
[Invited] Ji-Seon Kim\* (Imperial College London, UK)
- 10:55~11:10 **Air-Stable and High-Performance Solution-Processed Organic Light-Emitting Devices Based on Hydrophobic Polymeric Ionic Liquid Carrier-Injection Layers**  
Satoru Ohisa\*, Shugo Sato, Yukihiro Hayashi, Ryo Sato, Daisuke Yokoyama, Tetsuya Kato, Michinori Suzuki, Takayuki Chiba, Yong-Jin Pu, and Junji Kido\* (Yamagata Univ., Japan)
- 11:10~11:25 **Novel Carbazole-based Materials for Solution-Processable HTLs and EMLs in Phosphorescent OLEDs**  
S. Ameen, S. C. Yoon, C. Lee, and J. Lee\* (Korea Research Institute of Chemical Technology, Korea)
- 11:25~11:40 **Solution Processed Thermally Activated Delayed Fluorescence Emitters: Molecular and Device Engineering**  
Guohua Xie\* and Chuluo Yang (Wuhan Univ., China)
- 11:40~12:50 Lunch

## SESSION 12

LOCATION: ROOM A (EMERALD, B2) / 12:50 TO 14:05

### OLED Devices IV

**Session Chairs:** Youngmin You (Ewha Womans Univ., Korea); Shi-Jian Su (South China Univ. of Tech., China)

- 12:50~13:05 **Spin Spectroscopy on Organic Semiconductors: Direct Detection of Spin Correlations in OLEDs with Metal-Free Dual Fluorescence-Phosphorescence Emitters**  
W. Ratzke\*, S. Bange, T. Scharff, and J. M. Lupton (Univ. of Regensburg, Germany)
- 13:05~13:20 **Probing Carrier Behavior in Highly-Efficient Fluorescent Blue OLEDs by Electric-Field-Induced Sum-Frequency Generation**  
T. Miyamae\*, T. Sato (Nat'l Institute of Advanced Industrial Science and Technology (AIST), Japan), H. Ohata, and T. Tsutsui (CEREBA, Japan)
- 13:20~13:35 **Atom Probe Tomography of Organic Light Emitting Diode Materials**  
M. B. Jaskot, A. P. Proudian, G. Vincent, D. R. Diercks, B. P. Gorman, and J. D. Zimmerman\* (Colorado School of Mines, USA)
- 13:35~13:50 **Azasilane-based New TADF Materials**  
Yun-Hi Kim\* (Gyeongsang Nat'l Univ.)
- 13:50~14:05 **Device Design and Driving Scheme to Enable Active Control Over OLEDs' Beam-shape**  
Felix Fries\*, Markus Fröbel, Pen Yiao Ang, Simone Lenk, and Sebastian Reineke (Technische Universität Dresden, Germany)
- 14:05~14:35 Coffee Break

## SESSION 13

LOCATION: ROOM B (SAPPHIRE, B2) / 12:50 TO 13:35

### OLED Physics and Materials III

**Session Chairs:** Ji-Seon Kim (Imperial College London, UK); Satoru Ohisa (Yamagata Univ., Japan)

- 12:50~13:05 **Molecular Design for Thermally Activated Delayed Fluorescent Emitters with High Horizontal Emitting Dipole Ratios**  
Shaolong Gong\*, Weixuan Zeng, Xuan Zeng, Yepeng Xiang (Wuhan Univ., China), Hsin-Yu Lai, Chung-Chih Wu (Nat'l Taiwan Univ., Taiwan), and Chuluo Yang (Wuhan Univ., China)
- 13:05~13:20 **Electronic Structures and Emission Processes of Exciplex in Solids**  
C.-K. Moon, J.-S. Huh, J.-M. Kim, and J.-J. Kim\* (Seoul Nat'l Univ., Korea)
- 13:20~13:35 **Dihedral Angle Control of Blue Thermally Activated Delayed Fluorescent Emitters by Managing Donor Substitution Position for Efficient Reverse Intersystem Crossing**  
Daniel de Sa Pereira (Durham Univ., UK), Chan Seok Oh, Si Hyun Han, Hee-Jun Park (Sungkyunkwan Univ., Korea), Heather F. Higginbotham (Durham Univ., UK), Jun Yeob Lee\* (Sungkyunkwan Univ., Korea), and Andrew P. Monkman\* (Durham Univ., UK)
- 14:05~14:35 Coffee Break

**SESSION 14**

LOCATION: ROOM A (EMERALD, B2) / 14:35 TO 15:40

**Emerging Organic Devices**

Session Chair: Jun Yeob Lee (Sungkyunkwan Univ., Korea)

- 14:35~15:00 **Organic Memories Featuring Multi-Bit Storage**  
[Invited] K. Meerholz\* (Univ. of Cologne, Germany)
- 15:00~15:25 **Electroluminescence from Single Walled Carbon Nanotubes in Organic LEDs and Light-Emitting FETs**  
[Invited] Arko Graf (Univ. of St Andrews, UK and Univ. Heidelberg, Germany), Caroline Murawski (Univ. of St Andrews, UK), Martin Held, Yuriy Zakharko (Univ. Heidelberg, Germany), Laura Tropsch (Univ. of St Andrews, UK), Jana Zaumseil (Univ. Heidelberg, Germany), and Malte C. Gather\* (Univ. of St Andrews, UK)
- 15:25~15:40 **Conclusion**  
Jang-Joo Kim (Seoul Nat'l Univ., Korea)
- 15:40~16:00 Closing Remark

**POSTER SESSION**

LOCATION: ROOM B (SAPPHIRE, B2) / 18:20 TO 20:20

**[ Electrodes ]**

- [P1] **Silver Nanowire-based Stretchable Electrode by Embedding into the Polyurethane Substrate**  
Jeongho Min and Chang Su Kim\* (Korea Institute of Materials Science, Korea)
- [P2] **Interfacial Bonding Degradation Mechanism of Printed Ag on Polyimide Substrate for Flexible Device Applications**  
Young-Bae Park\* (Andong Nat'l Univ., Korea)
- [P3] **High Transparency and Good Thermal Stability Cathodes for Transparent OLED Applications**  
Min-Geun Song, Ji Eun Yeom, Hyeong Woo Bae, Kwan-Soo Kim, and Jang Hyuk Kwon\* (Kyung Hee Univ., Korea)
- [P4] **High Efficiency Top-Emission Organic Light Emitting Diodes Using a Pure Ag Cathode Configuration with High Thermal Stability**  
S.K. Kim and J.H. Kwon\* (Kyung Hee Univ., Korea)
- [P5] **Highly Flexible Transparent Electrodes Using IZO Nanomesh Structures with Conducting Polymer for Highly Efficient and Flexible OLEDs**  
H. J. Lee, T. H. Lee, T. H. Park, K. R. Son, S. H. Oh, W. Ren, and T. G. Kim\* (Korea Univ., Korea)
- [P6] **Highly Transparent and Conductive Electrode with Al<sub>2</sub>O<sub>3</sub>/Ag/Al<sub>2</sub>O<sub>3</sub>/Ag/Al<sub>2</sub>O<sub>3</sub> Structure Sandwiched by Al<sub>2</sub>O<sub>3</sub> Films for OLEDs**  
S. K. Kang, B. R. Lee, Y. W. Kim, and T. G. Kim\* (Korea Univ., Korea)

**[ Key Materials for EL Devices ]**

- [P7] **Post-Treatment-Free Solution-Processed Reduced Phosphomolybdic Acid Containing Molybdenum Oxide Units for Efficient Hole-Injection Layers in Organic Light-Emitting Devices**  
Kohei Endo, Satoru Ohisa\*, Kosuke Kasuga, Michinori Suzuki, Yong-Jin Pu, Takayuki Chiba, and Junji Kido\* (Yamagata Univ., Japan)



- [P8] **Comparison of Optical and Electrical Properties of Different Hole-transporting Materials for Solution-processable OLEDs**  
W. Park, S. C. Yoon, and J. Lee\* (Korea Research Institute of Chemical Technology and UST-KRICT School, Korea)
- [P9] **Preparation and Characterization of the New Hole-Transporting Material for Vacuum-Deposited Green Phosphorescent OLEDs**  
H. Na (Korea Research Institute of Chemical Technology, Korea), B-J Jung (Univ. of Seoul, Korea), and J. Lee\* (Korea Research Institute of Chemical Technology, Korea)
- [P10] **Solution Processed Multilayer Structure Organic Light Emitting Diode Using Crosslinkable Hole Transporting Materials**  
Ara Ko, Dongha Lee, and Kyoung Soo Yook\* (Sungkyunkwan Univ., Korea)
- [P11] **Vacuum-deposited Multiple Anion Mixed Perovskite for Light Emitting Diodes**  
Kwanwook Jung, Na Eun Jung, Donggeun Shin, Donghee Kang (Yonsei Univ., Korea), Hyunbok Lee\* (Kangwon Nat'l Univ., Korea), and Yeonjin Yi\* (Yonsei Univ., Korea)
- [P12] **High Efficiency Red Cadmium-free Quantum Dot Light-Emitting Diodes with Cross-linked Hole Transport Layer**  
Mude Nagarjuna Naik, Kwan Ju Eun, Chae Young Lee, and Jang Hyuk Kwon\* (Kyung Hee Univ., Korea)
- [P13] **In Phased Separated-InGaN Quantum Dots Embedded in Monolithic White Light-emitting Diodes**  
Hyun-Jin Lee and Sung-Nam Lee\* (Korea Polytechnic Univ., Korea)
- [P14] **Azasiline-based Thermally Activated Delayed Fluorescence Emitters for Blue OLED**  
Youheon Kim (Gyeongsang Nat'l Univ., Korea), Seung-Je Woo (Seoul Nat'l Univ., Korea), Myeong-Jong Kim, Jang Yeol Baek, Soon-Ki Kwon\*, Yun-Hi Kim\* (Gyeongsang Nat'l Univ., Korea), and Jang-Joo Kim\* (Seoul Nat'l Univ., Korea)
- [P15] **Blue Thermally Activated Delayed Fluorescence Emitters Based on Twisted Donor-Bridge-Acceptor-Bridge-Donor Structures**  
Youngnam Lee and Jong-In Hong\* (Seoul Nat'l Univ., Korea)
- [P16] **Synthesis of Reverse Intersystem Crossing Activating Host Material for over 20% External Quantum Efficiency of Red Thermally Activated Delayed Fluorescent Organic Light-emitting Diodes**  
Ji Han Kim, Dong Ryun Lee, Si Hyun Han, and Jun Yeob Lee\* (Sungkyunkwan Univ., Korea)
- [P17] **Highly Efficient Organic Light Emitting Diodes using Azasiline Derivative**  
Hyun-woo Kim (Gyeongsang Nat'l Univ., Korea), Jin Won Sun (Seoul Nat'l Univ., Korea), Jang Yeol Baek (Gyeongsang Nat'l Univ., Korea), Kwon-Hyeon Kim, Jin-Suk Huh (Seoul Nat'l Univ., Korea), Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), Jang-Joo Kim (Seoul Nat'l Univ., Korea), and Soon-Ki Kwon\* (Gyeongsang Nat'l Univ., Korea)
- [P18] **Effect of Structural Stability of Thermally Activated Delayed Fluorescent Emitters on Prolonged Lifetime in TADF OLEDs**  
Ho Jung Lee, Si Hyun Han (Sungkyunkwan Univ., Korea), Wan Pyo Hong, Ok-Keun Song (LG Chem, Korea), and Jun Yeob Lee\* (Sungkyunkwan Univ., Korea)
- [P19] **Thermally Activated Delayed Fluorescence Emitters Controlling Dexter Energy Transfer in Hyper-fluorescent Organic Light-Emitting Diodes**  
Ji Seon Jang, Si Hyun Han, Hye Won Choi, Kyoung Soo Yook, and Jun Yeob Lee\* (Sungkyunkwan Univ., Korea)
- [P20] **Deep-blue to Green TADF Emitters Based on Trivalent Boron Acceptor**  
Dongwook Yang, Jae-Min Kim, Jang-Joo Kim\*, and Jong-In Hong\* (Seoul Nat'l Univ., Korea)



- [P21] **Methyl Substitution at Phenylene Bridge of Azasiline and Acridine Donor Based Thermally Activated Delayed Fluorescence Molecules for Deeper Blue Emission**  
Seung-Je Woo (Seoul Nat'l Univ., Korea), Youheon Kim, Yun-Hi Kim\*, Soon-Ki Kwon\* (Gyeongsang Nat'l Univ., Korea), and Jang-Joo Kim\* (Seoul Nat'l Univ., Korea)
- [P22] **A New Azasiline Based TADF Materials for Highly Efficient Blue Light Emitting Diode**  
Kwang Hun Park (Gyeongsang Nat'l Univ., Korea), Jin Won Sun, Kwon-Hyeon Kim, Chang-Ki Moon, Jeong-Hwan Lee (Seoul Nat'l Univ., Korea), Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), Jang-Joo Kim (Seoul Nat'l Univ., Korea), and Soon-Ki Kwon\* (Gyeongsang Nat'l Univ., Korea)
- [P23] **Understanding of The State Hybridization in Electro-fluorescent Materials: Enhancing the Efficiency of Electron-deficient Acceptors**  
Shitong Zhang\*, Changjiang Zhou, and Bing Yang\* (Jilin Univ., China)
- [P24] **High Triplet Energy Hole Transport Type Host Material for Deep Blue Thermally Activated Delayed Fluorescent Organic Light-emitting Diodes**  
Dae Hyun Ahn, Hyuna Lee, Jee Hyun Maeng, Jaehong Ryu, Ju Young Lee, and Jang Hyuk Kwon\* (Kyung Hee Univ., Korea)
- [P25] **Locally Excited State and Charge Transfer State from One Organic Compound and Efficient Delayed Fluorescence White OLEDs Based on Single Emitter**  
Chenglong Li, Baoyan Liang, Zhiqiang Li, Zong Cheng, and Yue Wang\* (Jilin Univ., China)
- [P26] **Kinetic Modelling of Transient Photoluminescence Measurements of Thermally Activated Delayed Fluorescent Materials**  
Amel Mekic, Nils Haase, Christof Pflumm, Antonia Morherr, Ilona Stengel\* (Merck KGaA, Germany), Martin R. Bryce, Andrew Danos, Andrew Monkman, Patrycja Stachelek, and Jonathan Ward (Durham Univ., UK)
- [P27] **Benzocarbazole-based Thermally Activated Delayed Fluorescence Emitter Materials**  
D. Karthik, H. J. Yoo, J. Y. Lee, and J. H. Kwon\* (Kyung Hee Univ., Korea)
- [P28] **Analysis on the Degradation of Emitting Layer Host in Blue Thermally Activated Delayed Fluorescence Organic Light-Emitting Diodes**  
J. Sohn, D. Ko, J. Han, H. Lee, and C. Lee\* (Seoul Nat'l Univ., Korea)
- [P29] **Efficient Triplet-triplet Extinction in Organic Light-emitting Diodes**  
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