研究成果目錄： (* corresponding author) **h-index:48 (**Google Scholar)

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

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International Conference Papers 國外研討會論文

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2. Fang-Chung Chen*, Hao-Yeu Tsai, Yung-Fang Yang, Hong-Sheng Jiang, Chien-Chen Kuo, "Toward high-performance single-crystal perovskite solar cells," 3rd International Conference on Materials Science and Engineering, Boston, MA, USA (Hybrid) (April 2022) **(invited online oral presentation)**
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.
13. Fang-Chung Chen,* "Plasmonic nanostructures for organic photovoltaic devices" The 7th Asian Conference on Organic Electronics (A-COE 2015), Beijing, China, Oct. 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" 9th World Congress of Chemical Engineering (Seoul, Korea, Aug. 2013) **(invited oral presentation)**
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44. Chiao-Shun Chuang, Shu-Ting Tsai, Fang-Chung Chen*, and Han-Ping D. Shieh "Organic thin-film transistors with reduced-photosensitivity" The 13th International Display Workshops, Otsu, Japan, Dec. 6 (2006)
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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).
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1. 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)
2. 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).
3. 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).
4. 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).
5. 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).
6. 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).
7. 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).
8. 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).
9. 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).
10. 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.
11. 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 Perovksite Photovoltaic Devices

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12. Yi-Fong Lai, and Fang-Chung Chen*, "Virtual Screening of Conjugated Polymers for Organic Photovoltaic Devices Using Support Vector Machines and Ensemble Learning" The 7th RIKEN-NCTU Symposium on Physical and Chemical Sciences (2019). (Master Student Paper Award)
13. 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)**
14. 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.
15. Shi-Da Huang, Ren-Yung Yang, Fang-Chung Chen* "Plasmonic Effects of Gold Nanoparticles on the Performance of Perovksite Quantum Dot Light-Emitting Diodes" The EITA Conference on New Materials, Nanotechnology and New Energy 2019, Hsinchu, Taiwan.
16. 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.
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20. 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)
21. 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)
22. Chi-Yu Yang, Hao-Wu Lin*, Ken-Tsung Wong*, and Fang-Chung Chen* "Efficient Excimer Delay Fluorescence Organic Light Emission Devices Based on Fluorene Derovatives" Optics & Photonics Taiwan, International Conference 2016 (OPTIC 2016)

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24. 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)
25. Shun-Shing Yang, Nai-Wei Teng, and Fang-Chung Chen* "Organic Photovoltaic Devices for Indoor Applications" Optics & Photonics Taiwan, International Conference 2015 (OPTIC 2015)
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29. 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).
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31. 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)**.
32. Fang-Chung Chen* Ming-Kai Chuang, and Shih-Wei Lin, "Graphene Derivatives for Organic Optoelectronics" Graphene 2014 International Conference (Nov. 2014) **(invited talk)**.
33. 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)**.
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38. Yen-Tseng Lin, and Fang-Chung Chen* "Multiple-device stacked structures for High-performance organic cells" Optics & Photonics Taiwan, International Conference 2013 (OPTIC 2013).
39. 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).
40. 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).
41. 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).
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51. Fang-Chung Chen*, Jyh-Lih Wu, Yi Hong, and Chia-Ling Lee "Light Trapping Approaches for High-performance Polymer Solar Cells" 16th Opto-electronics and Communications Conference (OECC) (2011). **(Invited)**
52. Ya-Wei Chung, Ying-Pin Chen, and Fang- Chung Chen* "Solution-Processed ZrInZnO Semiconductor for Thin Film Transistors" International Display Manufacturing Conference (IDMC) (2011).
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55. 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)
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58. 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)
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"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)

61. 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)
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63. 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).
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65. 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).
66. 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).
67. 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).
68. Hao-Wei Ting and Fang-Chung Chen* "Triplet energy transfer between a conjugated polymer and phosphorescent molecules" International Display Manufacturing Conference & Exhibition, (2007).
69. 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).
70. Fang-Chung Chen* "Recent Developments in polymer photovoltaic devices" Flexible Electronics – Organic Photovoltaic Workshop (2007). **(Invited)**
71. Fang-Chung Chen* "Recent development of phosphorescent polymer light-emitting diodes and other organic electronics" The 5th International OLED and PLED workshop in Taipei (2007). **(Invited)**
72. Jyh-Lih Wu, Fang-Chung Chen*, and Sidney S. Yang "Highly Efficient Organic Solar Cell with an

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79. 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)
80. 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)
81. Fang-Chung Chen* "The development of high-performance organic electronics" ITRI 學員交流論壇, (June 2006) **(invited)**.
82. Fang-Chung Chen* "Organic Photovoltaic Devices for Low Power Sensor Networks" Wireless Sensor Network Workshop 2005
83. 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).
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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。

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9. 葛祖榮、林義凱、陳方中，「高分子太陽能電池光電轉換效率的提升」，電子月刊，第 145 期。
10. 陳方中、陳東賢、林永昇，「有機薄膜電晶體的發展與應用」，化合物半導體與光電技術。
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12. 葛祖榮、黃文奎、陳方中，2006 年，「有機高分子太陽能電池的發展現況」，工業材料雜誌，第 230 期。
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Patents 專利

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