

Prof. Ming-Chung Wu of Chang Gung University (Update 2026/08/28)

Award List

2026-

1. Jia-Mao Chang, Ting-Han Lin, Yu-Chi Peng, Yin-Hsuan Chang, and **Ming-Chung Wu***, "Photo-Induced Self-Polarization in Heterostructures Prolongs Charge Carrier Utilization for Efficient Reforming to Hydrogen", **2026 第三十二屆用戶年會暨研討會台灣光子啟用十週年**, Aug. 25-27, 新竹-國家同步輻射研究中心. **(壁報佳作)**
2. 張家茂, 林廷翰, 蕭凱起, 張胤萱, **吳明忠***, "漂浮式光熱-光觸媒平板應用於太陽光驅動二氧化碳高選擇性還原為甲烷", **第 21 屆台塑關係企業應用技術研討會**, Jun. 5, 桃園-長庚大學. **(研發論文暨海報競賽特優)**
3. 陳銘儀, 謝定宏, 張胤萱, 林廷翰, **吳明忠***, "應用於智慧密封材料之 AgNWs/TPU 壓阻型奈米複合材料製備與性質探討", **第 21 屆台塑關係企業應用技術研討會**, Jun. 5, 桃園-長庚大學. **(研發論文暨海報競賽優勝)**
4. Hong-Yi Lin, Kai-Chi Hsiao, Ting-Han Lin, Jia-Mao Chang, Yu-Wei Chen, Kun-Mu Lee, and **Ming-Chung Wu***, "Multidentate Bifunctional Molecules for Regulating Interfacial Dipoles and Relieving Lattice Stress toward High-Efficiency Perovskite Solar Cells", **2026 台灣過濾與分離學會年會暨台灣膜技術暨過濾分離國際研討會**, May. 29, 桃園-長庚大學. **(Honorable Mention)**
5. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, Kuan-Ying Wu, and **Ming-Chung Wu***, "Floatable Photothermal-Photocatalyst Sheet for Highly Selective Solar-Driven Carbon Dioxide to Methane Conversion", **2026 中華民國高分子年會**, Jan. 8-9, 新竹-國立清華大學. **(海報發表及競賽特優)**
6. Ming-Yi Chen, Ting-Hung Hsieh, Yin-Hsuan Chang, Ting-Han Lin, and **Ming-Chung Wu***, "Development and Self-Monitoring Application of Green Polymer Nanocomposites for Smart Sealing Gaskets", **2026 中華民國高分子年會**, Jan. 8-9, 新竹-國立清華大學. **(海報發表及競賽佳作)**

2025-

7. 陳彥璋, **吳明忠***, "藉由壓電-光協同催化效應對奈米金屬氧化物異質結構於二氧化碳還原的機制探討", **中國機械工程學會 114 年度年會**, Dec. 5-6, 新竹-國立陽明交通大學. **(114 年度能源學門-大專生研究計畫創作獎)**
8. 張胤萱, 李昱憲, 林廷翰, 李坤穆, **吳明忠***, "裂縫中綻放的花朵", **2025 台灣材料科學微結構影像美學競賽**, Nov. 14-15, 新竹-國立陽明交通大學. **(銀質獎)**
9. **吳明忠***, 林廷翰, 張胤萱, "一種以光重整製造氫的方法", **2025 台灣創新技術博覽會**, Oct. 16-18, 台北世貿 1 館. **(發明競賽鴻海特別獎)**
10. **吳明忠***, 林廷翰, 張胤萱, "一種以光重整製造氫的方法", **2025 台灣創新技術博覽會**, Oct. 16-18, 台北世貿 1 館. **(發明競賽台達特別獎)**
11. Hong-Yi Lin, Yueh-Lin Lin, Kai-Chi Hsiao, Ting-Han Lin, and **Ming-Chung Wu***, "Density Functional Theory Analysis of Chelating Molecule Passivation in Defective Perovskites: Implications for Efficiency Enhancement", **2025 SDSE 3rd International Conference on Smart Devices and Sustainable Energy (SDSE 2025)**, Oct. 15-17, New Taipei, Taiwan. **(Excellent Poster Award)**

12. Ying-Han Liao, Ze-Han Wu, Jia-Mao Chang, Yin-Hsuan Chang, Ting-Han Lin, and [Ming-Chung Wu*](#), "Bismuth Selenide/Silver Bismuth Iodide 2D/2D Heterostructure for Photocatalytic Carbon Dioxide Reduction", 2025 WMC, WMS & IUMRS-ICA The 3rd World Materials Conference, The 9th World Materials Summit & International Union of Materials Research Societies International Conference in Asia (IUMRS-ICA 2025), Oct. 14-17, Guilin, China. (High Level Poster Presentation)
 13. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and [Ming-Chung Wu*](#), "Floatable Hybrid Photothermal-Photocatalyst Sheet for Highly Selective Solar-Driven CO₂ to CH₄ via the Integration of Topological Bi₂Se₃ and ZnIn₂S₄ Photocatalysts", 2025 第三十一屆用戶年會暨研討會, Sep. 2-4, 新竹-國家同步輻射研究中心. (壁報佳作)
 14. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and [Ming-Chung Wu*](#), "Achieving High Selectivity for CO₂ Reduction to CH₄ through Photothermal-Photocatalysis with Topological Bi₂Se₃ and ZnIn₂S₄ Photocatalysts", 2025 GCIM The 3rd Global Conference of Innovation Materials & MRS-K Spring Meeting (GCIM 2025), June. 16-19, Jeju, South Korea. (Best Poster Award)
 15. 張家茂, 林廷翰, 蔣國斌, 張胤萱, [吳明忠*](#), "建構拓撲 Bi₂Se₃/ZnIn₂S₄ 偕同光熱與光催化實現二氧化碳高選擇性還原為甲烷", 第 20 屆台塑關係企業應用技術研討會, Jun. 6, 新北市-明志科技大學. (研發論文競賽優勝)
 16. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and [Ming-Chung Wu*](#), "Designing High-Efficiency Photocatalysts-Insights from a Photo-Assisted Kelvin Probe Force Microscopy Study", 2025 中華民國高分子學會年會, Jan. 15-16, 台中-朝陽科技大學. (海報發表及競賽佳作) 【MOST 113-2628-E-182-001-MY4】
 17. Ting-Hung Hsieh, Hao-Yun Yu, Yin-Hsuan Chang, Ting-Han Lin, and [Ming-Chung Wu*](#), "Multifunctional Electrospun Nanocomposite Fibers for the Detection of Various Biomarkers in Exhaled Breath", 2025 中華民國高分子學會年會, Jan. 15-16, 台中-朝陽科技大學. (海報發表及競賽優等) 【MOST 111-2628-E-182-001-MY2】
- 2024-**
18. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and [Ming-Chung Wu*](#), "Synergistic Photothermal and Photocatalytic Reduction of Carbon Dioxide to Methane via the Integration of Topological Bismuth Selenide and Zinc Indium Sulfide Photocatalysts", 2024 MRS Materials Research Society Fall Meeting & Exhibit (MRS 2024), Dec. 1-6, Boston, Massachusetts, United States of America. (Best Poster Award Nominee)
 19. 張家茂, 陳彥璋, 陳嘉佑, 林岑薰, 許子綸, [吳明忠*](#), "塑料裂解與製氫—新式單原子光觸媒原型反應器", 2024 華立創新材料大賽, Nov. 15-16, 台中-國立中興大學. (入選獎)
 20. [吳明忠*](#), 林廷翰, 張胤萱, "光重整廢塑料製氫裝置", 2024 台灣創新技術博覽會, Oct. 17-19, 台北世貿 1 館. (發明競賽銅牌獎)
 21. Hong-Yi Lin, Shu-Chi Lu, Kai-Chi Hsiao, Ting-Han Lin, and [Ming-Chung Wu*](#), "Strategic Passivation of Perovskite Layer Interfaces Using Multiple Functional Groups to Enhance Photovoltaic Performance", 2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024), Oct. 16-18, New Taipei, Taiwan. (Honorable Mentions)
 22. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and [Ming-Chung Wu*](#), "Synergistic CO₂-to-CH₄ Conversion via Photothermal and Photocatalytic Integration of Topological Bi₂Se₃ and ZnInS Photocatalysts", 2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024), Oct. 16-18, New Taipei, Taiwan. (Honorable Mentions)

23. Yen-Chang Chen, Ting-Han Lin, Jia-Mao Chang, Kuo-Ping Chiang, and Ming-Chung Wu*, "Construction of BaTiO/Ag-Doped TiO₂ Heterostructures to Enhance Carbon Dioxide Reduction Reaction via Synergistic Piezo-Photocatalysis", 2024 SDSE 2nd International Conference on Smart Devices and Sustainable Energy (SDSE 2024), Oct. 16-18, New Taipei, Taiwan. (Second Award)
24. 林廷翰, 張胤萱, 張家茂, 蔣國斌, 廖盈涵, 吳明忠*, "塑料裂解與製氫—新式單原子光觸媒原型反應器", 第 19 屆台塑關係企業應用技術研討會, Jun. 14, 桃園市-長庚大學. (研發實物競賽第三名)
25. 陳彥璋, 林廷翰, 蔣國斌, 張家茂, 吳明忠*, "藉由壓電-光協同催化效應增益銀摻雜 BaTiO₃/TiO₂ 奈米異質結構觸媒性能之應用與機制探討", 第 19 屆台塑關係企業應用技術研討會, Jun. 14, 桃園市-長庚大學. (研發論文暨海報競賽優勝)
26. Yen-Chang Chen, Ting-Han Lin, Jia-Mao Chang, and Ming-Chung Wu*, "Enhanced Photo-Piezocatalytic Performance through Synergistic Effects for Silver-Modified BaTiO₃/TiO₂ Heterostructure", 2024 JSAP The 71th Japan Society of Applied Physics Spring Meeting (JSAP 2024), Mar. 22-25, Tokyo, Japan. (Poster Award)
27. Yu-Chi Peng, Kuo-Ping Chiang, Jia-Mao Chang, Ting-Han Lin, and Ming-Chung Wu*, "Enhancing Solar-Driven Photocatalytic Hydrogen Production through Incorporation of ZnIn₂S₄ with BaTiO₃ Piezocatalyst to Decompose Polymeric Biomass", 2024 中華民國高分子學會年會, Jan. 24-25, 台南-國立成功大學. (海報論文競賽佳作) 【MOST 112-2813-C-182-036-E】
28. Mei-Yu Chen, Ting-Hung Hsieh, Yin-Hsuan Chang, Ting-Han Lin, and Ming-Chung Wu*, "Multifunctional Electrospun Nanocomposite Fibers for the Detection of Various Biomarkers in Exhaled Breath", 2024 中華民國高分子學會年會, Jan. 24-25, 台南-國立成功大學. (海報論文競賽優等) 【MOST 111-2628-E-182-001-MY2】
- 2023-**
29. Shu-Chi Lu, Yuan-Yu Chiu, Hong-Yi Lin, and Ming-Chung Wu*, "Bifunctional Carbazole-Based Interlayer for Defect Passivation in High-Efficiency Perovskite Solar Cells", 2023 台灣化學工程學會 70 週年會暨國科會化工學門成果發表會, Dec. 9-10, 台北-國立臺灣大學. (海報論文競賽佳作)
30. 林廷翰, 吳明忠*, "The Beautiful Island: Formosa, Taiwan", 2023 台灣材料科學微結構影像美學競賽, Nov. 17-20, 新竹-國立清華大學. (佳作)
31. 張胤萱, 林廷翰, 吳明忠*, "Floral Resilience: A Glimpse into the Layered Beauty of Bi₂Se₃ Topological Materials", 2023 台灣材料科學微結構影像美學競賽, Nov. 17-20, 新竹-國立清華大學. (銅質獎)
32. 邱遠宇, 陳世軒, 李坤穆, 吳明忠*, "利用金屬摻雜 n 型半導體材料調控鈣鈦礦太陽能電池光電轉換效率與陷阱狀態之研究", 第 18 屆台塑關係企業應用技術研討會, Jun. 9, 新北市-明志科技大學. (研發論文暨海報競賽優勝)
33. Yuan-Yu Chiu, Shih-Hsuan Chen, and Ming-Chung Wu*, "Interlayer of 2-Chloroethyl Vinyl Ether Chain-Grafted Carbazole Derivatives Confer Highly Efficient and Stable Perovskite Solar Cell", 2023 中華民國高分子學會年會, Jan. 17-18, 桃園-長庚大學. (海報論文競賽優等) 【MOST 109-2221-E-182-059】
34. Ting-Hung Hsieh, Yin-Hsuan Chang, Ting-Han Lin, Kai-Chi Hsiao, and Ming-Chung Wu*, "Breath Acetone Sensing Based on Polymer Nanocomposite Sensing Material for Application in Non-Invasive Diabetics Monitoring", 2023 中華民國高分子學會年會, Jan. 17-18, 桃園-長庚大學. (海報論文競賽優等) 【MOST 110-2628-E-182-001】

2022-

35. 陳天豪, 吳明忠*, "金屬摻雜硫化錫(IV)複合碳化奈米纖維素薄膜於二氧化碳還原產生再利用能源之研究", 中國機械工程學會 111 年度年會, Dec. 2-3, 苗栗-國立聯合大學. (111 年度能源學門-大專生優良創作獎)
36. 王哲麒, Rajat Subhra Karmakar, 林廷翰, 吳明忠*, 張國軒, "藉由 PEDOT:PSS 與 ITO 電極間之抑制介面塗層提升壓阻式壓力感測器之可靠度", 台灣化學工程學會 69 週年年會暨國科會化學工程學門成果發表會&台、日、韓、捷化學工程國際研討會, Dec. 2-3, 新北-淡江大學. (石延平教授論文獎)
37. Kou-Ping Chiang, Jia-Mao Chang, Kai-Chi Hsiao, and Ming-Chung Wu*, "Enhanced Photocatalytic CO₂ Reduction Activity of Silver-Bismuth-Iodide Decorated TiO₂ NF by Chemical Vapor Deposition", 台灣化學工程學會 69 週年年會暨國科會化學工程學門成果發表會&台、日、韓、捷化學工程國際研討會, Dec. 2-3, 新北-淡江大學. 【MOST 111-2221-E-182-040-MY3】 (海報競賽佳作)
38. Ting-Hung Hsieh, Yin-Hsuan Chang, Ting-Han Lin, Kai-Chi Hsiao, and Ming-Chung Wu*, "Ultra-Sensitive Breath Acetone Detection by Polymer Nanocomposite Sensing Material", 台灣化學工程學會 69 週年年會暨國科會化學工程學門成果發表會&台、日、韓、捷化學工程國際研討會, Dec. 2-3, 新北-淡江大學. 【MOST 111-2221-E-182-040-MY3】 (海報競賽佳作)
39. 廖盈涵, 吳明忠*, "The Ancient Sea Lamprey", 2022 台灣材料科學微結構影像美學競賽, Nov. 18-19, 苗栗-國立聯合大學. (金質獎)
40. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and Ming-Chung Wu*, "Composition Engineering in Silver Bismuth Iodide for Efficient Photocatalytic CO₂ Reduction", 中國材料科學學會 111 年年會, Nov. 18-19, 苗栗-國立聯合大學. 【MOST 111-2221-E-182-040-MY3】 (海報競賽特優)
41. Yin-Hsuan Chang, Ting-Hung Hsieh, Kai-Chi Hsiao, and Ming-Chung Wu*, "Development of Electrospun Nanofiber-Based Sensing Materials for Monitoring Biomarkers in Exhaled Breath", 中國材料科學學會 111 年年會, Nov. 18-19, 苗栗-國立聯合大學. 【MOST 111-2221-E-182-040-MY3】 (海報競賽優等)
42. Jia-Mao Chang, Ting-Han Lin, Yin-Hsuan Chang, and Ming-Chung Wu*, "Composition Engineering in Silver Bismuth Iodide for Efficient Photocatalytic CO₂ Reduction", 2022 第二十八屆用戶年會暨研討會, Aug. 30-Sep. 1, 新竹-國家同步輻射研究中心. (登報人氣獎)
43. Yin-Hsuan Chang, Yu-Han Liao, Ting-Han Lin, and Ming-Chung Wu*, "Organic Solvent Resistant Nanocomposite Films Made Self-Precipitated Ag/TiO₂ Nanofibers and Cellulose Nanofiber for Harmful Volatile Organic Compounds Photodegradation", 2022 中華民國高分子學會年會, Jan. 18-19, 台中-國立勤益科技大學. (論文海報競賽銅牌) 【MOST 110-2628-E-182-001】

2021-

44. 吳明忠*, 張胤萱, 林廷翰, 盧怡靜, 張家茂, "奈米光觸媒纖維複合紙燈罩 360° 無死角淨化空氣", 110 年度複合材料設計競賽, Dec. 17, 台中-逢甲大學. (佳作)
45. Yu-Hsiang Chang, Yen-Fu Yu, Kai-Chi Hsiao, Shih-Hsuan Chen, and Ming-Chung Wu*, "Enhance Power Conversion Efficiency of Non-Toxic Rudorfittes Solar Cells Through Modification of Carrier Transporting Layer", 2021 IEDMS International Electron Devices & Materials Symposium (IEDMS 2021), Nov. 18-19, Kaohsiung, Taiwan. (Excellent Poster Paper Award)

46. Ting-Hun Hsieh, Yin-Hsuan Chang, Ting-Han Lin, and Ming-Chung Wu*, "Ultra-Sensitive Breath Acetone Detection by Polymer Nanocomposite Sensing Material for Non-Invasive Diabetics Health Monitoring", **2021 MRSTIC Materials Research Society-Taiwan International Conference (MRSTIC 2021)**, Nov. 13-17, Virtual Conference. (First Prize)
47. 林廷翰, 張胤萱, 王前翰, 張家茂, 吳明忠*, "塑氫專案", 2021 長庚大學青年老闆築夢計畫校際盃創新創業競賽, Mar. 6, 桃園-長庚大學. (第三名及評審特別獎)

2020-

48. Yin-Hsuan, Chang, Yen-Tung Lin, Shih-Hsuan Chen, Meng-Huan Jao, and Ming-Chung Wu*, "Morphology Engineering of Low-Temperature Processed Electron Transport Layer for Pursuing High Performance Perovskite Photovoltaic", 2020 第二十六屆用戶年會暨研討會, Nov. 10-12, 新竹-國家同步輻射研究中心. (論文海報人氣獎)
49. Shih-Hsuan Chen, Yen-Tung Lin, and Ming-Chung Wu*, "Spray Deposition of Nanostructured Low-Temperature TiO₂ Electron Transport Layer for High-Performance Perovskite Solar Cells", 2020 中國材料科學學會年會, Nov. 6-7, 新北-明志科技大學. 【MOST 109-2221-E-182-059】(論文海報競賽優等)
50. Ying-Han Liao, and Ming-Chung Wu*, "Using Sn Doping to Modify TiO₂ Phase Junction of Electron Extraction Layer to Enhance Power Conversion Efficiency of Perovskite Solar Cells", 2020 中國材料科學學會年會, Nov. 6-7, 新北-明志科技大學. 【MOST 109-2221-E-182-059】(論文海報競賽優等)
51. Kai-Chi Hsiao, Meng-Huan Jao, Kuo-Yu Tian, Ting-Han Lin, Dinh-Phuc Tran, Hsueh-Chung Liao, Cheng-Hung Hou, Jing-Jong Shyue, Ming-Chung Wu, and Wei-Fang Su*, "Acetamidinium Cation to Confer Ion Immobilization and Structure Stabilization of Organometal Halide Perovskite Toward Long Life and High Efficiency p-i-n Planar Solar Cell via Air-Processable Method", 2020 中國材料科學學會年會, Nov. 6-7, 新北-明志科技大學. (論文海報競賽特優)
52. Kuo-Ping Chiang, Ting-Han Lin, Yin-Hsuan Chang, Jia-Mao Chang, Jen-Fu Hsu, Kai-Hsiang Hsu, and Ming-Chung Wu*, "Highly Efficient Solar-Driven Photodegradation on Antibiotics by Self-Precipitated Ag NPs/TiO₂ Nanofibers Photocatalyst", 2020 台灣化學工程學會 67 週年年會暨科技部化學工程學門成果發表會&台日韓捷永續化學工程國際研討會, Oct. 23-24, 新竹-國立清華大學. 【MOST 109-2221-E-182-059】(海報論文競賽佳作)
53. Yen-Ting Lin, Chi-Hui Tsao, Ting-Han Lin, and Ming-Chung Wu*, "Solar-Triggered Silver Doped Titanium Oxide Nanofibers with High Efficient Photothermal Therapy for Tumor Ablation", 2020 台灣化學工程學會 67 週年年會暨科技部化學工程學門成果發表會&台日韓捷永續化學工程國際研討會, Oct. 23-24, 新竹-國立清華大學. 【MOST 109-2221-E-182-059】(海報論文競賽優勝)
54. Ting-Han Lin, Duy Linh Vu, Ming-Chung Wu*, and Chao-Sung Lai, "Using Electrospun PANI/P3TI/PMMA Fibers for Highly-Sensitive Detection of Volatile Organic Compounds Vapor", **2020 ICSS International Conference on Smart Sensors, 25th Symposium of Association of Chemical Sensors in Taiwan, and 23rd Nano Engineering and Microsystem Technology Conference (ICSS 2020)**, Oct. 19-20, Kaohsiung, Taiwan. (Oral Presentation) (Best Oral Paper Award)

2019-

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56. Ting-Han Lin, Ching-Ting Chiu, and Ming-Chung Wu*, "Construction of 3D/1D Porous g-C₃N₄/TiO₂ with Z-Scheme Heterostructure for Efficient Water", 2019 台灣化學工程學會 66 週年年會暨科技部化學工程學門成果發表會, Nov. 8-9, 台中-東海大學. (海報論文競賽佳作)

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