

## *Schedule*

A-COE2021 Schedule

DATE	2, September	3, September	4, September
9:00	Oping remark	Plenary2 Prof. J. Kido	VIP4-1 Y.-Y. Noh
	Plenary1 C. Adachi		VIP4-2 S. Park
		VIP3-1 M. Mamada	VIP4-3 F. Zhu
10:00	VIP2-1 J. J. Kim	VIP3-2 T. Chiba	VIP4-4 C.-L. Wang
	VIP2-2 L. Xiao	Break	VIP4-5 S. Biring
	Break	VIP3-3 T.-W. Lee	Break
11:00	VIP2-3 H. Sasabe	VIP3-4 T. Matsushima	VIP4-6 P. Sonar
	VIP2-4 K.-T. Wong	VIP3-5 H. Fukagawa	VIP4-7 T. Nagase
	VIP2-5 S. Gong	VIP3-6 H. Cho	VIP4-8 J.-Y. Chen
12:00	Lunch	Lunch	VIP4-9 J. Tang
			Introduction of A-COE2021
			Colosing remark
13:00	VIP2-6 H. Kaji	VIP3-7 D. Zou	
	VIP2-7 F. Li	VIP3-8 H.-W. Lin	
	VIP2-8 Y.-T. Lee	VIP3-9 R. Murdey	
14:00	VIP2-9 S. Izawa	VIP3-10 J.-Y. Lee	
	Break	VIP3-11 T. Park	
	VIP2-10 Y. Chi	Break	
	VIP2-11 J. Y. Lee	VIP3-12 I. Osaka	
15:00	VIP2-12 J.-H. Lee	VIP3-13 Y.-J. Cheng	
	VIP2-13 N. Aizawa	VIP3-14 Z. Ge	
	Break		
16:00	VIP2-14 C.-S. Lee	VIP3-15 C. P. Chen	
	VIP2-15 S.-W. Liu	Break	
	VIP2-16 S. Yoo	POSTER Sessions	
17:00	VIP2-17 J.-W. Kim		
	VIP2-18 Y. Tanaka		
	VIP2-19 B. H. Pal		
18:00			

## ***Program***

***2<sup>nd</sup>, September, 2021 (Tuesday)***

9:15-9:20    Opening remark: Prof. Tatsuo Mori (Aichi Institute of Technology, Japan)

9:20-10:00    Chair: Prof. Tatsuo Mori (Aichi Institute of Technology, Japan)

### ***Plenary 1***

#### **“Rational Molecular and Device Architecture Design for Hyperfluorescence OLED”**

Yi-Ting Lee<sup>a</sup>, Chin-Yiu Chan<sup>a</sup>, Masaki Tanaka<sup>a</sup>, Masashi Mamada<sup>a</sup>, Kenichi Goushi<sup>a</sup>, Xun Tang<sup>a</sup>,  
Youichi Tsuchiya<sup>a</sup>, Hajime Nakanotani<sup>a,b</sup>, Chihaya Adachi<sup>a,b</sup>

<sup>a</sup>Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, Japan

<sup>b</sup>International Institute for Carbon Neutral Energy Research (I2CNER), Kyushu University, Japan

10:00-12:00    ***TADF Devices***

Chair: Prof. Jeong-Hwan Lee (Inha University, Korea)

Chair: Prof. Prashant Sonar (Queensland University of Technology, Australia)

Chair: Prof. Hironori Kaji (Kyoto University, Japan)

10:00-10:20    VIP2-1

#### **“High Efficiency Deep Blue OLEDs” [Invited]**

Hyungcheol Lim<sup>a</sup>, Yun-Hi Kim<sup>b</sup> and Jang-Joo Kim<sup>a</sup>

<sup>a</sup>Department of Materials Science and Engineering, Seoul National University, Korea

<sup>b</sup>Department of Chemistry and RIGET, Gyeongsang National University, Korea

10:20-10:40    VIP2-2

#### **“Long-lived Electron-Transporting Materials” [Invited]**

Jiannan Gu, Zhenyu Tang, Haoqing Guo, Zhijian Chen and Lixin Xiao

Department of Physics, Peking University, China

10:40-11:00    Break

11:00-11:20    VIP2-3

#### **“Multifunctional Smart Hole-Transporters Realizing High-Efficiency and Stable TADF OLEDs” [Invited]**

Hisahiro Sasabe

Department of Organic Material Science, Graduate School of Organic Materials Science, Research Center for Organic Electronics (ROEL), Frontier Center for Organic Materials (FROM), Yamagata

University, Japan

11:20-11:40 VIP2-4

**“A Rational Molecular Design for New High Efficiency TADF Emitter” [Invited]**

Chih-Lun Yi<sup>a</sup>, Chun-Yen Lin<sup>a</sup>, Ken-Tsung Wong<sup>a</sup>, Chun-Yu Wang<sup>b</sup>, Yukun Tang<sup>b</sup>, Chung-Chih Wu<sup>b</sup>

<sup>a</sup>Department of Chemistry, <sup>b</sup>Department of Electrical Engineering, National Taiwan University, Taiwan

11:40-12:00 VIP2-5

**“Horizontally Oriented Thermally Activated Delayed Fluorescence (TADF) Emitters” [Invited]**

Shaolong Gong<sup>a\*</sup>, Chung-Chih Wu<sup>b</sup>, Chuluo Yang<sup>a</sup>

<sup>a</sup>Department of Chemistry, Wuhan University, China

<sup>b</sup>Department of Electrical Engineering, National Taiwan University, Taiwan

12:00-13:00 Lunch Time

13:00-15:50 ***OLEDs Mechanism/Control***

Chair: Prof. Ken-Tsung Wong (National Taiwan University, Taiwan)

Chair: Prof. Furong Zhu (Hong Kong Baptist University, China)

Chair: Prof. Hisahiro Sasabe (Yamagata University, Japan)

13:00-13:20 VIP2-6

**“Material Design Realizing Ultrafast Reverse Intersystem Crossing in Purely Organic Emitter and Quantitative Prediction of Rate Constants for All Types of Electronic Transitions” [Invited]**

Hironori Kaji

Institute for Chemical Research, Kyoto University, Japan

13:20-13:40 VIP2-7

**“Doublet Emission from Radical Materials and Devices” [Invited]**

Feng Li

State Key Laboratory of Supramolecular Structure and Materials, College of Chemistry, Jilin University, China

13:40-14:00 VIP2-8

**“Investigating HOMO Energy Levels of Terminal Emitters for Realizing High-Brightness and**

**Stable TADF-Assisted Fluorescence Organic Light-Emitting Diodes” [Invited]**

Yi-Ting Lee<sup>a</sup>, Chin-Yiu Chan<sup>a</sup>, Masaki Tanaka<sup>a</sup>, Masashi Mamada<sup>a</sup>, Umamahesh Balijapalli<sup>a</sup>, Youichi Tsuchiya<sup>a</sup>, Hajime Nakanotani<sup>a</sup>, Takuji Hatakeyama<sup>b</sup>, Chihaya Adachi<sup>a</sup>

<sup>a</sup>Center for Organic Photonics and Electronics Research, Kyushu University, Japan Department of

<sup>b</sup>Chemistry, School of Science and Technology, Kwansei Gakuin University, Japan

14:00-14:20 VIP2-9

**“Upconversion Emission at Organic Semiconductor Interface” [Invited]**

Seiichiro Izawa

Institute for Molecular Science, The Graduate University for Advanced Studies (SOKENDAI), Japan

14:20-14:30 Break

14:30-14:50 VIP2-10

**“Efficient Near-infrared Electroluminescence from Pt(II) and Os(II) Phosphors” [Invited]**

Yun Chi

Department of Materials Science and Engineering, Department of Chemistry and Center of Super-Diamond and Advanced Films (COSDAF), City University of Hong Kong, China

14:50-15:10 VIP2-11

**“Device Engineering for Long Lifetime Blue Organic Light-Emitting Diodes” [Invited]**

Jun Yeob Lee

School of Chemical Engineering, Sungkyunkwan University, Korea

15:10-15:30 VIP2-12

**“The Role of Emitters and Host Molecules in OLEDs” [Invited]**

Jeong-Hwan Lee

Dept. of Materials Science and Engineering & 3D Convergence Center, Inha University, Korea

15:30-15:50 VIP2-13

**“Delayed Fluorescence from Energetically Inverted Singlet and Triplet Excited States”  
[Invited]**

Naoya Aizawa<sup>a,b</sup>

<sup>a</sup>RIKEN Center for Emergent Matter Science (CEMS), <sup>b</sup>PRESTO Japan Science and Technology Agency, Japan

15:50-16:00 Break

16:00-18:00 ***For Fabrication/Application***

Chair: Prof. Jang-Joo Kim (Seoul National University, Korea)

Chair: Prof. Lixin Xiao (Peking University, China)

Chair: Prof. Takashi Nagase (Osaka Prefecture University, Japan)

16:00-16:20 VIP2-14

**“Organic Electronic Materials for Novel Biomedical, Energy and Environmental Applications”**

**[Invited]**

Chun-Sing Lee

Center of Super-Diamond and Advanced Films (COSDAF) & Department of Chemistry, City University of Hong Kong, China

16:20-16:40 VIP2-15

**“Transparent Organic Electronics: Up-Conversion Devices and Photovoltaics” [Invited]**

Shun-Wei Liu<sup>a</sup>, Chih-Chien Lee<sup>b</sup>, Sajal Biring<sup>a</sup>

<sup>a</sup>Organic Electronics Research Center and Department of Electronic Engineering, Ming Chi University of Technology, Taiwan

<sup>b</sup>Department of Electronic Engineering, National Taiwan University of Science and Technology, Taiwan

16:40-17:00 VIP2-16

**“Progress in Solvent-free Organic Jet Printing” [Invited]**

Seunghyup Yoo, Sungyeon Kim, Jaehyeok Park

School of Electrical Engineering, KAIST, Korea

17:00-17:20 VIP2-17

**“Wearable Organic Optoelectronic Devices using Printing Process” [Invited]**

Jae-Wook Kang

Department of Flexible and Printable Electronics, Jeonbuk National University, Korea

17:20-17:40 VIP2-18

**“Enhanced Stability Against Light Irradiation in Electret-Based Vibrational Energy Generators Composed of OLED Materials” [Invited]**

Yuya Tanaka<sup>a,b</sup>, Noritaka Matsuura<sup>b</sup>, Yuki Tazo<sup>b</sup>, Hideyuki Kayaguchi<sup>b</sup>, Hisao Ishii<sup>a,b,c</sup>

<sup>a</sup>Center for Frontier Science, <sup>b</sup>Graduate School of Science and Engineering, <sup>c</sup>Molecular Chirality Research Center, Chiba University, Japan

17:40-18:00 VIP2-19

**“Solution-Processed Narrow Band Photodetector” [Invited]**

Bhola Nath Pal

School of Materials Science and Technology, Indian Institute of Technology (BHU), India

***3rd, September, 2021 (Friday)***

9:00-9:40 Chair: Prof. Yoshiyuki Seike (Aichi Institute of Technology, Japan)

***Plenary 2***

**“Current Status and Future Prospects of Solution Processable Organic LEDs”**

Junji Kido

Frontier Center for Organic Materials, Yamagata University, Japan

9:40-12:00 ***OLD/PeLED/QLED***

Chair: Prof. Chun-Sing Lee (City University of Hong Kong, China)

Chair: Prof. Jun Yeob Lee (Sungkyunkwan University, Korea)

Chair: Prof. Yuya Tanaka (Chiba University, Japan)

9:40-10:00 VIP3-1

**“Development of Highly Emissive Laser Dyes for Organic Semiconductor Laser Diodes”  
[Invited]**

Masashi Mamada, Chihaya Adachi

Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, Japan

10:00-10:20 VIP3-2

**“Surface Crystal Growth of Perovskite Nanocrystal for High Colloidal Stability and Efficient Leds” [Invited]**

Takayuki Chiba, Yoshihito Takahashi, Hinako Ebe, Junji Kido

Graduate School of Organic Materials Science, Yamagata University

10:20-10:40 Break

10:40-11:00 VIP3-3

**“Comprehensive Defect Passivation Strategies for Efficient Perovskite Nanocrystal Light-Emitting Diodes” [Invited]**

Young-Hoon Kim(+)<sup>a,b</sup>, Sungjin Kim(+)<sup>a,b</sup>, Arvin Kakekhani(+)<sup>c</sup>, Jinwoo Park<sup>a,b</sup>, Jaehyeok Park<sup>d</sup>, Yong-Hee Lee<sup>a</sup>, Hengxing Xu<sup>e</sup>, Satyawon Nagane<sup>f</sup>, Robert B. Wexler<sup>c</sup>, Dong-Hyeok Kim<sup>a,b</sup>, Seung Hyeon Jo<sup>aa,b</sup>, Laura Martínez-Sarti<sup>g</sup>, Peng Tan<sup>c,h</sup>, Aditya Sadhanala<sup>fi</sup>, Gyeong-Su Park<sup>a</sup>, Young-Woon Kim<sup>a</sup>, Bin Hu<sup>e</sup>, Henk J. Bolink<sup>g</sup>, Seunghyup Yoo<sup>d</sup>, Richard H. Friend<sup>f</sup>, Andrew M. Rappe<sup>c</sup>, Tae-Woo Lee<sup>a,b</sup>

<sup>a</sup>Department of Materials Science and Engineering, Seoul National University, Korea

<sup>b</sup>School of Chemical and Biological Engineering, Institute of Engineering Research, Research Institute of Advanced Materials, Nano Systems Institute, Seoul National University, Korea

<sup>c</sup>Department of Chemistry, University of Pennsylvania, USA

<sup>d</sup>School of Electrical Engineering, Korea Advanced Institute of Science and Technology, Korea

<sup>e</sup>Department of Materials Science and Engineering, University of Tennessee, USA

<sup>f</sup>Cavendish Laboratory, University of Cambridge, UK

<sup>g</sup>Instituto de Ciencia Molecular, Universidad de Valencia, Spain

<sup>h</sup>Department of Physics, Harbin Institute of Technology, China

<sup>i</sup>Clarendon Laboratory, Department of Physics, University of Oxford, UK

11:00-11:20 VIP3-4

**“Vacuum-Deposition Engineering for High Performance Organic Electronic Devices”**

Toshinori Matsushima<sup>a,b</sup>, Yu Esaki<sup>b,c</sup>, Chihaya Adachi<sup>a,b,c</sup>

<sup>a</sup>WPI-I2CNER, Kyushu University, <sup>b</sup>JST ERATO, Adachi Molecular Exciton Engineering, <sup>c</sup>OPERA, Kyushu University, Japan

11:20-11:40 VIP3-5

**“Unraveling Electron Injection/Transport Mechanism in OLEDs” [Invited]**

Hirohiko Fukagawa

NHK Science & Technology Research Laboratories, Japan

11:40-12:00 VIP3-6

**“Photoresist-Free Direct Optical Patterning of Quantum Dot Light-Emitting Diodes” [Invited]**

Himchan Cho

The Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea

12:00-13:00 Lunch

13:00-14:40 ***Perovskite Solar Cells&Applications***

Chair: Prof. Shun-Wei Liu (Ming Chi University of Technology, Taiwan)

Chair: Prof. Yong-Young Noh (POSTECH, Korea)

Chair: Prof. Toshinori Matsushima (Kyushu University, Japan)

13:00-13:20 VIP3-7

**“Mechanochemical Synthesis of Organic–inorganic Hybrid Perovskite Materials” [Invited]**

Dechun Zou

College of Chemistry, Peking University, China

13:20-13:40 VIP3-8

**“Halide Perovskites for Quantum Emitters and Neuromorphic Computing Applications”**

**[Invited]**

Hao-Wu Lin

Department of Materials Science and Engineering, National Tsing Hua University, Taiwan

13:40-14:00 VIP3-9

**“Strategies for Assessing and Improving the Stability of Perovskite Solar Cells” [Invited]**

Richard Murdey, Yuko Matsushige, Yasuhisa Ishikura, Yasuko Iwasaki, Minh Anh Truong, Tomoya Nakamura, Atsushi Wakamiya

Institute for Chemical Research, Kyoto University, Japan

14:00-14:20 VIP3-10

**“Mediating Colloidal Quantum Dot/Organic Semiconductor Interfaces for Efficient Hybrid Solar Cells” [Invited]**

Jung-Yong Lee

Electrical Engineering, KAIST, Korea

14:20-14:40 VIP3-11

**“Green Processable Semiconducting Polymers for Colloidal Quantum Dots Solar Cells” [Invited]**

Taiho PARK

Chemical Engineering, Pohang University of Science and Technology (POSTECH), Korea

14:40-15:00 Break



15:00-16:20     **OPVs**

Chair: Prof. Tae-Woo Lee (Seoul National University, Korea)

Chair: Prof. Hao-Wu Lin (National Tsing Hua University, Taiwan)

Chair: Prof. Takayuki Chiba (Yamagata University, Japan)

15:00-15:20    VIP3-12

**“Design and Synthesis of  $\pi$ -Conjugated Polymers for Highly Efficient Organic Solar Cells”**

**[Invited]**

Itaru Osaka

Graduate School of Advanced Science and Engineering, Hiroshima University, Japan

15:20-15:40    VIP3-13

**“Design and Synthesis of Organic Functional Materials for Organic Photovoltaics” [Invited]**

Yen-Ju Cheng

Department of Applied Chemistry, National Yang Ming Chiao Tung University, Taiwan

15:40-16:00    VIP3-14

**“Highly Efficient Organic Solar Cells” [Invited]**

Wei Song, Zhenyu Chen, Jinfeng Ge, Ziyi Ge

Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences, China

16:00-16:20    VIP3-15

**“High Performance Ternary Organic Photovoltaics and Photodetectors through Judicious Selection of the Third Components” [Invited]**

Chih-Ping Chen

Department of Materials Engineering, Ming Chi University of Technology, Taiwan

16:20-16:30    Break

16:30-18:10    Poster session (Zoom)

***4th, September, 2021 (Saturday)***

9:00-10:40     **OFET/Memory/Sensor1**

Chair: Prof. Jung-Yong Lee (KAIST, Korea)

Chair: Prof. Sajal Biring (Mingchi University of Technology, Taiwan)

Chair: Prof. Takashi Nagase (Osaka Prefecture University, Japan)

9:00-9:20 VIP4-1

**“Development of High Performance Halide Perovskite Transistors and Photosensors” [Invited]**

Yong-Young Noh

Pohang University of Science and Technology (POSTECH), Korea

9:20-9:40 VIP4-2

**“Microfluidic Channel Embedded Solution Shearing for Optimization of Organic Thin-film Transistors” [Invited]**

Jeong-Chan Lee<sup>a</sup>, Jaewook Nam<sup>b</sup>, Steve Park<sup>a</sup>

<sup>a</sup>Department of Materials Science and Engineering, KAIST, Korea

<sup>b</sup>School of Chemical and Biological Engineering and Institute of Chemical Process, Seoul National University, Korea

9:40-10:00 VIP4-3

**“Narrowband Near-infrared Perovskite/Polymer Hybrid Photodetectors” [Invited]**

Zhaojue Lan, Linfeng Cai, and Furong Zhu

Department of Physics, Research Centre of Excellence for Organic Electronics, and Institute of Advanced Materials, Hong Kong Baptist University, China

10:00-10:20 VIP4-4

**“Multi-scale Structure-Property Relationship of S,N-heteroacenes” [Invited]**

Yi-Fan Huang<sup>a</sup>, Chin-Lung Chung<sup>b</sup>, Chun-Kai Wang<sup>b</sup>, Guan-Ting Ciou<sup>a</sup>, Ken-Tsung Wong<sup>b</sup>, Chien-Lung Wang<sup>a</sup>

<sup>a</sup>Department of Applied Chemistry, National Yang Ming Chiao Tung University, <sup>b</sup>Department of Chemistry, National Taiwan University, Taiwan

10:20-10:40 VIP4-5

**“On Improving the Sensitivity of an Optical Oxygen Sensor and Development of an Optical Dual Gas Sensor” [Invited]**

Sajal Biring, Annada Sankar Sadhu, Moumita Deb

Department of Electronic Engineering and Organic Electronic Research Center, Mingchi University of Technology, Taiwan

10:40-11:00 Break

11:00-12:40 ***OFET/Memory/Sensor2***

Chair: Prof. Dechun Zou (Peking University, China)

Chair: Prof. Steve Park (KAIST, Korea)

Chair: Prof. Itaru Osaka (Hirishima University, Japan)

11:00-11:20 VIP4-6

**“High Performance Organic Semiconductors for Photonics and Electronics” [Invited]**

Prashant Sonar

Molecular Design and Synthesis Discipline, School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology, Australia

11:20-11:40 VIP4-7

**“Solution-Processable Organic Floating-Gate Transistors Toward Printed Nonvolatile Memory and Image Sensor Applications” [Invited]**

Takashi Nagase

Department of Physics and Electronics, Osaka Prefecture University, Japan

11:40-12:00 VIP4-8

**“Non-Volatile Photomemory with a Ultrafast and Multi-Level Memory Behavior” [Invited]**

Jung-Yao Chen

National Cheng Kung University, Taiwan

12:00-12:20 VIP4-10

**“Synergistical Electroluminescent Manipulation for Efficient Perovskite Light-Emitting Diodes” [Invited]**

Jianxin Tang<sup>a</sup>, Yang Shen<sup>a</sup>, Yanqing Li<sup>b</sup>

<sup>a</sup>Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University, China

<sup>b</sup>School of Physics and Electronic Science, East China Normal University, China

12:20-12:30 Introduction of A-COE2022

12:30-12:35 Closing remark: Prof. Tatsuo Mori (Aichi Institute of Technology, Japan)

***A. Emitting Devices(OLEDs, OLDS, PeLEDs)***

**PA-1    Detailed Explanation of the Increased Driving Voltage in a TADF Exciplex Host OLED during Prolonged Operation via a Quantitative Device Model**

M. Regnat<sup>a,b</sup>, K. P. Pernstich<sup>a</sup>, S. Jenatsch<sup>b</sup>, B. Ruhstaller<sup>a,b</sup>, (<sup>a</sup>Institute of Computational Physics, Zurich University of Applied Sciences, <sup>b</sup>Fluxim AG, Switzerland)

**PA-2    Analysing the Effect of Emitter Concentration on Charge Transport in a TADF OLED**

S. Sem<sup>a,b</sup>, P. Sahay<sup>b</sup>, S. Jenatsch<sup>a</sup>, S. Züfle<sup>a,c</sup>, M. Schmid<sup>b</sup>, W. Brütting<sup>b</sup> and B. Ruhstaller<sup>a,c</sup>, (<sup>a</sup>Fluxim AG, Switzerland · <sup>b</sup>Institute of Physics, University of Augsburg, Germany, <sup>c</sup>Institute of Computational Physics, Zurich University of Applied Sciences, Switzerland)

**PA-3    Development of High-Throughput Subnanosecond Time-Resolved Photoluminescence Spectrometer**

Minori Furukori<sup>a,b</sup>, Yasushi Nagamune<sup>b</sup>, Yasuo Nakayama<sup>a,b</sup>, Takuya Hosokai<sup>b</sup>, (<sup>a</sup>Tokyo University of Science, <sup>b</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan)

**PA-4    Role of a Charge-Transfer Interface in Blue TTU-OLEDs**

Thanh Ba Nguyen<sup>a</sup>, Hajime Nakanotani<sup>a,b</sup>, and Chihaya Adachi<sup>a,b</sup>, (<sup>a</sup>Center for Organic Photonics and Electronics Research (OPERA) and Department of Applied Chemistry, <sup>b</sup>International Institute for Carbon Neutral Energy Research (WPI-I2CNER) Kyushu University, Japan)

**PA-5    Quasi-Planar TADF Molecular Design Towards Pure Violet-Blue Electroluminescence and Organic Laser**

Xun Tang<sup>a</sup>, Aziz Khan<sup>b</sup>, Zuo-Quan Jiang<sup>b</sup> and Chihaya Adachi<sup>a</sup>, (<sup>a</sup>Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, Japan, <sup>b</sup>Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University, Taiwan)

**PA-6    A New Molecular Design Realizing Very Fast Reverse Intersystem Crossing**

Yu Kusakabe, Yoshimasa Wada, Hiromichi Nakagawa, Katsuyuki Shizu, Hironori Kaji, (Institute for Chemical Research Kyoto University, Japan)

**PA-7    Suppressing Intermolecular Interactions for Enhancing Exciplex-based OLEDs Performance**

Yuan-Cheng Hu<sup>a</sup>, Tzu-Chien Huang<sup>b</sup>, Wen-Yi Hung<sup>b</sup>, and Ken-Tsung Wong<sup>a</sup>, (<sup>a</sup>National Taiwan University, <sup>b</sup>National Taiwan Ocean University, Taiwan)

**PA-8 A Molecular Design Achieving Very Fast Reverse Intersystem Crossing**

Yongxia Ren, Yoshimasa Wada, Katsuaki Suzuki, Yu Kusakabe, Jan Geldsetzer, Hironori Kaji, (Institute for Chemical Research Kyoto University, Japan)

**PA-9 Quantitative Prediction of Internal Conversion Rate Constant for the Screening of Singlet Fission Materials**

Katsuyuki Shizu<sup>a</sup>, Chihaya Adachi<sup>b,c,d</sup>, Hironori Kaji<sup>a</sup>, (<sup>a</sup>Institute for Chemical Research, Kyoto University, <sup>b</sup>Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, <sup>c</sup>Japan Science and Technology Agency (JST), ERATO, <sup>d</sup>International Institute for Carbon Neutral Energy Research (WPI-I2CNER), Kyushu University, Japan)

**PA-10 Substitution Effect on Carbazole-Centered Donors for Tuning Exciplex Systems as Cohost for Highly Efficient Yellow and Red OLEDs**

Li-Ming Chen<sup>a</sup>, I-Hung Lin<sup>b</sup>, Yu-Chi You<sup>a</sup>, Wei-Chih Wei<sup>a</sup>, Meng-Ju Tsai<sup>a</sup>, Wen-Yi Hung<sup>b</sup>, Ken-Tsung Wong<sup>a</sup>, (<sup>a</sup>National Taiwan University, <sup>b</sup>National Taiwan Ocean University, Taiwan)

**PA-11 Low-Cost and Quantitative Prediction of Rate Constants: Application to Decay Mechanism of Benzophenone**

Katsuyuki Shizu, Hironori Kaji, (Institute for Chemical Research Kyoto University, Japan)

**PA-12 A Laser Model Involving the Effect of TADF Upconversion**

Ayano Abe<sup>a</sup>, Kenichi Goushi<sup>a,b</sup>, Ryutaro Komatsu<sup>b</sup>, Takashi Fujihara<sup>b</sup>, Masashi Mamada<sup>a,b</sup>, and Chihaya Adachi<sup>a,b</sup>, (<sup>a</sup>Kyushu University, <sup>b</sup>Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, Japan)

**PA-13 Facile Synthesis of Multi-Resonance Ultra-Pure-Green TADF Emitters Based on Bridged Diarylamine Derivatives for Efficient OLEDs with Narrow Emission**

Guanting Liu<sup>a</sup>, Hisahiro Sasabe<sup>a,b,c</sup>, Kengo Kumada<sup>a</sup>, Amane Matsunaga<sup>a</sup>, Hiroshi Katagiri<sup>a,b,c</sup>, Junji Kido<sup>a,b,c</sup>, (<sup>a</sup>Department of Organic Materials Science, Graduate School of Organic Materials Science, <sup>b</sup>Research Center for Organic Electronics (ROEL), <sup>c</sup>Frontier Center for Organic Materials (FROM), Yamagata University, Japan)

**PA-14 Asymmetric Spirobiacridine-based Delayed Fluorescence Emitters for High-**

## **performance Organic Light-Emitting Devices**

Hiroki Arai<sup>a</sup>, Hisahiro Sasabe<sup>a,b,c</sup>, Hisaki Tsuneyama<sup>a</sup>, Kengo Kumada<sup>a</sup>, and Junji Kido<sup>a,b,c</sup>,  
(<sup>a</sup>Department of Organic Materials Science, Graduate School of Organic Materials Science, <sup>b</sup>Frontier Center for Organic Materials (FROM), <sup>c</sup>Research Center for Organic Electronics (ROEL), Yamagata University, Japan)

## **PA-15 Highly Efficient and Exciplex Organic Light-Emitting Diodes with Phenylcarbazole Based Molecules**

Dian Luo<sup>a,b</sup>, Shun-Wei Liu<sup>b</sup>, (<sup>a</sup>Institute of Lighting and Energy Photonics, National Yang Ming Chiao Tung University, <sup>b</sup>Organic Electronics Research Center and Department of Electronic Engineering, Ming Chi University of Technology, Taiwan)

## **PA-16 High-Efficiency Perovskite Nanocrystal Light-Emitting Diodes via Reduced Interfacial Quenching**

Sungjin Kim<sup>a</sup>, Tae-Woo Lee<sup>a,b</sup>, (<sup>a</sup>Department of Materials Science and Engineering, <sup>b</sup>School of Chemical and Biological Engineering, Institute of Engineering Research, Research Institute of Advanced Materials, Nano Systems Institute, Seoul National University, Korea)

## **PA-17 OLEDs with On-Demand Patterns Drown by Ink-Jet Printing**

M. Sugimoto<sup>a</sup>, Y. Fukuchi<sup>b</sup>, H. Tsuruta<sup>b</sup>, M. Koden<sup>a</sup>, H. Nakada<sup>a</sup>, T. Yukia<sup>a</sup>, (<sup>a</sup>Innovation Center for Organic Electronics (INOEL), Yamagata University, <sup>b</sup>TOYOCEM CO. LTD., Japan)

## **PA-18 Study of Transport Mechanism in Laminated Structures of TAPC and mCP Used in High-Performance OLEDs**

Ryo Sato, Rina Yamashita, Yusuke Ichino, Yoshiyuki Seike, Tatsuo Mori, (Department of Electrical and Electronics Engineering, Graduate School of Engineering, Aichi Institute of Technology, Japan)

## **PA-19 Excited State Dynamics in a Thermally Activated Delayed Fluorescence Emitter Using Time-Resolved Photoluminescence Spectroscopy**

H. Kawasaki<sup>a</sup>, T. Kobayashi<sup>a</sup>, T. Nagase<sup>a</sup>, K. Goushi<sup>b</sup>, C. Adachi<sup>b</sup>, H. Naito<sup>a</sup>, (<sup>a</sup>Osaka Prefecture University, <sup>b</sup>Kyushu University, Japan)

## ***B. Organic and Perovskite PVs***

### **PB-1 Colorful Organic Solar Cells with Minor Power Conversion Efficiency Loss**

Chun-Jen Shih<sup>a,b</sup>, Abdul Khalik Akbar<sup>b</sup>, Jiun-Haw Lee<sup>a</sup>, Shun-Wei Liu<sup>b</sup>, (<sup>a</sup>Graduate Institute of Photonics and Optoelectronics and Department of Electrical Engineering, National Taiwan University,

<sup>b</sup>Organic Electronics Research Center and Department of Electronic Engineering, Ming Chi University of Technology, Taiwan)

**PB-2 Fabrication of Perovskite Photoreceptors of Blue-Light for Optical Wireless Power Supply**

Arisa Kawai, Ryo Fukami, Yusuke Ichino, Yoshiyuki Seike, and Tatsuo Mori, (Department of Electrical and Electronics Engineering, Graduate School of Engineering, Aichi Institute of Technology, Japan)

**PB-3 Operational Stability and Built-in Potential in Nonfullerene Organic Solar Cells**

Jiayin Han, Furong Zhu, (Department of Physics, Research Centre of Excellence for Organic Electronics, and Institute of Advanced Materials, Hong Kong Baptist University, China)

**PB-4 Spray Treatment of MAPbI<sub>3</sub> Layer in Organic Perovskite Solar Cells**

Issei Tanaka, Yusuke Ichino, Tatsuo Mori and Yoshiyuki Seike, (Department of Electrical and Electronics Engineering, Graduate School of Engineering, Aichi Institute of Technology, Japan)

**PB-5 Fabrication of Perovskite Layers Using a New Antisolvent Method**

Yotaku Nakashima, Yusuke Ichino, Yoshiyuki Seike, Tatsuo Mori, (Department of Electrical and Electronics Engineering, Graduate School of Engineering, Aichi Institute of Technology, Japan)

**C. Organic FET, Sensors and Devices**

**PC-1 Large-area Oriented Films of Semiconducting Polymers for Polymer Transistor**

Manish Pandey, Heriyanto Syafutra, Yuya Sugita, Shyam S. Pandey, Hiraoki Benten, Masakazu Nakamura, (Organic Electronics Laboratory, Division of Materials Science, Nara Institute of Science and Technology, Japan)

**PC-2 A Developed Atropine Imprinted Polymer and Its Functionalized Organic Transistor-based Sensor**

Qi Zhou, Tsuyoshi Minami, (Institute of Industrial Science, The University of Tokyo, Japan)

**PC-3 AC Voltage Superimposed Displacement Current Measurement for Pentacene-based MIS Device**

Tatsuhiro Kambayashi<sup>a</sup>, Taichi Hiraga<sup>a</sup>, Masahiro Ohara<sup>a</sup>, Yuya Tanaka<sup>a,b</sup>, Hisao Ishii<sup>a,b,c</sup>, (<sup>a</sup>Graduate School of Science and Engineering, <sup>b</sup>Center for Frontier Science, <sup>c</sup>Molecular Chirality Research Center, Chiba University, Japan)

**PC-4 Stable Near-Infrared Absorption Organic Photosensitizers with High Reactive Oxygen Species Yield for Multimodality Phototheranostics**

Wei-Chih Wei<sup>c</sup>, Yingpeng Wan<sup>a</sup>, Guihong Lu<sup>b</sup>, Jinfeng Zhang<sup>b</sup>, Chun-Sing Lee<sup>a</sup>, Ken-Tsung Wong<sup>c</sup>,  
(<sup>a</sup>Center of Super-Diamond and Advanced Films (COSDAF) & Department of Chemistry, City University of Hong Kong, China, <sup>b</sup>Key Laboratory of Molecular Medicine and Biotherapy, School of Life Sciences, Beijing Institute of Technology, China, <sup>c</sup>Department of Chemistry, National Taiwan University, Taiwan)





## ***Chairs List***

### ***2<sup>nd</sup>, September (Thursday)***

9:20-10:00 ***Plenary1*** Chair: Prof. Tatsuo Mori (Aichi Institute of Technology, Japan)

10:00-12:00 ***TADF Devices***

Chair: Prof. Jeong-Hwan Lee (Inha University, Korea)

Chair: Prof. Prashant Sonar (Queensland University of Technology, Australia)

Chair: Prof. Hironori Kaji (Kyoto University, Japan)

13:00-15:50 ***OLEDs Mechanism/Control***

Chair: Prof. Ken-Tsung Wong (National Taiwan University, Taiwan)

Chair: Prof. Furong Zhu (Hong Kong Baptist University, China)

Chair: Prof. Hisahiro Sasabe (Yamagata University, Japan)

16:00-18:00 ***For Fabrication/Application***

Chair: Prof. Jang-Joo Kim (Seoul National University, Korea)

Chair: Prof. Lixin Xiao (Peking University, China)

Chair: Prof. Takashi Nagase (Osaka Prefecture University, Japan)

### ***3<sup>rd</sup>, September (Friday)***

9:00-9:40 ***Plenary2*** Chair: Prof. Yoshiyuki Seike (Aichi Institute of Technology, Japan)

9:40-12:00 ***OLD/PeLED/QLED***

Chair: Prof. Chun-Sing Lee (City University of Hong Kong, China)

Chair: Prof. Jun Yeob Lee (Sungkyunkwan University, Korea)

Chair: Prof. Yuya Tanaka (Chiba University, Japan)

13:00-14:40 ***Perovskite Solar Cells&Applications***

Chair: Prof. Shun-Wei Liu (Ming Chi University of Technology, Taiwan)

Chair: Prof. Yong-Young Noh (POSTECH, Korea)

Chair: Prof. Toshinori Matsushima (Kyushu University, Japan)

15:00-16:20 ***OPVs***

Chair: Prof. Tae-Woo Lee (Seoul National University, Korea)

Chair: Prof. Hao-Wu Lin (National Tsing Hua University, Taiwan)

Chair: Prof. Takayuki Chiba (Yamagata University, Japan)

**4th, September (Saturday)**

**9:00-10:40    *OFET/Memory/Sensor1***

Chair: Prof. Jung-Yong Lee (KAIST, Korea)

Chair: Prof. Sajal Biring (Mingchi University of Technology, Taiwan)

Chair: Prof. Takashi Nagase (Osaka Prefecture University, Japan)

**11:00-12:40    *OFET/Memory/Sensor2***

Chair: Prof. Dechun Zou (Peking University, China)

Chair: Prof. Steve Park (KAIST, Korea)

Chair: Prof. Itaru Osaka (Hirishima University, Japan)



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Nagoya & Toyota

# Abstracts





Nagoya City Science Museum&  
Planetarium

<http://www.ncsm.city.nagoya.jp>

Sakae area

TV Tower & Hisaya-odori Park

<https://www.nagoya-info.jp/spot/detail/91/>



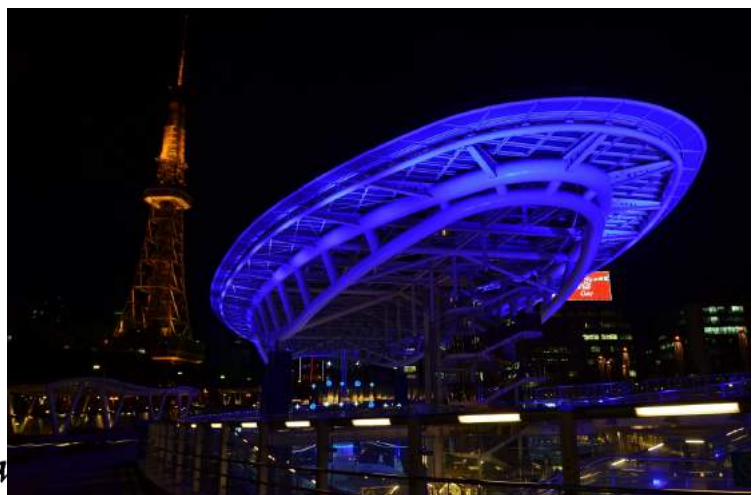
Mei-Eki area

(JR Nagoya Station)

Sake are

Oasis 21

[https://www.nagoya-  
info.jp/spot/detail/23/](https://www.nagoya-info.jp/spot/detail/23/)



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