

研究成果目錄： (\* corresponding author) **h-index:49** (Google Scholar)

**Journal papers 期刊論文** IF (impact factor: 2021 ; citation numbers from Google Scholar)

1. 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.** accepted (2023). (IF:9.0)
2. Tzu Yi Lee, Wei-Ta Huang, Jo-Hsiang Chen, Wei-Bo Liu, Shu-Wei Chang, Fang-Chung Chen, Hao-Chung Kuo\*, “Optimized Design with Artificial Intelligence Quantum Dot White Mini LED Backlight Module Development” **Crystals** 13, 1411 (2023) (IF:2.7)
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” **Adv. Funct. Mater.** 33, 2301538 (2023). (IF:19.0)
4. 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).
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6. 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:3.4)
7. 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: 4.1)
8. Mukhamed L. Keshtov,\* Dmitry Y. Godovsky, Ilya E. Ostapov, Vladimir G. Alekseev, Hemraj Dahiya, Rahul Singhal, Fang-Chung Chen, Ganesh D. Sharma\*, “Single junction binary and ternary polymer solar cells-based D–A structured copolymer with low lying HOMO energy level and two nonfullerene acceptors” **Mol. Syst. Des. Eng.**, 8, 53–64 (2023). (IF:3.6)
9. Prateek Malhotra, Kanupriya Khandelwal, Subhayan Biswas, Fang-Chung Chen, Ganesh D. Sharma\*, “Opportunities and challenges for machine learning to select combination of donor and

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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\* “Asymmetrical Single Crystals Containing Tilted Ruddlesden–Popper Phases for Efficient Perovskite Solar Cells”, European Assembly Advanced Materials Congress (Hybrid), (Sweden, Aug. 2022) **(invited oral presentation online)**

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3. Fang-Chung Chen\* “Emerging organic and perovskite photovoltaic devices for indoor applications”, Advanced Nanomaterials Congress, Sweden (2021) **(invited oral presentation online)**
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12. Ming-Kai Chuang, Chun-Hao Lin, and Fang-Chung Chen\* “Plasmonic Effects of Amphiphilic Gold Nanoparticles in Polymer Optoelectronic Devices” 2016 International Conference on Optical MEMS and Nanophotonics (IEEE OMN 2016), Singapore, Aug. 2016.
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14. Ming-Kai Chuang and Fang-Chung Chen\* “Plasmonic nanostructures for organic photovoltaic devices”, International Photonics and OptoElectronics Meetings 2015 (Wuhan Photonics Week), Wuhan, China, June 2015 **(invited oral presentation)**.
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20. 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)**
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36. 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).
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39. 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)
40. 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)
41. 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).
42. Fang-Chung Chen\*, Chu-Jung Ko, and Yi-Kai Lin “Microwave annealing processes in polymer photovoltaic devices” MRS (Spring 2007) (oral presentation)
43. 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)
44. 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)
45. 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)
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49. 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).
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51. Wen-Kuei Huang, Fang-Chung Chen\* and Chu-Jung Ko “Fabrication of microlens arrays on glass substrates by lotus effect” Micro & Nano Engineering, (2005).
52. 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).
53. Fang-Chung Chen, and Yang Yang\*, “Enhanced efficiency of plastic photovoltaic devices by blending with ionic solid electrolytes” MRS (Spring 2003) (oral presentation)
54. Fang-Chung Chen, and Yang Yang\*, Qibing Pei, “Phosphorescent light-emitting electrochemical cells” MRS (Spring 2003) (post presentation)
55. 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).
56. 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)
57. 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)
58. 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. 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)
2. 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).
  3. 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).
  4. 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).
  5. 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).
  6. 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).
  7. 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).
  8. 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).
  9. 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)**
  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” The 15th Asian Conference on Organic Electronics (A-COE 2023). (Student Poster Paper Award)
  11. 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).

12. Yu-Ze Zhang, Nutch 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).
13. 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)
14. 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).
15. 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).
16. 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).
17. 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).
18. 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).
19. 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).
20. 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).
21. 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).
22. 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.

23. 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)**
24. 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)
25. 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)**
26. 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.
27. 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.
28. 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.
29. 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).
30. 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).
31. 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).
32. 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)
33. 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)
34. 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)
35. 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)
  36. 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)
  37. Shun-Shing Yang, Nai-Wei Teng, and Fang-Chung Chen\* ”Organic Photovoltaic Devices for Indoor Applications” Optics & Photonics Taiwan, International Conference 2015 (OPTIC 2015)
  38. 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)
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  40. 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)
  41. 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).
  42. 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).
  43. 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**).
  44. Fang-Chung Chen\* Ming-Kai Chuang, and Shih-Wei Lin, “Graphene Derivatives for Organic Optoelectronics” Graphene 2014 International Conference (Nov. 2014) (**invited talk**).
  45. 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**).
  46. 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.

47. 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**).
48. 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).
49. 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).
50. Yen-Tseng Lin, and Fang-Chung Chen\* “Multiple-device stacked structures for High-performance organic cells” Optics & Photonics Taiwan, International Conference 2013 (OPTIC 2013).
51. 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).
52. 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).
53. 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).
54. 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).
55. Fang-Chung Chen\* “Light Harvesting Schemes for High-performance Polymer Solar Cells” International Conference on Functional Organic Materials and Related Devices 2012.
56. Chen-Wei Lin and Fang-Chung Chen\* “Small Molecule Sensitizers in Polymer Photodetectors for Extended Spectral Response” Symposium on Nano Device Technology 2012.
57. 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).
58. 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).

59. 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).
60. Shu-Cheng Lin, and Fang-Chung Chen\* “Charge Blocking Layers for Improving Detectivity of Organic Photomultiple Photodetectors” International Photonics Conference (IPC 2011).
61. 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).
62. Fang-Chung Chen\* “Light Harvesting Schemes for High-performance Polymer Solar Cells” 2011 Asia Pacific Academy of Materials (APAM) (2011) **(Invited)**
63. 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)**
64. Ya-Wei Chung, Ying-Pin Chen, and Fang-Chung Chen\* “Solution-Processed ZrInZnO Semiconductor for Thin Film Transistors” International Display Manufacturing Conference (IDMC) (2011).
65. 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)
66. 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)
67. 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)
68. 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).
69. 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)
70. 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)
71. 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).
72. 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)
  73. 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)
  74. 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)
  75. 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).
  76. 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).
  77. 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).
  78. 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).
  79. 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).
  80. Hao-Wei Ting and Fang-Chung Chen\* “Triplet energy transfer between a conjugated polymer and phosphorescent molecules” International Display Manufacturing Conference & Exhibition, (2007).
  81. Yan-Chu Tsai, Shu-Ting Tsai, Chiao-Shun Chuang, Jung-An Cheng, Fang-Chung Chen, and Han-Ping D. Shieh\* “Organic thin-film transistors with novel solution-process polymeric gate insulators” International Display Manufacturing Conference & Exhibition, (2007).
  82. Fang-Chung Chen\* “Recent Developments in polymer photovoltaic devices” Flexible Electronics – Organic Photovoltaic Workshop (2007). **(Invited)**
  83. Fang-Chung Chen\* “Recent development of phosphorescent polymer light-emitting diodes and other organic electronics” The 5<sup>th</sup> International OLED and PLED workshop in Taipei (2007).

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84. Jyh-Lih Wu, Fang-Chung Chen\*, and Sidney S. Yang “Highly Efficient Organic Solar Cell with an Interlayer of Cesium Carbonate” Optics and Photonics Taiwan (2006).
85. Yi-Kai Lin, Fang-Chung Chen\* and Chu-Jung Ko “Manipulation of the phase separation in organic blends by self-alignment method in sub-micron scale” Optics and Photonics Taiwan (2006).
86. Shang-Chieh Chien, and Fang-Chung Chen\* “Polymer electrophosphorescent devices with Low turn-on voltage and high power conversion efficiencies” Optics and Photonics Taiwan (2006).
87. Ying-Pin Chen and Fang-Chung Chen\* “Effect of deposition temperature on the device properties of pentacene thin-film transistors” Optics and Photonics Taiwan (2006).
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89. Tung-Hsien Chen, and Fang-Chung Chen\* “Metal oxides as the buffer layers for organic thin-film transistors” Taiwan Display Conference (2006)
90. Li-Jen Kung, and Fang-Chung Chen\* “High-performance organic thin-film transistors with copper phthalocyanine-modified source/drain contacts” Taiwan Display Conference (2006)
91. 劉思芳，王文生，陳方中\*，偏極化高分子發光二極體之新型導電配向層，Taiwan Display Conference (2006)
92. 甘惠君，王文生，黃文奎，陳方中\*，利用自組裝微小陣列透鏡增加有機發光二極體的光耦合效率，Taiwan Display Conference (2006)
93. Fang-Chung Chen\* “The development of high-performance organic electronics” ITRI 學員交流論壇, (June 2006) **(invited)**.
94. Fang-Chung Chen\* “Organic Photovoltaic Devices for Low Power Sensor Networks” Wireless Sensor Network Workshop 2005
95. Chiao-Shun Chuang, Han-Ping D. Shieh, Yang Yang, and Fang-Chung Chen\* “Numerical Prediction of Effective Dielectric Constant in Organic Thin-film Transistors with Nanocomposite Gate Insulator” International Display Manufacturing Conference & Exhibition, (2005).
96. Wen-Kuei Huang, Chu-Jung Ko, Hui-Chun Kan, and Fang-Chung Chen\* “Fabrication of self-organized microlens array on plastic substrates” Optics and Photonics Taiwan (2005).

### **Other Publications**

#### **其他 (中文專刊)**

1. 高宗聖、陳方中、盧廷昌，2017年，「淺談鈣鈦礦材料雷射發光特性之操控」，科儀新知，211期，p60-67。

2. 陳新傑、岳宏霖、莊名凱、陳方中，2017年，「鈣鈦礦太陽能電池」，奈米通訊，二十四卷，p21-26。
3. 陳方中，2013年，「有機光偵測器與三維空間動作感知技術」，電子月刊，第216期。
4. 莊名凱、陳方中，2011年，「以轉印製程製作高分子太陽能電池」，光學工程，第114期。
5. 陳方中，2011年，「高分子太陽能電池與其新穎集光方式的探討」，化工，第58卷，第2期。
6. 陳方中，2009年，「可撓性高效能高分子薄膜太陽能電池的發展」，化合物半導體與光電技術。
4. 陳方中，2008年，「高分子薄膜太陽能電池」，化合物半導體與光電技術。
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