Prof. Kun-Mu Lee of Chang Gung University (Update 2026/10/21)

International Conference Papers List

2026-

1. Wei-Hao Chiu, Wei-Lun Yu, Ching-Yuan Liu, and Kun-Mu Lee*, "Rapid Preheating-Assisted Liquid-Medium Annealing for Efficient and Stable Perovskite Solar Cells", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan.

2. Neeraja Bose, Kumar Gokulkumar, Shih-Hsuan Chen, Ramalingam Mahaan, Dheepthy Fabius Suresh, P. Varatharajan, and Kun-Mu Lee*, "ECM-Mimetic CoMn-LDH Integrated PCL/PAAm Nanofibrous Hydrogel for Effective Multifunctional Drug Delivery and Fenton-like Chemodynamic Cancer Therapy", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan.

3. Harini Srikanth Rao, Seoungjun Ahn, Wei-Hao Chiu, Wei-Chen Chu, Yi-Wen Sung, and Kun-Mu Lee*, "Reliability Enhancement of PVDF-HFP Modified Perovskite Solar Cells under Synergistic Space-Relevant Stress Conditions", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan.

4. P. Varatharajan, Kumar Gokulkumar, Neeraja Bose, Shih-Hsuan Chen, and Kun-Mu Lee*, "PBA-Derived High Entropy Alloy Nanoparticles Embedded in a Carbon Network for Enhanced OER and HER Electrocatalysis", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan.

5. Iqra Shaheen, Yu-Xian Lee, Wei-Hao Chiu, Shih-Hsuan Chen, and Kun-Mu Lee*, "Nanostructured g-C_3N_4-Decorated Graphite Felt Electrodes for Enhanced Redox Kinetics in Vanadium Redox Flow Batteries", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan. **(Honorable Mentions Award)**

6. Kumar Gokulkumar, and Kun-Mu Lee*, "Plasma-Activated O-Nd_2WO_6/f-CNF Hybrid Electrode for Sensitive Electrochemical Detection of Azathioprine in Environmental Water Samples", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan. **(Excellent Poster Award)**

7. Hong-Yi Lin, Kai-Chi Hsiao, Shu-Chi Lu, Ting-Han Lin, Jia-Mao Chang, Kun-Mu Lee, and Ming-Chung Wu*, "Synthesis of Dual-Function Carbazole Modifiers for Accelerating Hole Transport and Passivating Defects in Perovskite Solar Cells", ***2026 SDSE 4nd International Conference on Smart Devices and Sustainable Energy (SDSE 2026)***, Oct. 14-16, New Taipei, Taiwan. **(Excellent Poster Award)**

8. Yen-Chang Chen, Hong-Yi Lin, Kai-Chi Hsiao, Ting-Han Lin, Kun-Mu Lee, and Ming-Chung Wu*, "Balancing Lead Reduction and Device Performance through Barium Substitution in Perovskite Solar Cells", ***2026 IPS The 25th International conference on Photochemical Conversion and Storage of Solar Energy (IPS 2026)***, July. 12-17, Seoul, Korea. **(Oral Presentation)**

9. Yi-Ming Yu, Yen-Chang Chen, Hong-Yi Lin, Kai-Chi Hsiao, Ting-Han Lin, Kun-Mu Lee, and Ming-Chung Wu*, "Molecular Passivation of Interfacial Defects in Perovskite Solar Cells Using Nicotinic Acid Derivatives", ***2026 IPS The 25th International conference on Photochemical Conversion and Storage of Solar Energy (IPS 2026)***, July. 12-17, Seoul, Korea. **(Oral Presentation)**

10. Seoungjun Ahn, Wei-Hao Chiu, and Kun-Mu Lee*, "PVDF-HFP Polymer Additive for Highly Stable Perovskite Solar Cells Under Vacuum and Gamma-Ray Conditions", ***2026 PESI Polymer Engineering & Sciences International (PESI 2026)***, June. 28-July. 2, Kanazawa, Japan.

11. Kun-Mu Lee*, Seoungjun Ahn, and Wei-Hao Chiu, "Add PVDF-HFP in Perovskite for Improve Reliability of Perovskite Photovoltaic for Space Application", ***2026 AEPA The 16th Asia-Pacific Symposium on Engineering Plasticity and Its Applications (AEPA 2026)***, Feb. 1-6, Auckland, New Zealand.

2025-

12. 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 3rdInternational Conference on Smart Devices and Sustainable Energy (SDSE 2025)***, Oct. 15-17, New Taipei, Taiwan. (**Honorable Mentions Award**)

13. Wei-Chen Chu, Wei-Hao Chiu, and Kun-Mu Lee*, "Blade Coating Strategies for Morphology-Controlled Perovskite Solar Cells with High Performance", ***2025 SDSE 3rdInternational Conference on Smart Devices and Sustainable Energy (SDSE 2025)***, Oct. 15-17, New Taipei, Taiwan. (**Excellent Poster Award**)

14. 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)**

15. Wei-Hao Chiu, Ying-Kai Huang, and Kun-Mu Lee*, "Enhancing Perovskite Solar Cell Performance through Chemical Bath Deposition of SnO_2 on Mesoporous TiO_2 Electrodes", ***2025 MC The 17th International Conference on Materials Chemistry (MC 2025)***, Jul. 7-10, Edinburgh, United Kingdom.

16. 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.

17. 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 $BaTiO_3/ZnIn_2S_4$ Heterostructures", ***2025 JSAP The 72th Japan Society of Applied Physics Spring Meeting (JSAP 2025)***, Mar. 14-17, Tokyo, Japan.

18. 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**)

19. 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-

20. 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.

21. 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**)

22. Wei-Hao Chiu*, and Kun-Mu Lee, "Enhancing Perovskite Solar Cell Performance through Chemical Bath Deposition of SnO_2 on Mesoporous TiO_2 Electrodes ", ***2024 PVSEC-35 The 35rd International Photovoltaic Science and Engineering Conference (PVSEC-35 2024)***, Nov. 10-15, Numazu, Japan.

23. 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.

24. 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.

25. 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.

26. 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.

27. Wei-Hao Chiu, Si-Yu Chen, and Kun-Mu Lee*, "Rapid Laser Annealing of Cu-Doped NiO_x for Improved Efficiency in Perovskite Solar Calle", ***2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024)***, Oct. 16-18, New Taipei, Taiwan.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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-

34. 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-

35. 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.

36. 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.

37. 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-

38. 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.

39. 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.

40. 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.

41. 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-

42. 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.

43. 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.

44. 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.

45. 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)**

46. 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-

47. 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.

48. 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.

49. 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.

50. 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.

51. 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.

52. 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-

53. Wei-Jhih Lin, and Kun-Mu Lee*, "Control Electron Collection and Transportation of TiO_2 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.

54. 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.

55. 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.

56. 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-

57. 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-

58. Hao-Chein Cheng, and Kun-Mu Lee*, "The Effect of Electrodeposition Current of PbO_2 Film on The Performance of $CH_3NH_3PbI_3$ Perovskite Solar Cells", ***PSCO-2016: 2nd International Conference on Perovskite Solar Cells and Optoelectronics (PSCO-2016)***, Sep. 26-28, Palazzo Ducale, Genova, Italy.

59. 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.

60. 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

61. 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.