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Professor

B.S. in Chemical Engineering

National Taiwan University, 1980

M.S. in Chemical Engineering

West Virginia University, 1985

Ph.D. in Chemical Engineering

University of Pittsburgh, 1988

Research and Professional Interests

Catalysis

Reaction Engineering

Journal Papers

1. Van-Huy Nguyen, **Jeffrey C. S. Wu***, Recent developments in the design of photoreactors for solar energy conversion from water splitting and CO₂ reduction, *Applied Catalysis: General*, 550, 122-141 (2018) **Feature Article** (SCI)
2. Nela Ambrožová, Martin Reli, Marcel Šihor*, Piotr Kuśtrowski, **Jeffrey C. S. Wu***, Kamila Kočí, Copper and platinum doped titania for photocatalytic reduction of carbon dioxide, *Applied Surface Science*, 430, 475-487 (2018) (SCI)
3. Zhuo Xiong, Chia-Chien Kuang, Kuan-Yu Lin, Ze Lei, Xiaoxiang Chen, Bengen Gong, Jianping Yang, Yongchun Zhao*, Junying Zhang, Baoyu Xia, **Jeffrey C. S. Wu***, Enhanced CO₂ photocatalytic reduction through simultaneously accelerated H₂ evolution and CO₂ hydrogenation in a twin photoreactor, *Journal of CO₂ Utilization*, 24, 500–508 (2018) (SCI)
4. Ying Wang, Zizhong Zhang, Lina Zhang, Zhongbin Luo, Jinni Shen, Huaxiang Lin, Jinlin Long, **Jeffrey C. S. Wu**, Xianzhi Fu, Xuxu Wang, and Can Li, Visible-Light Driven Overall Conversion of CO₂ and H₂O to CH₄ and O₂ on 3D-SiC@2D-MoS₂ Heterostructure, *Journal of the American Chemical Society*, 140 (44), 14595-14598 (2018) (SCI)
5. Kai Liu, Joseph Che-Chin Yu, Heng Dong, **Jeffrey C. S. Wu**, and Michael R. Hoffmann*, Degradation and Mineralization of Carbamazepine Using an Electro-Fenton Reaction Catalyzed by Magnetite Nanoparticles Fixed on an Electrocatalytic Carbon Fiber Textile Cathode, *Environmental Science & Technology*, 52(21), 12667-12674 (2018) (SCI)
6. Duanxing Li, Joseph Che-Chin Yu, Van-Huy Nguyen, **Jeffrey C.S. Wu***, Xuxu Wang, A dual-function photocatalytic system for simultaneous separating hydrogen from water splitting and photocatalytic degradation of phenol in a twin-reactor, *Applied Catalysis B: Environmental*, 239, 268-279 (2018) (SCI)
7. Y. Zhou, Z. Zhang, Z. Fang, M. Qiu, L. Ling, J. Long, L. Chen, Y. Tong, W. Su, Y. Zhang, **Jeffrey C.S. Wu**, J.-M. Basset, X. Wang, G. Yu, Defect engineering of metal–oxide interface for proximity of photooxidation and photoreduction, *Proceedings of the National Academy of Sciences*, 116, 10232-37 (2019) (SCI)
8. Yu-An Ho, Shan-Yu Wang, Wei-Hung Chiang*, Van-Huy Nguyen, Jun-Long Chiud,

- Jeffrey C.S. Wu***, Moderate-temperature catalytic incineration of cooking oil fumes using hydrophobic honeycomb supported Pt/CNT catalyst, *Journal of Hazardous Materials* 379, 120750 (2019) (SCI)
9. Yu-Ting Hsu, **Jeffrey C. S. Wu***, Van-Huy Nguyen, Mg_xAl-LDHs layered double hydroxides catalysts for boosting catalytic synthesis of biodiesel and conversion of by-product into valuable glycerol carbonate, *Journal of the Taiwan Institute of Chemical Engineers*, 104, 291-226 (2019) (SCI)
 10. Hung Ji Huang, Yen Han Wang, Yuan-Fong Chou Chau, Hai-Pang Chiang, **Jeffrey Chi-Sheng Wu**, Magnetic field-enhancing photocatalytic reaction in micro optofluidic chip reactor, *Nanoscale Research Letters* 14:323 (2019) (SCI)
 11. Minh Thang Le, Hong Lien Nguyen, Anh-Tuan Vu, Van Chuc Nguyen, **Jeffrey C. S. Wu**, Synthesis of TiO₂ on different substrates by chemical vapor deposition for photocatalytic reduction of Cr(VI) in water, *Journal of the Chinese Chemical Society*, 66, 1713–1720 (2019) (SCI)
 12. Kamila Kočí*, Han Dang Van, Miroslava Edelmannová, Martin Reli, **Jeffrey C.S. Wu***, Photocatalytic reduction of CO₂ using Pt/C₃N₄ photocatalysts, *Applied Surface Science*, 503, 144426 (2020) (SCI)
 13. Chao-Wei Huang, Ba-Son Nguyen, **Jeffrey C. S. Wu*** Van-Huy Nguyen, A current perspective for photocatalysis towards the hydrogen production from biomass-derived organic substances and water, *International Journal of Hydrogen Energy*, 45(36), 18144-18159 (2020) (SCI)
 14. Hung Ji Huang, **Jeffrey C. S. Wu**, Hai-Pang Chiang, Yuan-Fong Chou Chau, Yung-Sheng Lin, Yen Han Wang, Po-Jui Chen. Review of Experimental Setups for Plasmonic Photocatalytic Reactions. *Catalysts*, 10(1):46 (2020) (SCI)
 15. Ying Wang, Xiaotong Shang, Jinni Shen, Zizhong Zhang*, Debao Wang, Jinjin Lin, **Jeffrey C. S. Wu***, Xianzhi Fu, Xuxu Wang*, Can Li*. Direct and indirect Z-scheme heterostructurecoupled photosystem enabling cooperation of CO₂ reduction and H₂O oxidation, *Nature Communications*, 11, 3043 (2020) (SCI)
 16. Chun-Yen Liu, Kim Struwe, Cheng-Hung Lee, Haw-Yeu Chuang, Jörg Sauer, Joseph Che-Chin Yu, Van-Huy Nguyen, Chao-Wei Huang, **Jeffrey C. S. Wu***, Ethanol Conversion to Selective High-value Hydrocarbons over Ni/HZSM-5 Zeolite Catalyst, *Catalysis Communications*, 144, 106067 (2020) (SCI)
 17. Chao-Wei Huang, Chi-Hung Liao, **Jeffrey Chi-Sheng Wu***, Hygroscopic MgO on the Dual-Layer Photoelectrode Prepared by RF Magnetron Sputtering for Photocatalytic Water Splitting, *Korean Journal of Chemical Engineering*, 37(8), 1352-1359 (2020) (SCI)
 18. Yu-Tang Lin, Chao-Wei Huang, Yen-Han Wang, **Jeffrey C. S. Wu***, High Effective Composite RGO/TiO₂ Photocatalysts to Degrade Isopropanol Pollutant in Semiconductor Industry, *Topics in Catalysis*, 63, 1240–1250 (2020) (SCI)
 19. Trung Hieu Nguyen, Anh Tuan Vu, Van Han Dang, **Jeffrey Chi-Sheng Wu***, Minh Thang Le*, Photocatalytic Degradation of Phenol and Methyl Orange with Titania-Based Photocatalysts Synthesized by Various Methods in Comparison with ZnO–Graphene Oxide Composite, *Topics in Catalysis*, 63, 1215–1226 (2020) (SCI)

20. Yu-Tang Lin, Yen-Han Wang, **Jeffrey C.S. Wu***, Xuxu Wang, Photo-Fenton enhanced twin-reactor for simultaneously hydrogen separation and organic wastewater degradation, *Applied Catalysis B: Environmental* 281, 119517(2021) (SCI)
21. Cheng-Ting Lee, Ling-I Hung, Yu-Chieh Shih, **Jeffrey Chi-Sheng Wu***, Sue-Lein Wang*, Chao-Wei Huang, Van-Huy Nguyen, Solar hydrogen production from seawater splitting using mixed-valence titanium phosphite photocatalyst, *Journal of Environmental Chemical Engineering*, 9, 104826 (2021) (SCI)
22. Thuy-Hanh Pham, Huu-Tuan Do*, Lan-Anh Phan Thi**, Pardeep Singh, Pankaj Raizada, **Jeffrey Chi-Sheng Wu*****, Van-Huy Nguyen***, Global challenges in microplastics: From fundamental understanding to advanced degradations toward sustainable strategies, *Chemosphere* 267 (2021) 129275 (SCI)
23. Jia Quan Su, Yi-Chun Chang, **Jeffrey C. S. Wu***, Visible-Light Photocatalyst to Remove Indoor Ozone under Ambient Condition Catalysts, *Catalysts* 11 (2021) 383(SCI)
24. Han Van Dang, Yen Han Wang, **Jeffrey C.S. Wu***, Z-scheme photocatalyst Pt/GaP-TiO₂-SiO₂:Rh for the separated H₂ evolution from photocatalytic seawater splitting, *Applied Catalysis B: Environmental* 296 (2021) 120339(SCI)
25. Yi-Shan Huang, Chao-Wei Huang, Van-Huy Nguyen, Yen-Han Wang, **Jeffrey C. S. Wu***, Mei-Rurng Tseng, Yu-Chieh Pao, Dye-sensitised Photocatalyst for Photocatalytic Whole Water Splitting to Produce Hydrogen in a Twin Photoreactor, *Journal of Engineering Science*, 17(2) (2021) 47–72
26. Han Van Dang, Yen Han Wang, **Jeffrey C.S. Wu***, Exploration of photocatalytic seawater splitting on Pt/GaP-C₃N₄ under simulated sunlight, *Applied Surface Science* 572 (2022) 151346 (SCI)
27. Ya-Ning Yang, Chao-Wei Huang, Van-Huy Nguyen, and **Jeffrey C.-S. Wu***, Enhanced methanol production by two-stage reaction of CO₂ hydrogenation at atmospheric pressure, *Catalysis Communications*, 162 (2022) 106373 (SCI)
28. Han-Sheng Sun, Tien-Liang Tsai, Cheng-Hao Chang, Yen-Yu Chen, Hau-Ren Yang, **Jeffrey C. S. Wu***, Yu-Ying Lai*, Effect of the length of bromoalkyl chains on light-driven hydrogen evolution facilitated by fluorene-based polymers, *Sustainable Energy Fuels*, 6 (2022) 4470 (SCI)
29. Zi-Jie Gong, Cheng-Chi Chien, Sudeep Mudhulu, Jeffrey C.S. Wu, Nina Daneu, Marjeta Macek Krzmann*, Wen-Yueh Yu*, SrTiO₃ catalysts prepared from topochemical conversion of Bi₄Ti₃O₁₂ nanoplatelets: Surface characterizations and interactions with isopropanol, *Journal of Catalysis* 416 (2022) 222–232 (SCI)(合著)
30. Leonid L. Rusevich*, Eugene A. Kotomin, Guntars Zvejnieks, Marjeta Macček Krzmann, SurajGupta, Nina Daneu, Jeffrey C.S. Wu, Yu-Guan Lee, Wen-Yueh Yu, Effects of Al Doping on Hydrogen Production Efficiency upon Photostimulated Water Splitting on SrTiO₃ Nanoparticles, *Journal of Physical Chemistry C* 126 (2022) 21223–21233 (SCI)(合著)
31. Yu-Yang Tai, **Jeffrey C.S. Wu***, Wen-Yueh Yu, Marjeta Macek Krzmann*, Eugene Kotomin, Photocatalytic water splitting of improved strontium titanate for simultaneous separation of H₂ in a twin photoreactor, *Applied Catalysis B: Environmental* 324 (2023) 122183 (SCI)(合著)

Conference Papers

1. Duan-Xin Li and **Jeffrey Chi-Sheng Wu**, "Simultaneous Separation of Water-split Hydrogen and Photodegradation of Phenol in a Novel Twin Reactor", 16th Japan-Taiwan Joint Symposium on Catalysis, Kyoto, Japan, January 29-31, 2018
2. Cheng-Ting Lee, Yu-Chieh Shih, Ling-I Hung, **Jeffrey Chi-Sheng Wu**, Sue-Lein Wang, "Titanium Phosphite for photocatalytic hydrogen evolution from sea water ", Chinese Symposium on Photocatalysis Materials, Wuhan, China, July 26-29, 2018
Plenary Lecturer
3. Cheng-Ting Lee, Yu-Chieh Shih, Ling-I Hung, **Jeffrey Chi-Sheng Wu**, Sue-Lein Wang, "Sunlight-driven Photocatalytic Hydrogen Evolution from Water Using Titanium Phosphorus Oxide", 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan, August 5-10, 2018
4. Cheng-Hung Lee, Chun-Yen Liu, Kim Strüwe, **Jeffrey Chi-Sheng Wu**, "Enhanced Conversion and Selectivity from Bio-ethanol to Aromatics over Modified HZSM-5 Zeolite Catalysts", 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan, August 5-10, 2018
5. Yu-Tang Lin, **Jeffrey Chi-Sheng Wu**, "Synthesis of solar Light-driven Photocatalyst for water treatment by using graphene graphene and reduced graphene oxide", 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan, August 5-10, 2018
6. Joseph Che -Chin Yu, Nguyen Van Huy, Janusz Lasik, **Jeffrey Chi-Sheng Wu**, "Photocatalytic NOx abatement using titania nanosheet photocatalysts with dominantly exposed (001) reactive facets", 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan, August 5-10, 2018
7. 吳紀聖 · "觸媒及反應工程" · 台灣觸媒學會工業觸媒工作坊 · 中油宏南教室 · 高雄 · 民國107年1月25日
8. 黃繹珊, 包郁傑, 吳紀聖, "染料敏化光觸媒用於水分解產氫" · 第 36 屆台灣區觸媒與反應工程研討會, 台中逢甲大學 · 民國 107 年 6 月 28-29 日
9. Cheng-Hung Lee, Chun-Yen Liu, Kim Strüwe, **Jeffrey Chi-Sheng Wu**, "Enhanced Conversion and Selectivity from Bio-ethanol to Aromatics over Modified HZSM-5 Zeolite Catalysts" · 第 36 屆台灣區觸媒與反應工程研討會, 台中逢甲大學 · 民國 107 年 6 月 28-29 日
10. Cheng-Ting Lee, Yu-Chieh Shih, Ling-I Hung, **Jeffrey Chi-Sheng Wu**, Sue-Lein Wang, "Titanium Phosphite for photocatalytic hydrogen evolution from sea water" · 第36屆台灣區觸媒與反應工程研討會, 台中逢甲大學 · 民國107年6月28-29日
11. Jia Quan Su, Yi-Chun Chang, **Jeffrey Chi-Sheng Wu**, "Visible Light Plasmonic Photocatalyst to Remove Indoor Ozone Under Ambient Condition" · 第36屆台灣區觸媒與反應工程研討會, 台中逢甲大學 · 民國107年6月28-29日

12. 吳紀聖, "太陽能光催化分離生產氫氣同時降解有機廢水", 第九屆「永續綠色科技研討會」, 台灣大學環工所, 民國107年7月1日
13. Yi-Shan Huang, Yu-Chieh Pao, **Jeffrey C. S. Wu**, "Dye-sensitized Photocatalyst for Photocatalytic Splitting of Water into Hydrogen", 6th International Workshop on Process Intensification (IWPI 2018), Taipei, Taiwan, November 7-8, 2018
14. **Jeffrey Chi-Sheng Wu**, "Photocatalytic Removal of NO_x pollutants in Flue Gas", 2nd Global Conference on Catalysis Chemical Engineering & Technology, Rome, Italy May 13-14, 2019 **Keynote Speaker**
15. Duan-Xin Li and **Jeffrey Chi-Sheng Wu**, "Simultaneous photocatalytic production of hydrogen and photodegradation of organic wastewater by sunlight", International Conference on Photocatalysis and Photoenergy 2019 (ICoPP2019), Songdo Convensia, Incheon, Korea, May 22-25, 2019
16. Joseph Che-Chin Yu, Janusz Lasek, **Jeffrey Chi-Sheng Wu**, "Photocatalytic Removal of NO_x pollutants in Flue Gas", The 8th Asia-Pacific Congress on Catalysis (APCAT-8), Bangkok, Thailand, August 4-7, 2019 **Keynote Speaker**
17. 何好安, 江偉宏, 吳紀聖, "疏水性奈米碳管白金觸媒消除廚房油煙異味", 第37屆台灣區觸媒與反應工程研討會, 台北大同大學, 民國108年6月26-27日, **邀請演講**
18. Phu Chi Huynh, **Jeffrey C.S Wu**, "Removal of NH₃/NH₄⁺, NO³⁻, NO²⁻ ions in water using facet-modified TiO₂ photocatalyst", 第37屆台灣區觸媒與反應工程研討會, 台北大同大學, 民國108年6月26-27日
19. 林玉堂, 吳紀聖, "光催化降解水溶液異丙醇並同步分離生成的氫氣", 第37屆台灣區觸媒與反應工程研討會, 台北大同大學, 民國108年6月26-27日
20. 黃繹珊, 包郁傑, 吳紀聖, "有機染料敏化無機光觸媒純水分解產氫技術", 第37屆台灣區觸媒與反應工程研討會, 台北大同大學, 民國108年6月26-27日
21. 吳紀聖, "化工技術用於再生能源和環境保護研究成果", 2019 台灣化學產業高峰論壇, 台北國際會議中心, 民國108年8月22日, **邀請演講**
22. 吳紀聖, " Simultaneous photocatalytic production of hydrogen and photodegradation of organic wastewater by sunlight ", 第十二屆海峽兩岸化學工程學術研討會, 高雄 蓮潭國際會館, 民國108年8月26-30日
23. 林玉堂, 吳紀聖, "光催化降解水溶液異丙醇並同步分離生成的氫氣", 台灣化學工程學會 66週年年會, 東海大學, 台中市, 民國108年11月8-9日
24. 沈允中, 吳紀聖, "常壓下光催化和熱催化氫解木質素衍生物轉化為苯酚", 台

灣化學工程學會 66週年大會，東海大學，台中市，民國108年11月8-9日

25. Yun-Chung Shen, **Jeffrey C. S. Wu**, "Photocatalytic Hydrogenolysis to Convert Lignin-Derivatives to Phenol under Ambient Conditions", 2020 TMS Annual Meeting & Exhibition, San Diego, CA, USA, February 23-27, 2020
26. Han Van Dang, **吳紀聖**, "Photocatalytic water splitting under visible light illumination without any sacrificial agents", 第38屆台灣區觸媒與反應工程研討會, 台灣大學, 台北市, 民國109年7月16-17日
27. 王彥涵, **吳紀聖**, "Magnetic Field Effect on Heterogeneous Photocatalysis", 第38屆台灣區觸媒與反應工程研討會, 台灣大學, 台北市, 民國109年7月16-17日
28. 張翊群, **吳紀聖**, "Photocatalytic Production of Ammonia and Remediation of Agricultural Waste Water with Twin Reactor System", 第38屆台灣區觸媒與反應工程研討會, 台灣大學, 台北市, 民國109年7月16-17日
29. 李思偉, **吳紀聖**, 張清土, "Synthesis of Hydrotalcite Intercalated Hexacyanoferrates for Treatment of Radioactive Solutions", 第38屆台灣區觸媒與反應工程研討會, 台灣大學, 台北市, 民國109年7月16-17日
30. 楊雅甯, **吳紀聖**, "Novel reactor design of carbon dioxide hydrogenation to methanol in low pressure", 第38屆台灣區觸媒與反應工程研討會, 台灣大學, 台北市, 民國109年7月16-17日
31. 陳凱婷, **吳紀聖**, "Photocatalytic Nitrogen Fixation to Ammonia", 第38屆台灣區觸媒與反應工程研討會, 台灣大學, 台北市, 民國109年7月16-17日
32. Han Van Dang, Yen Han Wang, **Jeffrey C. S. Wu**, Nanocomposites Pt/GaP-C₃N₄ to Explore Photocatalytic Seawater Splitting by Simulated Sunlight, National Taiwan University-Sogang University 3rd ChemE Online Symposium on Energy & Biomolecular Engineering, Feb. 23, 2021, virtual conference
33. Han Van Dang, **Jeffrey C. S. Wu***, "Photocatalytic Whole Water Splitting using Pt/GaP-p-C₃N₄ Nanocomposite under Visible Light Irradiation", 11th Asian Photochemistry Conference (APC2021), Oct. 31-Nov. 4, 2021, Korea, virtual conference
34. 尤諠荏, 徐振哲, **吳紀聖**, "等離子結合觸媒反應器處理含氯有機揮發性廢氣", 兩岸視訊會議:工業過程廢棄物減量與分離, 李國鼎故居, 台北市, 民國110年9月23日。
35. Han Van Dang, Yen Han Wang, **Jeffrey C. S. Wu**, "Nanocomposites Pt/GaP-C₃N₄ to Explore Photocatalytic Seawater Splitting by Simulated Sunlight", National Taiwan University-Sogang University 3rd ChemE Online Symposium on Energy &

Biomolecular Engineering, Feb. 23, 2021, virtual conference

36. Yu-Tang Lin, Yen-Han Wang, Jeffrey Chi-Sheng Wu*, "Photo-Fenton enhanced twin-reactor for green hydrogen production and organic wastewater degradation simultaneously", 9th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT9), Fukuoka, Japan, Jul. 24-29, 2022
37. Yu-Yang Tai, Jeffrey C. S. Wu*, Wen-Yueh Yu, Marjeta Maček Kržmanc, "Photocatalytic Water Splitting of Improved Strontium Titanate and Simultaneous Separation of H₂ in a Twin Photoreactor", 12th International Conference on Environmental Catalysis (ICEC2022), Osaka, Japan, Jul. 30 – Aug. 2, 2022
38. 林玉堂·王彥涵·吳紀聖·"芬頓強化光催化降解有機廢水並同步分離生成氫氣"·台灣化學工程學會68週年年會·高雄市·民國111年1月6-7日·**Keynote**
39. Jun-Yi Wu, Jeffrey Chi-Sheng Wu, "Pd/ZnO catalysts for direct CO₂ hydrogenation to methanol under atmospheric pressure"·台灣化學工程學會68週年年會·高雄市·民國111年1月6-7日
40. Yu-Guan Lee, Yu-Yang Tai, Marjeta Maček Kržmanc, Jeffrey Chi-Sheng Wu·"Perovskite Structure for Photocatalytic Water Splitting"·台灣化學工程學會68週年年會·高雄市·民國111年1月6-7日
41. 嚴毅, 吳紀聖·"電漿反應器結合觸媒高效分解含有機氯化物廢氣"·台灣化學工程學會69週年年會·淡江大學·民國111年12月2-3日
42. Limin Pai, Jeffrey Chi-Sheng Wu·"Highly Mechanical Stable and Active Monolithic Manganese-based Catalyst for Low-temperature De-NO_x"·台灣化學工程學會69週年年會·淡江大學·民國111年12月2-3日
43. 胡芮齊, 吳紀聖·"疏水性h-BN表面改質應用CO₂氫化反應"·台灣化學工程學會69週年年會·淡江大學·民國111年12月2-3日
44. Dang Van Han, Jeffery Chi-Sheng Wu, Marjeta Maček Kržmanc, "SrTiO₃ Based Photocatalysts for Overall Seawater Splitting to Produce Solar Hydrogen", Feb. 6-8, 2023, Riyadh, Saudi Arabia, Oral paper T1-FOE-VS81
45. Yi (Ian) Yen, Jeffrey Chi-Sheng Wu, "Using Plasma Catalyst Hybrid Reactor to Decompose Chlorine-Containing Organic Waste Gas", 15th International Symposium on Advanced Plasma Science and Its Applications for Nitrides and Nanomaterials (ISPlasma2023), Gifu University, Gifu, Japan, Mar. 5-9, 2023

Books or Chapters

1. 雷敏宏、吳紀聖·觸媒化學概論與應用·五南圖書·民國 103 年 2 月(ISBN 978-957-11-7503-4)

Patents

1. Lien-Hua Chiu, Wen-Tung Chen, Jan-An Guu, **Jeffrey C.-S. Wu**, I-Hsiang Tseng, Chih-Hsien Chen, "Component and Manufacture of a Photo-Catalyst," US Patent 6,805,739, 2004, and "光觸媒組成物與其製造方法", 中華民國發明專利 TW592824 (2004/06/21 - 2022/02/20)
2. Din-Ping Tsai, **Jeffrey Chi-Sheng Wu**, Nae-Lih Wu, Hung-Ji Huang, Tai-Chi Chu, Photocatalytic Reactor with Movable Conformal Light Guiding Plate, US patent 7,927,553 (200706~202707)
3. **吳紀聖**、蔡旻霏、張展璋, "還原二氧化碳的裝置及方法", 中華民國發明專利 I439317 (2014/6/1 - 2031/12/29)
4. 張陸滿、林郁真、**吳紀聖**、林語騰、許明皓、吳怡亭、黃正吉、周政隆、洪煜方方土、游議輝, "用於偵測氣體中汙染物之裝置及方法", 中華民國專利 I465282B (2014/12/21 - 2032/6/27)
5. 吳嘉文、江亞東、**吳紀聖**、黃郁慈, "脂肪酸烷酯之製備方法", 中華民國專利, 發明証號I468518 (2015/1/11 - 2033/4/2)
6. 胡振宇、陳肇和、王鏡竣、朱維屏、張淑美、**吳紀聖**、莊賦祥, "空氣淨化及增氧式植物栽培系統", 中華民國專利, 發明証號I483674 (2015/5/11 - 2032/9/3)
7. 何妤安、**吳紀聖**、江偉宏、王善猷、陳世昌、邱俊龍, "金屬疏水性碳材蜂巢式載體觸媒低溫焚燒技術消除油煙廢氣", 中華民國專利, 發明証號I593457 (2017/8/1 - 2036/4/24)
8. **吳紀聖**、劉俊彥、李政泓、莊浩宇、康文成、金 丹尼爾 斯特魯維, "生質苯-甲苯-二甲苯混合物的合成方法", 中華民國專利, 發明証號I638797 (2018/10/21 - 2037/3/23)
9. 黃繹珊、**吳紀聖**、曾美榕, "金屬疏水性碳材蜂巢式載體觸媒低溫焚燒技術消除油煙廢氣", 中華民國專利, 發明証號I732540 (2021/7/1 - 2040/4/23)

Honors and Others

1. Editor, Catalysis Communications, January 2016-present
2. Editorial board, *Research on Chemical Intermediates*, December 2012-present
3. 會士, 台灣化工學會, 2022

4. 工學院慶琅先生·詮達化學講座, 2022
5. 工學院斌彥先生紀念講座, 2017
6. 監事·台灣化學產業協會, 2022--present
7. 榮譽理事長·台灣光觸媒產業發展協會, 2022
8. 常務理事·台灣觸媒學會, 2018-present
9. 後補理事·台灣化工學會, 2022-present
10. 榮獲第 38 屆台灣觸媒學會傑出論文研究獎·2020
11. 指導余哲璿同學·參加「第 35 屆觸媒暨反應工程研討會」海報論文競賽第 2 名·2017
12. 指導 李政泓·劉俊和 Kim Strüwe 同學·參加 106 年度化工年會壁報論文競賽 榮獲觸媒及反應工程組佳作論文獎·, 2017
13. 獲頒台大工學院斌彥先生紀念講座 2018-2020
14. 指導余哲璿同學·參加「第 36 屆觸媒暨反應工程研討會」海報論文競賽第 2 名·2018
15. 指導李政泓同學·參加「第 36 屆觸媒暨反應工程研討會」學生英語演講競賽 第三名·2018
16. 指導林玉堂同學·參加「第 37 屆觸媒暨反應工程研討會」學生口頭報告優良獎·2019
17. 指導盧彥均、鄭宇翔、劉倚辰同學·環保署與教育部第 2 屆大專校院綠色化學 創意競賽·榮獲大專組金牌獎·2020
18. 指導王彥涵同學和 Dang Han Van 同學·參加「第 38 屆觸媒暨反應工程研討會」 學生口頭報告優良獎·2020
19. 指導張翊群同學·參加「第 38 屆觸媒暨反應工程研討會」學生英語演講競賽 獲獎·2020
20. 指導 Dang Han Van 同學獲得台大工學院·博士論文獎·2021
21. 指導王彥涵同學·獲得 2021 年中國化學會 巴斯夫博士論文獎·2021

22. 指導李榆觀同學，參加台灣化學工程學會 68 週年年會榮獲英文報告優等獎，
2022

主辦國際會議或活動

1. The 3rd Taiwan-Vietnam Joint Symposium on Catalysis，Department of Chemical Engineering, National Taiwan University，Taiwan，2019/7/7-2019/7/8
2. 2020 台灣觸媒與反應工程研討會暨光觸媒產業論壇，台灣大學化工系，台北，
2020/7/16-2020/7/17
3. 2023 台灣化學產業高峰論壇，台大醫院國際會議中心，2023/8/30 – 2023/9/1

