

研究成果目錄： (\* corresponding author) **h-index : 51** (Google Scholar)

**Journal papers 期刊論文** **IF** (impact factor: 2023 ; citation numbers from Google Scholar)

1. Ping-Yen Chen, Gajendra Suthar, Yu-Yang Su, Chung-Wei Hsu, Kuen-Wei Tsai, Cheng-En Tsai, Chih-Wei Chu, Fang-Chung Chen\*, Yi-Ming Chang\* “Enhancing Performance in Top-Illuminated Shortwave Infrared Organic Photodetectors via Microcavity Resonance” **Adv. Opt. Mater.** accepted (2024). (**IF:8.0**)
2. Gajendra Suthar, Chih-Wei Chu, and Fang-Chung Chen\*, “High-Performance Self-filtering Organic Photodetectors with Photomultiplication Narrowing” **Adv. Opt. Mater.** 12, 2400662 (2024). (**IF:8.0**)
3. Tzu-Yi Lee, Chien-Chi Huang, Wen-Chien Miao, Fu-He Hsiao, Chia-Hung Tsai, Yu-Ying Hung, Fang-Chung Chen, Chun-Liang Lin, Kazuhiro Ohkawa, Jr-Hau He, Yu-Heng Hong\*, Hao-Chung Kuo\*, “Innovative Stacked Yellow and Blue Mini-LED Chip for White Lamp Applications” **Micromachines** 15, 796 (2024). (**IF:3.0**)
4. Jo-Hsiang Chen, Che-Hsuan Huang, Tzu-Yi Lee, Fang-Chung Chen, Tsung Sheng Kao\*, Hao-Chung Kuo\*, “Advancing LED Technology: The FDCSP Element's Breakthrough in Mini and Micro-LED Packaging and Backlight Module Enhancement” **Discover Nano** 19, 94 (2024).
5. Tzu-Yi Lee, Chien-Chi Huang, Yu-Ying Hung, Fang-Chung Chen, Yu-Heng Hong, and Hao-Chung Kuo\*, “InGaN Blue Resonant Cavity Micro-LED with RGY Quantum Dot Layer for Broad Gamut, Efficient Displays” **Discover Nano** 19, 75 (2024).
6. Kuen-Wei Tsai, Min-Hsien Chen, Gajendra Suthar, Yu-Tang Hsiao, Lin-Chieh Cheng, Chuang-Yi Liao, Fang-Chung Chen, Chih-Wei Chu, Yi-Ming Chang\*, “Suppressing the Dark Current While Improving the Quantum Efficiency in Shortwave Infrared Organic Photodetectors Through Naphthalenediimide-Based Interlayer” **Adv. Opt. Mater.** 12, 2302435 (2024). (**IF:8.0**)
7. Wei-Ta Huang, Tzu-Yi Lee, Yi-Hong Bai, Hsiang-Chen Wang, Yu-Ying Hung, Kuo-Bin Hong, Fang-Chung Chen, Chia-Feng Lin, Shu-Wei Chang, Jung Han, Jr-Hau He, Yu-Heng Hong\*, Hao-Chung Kuo\*, “InGaN-based blue resonant cavity micro-LEDs with staggered multiple quantum wells enabling full-color and low-crosstalk micro-LED displays” **Next Nanotechnology** 5, 100048 (2024).
8. Gautham Kumar, Chien-Chung Lin, Hao-Chung Kuo, Fang-Chung Chen\*, “Enhancing photoluminescence performance of perovskite quantum dots with plasmonic nanoparticles: insights into mechanisms and light-emitting applications” **Nanoscale Adv.**, 6, 782-791 (2024). (**IF: 4.6**) (selected as the following themed collections: Celebrating the scientific accomplishments of RSC Fellows and Popular Advances)
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- Hao-Chung Kuo\*, “Optimized Design with Artificial Intelligence Quantum Dot White Mini LED Backlight Module Development” **Crystals** 13, 1411 (2023) (IF:2.4)
10. Gajendra Suthar, Yu-Tang Hsiao, Kuen-Wei Tsai, Chuang-Yi Liao, Chih-Wei Chu, Yi-Ming Chang\*, Fang-Chung Chen\*, “Morphological effects on the performance of broadband organic photomultiplication photodetectors containing selenium substituted non-fullerene acceptors” **Adv. Funct. Mater.** 33, 2301538 (2023). (IF:18.5)
  11. Fu-He Hsiao, Tzu-Yi Lee, Wen-Chien Miao, Yi-Hua Pai, Daisuke Iida, Chun-Liang Lin, Fang-Chung Chen, Chi-Wai Chow, Chien-Chung Lin, Ray-Hua Horng, Jr-Hau He, Kazuhiro Ohkawa, Yu-Heng Hong\*, Chiao-Yun Chang\*, Hao-Chung Kuo\*, “Investigations on the high performance of InGaN red micro-LEDs with single quantum well for visible light communication applications” **Discover Nano** 18, 95 (2023).
  12. Tzu-Yi Lee, Wen-Chien Miao, Yu-Ying Hung, Yi-Hong Bai, Pei-Tien Chen, Wei-Ta Huang, Kuan-An Chen, Chien-Chung Lin, Fang-Chung Chen, Yu-Heng Hong\*, Hao-Chung Kuo\*, “Ameliorating Uniformity and Color Conversion Efficiency in Quantum Dot-Based Micro-LED Displays through Blue–UV Hybrid Structures” **Nanomaterials** 13, 2099 (2023) (IF:4.4)
  13. Gautham Kumar, Fang-Chung Chen\*, “A review on recent progress in organic photovoltaic devices for indoor applications” **J. Phys. D: Appl. Phys.** 56, 353001 (2023). (IF:3.1)
  14. Mukhamed L. Keshtov,\* Alexei R. Khokhlov, Dimitriy Y. Shikin, Vladimir Alekseev, Giriraj Chayal, Hemraj Dahiya, Manish Kumar Singh, Fang-Chung Chen, and Ganesh D. Sharma\*, “Medium Bandgap Nonfullerene Acceptor for Efficient Ternary Polymer Solar Cells with High Open-Circuit Voltage” **ACS Omega**, 8, 1989–2000 (2023). (IF:3.7)
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  16. Prateek Malhotra, Kanupriya Khandelwal, Subhayan Biswas, Fang-Chung Chen, Ganesh D. Sharma\*, “Opportunities and challenges for machine learning to select combination of donor and acceptor materials for efficient organic solar cells” **J. Mater. Chem. C**, 10, 17781–17811 (2022). (IF:5.7)
  17. Tzu-Yi Lee, Tsau-Hua Hsieh, Wen-Chien Miao, Konthoujam James Singh, Yiming Li, Chang-Ching Tu, Fang-Chung Chen\*, Wen-Chung Lu, Hao-Chung Kuo\* “High-Reliability Perovskite Quantum Dots Using Atomic Layer Deposition Passivation for Novel Photonic Applications” **Nanomaterials** 12, 4140 (2022). (IF:4.4)
  18. Cheng-Han Sung, Shi-Da Huang, Gautham Kumar, Wen-Chi Lin, Chien-Chung Lin, Hao-Chung

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19. Tzu-Yi Lee, Li-Yin Chen\*, Yu-Yun Lo, Sujith Sudheendran Swayamprabha, Amit Kumar, Yu-Ming Huang, Shih-Chen Chen, Hsiao-Wen Zan, Fang-Chung Chen\*, Ray-Hua Horng\*, Hao-Chung Kuo\*, “Technology and Applications of Micro-LEDs: Their Characteristics, Fabrication, Advancement, and Challenges” **ACS Photonics**, 9, 2905–2930 (2022). (IF:6.5)
  20. Hao-Yeu Tsai, Yung-Fang Yang, Hong-Sheng Jiang, Fang-Chung Chen\*, “Asymmetrical Single Crystals Containing Tilted Ruddlesden–Popper Phases for Efficient Perovskite Solar Cells” **Solar RRL**, 6, 2200562 (2022). (IF:6.0)
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  25. Sumit S. Bhosale, Efat Jokar, Yi-Ting Chiang, Chieh-Hsi Kuan, Kiana Khodakarami, Zahra Hosseini\*, Fang-Chung Chen\*, Eric Wei-Guang Diao\*, “Mn-Doped Organic-Inorganic Perovskite Nanocrystals for a Flexible Luminescent Solar Concentrator” **ACS Appl. Energy Mater.** 4, 10565-10573 (2021). (IF:5.4)
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### **Conference papers 研討會論文 (sorted by conference Location)**

#### **International Conference Papers 國外研討會論文**

1. Fang-Chung Chen\*, Ching-Wei Lee, “Self-adaptive nanoscale electrode structures for efficient inverted perovskite photovoltaics” SPIE Optics and Photonics 2024 (San Diego, USA, Aug. 2024) (oral presentation)
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16. Fang-Chung Chen\* “High-efficient organic and perovskite photovoltaic devices for low-power indoor applications” The 12<sup>th</sup> Pacific Rim Conference on Ceramic and Glass Technology, Hawaii, U.S.A., May 2017 **(invited oral presentation)**
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20. Fang-Chung Chen,\* Ming-Kai Chuang, and Shih-Wei Lin, “Plasmonic nanostructures for organic photovoltaic devices” Materials Challenges in Alternative & Renewable Energy (MCARE 2015), (Jeju, Korea, Feb. 2015). **(invited oral presentation)**
21. V.S. Kochurov, M.L.Keshtov, C.D.Sharma, Fang-Chung Chen, A.R.khokhlov, “New Donor Acceptor Conjugated Copolymers for Solar Cells” XII International Conference on Nanostructured Materials (NANO 2014), Moscow, July 13-18, pp. 07.024
22. D.Yu.Godovsky, M.L.Keshtov, Y. Zou, Fang-Chung Chen, A.R.Khokhlov, “Synthesis and Photovoltaic Properties of New Donor–Acceptor thienofluorantenes Containing Copolymers with quinoid nature of  $\pi$ -conjugation” International Fall School on Organic Electronics (IFSOE) Moscow Russia, September 21-26, 2014.
23. M. Keshtov, D. Godovsky, V. Kochurov, G. D. Sharma, Fang-Chung Chen, N. Radychev, A. Khokhlov, “New Donor-Acceptor Benzotrithiophene-Containing Conjugated Polymers for Solar

- Cells” 7th International Conference on Times of Polymers and Composites, (Ischia, Italy, Jun. 2014)
24. Ming-Kai Chuang, Fang-Chung Chen\*, and Chain-Shu Hsu “Green synthesis of gold nanoparticle – decorated graphene oxides that enhance the photocurrent in polymer solar cells” 2014 Materials Research Society Spring Meeting (April 2014)
  25. Fang-Chung Chen\* “Surface plasmonic effects of metallic nanostructures on the performance of polymer solar cells” 9<sup>th</sup> World Congress of Chemical Engineering (Seoul, Korea, Aug. 2013) **(invited oral presentation)**
  26. Fang-Chung Chen\* “Light Harvesting Schemes for High-performance Polymer Solar Cells” The 12<sup>th</sup> Emerging Information & Technology Conference (Toronto, Canada, Aug. 2012) **(invited oral presentation)**
  27. Fang-Chung Chen\*, Jyh-Lih Wu, Chia-Ling Lee, Yi Hong, Ming-Kai Chuang and Kim-shih Tan “Light Harvesting Schemes for High-performance Polymer Solar Cells” 4<sup>th</sup> International Conference Smart Materials, Structures and Systems (Italy, June 2012) **(invited oral presentation)**
  28. Fang-Chung Chen\*, and Ming-Kai Chuang “Thin-film Transfer-printing of Polymer Blends with Self-organized Interfaces for Flexible Polymer Solar Cells” 2011 Materials Research Society Spring Meeting (April 2011) (oral presentation).
  29. Fang-Chung Chen\*, Tzung-Da Chen, Bing-Ruei Zeng and Ya-Wei Chung “Electrical Characteristics of Flexible Organic Thin-film Transistors under Bending Conditions” The 17<sup>th</sup> International Display Workshops (IDW) (Dec. 2010 Japan).
  30. Fang-Chung Chen\*, Jyh-Lih Wu, Yi Hung “Light Harvesting Schemes for High-performance Polymer Solar Cells” Advances in Optoelectronics and Micro/nano-optics (AOM) (Dec. 2010 Guangzhou, China) **(invited oral presentation)**
  31. Fang-Chung Chen\*, and Shang-Chieh Chien “Nanoscale functional interlayers formed through spontaneous vertical phase separation in polymer photovoltaic devices” MRS (Spring 2010) (oral presentation).
  32. Chao-Feng Sung, Dhananjay Kekuda, Li Fen Chu, Yuh-Zheng Lee, Fang-Chung Chen, Meng-Chyi Wu, and Chih-Wei Chu\*, “Fullerene C<sub>60</sub> thin film transistors fabricated by solution processing” MRS (Spring 2010) (oral presentation).
  33. Fang-Chung Chen\* “Morphology manipulation for polymer solar cells” Progress in Electromagnetics Research Symposium PIERS 2010 Xi’an (oral presentation).
  34. Li Fen Chu, Chao-Feng Sung, Yuh-Zheng Lee, Fang-Chung Chen, Meng-Chyi Wu, and Chih Wei Chu “Ambipolar charge carrier transport in C<sub>60</sub> and Poly(3-hexylthiophene) blends of organic semiconductor thin film transistors and their logic circuits” International Conference on Solid

State Devices and Materials 2009 (SSDM 2009)

35. Yi-Hsing Chu, Gao-Ming Wu, Chiao-Shun Chuang, Wei-Kuan Yu, Fang Chung Chen, Han-Ping D. Shieh “CMOS-Like Ambipolar Organic/Inorganic TFTs for AMLCD and AMOLED Applications” Society for Information Display (2009).
36. Jyh-Lih Wu, Kuo-Huang Hsieh, Wen-Chang Chen and Fang-Chung Chen\*, “Highly efficient inverted bulk-heterojunction polymer photovoltaic devices with transparent contacts” 215<sup>th</sup> Electrochemical Society Meeting (2009).
37. Shang-Chieh Chien and Fang-Chung Chen\* “Improved Hole-Mobility of Polymer Bulk Heterojunction Photovoltaic Cells Incorporating Hole Transporting Materials” 215<sup>th</sup> Electrochemical Society Meeting (2009)
38. Fang-Chung Chen\* “High-performance polymer solar cells” Printed electronics Asia 08’ (**invited oral presentation**)
39. Fang-Chung Chen\*, Cheng-Hsiang Liao, Wei-Pang Huang, Tom Huang “Improved Air-stability of n-Channel Organic Thin Film Transistors via Surface Modification on Gate Dielectrics” Pacific Rim Meeting on Electrochemical and Solid-state Science (PRiME) (2008). (oral presentation)
40. Yung-Shiuan Chen, Shang-Chieh Chien, Fang-Chung Chen\*, Jan-Tian Lian, Chien-Lung Tsou and Chi-Neng Mo “Enhanced power efficiency of single-layer white triplet polymer light-emitting diodes by blending with polymer oxides” Society for Information Display (2008).
41. J. P. Lu, F. C. Chen, F.K. Chen, W.C. Chen, H.C Hsu, Y. Z Liao, and Y. Z. Lee “The Fabrication of Single Substrate Multi-Color Cholesteric Liquid Crystal Display by Ink-Jet Printing” Society for Information Display (2008).
42. Fang-Chung Chen\*, Hisn-Chen Tseng, and Chu-Jung Ko, “Efficient polymer solar cells prepared from co-solvent systems” MRS (Spring 2008).
43. Chu-Jung Ko, Fang-Chung Chen\*, and Wei-Chi Chen “In-situ, dynamic investigation of phase separation in P3HT/PCBM blends during the solvent annealing process” MRS (Spring 2008)
44. Fang-Chung Chen\*, Chu-Jung Ko, and Yi-Kai Lin “Highly efficient polymer photovoltaic devices with bulk heterogeneous *p-n* junctions” 212<sup>th</sup> ECS meeting (2007) (oral presentation)
45. Shang-Chieh Chien and Fang-Chung Chen\* “Polymeric electrophosphorescent devices with low turn-on voltage and high power efficiency by blending with poly(ethylene glycol)” Society for Information Display (2007)
46. Chiao-Shun Chuang, Su-Ting Tsai, Yung-Sheng Lin, Jung-An Cheng, Fang-Chung Chen\*, and Han-Ping D. Shieh “Transparent OTFTs with color filtering functional gate insulators” Society for Information Display (2007).
47. Fang-Chung Chen\*, Chu-Jung Ko, and Yi-Kai Lin “Microwave annealing processes in polymer

- photovoltaic devices” MRS (Spring 2007) (oral presentation)
48. Fang-Chung Chen\*, Wen-Kuei Huang, and Jih-Ping Lu “High-quality Microlens Arrays Fabricated by Ink-jet Printing and Micro-contact Printing” MRS (Spring 2007) (oral presentation)
  49. Chiao-Shun Chuang, Shu-Ting Tsai, Fang-Chung Chen\*, and Han-Ping D. Shieh “Organic thin-film transistors with reduced-photosensitivity” The 13<sup>th</sup> International Display Workshops, Otsu, Japan, Dec. 6 (2006)
  50. Fang-Chung Chen\*, Ssu-Fang Liu and Wen-Sheng Wang “Polarized polymer light-emitting diodes with conducting alignment layers” The 6th International Conference on Electroluminescence of Molecular materials and Related Phenomena, Hong Kong (August 2006). (oral presentation)
  51. Wen-Kuei Huang, Jih-Ping Lu and Fang-Chung Chen\* “Fabrication of a microlens array using ink-jet printing on a pre-patterned substrate by self-assembled monolayers” Micro & Nano Engineering, (2006).
  52. Fang-Chung Chen\*, Tung-Hsien Chen, and Yung-Sheng Lin, “Novel electrode architecture for transparent organic thin-film transistors” International Meeting on Information Display/International Display Manufacturing Conference, Korean (2006). (oral presentation)
  53. Wen-Kuei Huang, Wen-Sheng Wang, Hui-Chun Kan, and Fang-Chung Chen\* “Enhanced Light Out-coupling Efficiency of OLEDs with Self-organized Microlens Arrays” Society for Information Display (2006).
  54. Fang-Chung Chen\*, Chiao-Shun Chuang, Yung-Sheng Lin, Li-Jen Kung, and Dong-Sian Chen, “Polymeric Nanocomposite Dielectrics for Organic thin-film Transistors” MRS (Spring 2006).
  55. Chiao-Shun Chuang, Yung-Sheng Lin, Li-Jen Kung, Dong-Sian Chen, Fang-Chung Chen\*, and Han-Ping D. “Organic Thin-Film Transistors based on Nanocomposite Gate Insulators for High-current Driving Applications” International Display Workshops (2005). (oral presentation)
  56. Wen-Kuei Huang, Fang-Chung Chen\* and Chu-Jung Ko “Fabrication of microlens arrays on glass substrates by lotus effect” Micro & Nano Engineering, (2005).
  57. Fang-Chung Chen, Roozbeh Jafari, Eren Kursun, Vijay Raghunathan, Thomas Schoellhammer, Doug Sievers, Deborah Estrin, Glenn Reinman, Majid Sarrafzadeh, Mani Srivastava, Ben Wu, and Yang Yang “Reconfigurable Fabric: An enabling technology for pervasive medical monitoring” Communication Networks and Distributed Systems Modeling and Simulation Conference, (2004).
  58. Fang-Chung Chen, and Yang Yang\*, “Enhanced efficiency of plastic photovoltaic devices by blending with ionic solid electrolytes” MRS (Spring 2003) (oral presentation)
  59. Fang-Chung Chen, and Yang Yang\*, Qibing Pei, “Phosphorescent light-emitting electrochemical cells” MRS (Spring 2003) (post presentation)
  60. Yang Yang\*, Fang-Chung Chen, Mark. E. Thompson, “High performance polymer light-emitting

diodes” ACS (Fall 2002). This paper is published in **Polymer Reprints**, 43, 487 (2002).

61. Fang-Chung Chen, Shun-Chi Chang, Yang Yang\*, “Energy transfer and triplet exciton confinement in phosphorescent polymer light-emitting diodes” TMS 2002 Electronic Materials Conference, (Spring 2002) (oral presentation)
62. Fang-Chung Chen, Shu-Chi Chang, Gufeng He, Seungmoom Pyo, Jie Liu, Yang Yang\*, Sergey Lamansky, Mark E. Thompson, Junji Kido, “The search of polymeric hosts for phosphorescent polymer light-emitting diodes” ICEL-3 (2001) (oral presentation)
63. Shun-Chi Chang, Fang-Chung Chen, Shu-Chi Chang, Yang Yang\* “The search of host materials in phosphorescent polymer light-emitting diodes” MRS (2001) (post presentation)

### **Domestic Conference Papers 國內研討會論文**

1. Fang-Chung Chen\*, Gautham Kumar, Cheng-Han Sung, Shi-Da Huang, Wen-Chi Lin, Chien-Chung Lin, Hao-Chung Kuo, “Photopatternable Perovskite Quantum Dots for Light-Emitting Devices” The 13th International Symposium for Luminescent Materials (Phosphor Safari 2024), (Taipei, Taiwan, Aug. 2024) (**invited oral presentation**)
2. Gajendra Suthar, Chih-Wei Chu, Fang-Chung Chen\* “High-performance narrowband organic photodetectors based on selective exciton activated photomultiplication” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023). (Student Paper Award, Oral)
3. Gajendra Suthar, Yu-Tang Hsiao, Kuen-Wei Tsai, Chuang-Yi Liao, Chih-Wei Chu, Yi-Ming Chang\*, Fang-Chung Chen\* “Morphological effects on the performance of broadband organic photomultiplication photodetectors containing selenium substituted non-fullerene acceptors” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).
4. Tsu-Hsin Li, Chia-Tse Hsu, Fang-Chung Chen\* “Machine Learning Models for Predicting Efficiencies of Organic Photomultiple Photodetectors” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).
5. Wen-Chi Lin, Ching-Deng Lin, Fang-Chung Chen\* “Effects of Cs ions in Organic-Inorganic Hybrid Perovskite Quantum Dots for X-Ray Imaging Applications” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).
6. Yu-Ze Zhang, Chia-Tse Hsu, Fang-Chung Chen\* “Rapid Crystal Growth of Quasi-Two-Dimensional Perovskite Single Crystals for Solar Applications Using Alcohols Additives” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).
7. Gautham Kumara Kabbinahithlu, Fang-Chung Chen\* “Plasmonic Enhanced Photoluminescence of Perovskite Quantum Dots Using Gold Nanoparticles and Light-Emitting Applications” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).

8. Tzu-Yi Lee, Pei-Tien Chen, Chia-Hung Tsai, Fang-Chung Chen, Hao-Chung Kuo\* “High Reliability Perovskite Quantum Dots Using Atomic Layer Deposition Passivation for Novel Photonic Applications” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).
9. Yen-Hsien Chang, Yan-Yu Shiu, Fang-Chung Chen\* “Ligand Engineering of Red Perovskite Quantum Dots for Lighting Applications” Optics & Photonics Taiwan, International Conference 2023 (OPTIC 2023).
10. Fang-Chung Chen\* and Ching-Wei Lee “Self-adaptive hole transport layers for efficient inverted perovskite photovoltaics” The 15th Asian Conference on Organic Electronics (A-COE 2023).  
**(invited oral presentation)**
11. Gajendra Suthar, Yu-Tang Hsiao, Kuen-Wei Tsai, Chuang-Yi Liao, Chih-Wei Chu, Yi-Ming Chang\*, Fang-Chung Chen\* “Morphological effects on the performance of broadband organic photomultiplication photodetectors containing selenium substituted non-fullerene acceptors” The 15th Asian Conference on Organic Electronics (A-COE 2023). (Student Poster Paper Award)
12. Gautham Kumara, Fang-Chung Chen\* “Photoluminescence Enhancement of Quantum Dots Using Gold Nanoparticle-Decorated Graphene Oxides: Unveiling Plasmonic Effects and Real-World Applications” The 15th Asian Conference on Organic Electronics (A-COE 2023).
13. Yu-Ze Zhang, Nutchha Khambunkoed, Fang-Chung Chen\* “Rapid Crystal Growth of Quasi-Two-Dimensional Perovskite Single Crystals for Solar Applications” The 15th Asian Conference on Organic Electronics (A-COE 2023).
14. Ching-Wei Lee, Fang-Chung Chen\* “Self-Adaptive Transport Layers for Efficient Inverted Perovskite Photovoltaics” Optics & Photonics Taiwan, International Conference 2022 (OPTIC 2022). (Student Poster Paper Award)
15. Cheng-Han Sung, Yen-Hsien Chang, Chien-Chung Lin, Hao-Chung Kuo, Fang-Chung Chen\* “Perovskite quantum dots for light-emitting devices: Photopatternable perovskite quantum dot-polymer nanocomposites” Optics & Photonics Taiwan, International Conference 2022 (OPTIC 2022).
16. Hung-Nien Yu, Tsu-Hsin Li, Fang-Chung Chen\* “Machine Learning Models for Predicting Power Conversion Efficiencies of Indoor Organic Photovoltaics” Optics & Photonics Taiwan, International Conference 2022 (OPTIC 2022).
17. Huai-Yu Lei, Tzu-Yu Hsu, Fang-Chung Chen\* “Plasmonic Effects of Gold Nanoparticles on the Performance of TADF Organic Light-Emitting Diodes” Optics & Photonics Taiwan, International Conference 2021 (OPTIC 2021).
18. Hoong Lien Lai, Jing-Yuan Su, Fang-Chung Chen\* “Metal-Organic Frameworks as Hole Injection Materials for Organic Light-Emitting Diodes” Optics & Photonics Taiwan, International Conference

2021 (OPTIC 2021).

19. Gautham Kumar and Fang-Chung Chen\* “Plasmonic Effect of Bimetallic Au-Cu Alloy Nanoparticles on Indoor Performance of Organic Photovoltaics” Optics & Photonics Taiwan, International Conference 2020 (OPTIC 2020).
20. Yi-Fong Lai, Shun-Yu Xie and Fang-Chung Chen\* “Surface Treatments Lead to Simultaneous Efficiency Improvement in Perovskite Solar Cells for Both Outdoor and Indoor applications” Optics & Photonics Taiwan, International Conference 2020 (OPTIC 2020).
21. Tzu-Hsueh Wu, Yung-Fang Yang and Fang-Chung Chen\* “Surface Passivation on Single-Crystal Perovskite Micro-Plates Improves the Performance of Solar Cells” Optics & Photonics Taiwan, International Conference 2020 (OPTIC 2020).
22. Hao-Yeu Tsai, Hung-Wen Huang and Fang-Chung Chen\* “Vertical Oriented Quasi-Two-Dimensional Perovskite Single Crystal Micro-Plates for Highly Efficient Solar Cells” Optics & Photonics Taiwan, International Conference 2020 (OPTIC 2020).
23. Fang-Chung Chen\*, Hsin-Hung Sung, Chien-Chen Kuo Hung-Sheng Chiang and Hong-Lin Yue “Perovskite Single Crystals for Photovoltaic Applications” International Conference on Emergent Functional Matter Science 2020. Yilan, Taiwan.
24. Fang-Chung Chen\*, Ming-Ju Wu, Chien-Chen Kuo, Lu-Syuan Jhuang, Shun-Shing Yang, Po-Han Chen, Zong-Chun Hsieh, Nai-Wei Teng, “Emerging Organic and Perovskite Photovoltaic Devices for Indoor Applications” Optics & Photonics Taiwan, International Conference 2019 (OPTIC 2019).  
**(invited oral presentation)**
25. Yi-Fong Lai, and Fang-Chung Chen\*, “Virtual Screening of Conjugated Polymers for Organic Photovoltaic Devices Using Support Vector Machines and Ensemble Learning” The 7<sup>th</sup> RIKEN-NCTU Symposium on Physical and Chemical Sciences (2019). (Master Student Paper Award)
26. Fang-Chung Chen\* “Off-grid Photovoltaics for Smart Applications” The EITA Conference on New Materials, Nanotechnology and New Energy 2019, Hsinchu, Taiwan **(invited oral presentation)**
27. Wun-Jhen Chen, Tzu-Hsueh Wu, Fang-Chung Chen\* “Enhancing the Performance of Perovskite Solar Cells by Utilizing the Local Surface Plasmon Effects of Copper Nanoparticles” The EITA Conference on New Materials, Nanotechnology and New Energy 2019, Hsinchu, Taiwan.
28. Shi-Da Huang, Ren-Yung Yang, Fang-Chung Chen\* “Plasmonic Effects of Gold Nanoparticles on the Performance of Perovskite Quantum Dot Light-Emitting Diodes” The EITA Conference on New Materials, Nanotechnology and New Energy 2019, Hsinchu, Taiwan.
29. Hsin-Hung Sung, Hung-Sheng Chiang, Ren-Yung Yang, Fang-Chung Chen\* “Fabrication and Characteristic of Mixed-Cation Single-Crystal Plates for Perovskite Solar Cells” The EITA Conference on New Materials, Nanotechnology and New Energy 2019, Hsinchu, Taiwan.



30. Yu-Chang Lin, Wun-Jhen Chen, and Fang-Chung Chen\* “Solution-Processable Copper Nanoparticles for Plasmonic-Enhanced Perovskite Solar Cells” Optics & Photonics Taiwan, International Conference 2018 (OPTIC 2018).
31. Chen-Min Yang, Lu-Syuan Jhuang, Fang-Chung Chen\* “Plasmonic Effects of Gold Nanoparticles on the Performance of Perovskite Light-Emitting Diodes” Optics & Photonics Taiwan, International Conference 2018 (OPTIC 2018).
32. Ming-Ju Wu, Chien-Chen Kuo, and Fang-Chung Chen\* “Band-gap Engineering of Perovskite Photovoltaic Devices for Indoor Applications” Optics & Photonics Taiwan, International Conference 2018 (OPTIC 2018).
33. Xin-Jie Chen, Ming-Ju Wu, and Fang-Chung Chen\* “Semitransparent Perovskite Solar Cells and their Tandem Structures Assembled with Si Cells” Optics & Photonics Taiwan, International Conference 2017 (OPTIC 2017)
34. Pang-Hua Huang, Yi-Chun Lai, Sih-Han Chen, Peichen Yu\*, and Fang-Chung Chen ” Hybrid Carbon Nanotube/Silicon Schottky Junction Solar Cells” Optics & Photonics Taiwan, International Conference 2016 (OPTIC 2016)
35. Chi-Yu Yang, Hao-Wu Lin\*, Ken-Tsung Wong\*, and Fang-Chung Chen\* “Efficient Excimer Delay Fluorescence Organic Light Emission Devices Based on Fluorene Derivatives” Optics & Photonics Taiwan, International Conference 2016 (OPTIC 2016)
36. Guan Yu Chen, Tsung Sheng Kao, Kuo Bin Hong, Yu Hsun Chou, Jiong Fu Huang, Fang Chung Chen\*, Tien Chang Lu\* “Lasing performance enhanced by localized surface plasmon in solution-processed perovskites” Optics & Photonics Taiwan, International Conference 2016 (OPTIC 2016) (oral presentation)
37. Zong-Chun Hsieh, Po-Han Chen and Fang-Chung Chen\* ” Organic Photovoltaic Devices Prepared with a Low-Band-Gap Polymer for Low Light Applications” Optics & Photonics Taiwan, International Conference 2015 (OPTIC 2015)
38. Shun-Shing Yang, Nai-Wei Teng, and Fang-Chung Chen\* ”Organic Photovoltaic Devices for Indoor Applications” Optics & Photonics Taiwan, International Conference 2015 (OPTIC 2015)
39. Shun-Shing Yang and Fang-Chung Chen\* ”Organic Photovoltaic Devices for Indoor Applications” 2015 International Conference on Flexible and Printed Electronics, (The 6th ICFPE, 2015, Taipei)
40. Zong-Chun Hsieh and Fang-Chung Chen\* ” Organic Photovoltaic Devices Prepared with a Low-Band-Gap Polymer for Low Light Applications” 2015 International Conference on Flexible and Printed Electronics, (The 6th ICFPE, 2015, Taipei)
41. Wai-Chen Lin, Hung-Wen Hsu, and Fang-Chung Chen\* ” Polymer Solar Cells Prepared with Photoexfoliated Fluorinated Graphite as Cathode Buffer Layer” 2015 International Conference on

Flexible and Printed Electronics, (The 6th ICFPE, 2015, Taipei)

42. Chun-Hao Lin, Jiong-Fu Huang, and Fang-Chung Chen\*, “Plasmonic Effects of Gold Nanoparticle-Decorated Graphene Oxide Nanocomposites on the Performance of Polymer Light-Emitting Devices” Optics & Photonics Taiwan, International Conference 2014 (OPTIC 2014).
43. Ming-Kai Chuang, Shun-Shing Yang and Fang-Chung Chen\*, “PEGylated gold nanoparticle-decorated graphene oxides for realizing synergistic plasmonic effects on polymer solar cells” Optics & Photonics Taiwan, International Conference 2014 (OPTIC 2014).
44. Fang-Chung Chen\* “Plasmonic nanostructures for light-trapping in organic photovoltaic devices” International Conference on New Materials, Nanotechnology and New Green Energy 2014 (EITA–New Materials 2014) (**invited talk**).
45. Fang-Chung Chen\* Ming-Kai Chuang, and Shih-Wei Lin, “Graphene Derivatives for Organic Optoelectronics” Graphene 2014 International Conference (Nov. 2014) (**invited talk**).
46. Fang-Chung Chen\*, Ming-Kai Chuang, and Shih-Wei Lin, “Plasmonic nanostructures for polymer photovoltaic devices” International Symposium on Organic Photovoltaics (OPV-2014) (**invited talk**).
47. Chun-Hsien Chou, Fang-Chung Chen\*, Li Wen-Chieh, Lin Yao-Leng, Wu Cheng-Han “Anti-reflection encapsulant for solar cells” Annual Meeting of The Physical Society of Republic of China, 2014.
48. Chun-Hsien Chou and Fang-Chung Chen\* “Ray-tracing Designed Microlenses for Improving Flexible Waveguiding Photovoltaics” Optics & Photonics Taiwan, International Conference 2013 (OPTIC 2013) (**student paper award**).
49. An-Kai Ling, Chun-Hao Lin, and Fang-Chung Chen\* “Enhanced Light Out-Coupling Efficiency of Polymer Light-Emitting Devices by Blending Low Refractive Index materials” Optics & Photonics Taiwan, International Conference 2013 (OPTIC 2013).
50. Yan-Hao Liao, Fang-Chung Chen\*, Michael H. Huang and Min-Yi Yang “Au Nanosheets Induced Surface Plasmon to Enhance Performance of Organic Solar Cells” Optics & Photonics Taiwan, International Conference 2013 (OPTIC 2013).
51. Yen-Tseng Lin, and Fang-Chung Chen\* “Multiple-device stacked structures for High-performance organic cells” Optics & Photonics Taiwan, International Conference 2013 (OPTIC 2013).
52. Chun-Hsien Chou and Fang-Chung Chen\* “A Novel Concentrator Design with High Performance Flexible Waveguiding Photovoltaics” Photovoltaic Science and Engineering Conference (International PVSEC-23).
53. Shih-Wei Lin, Ming-Kai Chuang, and Fang-Chung Chen\* “Gold nanoparticle–decorated graphene oxide nanocomposites for plasmonic-enhanced polymer photovoltaic devices” Photovoltaic

Science and Engineering Conference (International PVSEC-23).

54. Kim-Shih Tan, Jyh-Lih Wu, Fang-Chung Chen\*, Shu-Hao Chang, and Hsing-Yu Tuan “Near-Infrared Laser-Driven Polymer Photovoltaic Devices Containing Upconversion Nanocrystals”, Optics & Photonics Taiwan, International Conference 2012 (OPTIC 2012, formerly OPT 2012).
55. Chuan-Sheng Kao and Fang-Chung Chen\* “Plasmonic-Enhanced Polymer Solar Cells with Inverted Structures”, Optics & Photonics Taiwan, International Conference 2012 (OPTIC 2012, formerly OPT 2012).
56. Fang-Chung Chen\* “Light Harvesting Schemes for High-performance Polymer Solar Cells” International Conference on Functional Organic Materials and Related Devices 2012.
57. Chen-Wei Lin and Fang-Chung Chen\* “Small Molecule Sensitizers in Polymer Photodetectors for Extended Spectral Response” Symposium on Nano Device Technology 2012.
58. Ya-Wei Chung, Hsieh Po-Cheng, Yu-Ze Chen, Yu-Lun Chueh, and Fang-Chung Chen\* “Effect of Doping Ratio on the Electrical Properties of Zirconium-Indium-Zinc-Oxide Thin-film Transistors Fabricated by Using a Solution Process” Taiwan Display Conference (2012).
59. Shao-Tang Chuang, and Fang-Chung Chen\* “Realization of Broad Spectral Response of Organic Photomultiple Photodetectors through Codoping Near-Infrared Dyes” International Photonics Conference (IPC 2011).
60. Jyh-Lih Wu, Ming-Kai Chuang, Kim-Shih Tan, and Fang-Chung Chen\* “Near-Infrared Laser-Driven Polymer Photovoltaic Devices and Their Biomedical Applications” International Photonics Conference (IPC 2011).
61. Shu-Cheng Lin, and Fang-Chung Chen\* “Charge Blocking Layers for Improving Detectivity of Organic Photomultiple Photodetectors” International Photonics Conference (IPC 2011).
62. Wai-Chen Lin\*, Mei-Ju Lee, Chao-Feng Sung, Fang-Chung Chen “Inverted and semitransparent polymer solar cells” The Asian Conference on Organic Electronics” (ACOE 2011).
63. Fang-Chung Chen\* “Light Harvesting Schemes for High-performance Polymer Solar Cells” 2011 Asia Pacific Academy of Materials (APAM) (2011) **(Invited)**
64. Fang-Chung Chen\*, Jyh-Lih Wu, Yi Hong, and Chia-Ling Lee “Light Trapping Approaches for High-performance Polymer Solar Cells” 16<sup>th</sup> Opto-electronics and Communications Conference (OECC) (2011). **(Invited)**
65. Ya-Wei Chung, Ying-Pin Chen, and Fang-Chung Chen\* “Solution-Processed ZrInZnO Semiconductor for Thin Film Transistors” International Display Manufacturing Conference (IDMC) (2011).
66. Fang-Chung Chen\*, Shang-Chieh Chien, Shao-Tang Chuang, and Guan-Lin Cious “High-performance organic photomultiple photodetectors exhibiting broadband response” 2010

International Conference on Optics and Photonics in Taiwan (OPT' 10)

67. Ming-Kai Chuang and Fang-Chung Chen\* “A novel transfer-printing technique for flexible polymer solar cells” 2010 International Conference on Optics and Photonics in Taiwan (OPT' 10)
68. 陳宗達、陳方中\*, 可撓式有機薄膜電晶體在彎曲應力下的電性探討, Taiwan Display Conference (2010). (Student paper award)
69. Tzung-Han Tsai, Shang-Chieh Chien, and Fang-Chung Chen\* “Performance-enhanced n-channel organic thin-film transistors incorporating poly(ethylene glycol)” Taiwan Display Conference (2010).
70. Shang-Chieh Chien, and Fang-Chung Chen\*, “Nanoscale functional interlayers formed through spontaneous vertical phase separation in high-performance polymer photovoltaic devices”, Optics and Photonics Taiwan (OPT) (2009). (Student paper award)
71. Jyh-Lih Wu, Yi Hung, and Fang-Chung Chen\*, “The exploitation of optical interference for improving the performance of inverted polymer solar cells”, Optics and Photonics Taiwan (OPT) (2009). (Student paper award)
72. Bing-Ruei Zeng, Fang-Chung Chen\*, Shang-Chieh Chien, Chi-Neng Mo, Huai-An Li, and Shou-Cheng Weng, “Hysteresis-free photopatternable dielectrics for flexible organic thin-film transistors” International Display Manufacturing Conference/3D System and Application/Asia Display, (2009).
73. Yi-Hsing Chu, Gao-Ming Wu, Wei-Kuan Yu, Fang-Chung Chen, and Han-Ping D. Shieh, “Complementary circuits of ambipolar organic/oxide thin-film transistors for AMFPD applications” International Display Manufacturing Conference/3D System and Application/Asia Display, (2009). (Best paper award)
74. Jyh-Lih Wu, Fang-Chung Chen\*, Kuo-Huang Hsieh, and Wen-Chang Chen\* “Transparent cathode for bulk-heterojunction organic solar cells”, International Conference on Optics and Photonics in Taiwan (OPT) (2008) (Student paper award)
75. Wen-Che Huang, Shang-Chieh Chien and Fang-Chung Chen\*, “Highly efficient semi-transparent polymer solar cells”, International Conference on Optics and Photonics in Taiwan (OPT) (2008)
76. Shang-Chieh Chien, Hsin-Chen Tseng and Fang-Chung Chen\* “Solvent mixtures for improving device efficiency of polymer photovoltaic devices” International Conference on Optics and Photonics in Taiwan (OPT) (2008).
77. Yu-Jen Huang, Hsiao-Fen Chang, Su-Ting Tsai, Chiao-Shun Chuang, Jung-An Cheng, Fang-Chung Chen\*, and Han-Ping D. Shieh “Color filtering functional organic thin-film transistors” International Display Manufacturing Conference & Exhibition, (2007).
78. Yin-Ting Shih and Fang-Chung Chen\* “The post-annealing effect on the electrical properties of

- pentacene thin film transistors” International Display Manufacturing Conference & Exhibition, (2007).
79. Shu-Ting Tsai and Fang-Chung Chen\* “Effect of the surface treatments on the turn-on voltages of pentacene-based thin film transistors” International Display Manufacturing Conference & Exhibition, (2007).
  80. Ying-Pin Chen and Fang-Chung Chen\* “Effect of deposition temperature on the channel and contact resistance of pentacene thin film transistors” International Display Manufacturing Conference & Exhibition, (2007).
  81. Hao-Wei Ting and Fang-Chung Chen\* “Triplet energy transfer between a conjugated polymer and phosphorescent molecules” International Display Manufacturing Conference & Exhibition, (2007).
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