# Dr. Wei-Hao Chiu of Chang Gung University (Update 2025/10/22)

# SCI Journal Paper

## **2026**-

Harini Srikanth Rao, Wei-Hao Chiu, Shih-Hsuan Chen, Ming-Chung Wu, and Kun-Mu Lee\*, "Impact of Proton Radiation on the Performance of Single-Junction Perovskite Solar Cells for Space Applications", 2026, Solar Energy Materials and Solar Cells, 295, 114015. (▲:0; SCI; IF:6.3 at 2024; Ranking:36/187=19.3% in Physics, Applied)

# 2025-

- 2. Kun-Mu Lee, Chia-Hui Lin, Chia-Chi Chang, Ting-Yu Yang, Wei-Hao Chiu, Wei-Chen Chu, Ya-Ho Chang, Sie-Rong Li, Shih-I Lu, Hsiao-Chi Hsieh, Kang-Ling Liau, Chia Hui Hu, Chih-Hung Chen, Yun-Shuo Liu, Wei-Chun Chou, Mandy M. Lee, Shih-Sheng Sun, Yu-Tai Tao, and Yan-Duo Lin\*, "Judicious 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, Advanced Science, 12, 2410666. (▲:0; SCI; IF:14.1 at 2024; Ranking:33/460=7.2% in Materials Science, Multidisciplinary)
- 3. Iqra Shaheen, Wei-Hao Chiu, Shih-Hsuan Chen, and Kun-Mu Lee\*, "MOF- & COF-Integrated Composite Separators/Membranes: Innovations for Sustainable and High-Performance Redox Flow Batteries", 2025, Separation and Purification Technology, 376, 134157. (▲:0; SCI; IF:9.0 at 2024; Ranking:16/175=9.1% in Engineering, Chemical)
- 4. Chia-Yuan Chen\*, Yu-Fan Chang, Yen-Chen Shih, Ying-Chuan Liu, Chi-Feng Chiu, Rahma Rahayu Dinarlita, Tsung-Yu Tsai, Chieh-Ming Hung, Hou-Chin Cha, You-Ren Chen, Zhi-Hao Huang, Yu-Cheng Zhang, Hui-Chieh Lin, Wei-Chen Chu, Wei-Hao Chiu, Sie-Rong Li, Ting-Jui Chang, Yi-Hong Liao, Siti Utari Rahayu, Bo-Yu Han, Yun-Tou Lin, Pei-Ling Wang, Zi-Ting Liao, Jhao-Yun Tsai, Zhong-En Shi, Chia-Tse Hsu, Po-Shun Hsu, Po-Yuan Chen, Jia-Zhen Li, Anjali Thakran, Yu-Ting Chen, Yu-Sheng Li, Hao-Wei Yu, Chu-Chen Chueh\*, Tzung-Fang Guo\*, Chih-Wei Chu\*, Leeyih Wang\*, Kuo-Chuan Ho\*, Fang-Chung Chen\*, Chih-Ping Chen\*, Yian Tai\*, Chun-Ting Li\*, Ming-Way Lee\*, Chih-Liang Wang\*, Shih-Sheng Sun\*, Kun-Mu Lee\*, Zong-Liang Tseng\*, Yu-Ching Huang\*, Pi-Tai Chou\*, Chung-Wen Ko\*, and Chun-Guey Wu\*, "Round-Robin Interlaboratory Comparison of Large-Area Organic Thin-Film and Perovskite Solar Cells", 2025, Solar RRL, e202500538. (▲:0; SCI; IF:4.7 at 2024; Ranking:150/460=32.6% in Materials Science, Multidisciplinary)
- 5. Kun-Mu Lee\*, Jui-Ting Pan, Wen-Tzu Chen, Chia-Hui Lin, Zhe-Wei Wang, Wei-Hao Chiu, Wei-Chen Chu, Ya-Ho Chang, Jen-Fu Hsu, Sie-Rong Li, Shih-I Lu\*, Hsiao-Chi Hsieh\*, Chih-Wei Hu, Chih-Hung Chen, Jian-Ming Chiu, Kang-Ling Liau, Gao Chen, Yun-Shuo Liu, Shih-Sheng Sun\*, and Yan-Duo Lin\*, "Asymmetric Fluorinated Cyclopenta[2,1-b:3,4-b']Dithiophene-Based Hole-Transporting Materials for Perovskite Solar Cell", 2025, Chemistry-An Asian Journal, 0, e00719. (▲:0; SCI; IF:3.3 at 2024; Ranking:102/239=42.7% in Chemistry, Multidisciplinary)
- 6. Kun-Mu Lee, Wei-Hao Chiu, Bo-Chin Lee, Yu-Hsin Kao, Jr-Si Hsu, and Yung-Sheng Yen\*, "Fused Dithienoheterocycle-Based Hole-Transporting Materials for Efficient Perovskite Solar Cells", 2025, *Chemistry-An Asian Journal*, 0, e70245. (▲:0; SCI; IF:3.3 at 2024; Ranking:102/239=42.7% in Chemistry, Multidisciplinary)

#### 2024-

- 7. Seoungjun Ahn, Wei-Hao Chiu, Wei-Chen Chu, Pei-Yu Chen, Ting-Han Lin, and Kun-Mu Lee\*, "A Systematic Investigation of PVDF-HFP in Perovskite Solar Cells for Improved Space Mission Reliability", 2024, *Chemical Engineering Journal*, 496, 153974. (▲:2; SCI; IF:13.2 at 2024; Ranking:3/83=3.6% in Engineering, Environmental)
- 8. Hsiao-Chien Chen\*, Abdul Shabir, Kun-Hua Tu, Cher Ming Tan\*, Wei-Hao Chiu, Ruei-Cheng Fan, Nilim Akash Baruah, "Additive-Free Electroless Deposition on Graphene/Copper Foil: Photo-Induced and Defect-Assisted Approach for Environmentally Friendly Plating", 2024, Journal of Environmental Chemical Engineering, 12, 111741. (▲:0; SCI; IF:7.2 at 2024; Ranking:25/175=14.3% in Engineering, Chemical)
- 9. Wei-Hao Chiu, Ying-Kai Huang, Shih-Hsuan Chen, Ming-Chung Wu, Gao Chen, and Kun-Mu Lee\*, "Exploring the Efficiency Enhancement of Perovskite Solar Cells by Chemical Bath Depositing SnO₂ on Mesoporous TiO₂ Electrode", 2024, *Materials Today Chemistry*, 41, 102329. (▲:2; SCI; IF:6.7 at 2024; Ranking:46/239=19.2% in Chemistry, Multidisciplinary)
- 10. Gizachew Belay Adugna, Kun-Mu Lee\*, Hsiao-Chi Hsieh\*, Shih-I Lu\*, Chia-Hui Lin, Yu-Chien Hsieh, Hune Hung Yang, Jian-Ming Chiu, Yun-Shuo Liu, Chih-Wei Hu, Wei-Hao Chiu, Sie-Rong Li, Kang-Ling Liau, Yu-Tai Tao, and Yan-Duo Lin\*, "Fluorination of Star-Shaped Cyclopenta[2,1-b;3,4-b 0]dithiophene Derivatives and Its Application as Hole-Transporting Materials in Scalable Perovskite Solar Cell Fabrication by Bar Coating", 2024, Solar RRL, 8, 2300988. (▲:1; SCI; IF:4.7 at 2024; Ranking:150/460=32.6% in Materials Science, Multidisciplinary)

#### 2023-

- 11. Kun-Mu Lee, Yao-Shen Huang, Wei-Hao Chiu, Ying-Kai Huang, Gao Chen, Gizachew Belay Adugna, Sie Rong Li, Fang Ju Lin, Shih-I Lu, Hsiao-Chi Hsieh, Kang-Ling Liau, Chun-Cheng Huang, Yian Tai, Yu-Tai Tao, and Yan-Duo Lin\*, "Fluorinated Pentafulvalene-Fused Hole-Transporting Material Enhances the Performance of Perovskite Solar Cells with Efficiency Exceeding 23%", 2023, Advanced Functional Materials, 33, 230637. (A:21; SCI; IF:19.0 at 2024; Ranking:9/187=4.8% in Physics, Applied)
- 12. Kun-Mu Lee\*, Seid Yimer Abate, June Hung Yang, Wei-Hao Chiu, Seoungjun Ahn, Sie-Rong Li, Kang-Ling Liau, Yu-Tai Tao\*, and Yan-Duo Lin\*, "Facile Synthesis of Spiro-Core Based Hole Transporting High-Performance and Stable Perovskite Solar Cells", 2023, Chemical Engineering Journal, 454, 139926. (▲:25; SCI; IF:13.2 at 2024; Ranking:3/83=3.6% in Engineering, Environmental)
- 13. Dharuman Chandrasekaran, Shih-Jyun Liou, Wei-Hao Chiu, Lee-Che Lee, Kun-Mu Lee\*, Yi-Chen Wu, Hsien-Hsin Chou, Yuan-Jay Chang\*, and Yung-Sheng Yen\*, "Ladder-Type Dihydronaphtho[1, 2, 3, 4,-rst]pentaphene as Building Block to Construct Hole-Transporting Materials for Perovskite Solar Cells", 2023, Journal of Power Sources, 581, 233496. (▲:3; SCI; IF:7.9 at 2024, Ranking:7/44=15.9% in Electrochemistry)
- 14. Gizachew Belay Adugna<sup>†</sup>, Kun-Mu Lee<sup>\*†</sup>, Hsiao-Chi Hsieh<sup>\*</sup>, Shih-I Lu<sup>\*</sup>, Yu-Chien Hsieh, Hune Hung Yang, Wei-Hao Chiu, Kang-Ling Liau, Yu-Tai Tao, and Yan-Duo Lin<sup>\*</sup>, "Fluorination on Cyclopentadithiophene-Based Hole-Transport Material for High-Performance Perovskite Solar Cells", 2023, Chemical Communications, 59, 14653-14656. (▲:3; SCI; IF:4.2 at 2024; Ranking:84/239=35.1% in Chemistry, Multidisciplinary) (Selected as an inside front cover of Chemical Communications!!)



- 15. Li-Lin, Wei-Hao Chiu, Ming-Ling Cao, Kun-Mu Lee, Wei-Lun Yu, and Ching-Yuan Liu\*, "New Molecular Design, Step-Saving Synthesis, and Applications of Indolocarbazole Core-Based Oligo(hetero)arenes", 2023, Chemistry-An Asian Journal, 18, e202300681. (▲:0; SCI; IF:3.3 at 2024; Ranking:102/239=42.7% in Chemistry, Multidisciplinary)
- 16. Seoungjun Ahn, Wei-Hao Chiu, Hsin-Ming Cheng, Vembu Suryanarayanan, Gao Chen, Yu-Ching Huang\*, Ming-Chung Wu\*, and Kun-Mu Lee\*, "Enhancing Efficiency and Stability of Perovskite Solar Cells Through Two-Step Deposition Method with the Addition of Cesium Halides to PbI₂ Precursor", 2023, Organic Electronics, 120, 106847. (▲: 5; SCI; IF:2.6 at 2024; Ranking:97/187=51.9% in Physics, Applied)

## 2022-

- 17. Kun-Mu Lee, Wei-Hao Chiu, Yu-Hsiang Tsai, Chao-Shian Wang, Yu-Tai Tao, and Yan-Duo Lin\*, "High-Performance Perovskite Solar Cells Based on Dopant-Free Hole-Transporting Material Fabricated by a Thermal-Assisted Blade-Coating Method with Efficiency Exceeding 21%", 2022, *Chemical Engineering Journal*, 427, 131609. ( **\( \Limes : 46**; SCI; **IF:13.2** at 2024; Ranking: 3/83=3.6% in Engineering, Environmental)
- **18.** Dharuman Chandrasekaran, Wei-Hao Chiu, Kun-Mu Lee\*, Jian-Ming Liao, Hsien-Hsin Chou\*, and Yung-Sheng Yen\*, "Effect of Thiophene Insertion on X-Shaped Anthracene-Based Hole-Transporting Materials in Perovskite Solar Cells", **2022**, *Polymers*, 14, 1580. (▲:2; SCI; **IF:4.9** at 2024; Ranking:19/94=20.2% in Polymer Science)
- 19. Kun-Mu Lee\*†, Shun-Hsiang Chan\*†, Chang-Chieh Ting, Shih-Hsuan Chen, Wei-Hao Chiu, Vembu Suryanarayanan, Jen-Fu Hsu, Ching-Yuan Liu\*, and Ming-Chung Wu\*, "Surfactant Tween 20 Controlled Perovskite Film Fabricated by Thermal Blade Coating for Efficient Perovskite Solar Cells", 2022, Nanomaterials, 12, 2651. (▲:8; SCI; IF:4.3 at 2024; Ranking:57/187=30.5% in Physics, Applied)

## 2021-

- 20. Yi-Jen Huang, Chien-Lin Huang\*, Ruo-Yu Lai, Cheng-Han Zhuang, Wei-Hao Chiu, and Kun-Mu Lee\*, "Microstructure and Biological Properties of Electrospun In Situ Polymerization of Polycaprolactone-Graft-Polyacrylic Acid Nanofibers and Its Composite Nanofiber Dressings", 2021, *Polymers*, 13, 4246. (▲:13; SCI; IF:4.9 at 2024; Ranking:19/94=20.2% in Polymer Science)
- 21. Wei-Hao Chiu, Kun-Mu Lee\*, Vembu Suryanarayanan, Jen-Fu Hsu\*, and Ming-Chung Wu\*, "Controlled Photoanode Properties for Large-Area Efficient and Stable Dye-Sensitized Photovoltaic Modules", 2021, Nanomaterials, 11, 2125. (▲:7; SCI; IF:4.3 at 2024; Ranking:57/187=30.5% in Physics, Applied)
- 22. Kun-Mu Lee\*, Shun-Hsiang Chan, Wei-Hao Chiu, Seoungjun Ahn, Chang-Chieh Ting, Yin-Hsuan Chang, Vembu Suryanarayanan, Ming-Chung Wu\*, and Ching-Yuan Liu\*, "Reduced Defect in Organic-Lead Halide Perovskite Film by De-Layer Thermal Annealing Combined with KI/I₂ for Efficient Perovskite Solar Cells", 2021, Nanomaterials, 11, 1607. (▲:6; SCI; IF:4.3 at 2024; Ranking:57/187=30.5% in Physics, Applied)

# 2013-

23. Kun-Mu Lee\*, Wei-Hao Chiu, Vembu Suryanarayanan, and Chun-Guey Wu\*, "Enhanced Efficiency of Bifacial and Back-Illuminated Ti Foil Based Flexible Dye-Sensitized Solar Cells by Decoration of Mesoporous SiO₂ Layer on TiO₂ Anode", 2013, Journal of Power Sources, 232, 1-6. (▲:13; SCI; IF:7.9 at 2024, Ranking:7/44=15.9% in Electrochemistry)

#### 2012-

24. Kun-Mu Lee\*, Wei-Hao Chiu, Chih-Yu Hsu, Hsin-Ming Cheng, Chia-Hua Lee, and Chun-Guey Wu, "Ionic Liquid Diffusion Properties in Tetrapod-like ZnO Photoanode for Dye-Sensitized Solar Cells", 2012, *Journal of Power Sources*, 216, 330-336. (▲:16; SCI; IF:7.9 at 2024, Ranking:7/44=15.9% in Electrochemistry)

#### 2011-

- **25.** Kun-Mu Lee\*, Wei-Hao Chiu, Ming-De Lu, and Wen-Feng Hsieh, "Improvement on the Long-Term Stability of Flexible Plastic Dye-Sensitized Solar Cells", **2011**, *Journal of Power Sources*, 196, 8897-8903. (▲:35; SCI; IF:7.9 at 2024, Ranking:7/44=15.9% in Electrochemistry)
- **26.** Wei-Hao Chiu, Kun-Mu Lee, and Wen-Feng Hsieh\*, "High efficiency Flexible Dye-Sensitized Solar Cells by Multiple Electrophoretic Depositions", **2011**, *Journal of Power Sources*, 196, 3683-3687. (▲:**71**; SCI; **IF:7.9** at 2024, Ranking:7/44=15.9% in Electrochemistry)
- 27. Chia-Hua Lee, Wei-Hao Chiu, Kun-Mu Lee, Wen-Feng Hsieh, and Jenn-Ming Wu, "Improved Performance of Flexible Dye-Sensitized Solar Cells by Introducing an Interfacial Layer on Ti Substrates", 2011, Journal of Materials Chemistry, 21, 5114. (▲:58; SCI; IF:6.626 at 2013; Ranking:22/251=8.8% in Materials Science, Multidisciplinary)

# 2010-

- 28. Chia-Hua Lee, Wei-Hao Chiu, Kun-Mu Lee, Wen-Hsiang Yen, Hsiu-Fen Lin, Wen-Feng Hsieh, and Jenn-Ming Wu, "The Influence of Tetrapod-Like ZnO Morphology and Electrolytes on Energy Conversion Efficiency of Dye-Sensitized Solar Cells", 2010, *Electrochimica Acta*, 55, 8422-8429. (▲:37; SCI; IF:5.6 at 2024, Ranking:11/44=25.0% in Electrochemistry)
- 29. Kun-Mu Lee\*, Wei-Hao Chiu, Hung-Yu Wei, Chih-Wei Hu, Vembu Suryanarayanan, Weng-Feng Hsieh, and Kuo-Chuan Ho, "Effects of Mesoscopic Poly (3,4-ethylenedioxythiophene) Films as Counter Electrodes for Dye-Sensitized Solar Cells", 2010, *Thin Solid Films*, 518, 1716-1721. (▲:76; SCI; IF:2.0 at 2024; Ranking:50/79 =63.3% in Physics, Condensed Matter)

## 2009-

- 30. Wei-Hao Chiu, Chia-Hua Lee, Hsin-Ming Cheng, Hsiu-Fen Lin, Shih-Chieh Liao, Jenn-Ming Wu, and Wen-Feng Hsieh\*, "Efficient Electron Transport in Tetrapod-Like ZnO Metal-Free Dye-Sensitized Solar Cells", 2009, Energy & Environmental Science, 2, 694-698. (▲:96; SCI; IF:32.4 at 2023 Ranking: Ranking:1/231=0.4% in Chemistry, Multidisciplinary)
- 31. Kun-Mu Lee, Chih-Yu Hsu, Wei-Hao Chiu, Meng-Chin Tsui, Yung-Liang Tung, Song-Yeu Tsai, and Kuo-Chuan Ho\*, "Dye-Sensitized Solar Cells with A Micro-Porous TiO₂ Electrode and Gel Polymer Electrolytes Prepared by in Situ Cross-Link Reaction", 2009, Solar Energy Materials and Solar Cells, 93, 2003-2007. (▲:40; SCI; IF:6.3 at 2024; Ranking:36/187=19.3% in Physics, Applied)

#### 2008-

**32.** Hsin-Ming Cheng<sup>†</sup>, Wei-Hao Chiu<sup>†</sup>, Chia-Hua Lee, Song-Yeu Tsai, and Wen-Feng Hsieh<sup>\*</sup>, "Formation of Branched ZnO Nanowires from Solvothermal Method and Dye-Sensitized Solar Cells Applications", **2008**, *Journal of Physical Chemistry C*, 112, 16359-16364. (▲:247; SCI; IF:3.2 at 2024; Ranking:95/185=51.4% in Chemistry, Physical)

#### 2005-

33. Ching-Hsu Chen\*, Po-Tse Tai, Wei-Hao Chiu, and Wen-Feng Hsieh\*, "Transverse Excess Noise Factor and Transverse Mode Locking in A Gain-Guided Laser", 2005, *Optics Communications*, 245, 301-308. (▲:12; SCI; IF:2.5 at 2024; Ranking:61/125=48.8% in Optics)