

International Conference Papers List

2025-

1. Kumar Gokulkumar, and Kun-Mu Lee*, "Design of a Hybrid Ni-MOF/ β -CD@fCB Electrocatalyst-Based Electrochemical Sensor for Trace Level Detection of Metronidazole in Aqueous Environmental Samples", **2025 SDSE 3rd International Conference on Smart Devices and Sustainable Energy (SDSE 2025)**, Oct. 15-17, New Taipei, Taiwan. **(Honorable Mentions Award)**
2. Wei-Chen Chu, Wei-Hao Chiu, and Kun-Mu Lee*, "Blade Coating Strategies for Morphology-Controlled Perovskite Solar Cells with High Performance", **2025 SDSE 3rd International Conference on Smart Devices and Sustainable Energy (SDSE 2025)**, Oct. 15-17, New Taipei, Taiwan. **(Excellent Poster Award)**
3. Kun-Mu Lee*, Seoungjun Ahn, and Wei-Hao Chiu, "Advanced Additives for Space Missions: PVDF-HFP's Impact on Perovskite Solar Cell Reliability", **2025 EU PVSEC The 42nd European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC 2025)**, Sep. 22-26, Bilbao, Spain. **(Oral Presentation)**
4. Wei-Hao Chiu, Ying-Kai Huang, and Kun-Mu Lee*, "Enhancing Perovskite Solar Cell Performance through Chemical Bath Deposition of SnO₂ on Mesoporous TiO₂ Electrodes", **2025 MC The 17th International Conference on Materials Chemistry (MC 2025)**, Jul. 7-10, Edinburgh, United Kingdom.
5. Kun-Mu Lee*, Yan-Duo Lin, and Wei-Hao Chiu, "Molecular Design of 5H-Dithieno[3,2-b:2',3'-d]pyran-Based Hole-Transporting Materials for Highly Efficient and Stable Perovskite Solar Cells", **2025 ESOC The 11th European Stroke Organisation Conference (ESOC 2025)**, May 21-23, Helsinki, Finland.
6. Ting-Han Lin, Jia-Mao Chang, Yu-Chi Peng, Yen-Chang Chen, Yin-Hsuan Chang, Kun-Mu Lee, and Ming-Chung Wu*, "Enhanced Hydrogen Production via Synergistic Photo-Piezocatalysis in BaTiO₃/ZnIn₂S₄ Heterostructures", **2025 JSAP The 72th Japan Society of Applied Physics Spring Meeting (JSAP 2025)**, Mar. 14-17, Tokyo, Japan.
7. Wei-Chen Chu, Seoungjun Ahn, Wei-Hao Chiu, and Kun-Mu Lee*, "Enhancing Perovskite Solar Cell Efficiency by Controlling Active Layer Morphology with Blade Coating", **2025 International Conference on Advanced Green-Energy Materials**, Jan. 15-17, Tainan, Taiwan. **(Best Poster Presentation Award)**
8. Seoungjun Ahn, Wei-Chen Chu, Wei-Hao Chiu, and Kun-Mu Lee*, "Exploring PVDF-HFP Additives in Perovskite Solar Cells: Advancements for Enhanced Space Mission Durability", **2025 International Conference on Advanced Green-Energy Materials**, Jan. 15-17, Tainan, Taiwan.

2024-

9. Seoungjun Ahn, Wei-Hao Chiu, Wei-Chen Chu, and Kun-Mu Lee*, "Optimizing PVDF-HFP Additives in Perovskite Solar Cells for Improving Space Mission Durability", **2024 SEGT International Conference on Sustainable Energy and Green Technology (SEGT 2024)**, Dec. 15-18, Bangkok, Thailand.
10. Kun-Mu Lee*, Wei-Hao Chiu, and Yan-Duo Lin, "Pentafulvalene-Fused Fluorinated Compound Boosts Perovskite Solar Cell Performance", **2024 PVSEC-35 The 35rd International Photovoltaic Science and Engineering Conference (PVSEC-35 2024)**, Nov. 10-15, Numazu, Japan. **(Invited Speaker)**
11. Wei-Hao Chiu*, and Kun-Mu Lee, "Enhancing Perovskite Solar Cell Performance through Chemical Bath Deposition of SnO₂ on Mesoporous TiO₂ Electrodes ", **2024 PVSEC-35 The 35rd International Photovoltaic Science and Engineering Conference (PVSEC-35 2024)**, Nov. 10-15, Numazu, Japan.

12. Ming-Chung Wu*, Ying-Hann Liao, Shun-Hsiang Chan, Shih-Hsuan Chen, Yuan-Yu Chiu, Yin-Hsuan Chang, Ting-Han Lin, and Kun-Mu Lee, "Predicting the Quality of Photovoltaic Materials in Lead-Reduced Perovskite Solar Cells Using Photo-Assisted Kelvin Probe Force System", **2024 PVSEC-35 The 35rd International Photovoltaic Science and Engineering Conference (PVSEC-35 2024)**, Nov. 10-15, Numazu, Japan.
13. Hong-Yi Lin, Kai-Chi Hsiao, Ting-Han Lin, Kun-Mu Lee, and Ming-Chung Wu*, "Enhancing the Photovoltaic Conversion Efficiency of Perovskite Solar Cells through Interface Engineering Using Chelating Molecules", **2024 PVSEC-35 The 35rd International Photovoltaic Science and Engineering Conference (PVSEC-35 2024)**, Nov. 10-15, Numazu, Japan.
14. Shu-Chi Lu, Ting-Han Lin, Kun-Mu Lee, Tz-Feng Lin, and Ming-Chung Wu*, "Enhancement of Power Conversion Efficiency and Stability in Perovskite Solar Cells Using Long Carbon Chain Carbazole Derivatives", **2024 PVSEC-35 The 35rd International Photovoltaic Science and Engineering Conference (PVSEC-35 2024)**, Nov. 10-15, Numazu, Japan.
15. Seoungjun Ahn, Wei-Chen Chu, Wei-Hao Chiu, and Kun-Mu Lee*, "Exploring the Role of PVDF-HFP in Enhancing Perovskite Solar Cell Performance for Space Missions", **2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024)**, Oct. 16-18, New Taipei, Taiwan.
16. Wei-Hao Chiu, Si-Yu Chen, and Kun-Mu Lee*, "Rapid Laser Annealing of Cu-Doped NiO_x for Improved Efficiency in Perovskite Solar Cells", **2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024)**, Oct. 16-18, New Taipei, Taiwan.
17. Wei-Chen Chu, Seoungjun Ahn, Wei-Hao Chiu, and Kun-Mu Lee*, "Controlling the Morphology of the Active Layer with Blade and Slot-Die Coating Results in Highly Efficient Perovskite Solar Cells", **2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024)**, Oct. 16-18, New Taipei, Taiwan.
18. Zhi-Hao Huang, Fu-Zong Liu, Kun-Mu Lee, and Yu-Ching Huang*, "Enhancing Crystallinity and Absorption in Organic Photodetector Films for Improved Short-Wave Infrared Performance", **2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024)**, Oct. 16-18, New Taipei, Taiwan.
19. Kun-Mu Lee*, Seoungjun Ahn, Wei-Chen Chu, and Wei-Hao Chiu, "Enhancing the Performance of Space-Ready Perovskite Solar Cells Using PVDF-HFP", **2024 ISOS 15 International Summit on Organic and Hybrid Photovoltaics Stability (ISOS-15 2024)**, Sep. 30-Oct. 2, Berlin, Germany.
20. Kun-Mu Lee*, Seoungjun Ahn, Wei-Chen Chu, and Wei-Hao Chiu, "Comprehensive Study of PVDF-HFP in Perovskite Solar Cells for Enhanced Space Mission Reliability", **2024 ISOS 15 International Summit on Organic and Hybrid Photovoltaics Stability (ISOS-15 2024)**, Sep. 30-Oct. 2, Berlin, Germany.
21. Seoungjun Ahn, Wei-Hao Chiu, and Kun-Mu Lee*, "Optimizing Space Mission Reliability via Comprehensive Investigation of PVDF-HFP in Perovskite Solar Cells", **2024 IC ME&D The 34th International Conference on Molecular Electronics and Devices (IC ME&D 2024)**, May. 9-10, Pohang, Korea.
22. Ming-Chung Wu*, Shih-Hsuan Chen, Shun-Hsiang Chan, Yuan-Yu Chiu, Ting-Han Lin, Yin-Hsuan Chang, Ying-Han Liao, and Kun-Mu Lee*, "Lead-Reduced Halide Perovskite Solar Cells-Predicting the Quality of Photovoltaic Materials with Photo-Assisted Kelvin Probe Force System", **2024 IC ME&D The 34th International Conference on Molecular Electronics and Devices (IC ME&D 2024)**, May. 9-10, Pohang, Korea.

2023-

23. Kun-Mu Lee*, "Augmenting the Performance and Stability of Perovskite Solar Cells by Introducing Cesium Iodide Doping into the PbI_2 Film via A Two-Step Deposition Method", **2023 IPEROP-24 Asia-Pacific International Conference on Perovskite, Organic Photovoltaics and Optoelectronics (IPEROP-24 2023)**, Jan. 22-23, Tokyo, Japan.

2022-

24. Kun-Mu Lee*, Seoungjun Ahn, and Ming-Chung Wu, "Enhanced Efficiency and Stability of Quasi-2D/3D Perovskite Solar Cells by Blade Coating Method", **2022 PVSEC-33 The 33rd International Photovoltaic Science and Engineering Conference (PVSEC-33 2022)**, Nov. 13-17, Nagoya, Japan.
25. Seoungjun Ahn, Kun-Mu Lee*, and Wei-Hao Chiu, "Toward High Efficiency Perovskite Solar Cells by Doping Cesium Iodide into PbI_2 Film via Two-Step Deposition Method", **2022 PVSEC-33 The 33rd International Photovoltaic Science and Engineering Conference (PVSEC-33 2022)**, Nov. 13-17, Nagoya, Japan.
26. Seoungjun Ahn, Kun-Mu Lee*, and Wei-Hao Chiu, "High Efficiency Perovskite Solar Cells by Incorporating Cesium into PbI_2 Solution via Two-Step Deposition Method", **2022 IEDMS International Electron Devices & Materials Symposium (IEDMS 2022)**, Oct. 27-28, Nantou, Taiwan. (Oral Presentation)

2021-

27. Kun-Mu Lee*, Wei-Hao Chiu, Bo-Yang Chen, and Yan-Duo Lin, "Achieving >21% Perovskite Solar Cells with Dopant-Free HTM by Thermal-Assisted Blade-Coating Method", **2021 IEDMS International Electron Devices & Materials Symposium (IEDMS 2021)**, Nov. 18-19, Kaohsiung, Taiwan.
28. Seoungjun Ahn, Kun-Mu Lee*, and Wei-Hao Chiu, "Effect of Cesium Iodide Dopant for High-Efficiency Perovskite Solar Cells via Two-Step Deposition Method", **2021 IEDMS International Electron Devices & Materials Symposium (IEDMS 2021)**, Nov. 18-19, Kaohsiung, Taiwan.
29. Yu-Ching Huang*, Yu-Hsiang Cheng, Zih-Ting Chen, Zhi-Hao Huang, Kun-Mu Lee, and Ming-Chung Wu*, "Study of the Conducting Polymer as the Interfacial Buffer Layer of Screen-Printed Electrodes for Perovskite Solar Cells", **2021 TACT International Thin Films Conference (TACT 2021)**, Nov. 15-18, Virtual Conference.
30. Yu-Ching Huang*, Tai-Yung Wang, Zhi-Hao Huang, Zih-Ting Chen, and Kun-Mu Lee, "Lower Dark Current and High External Quantum Efficiency for Near-Infrared Organic Photodetectors Using a New Fullerene Acceptor", **2021 PESI Polymer Engineering & Science International (PESI 2021)**, May. 30-June. 3, Virtual Conference.

2020-

31. Yu-Zhe Liu, Kun-Mu Lee*, and Ming-Chung Wu*, "Sequential Preparation of Fluorine-Doped Tin Oxide Films for High-Efficiency Perovskite Solar Cells", **2020 IEDMS International Electron Devices & Materials Symposium (IEDMS 2020)**, Oct. 15-16, Taoyuan, Taiwan.
32. Yung-Hsiang Lin, Kun-Mu Lee*, and Seoungjun Ahn, "Efficient and Stable Semi-Transparent Perovskite Solar Modules with a Trilayer Anode Electrode", **2020 IEDMS International Electron Devices & Materials Symposium (IEDMS 2020)**, Oct. 15-16, Taoyuan, Taiwan.

33. Yi-Chen Liao, and Kun-Mu Lee*, "Efficient and Stable Semi-Transparent Perovskite Solar Modules", **2020 IEDMS International Electron Devices & Materials Symposium (IEDMS 2020)**, Oct. 15-16, Taoyuan, Taiwan.
34. Seoungjun Ahn, Kun-Mu Lee*, and Yu-Zhe Liu, "Bi-Functional FTO Films for Efficient Perovskite Solar Cells", **2020 IEDMS International Electron Devices & Materials Symposium (IEDMS 2020)**, Oct. 15-16, Taoyuan, Taiwan. (Oral Presentation)
35. Ching-Yuan Liu, and Kun-Mu Lee*, "Bridge the Gap from Synthetic Methodologies to Organic Photovoltaic Materials", **2020 IEDMS International Electron Devices & Materials Symposium (IEDMS 2020)**, Oct. 15-16, Taoyuan, Taiwan.

2019-

36. Shih-Han Huang, Chia-Feng Li, Wei-Cheng Chu, Kun-Mu Lee*, Yu-Ching Huang*, and Wei-Fang Su*, "Perovskite Layer of High-Efficiency Solar Cell Fabricated Using Blade Coating in Ambient Environment", **2019 A-COE The 11th Asian Conference on Organic Electronics (A-COE 2019)**, Nov. 6-9, New Taipei, Taiwan.
37. Min-Yao Hou, and Kun-Mu Lee*, "Blade Coating 2D/3D Perovskite Films for High Efficiency and Stable Perovskite Solar Cells", **2019 JSAP The 12th International Summit on Organic and Hybrid Photovoltaics Stability (ISOS-12 2019)**, Oct. 7-9, Karlsruhe, Germany.
38. Wei-Jhih Lin, and Kun-Mu Lee*, "Preparation of High Transmittance and Activity Platinum Counter Electrode for Flexible Dye-Sensitized Solar Cells and Modules", **2019 CGEEE The 2nd International Conference on Green Energy and Environment Engineering (CGEEE 2019)**, July 2-5, Okinawa, Japan.
39. Min-Yao Hou, and Kun-Mu Lee*, "Blade Coating 2D/3D Perovskites Films for High Efficiency and Stable Perovskite Solar Cells", **2019 JSAP The 66th Japan Society of Applied Physics Spring Meeting (JSAP 2019)**, Mar. 9-12, Tokyo, Japan.
40. Chang-Chieh Ting, and Kun-Mu Lee*, "Low Defect Density of Perovskites Films for High Efficiency Perovskite Solar Cells", **2019 JSAP The 66th Japan Society of Applied Physics Spring Meeting (JSAP 2019)**, Mar. 9-12, Tokyo, Japan.
41. Chang-Chieh Ting, Kun-Mu Lee*, Kuan-Ming Lu, and Ching-Yuan Liu, "One-Pot Synthesis of D-p-D-p-D Type Holetransporting Materials for Perovskite Solar Cells by Sequential C-H(Hetero) Arylations", **2019 JSAP The 66th Japan Society of Applied Physics Spring Meeting (JSAP 2019)**, Mar. 9-12, Tokyo, Japan.

2018-

42. Wei-Jhih Lin, and Kun-Mu Lee*, "Control Electron Collection and Transportation of TiO₂ Electrode for High Efficiency Perovskite Solar Cells", **2018 ISOS-11 The 11th International Summit on Organic and Hybrid Photovoltaics Stability (ISOS-11 2018)**, Oct. 21-25, Suzhou, China.
43. Hsin Lo, and Kun-Mu Lee*, "Thermal Treatment on The Photoelectric Properties and Stability of Mixed-Cation Perovskite Solar Cells", **2018 ISOS-11 The 11th International Summit on Organic and Hybrid Photovoltaics Stability (ISOS-11 2018)**, Oct. 21-25, Suzhou, China.
44. Kun-Mu Lee*, "Effect of Anti-Solvent Treatment on Fabrication of Large Area Perovskite Solar Cells", **2018 JSAP The 65th Japan Society of Applied Physics Spring Meeting (JSAP 2018)**, Mar. 17-20, Tokyo, Japan.
45. Kun-Mu Lee*, "Influence of The Titanium Dioxide Nano-Particles Size on the Performance of Mesoscopic Perovskite Solar Cell", **2018 JSAP The 65th Japan Society of Applied Physics Spring Meeting (JSAP 2018)**, Mar. 17-20, Tokyo, Japan.

2017-

46. Bo-Yi Liou, and Kun-Mu Lee*, "Influence of the Anti-Solvents on The Performance of The Methylammonium Lead Triiodide Perovskite Solar Cells", **2017 IWGCP2 2nd International Workshop on Graphene and C3N4-based Photocatalysts (IWGCP2)**, Mar. 24-27, Wuhan, China.

2016-

47. Hao-Chien Cheng, and Kun-Mu Lee*, "The Effect of Electrodeposition Current of PbO₂ Film on The Performance of CH₃NH₃PbI₃ Perovskite Solar Cells", **PSCO-2016: 2nd International Conference on Perovskite Solar Cells and Optoelectronics (PSCO-2016)**, Sep. 26-28, Palazzo Ducale, Genova, Italy.
48. Bo-Yi Liou, Hao-Chien Cheng, and Kun-Mu Lee*, "Investigation the Influence of The Anti-Solvents on The Performance of The Large Area Perovskite Solar Cells", **PSCO-2016: 2nd International Conference on Perovskite Solar Cells and Optoelectronics (PSCO-2016)**, Sep. 26-28, Palazzo Ducale, Genova, Italy.
49. Kun-Mu Lee*, "Co-Sensitization Promoted Light Harvesting for Plastic Dye-Sensitized Solar Cells", **The 4th International Symposium on Fundamental and Applied Sciences (ISFAS 2016)**, Mar. 29-31, Kyoto, Japan
50. Kun-Mu Lee*, "Investigation The Influence of The Antisolvents on The Performance of The Perovskite Solar Cells", **2016 Materials Research Society (2016 MRS Fall Meeting)**, Nov. 27-Dec. 2, Boston, Massachusetts.