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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

Projects (started from 2020)

1. Photocatalytic Nitrogen Fixation
光催化固定氮
Sponsored by Ministry of Science and Technology, MOST 108-2221-E-002-111-MY3
NT\$ 4,138,000, 8/1/2019-7/31/2022
2. Engineering of perovskite photocatalysts for sunlight-driven hydrogen evolution from water splitting
臺歐盟國合計畫－工程設計鈣鈦礦型光觸媒用於太陽光能水分解產氫氣
Sponsored by Ministry of Science and Technology, MOST 108-2923-E-002-006-MY3
NT\$ 6,924,000, 7/1/2019-6/30/2022
3. Separation and Recovery of Typical Organic Waste Gas Containing Chlorine Based on Ionic Liquids
基於離子液體的典型含氯有機廢氣分離及回收過程研究
Sponsored by Ministry of Science and Technology, MOST 108-2218-E-002-06-MY3
NT\$ 3,900,000, 10/1/2019-9/30/2022
4. Photocatalytic and temperature-assisted air purification from VOC and NO_x using a pilot-scale photo-reactor
臺波(PL)雙邊協議型擴充增值國際合作研究計畫－先導級光反應器進行升溫輔助光催淨化空污 VOC 和 NO_x
Sponsored by Ministry of Science and Technology, MOST 110-2923-E-002-010-MY3
NT\$ 1,280,000, 1/1/2020-12/31/2023

Journal Papers

1. Bo-Ren Chen, Van-Huy Nguyen, **Jeffrey C.S. Wu***, Reli Martin, Kamila Kočí, Renewable fuel by photohydrogenation of CO₂: Impact of the nature of Cu species loaded TiO₂, *Physical Chemistry Chemical Physics*, 18, 4942-4951 (2016) (SCI)
2. Kung-Te Lu, Van-Huy Nguyen, Yi-Hui Yu, Che-Chin Yu, **Jeffrey C.S. Wu***, Luh-Maan Chang, Angela Yu-Chen Lin, An internal-illuminated monolith photoreactor towards efficient photocatalytic degradation of ppb-level isopropyl alcohol, *Chemical Engineering Journal*, 296, 11-18 (2016) (SCI)
3. Sheng-Hung Yu, Cheng-Wei Chiu, Yi-Ting Wu, Chi-Hung Liao, Van-Huy Nguyen, **Jeffrey C. S. Wu***, Photocatalytic water splitting and hydrogenation of CO₂ in a novel twin photoreactor with IO₃⁻/I⁻ shuttle redox mediator, *Applied Catalysis A: General*, 518, 158-166 (2016) (SCI)

4. Zhuo Xiong, Ying Luo, Yongchun Zhao, Junying Zhang, Chuguang Zhenga, **Jeffrey C. S. Wu**, Synthesis, characterization and enhanced photocatalytic CO₂ reduction activity of graphene supported TiO₂ nanocrystals with coexposed {001} and {101} facets, *Physical Chemistry Chemical Physics*, 18(19), 13186-13195 (2016) (SCI)
5. Joseph Che-Chin Yu, Van-Huy Nguyen, Janusz Lasek, Duan Xing Li, **Jeffrey C. S. Wu***, Competitive reaction pathway for photo and thermal catalytic removal of NO with hydrocarbon in flue gas under elevated temperatures, *Catalysis Communications*, 84, 40-43 (2016) (SCI)
6. Joseph Che-Chin Yu, Van-Huy Nguyen, Janusz Lasek, Sheng-Wei Chiang, Duan Xing Li, **Jeffrey C. S. Wu***, NO_x abatement from stationary emission sources by photo-assisted SCR: lab-scale to pilot-scale studies, *Applied Catalysis A: General*, 523, 294-303 (2016) (SCI)
7. Zhuo Xiong, Ze Lei, Chia-Chien Kuang, Xiaoxiang Chen, Bengen Gong, Yongchun Zhao*, Junying Zhang*, Chuguang Zheng, **Jeffrey C.S. Wu**, Selective photocatalytic reduction of CO₂ into CH₄ over TiO₂ nanocrystals: The interaction between Pt and Cu₂O cocatalysts, *Applied Catalysis B: Environmental*, 202, 695-703 (2017) (SCI)
8. Chun-Ying Chen, Joseph Che-Chin Yu, Van-Huy Nguyen, **Jeffrey Chi-Sheng Wu***, Wei-Hon Wang, and Kamila Kočí, Reactors Design for CO₂ Photo-hydrogenation toward Solar Fuels under Ambient Temperature and Pressure, *Catalysts*, 7(2), 63 (2017) (SCI)
9. Joseph Che-Chin Yu, Van-Huy Nguyen, Janusz Lasek, **Jeffrey C. S. Wu***, Titania nanosheet photocatalysts with dominantly exposed (001) reactive facets for photocatalytic NO_x abatement, *Applied Catalysis B: Environmental*, 219, 391-400 (2017) (SCI)
10. Y.-T. Huang*, C.-W. Lai, B.-W. Wu, K.-S. Lin, **Jeffrey C. S. Wu**, M.S.A. Hossain, Y. Yamauchi, K.C.W. Wu, Advances in bioconversion of microalgae with high biomass and lipid productivity, *Journal of the Taiwan Institute of Chemical Engineers*, 79, 37-42 (2017) (SCI) (合著)
11. Yu-Kai Lin, Van-Huy Nguyen, Joseph Che-Chin Yu, Ching-Wei Lee, Yu-Heng Deng, **Jeffrey C. S. Wu***, Kevin C. W. Wu, Kuo-Lun Tung, Cheng-Liang Chen, Biodiesel production by pervaporation-assisted esterification and pre-esterification using graphene oxide/chitosan composite membranes, *Journal of the Taiwan Institute of Chemical Engineers*, 79, 23-30 (2017) (SCI) (合著)
12. Ying Wang, Lina Zhang, Xiaoyan Zhang, Zizhong Zhang*, Yuecong Tong, Fuying Li, **Jeffrey C.-S. Wu**, Xuxu Wang*, Openmouthed β-SiC hollow-sphere with highly photocatalytic activity for reduction of CO₂ with H₂O, *Applied Catalysis B: Environmental*, 206, 158-167 (2017) (SCI)
13. Joseph Che-Chin Yu, Janusz Lasek, Van-Huy Nguyen, Yi-Hui Yu, **Jeffrey C. S. Wu***, Visualizing reaction pathway for the photo-transformation of NO₂ and N₂ into NO over WO₃ photocatalyst, *Research on Chemical Intermediates*, 43, 7159–7169 (2017) (SCI)
14. 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)

15. 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)
16. 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)
17. 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)
18. 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)
19. 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)
20. 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)
21. 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)
22. 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)
23. 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)
24. 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)
25. 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)

26. 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)
27. 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)
28. 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)
29. 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)
30. 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)
31. 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)
32. 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)
33. 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 (2021) 119517
34. 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 (2021) 104826
35. 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.

Conference Papers

1. Che-Chin Yu, **Jeffrey Chi-Sheng Wu** , " Photocatalytic NO reduction using butane as reducing agent in flue gas", 第 33 屆台灣區觸媒與反應工程研討會，台灣大學，民國 104 年 6 月 25-26 日

2. 林煜凱, 吳紀聖, "結合滲透蒸發的氧化石墨烯/甲殼素複合膜反應器以提升酯化反應效率", 第 33 屆台灣區觸媒與反應工程研討會, 台灣大學, 民國 104 年 6 月 25-26 日
3. 陳柏任, 吳紀聖, "雙胞反應器進行氣相光催氫化二氧化碳", 第 33 屆台灣區觸媒與反應工程研討會, 台灣大學, 民國 104 年 6 月 25-26 日
4. Yu-Ting Hsu, **Jeffrey C. S. Wu**, "Biodiesel Synthesis by Layered Double Hydroxides in Stirring Packed-Bed Reactor", 第 33 屆台灣區觸媒與反應工程研討會, 台灣大學, 民國 104 年 6 月 25-26 日
5. Che-Chin Yu, Janusz Lasek, **Jeffrey Chi-Sheng Wu**, "DeNO_x of flue gas by photocatalytic NO reduction", 台灣化學工程學會 62 週年年會, 高雄義大皇家酒店, 民國 104 年 11 月 5-6 日 **Poster Award**
6. 許毓婷, 吳紀聖, "層狀複金屬氫氧化物應用轉酯化反應", 台灣化學工程學會 62 週年年會, 高雄義大皇家酒店, 民國 104 年 11 月 5-6 日 **Invited talk**
7. Bo-Ren Chen, Van-Huy Nguyen, Steven Kuan-Yu Lin, **Jeffrey C.S. Wu**, Kamila Kočí, "Photocatalytic CO₂ Reduction by Cu loaded TiO₂ in the Twin Photoreactor", CHISA 2016, Prague, Czech, August 27-31, 2016
8. April Yu-Ting Hsu, **Jeffrey Chi-Sheng Wu**, "Biodiesel and Glycerol Transesterification Using Solid Catalyst in Stirring Packed-Bed Reactor", 2nd International Congress and Expo on Biofuels and Bioenergy, Sao Paulo, Brazil, August 29-31, 2016
9. **Jeffrey Chi-Sheng Wu**, Jia-Hon Huang, "Introduction of TPIA and Recent development of photocatalyst in Taiwan", Committee of Asian Standardization for Photocatalytic Material and Products Meeting (CASP 2016), Bangkok, Thailand, September 13-15, 2016 **Invited talk**
10. 吳紀聖, "The Ultimate Solution of Greenhouse Gas CO₂ - Photosynthetic Process by Nano Photocatalyst", 第十一屆海峽兩岸催化學術會議, 中南民族大學, 武漢, July 9-11, 2016 **Invited talk**
11. 吳紀聖, "CO₂ Photoreduction to Renewable Energy via Artificial Photosynthesis", 第十五屆全國太陽能光學與光催化學術會議, 山東大學, 濟南市, 山東, August 20-24, 2016 **Invited speaker**
12. 何妤安, 吳紀聖, 江偉宏, 陳世昌, 邱俊龍, "觸媒焚燒法消除油煙廢氣異味", 第 34 屆台灣區觸媒與反應工程研討會, 臺大醫院國際會議中心, 民國 105 年 6 月 27-28 日
13. Chun-Yen Liu, Kim Strüwe, Cheng-Hung Lee, Haw-Yeu Chuang, Jörg Sauer, **Jeffrey Chi-Sheng Wu**, "Modification and performance enhancement of HZSM-5-catalysts for the conversion of ethanol from fermentation broths to gasoline", 第 34 屆台灣區觸媒與反應工程研討會, 臺大醫院國際會議中心, 民國 105 年 6 月 27-28 日
14. Chia-Chien Kuang, Xu Xu Wang, **Jeffery Chi-Sheng Wu**, "CO₂ photocatalytic reduction by metal-loaded Ni-Al layered double hydroxides", 第 34 屆台灣區觸媒與反應工程研討會, 臺大醫院國際會議中心, 民國 105 年 6 月 27-28 日

15. 吳紀聖, "太陽能光催化轉換 CO₂ 成再生能源", 匯智俱樂部, 成功大學化學工程學系, 民國 105 年 8 月 5 日 **Invited speaker**
16. 吳紀聖, "人工光合作用轉換太陽能成再生能源", 第九屆兩岸化學工程學術研討會, 中興大學, 台中, 民國 105 年 10 月 18-19 日 **Invited talk**
17. Kuan-Yu Lin, **Jeffrey C. S. Wu** and Kamila Kočí, "Improvement of CO₂ Photoreduction by Coupling Photocatalyst with Hydrophobic Montmorillonite", 台灣化學工程學會 63 週年會, 中央大學, 中壢, 民國 105 年 11 月 25-26 日
18. Tzu-Ming Chen, Kuo-Lun Tung, Chia-Wen Wu, **Jeffrey Chi-Sheng Wu**, "Enhancing Pre-esterification of Biodiesel Process by Pervaporation", 台灣化學工程學會 63 週年會, 中央大學, 中壢, 民國 105 年 11 月 25-26 日
19. Joseph Che-Chin Yu, Van-Huy Nguyen, Janusz Lasek, **Jeffrey Chi-Sheng Wu**, "Photocatalytic removal of NO_x: From reaction pathways to applications in industry", 台灣化學工程學會 63 週年會, 中央大學, 中壢, 民國 105 年 11 月 25-26 日
20. Yi-Ting Wu, **Jeffrey C. S. Wu**, Lu-Mann Chang, "VOCs Removal in Semiconductor Clean Lab Using Fiber-illuminated Monolith photoreactor", 7th Asia-Pacific Congress on Catalysis (APCAT-7), Lalit Hotel, Mumbai, India, January 17-21, 2017
21. **Jeffrey Chi-Sheng Wu**, "The Ultimate Solution of Greenhouse Gas CO₂ - Photosynthetic Process", CO₂ Capture and Utilisation Workshop, Pullman Hotel, Kuala Lumpur, Malaysia, February 5-8, 2017 **Keynote Speaker**
22. Van Huy Nguyen, Duan-Xing Li, **Jeffrey Chi-Sheng Wu**, "Photo-reactor design of sunlight harvesting for solar H₂ by water splitting", 2nd international Workshop on Graphene and C₃N₄-Based Photocatalysts, Wuhan University of Technology, Wuhan, China, March 24-27, 2017 **Keynote Speaker**
23. Cheng-Hon Li, Jun-Yan Liu, Kim Struwe, Martin Chang, **Jeffrey C. S. Wu**, "Bio-ethylene production from ethanol broth using ZSM-5 catalysts", 16th International Conference on Envirotech, Cleantech & Greentech, Bali, Indonesia, July 14-15, 2017
24. M. Edelmannova, K. Y Lin, **Jeffrey C. S. Wu**, K. Koci, "Photocatalytic Reduction of CO₂ over copper doped TiO₂ photocatalysis", 13th European Congress on Catalysis (EUROPACAT), Florence, Italy, August 27-31, 2017
25. Yu-An Ho, Wei-Hung Chiang, Jun-Long Chiu, **Jeffrey C. S. Wu**, "Odor Elimination of Cooking-oil Fumes by Catalytic Incineration using hydrophobic noble-metal catalysts", 2017 Korea/Japan/Taiwan Chemical Engineering Conference, Haeundae Grand Hotel, Busan, Korea, November 12-14, 2017
26. Duan-Xin Li, **Jeffrey C. S. Wu**, "Simultaneous photocatalytic production of hydrogen and photodegradation of organic wastewater by sunlight", 17th International Symposium on Clean Technology, Yeungnam University, Daegu, Korea, November 24, 2017 **Lecturer**
27. Che-Chin Yu, Van-Huy Nguyen, Janusz Lasek, **Jeffrey Chi-Sheng Wu**, "NO_x abatement by photocatalytic process: reaction pathway, applications, and photoactivity enhancement", 第 35 屆台灣區觸媒與反應工程研討會, 高雄義守大學, 民國 106 年 6 月 22-23 日

28. Kuan-Yu Lin, **Jeffrey C. S. Wu**, Kamila Kočí, "NO_x abatement by photocatalytic process: reaction pathway, applications, and photoactivity enhancement", 第 35 屆台灣區觸媒與反應工程研討會, 高雄義守大學, 民國 106 年 6 月 22-23 日
29. Tzu-Ming Chen, Kuo-Lun Tung, Chia-Wen Wu, **Jeffrey Chi-Sheng Wu**, "Pervaporation Assisted Pre-esterification in a Biodiesel Process", 第 35 屆台灣區觸媒與反應工程研討會, 高雄義守大學, 民國 106 年 6 月 22-23 日
30. 李端行, 吳紀聖, "雙胞反應器進行光催化降解苯酚同時分離生產氫氣", 第 35 屆台灣區觸媒與反應工程研討會, 高雄義守大學, 民國 106 年 6 月 22-23 日
31. Cheng-Hung Lee, Chun-Yen Liu, Kim Strüwe, **Jeffrey C. S. Wu**, "Enhanced conversion and selectivity from bio-ethanol to benzene, toluene and xylene over modified HZSM-5 zeolite catalysts", 台灣化學工程學會 64 週年會, 台北科技大學, 台北市, 民國 106 年 11 月 17-18 日
32. 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
33. 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
34. 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
35. 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
36. Yu-Tang Lin, **Jeffrey Chi-Sheng Wu**, "Synthesis of solar Light-driven Photocatalyst for water treatment by using graphene and reduced graphene oxide", 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan, August 5-10, 2018
37. Joseph Che -Chin Yu, Nguyen Van Huy, Janusz Lasik, **Jeffrey Chi-Sheng Wu**, "Photocatalytic NO_x 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
38. 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
39. 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
40. 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
41. 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
 42. 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
 43. 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
 44. 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
 45. **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**
 46. 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), Sondgo ConvensiA, Incheon, Korea, May 22-25, 2019
 47. 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**
 48. 何妤安, 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
 49. 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
 50. 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
 51. 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
 52. 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
 53. 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

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55. 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 週年會, 東海大學, 台中市, 民國 108 年 11 月 8-9 日
56. 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
57. 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
58. 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
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6. 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)
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8. 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)
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Honors and Others

1. Editor, *Catalysis Communications*, January 2016-present
2. Editorial board, *Applied Catalysis A: General*, April 2009-present
3. Editorial board, *Research on Chemical Intermediates*, December 2012-present
4. 理事長, 台灣光觸媒產業發展協會, 2016-present
5. 常務理事, 台灣觸媒學會, 2018-present
6. 常務理事, 台灣化工學會, 2020-present
7. 榮獲第 38 屆台灣觸媒學會傑出論文研究獎, 2020
8. 榮獲中國工程師學會 105 年度傑出工程教授獎, 2016
9. 指導余哲璿 105 年度化工年會壁報論文競賽榮獲觸媒及反應工程組最佳論文獎, 2015
10. 指導劉俊彥同學, 中油新能源創意競賽榮獲第 3 名實用獎, 2016
11. 指導 劉俊彥同學, 參加「第 34 屆觸媒暨反應工程研討會」學生英語演講競賽第二名, 2016
12. 指導 余哲璿同學, 參加「第 34 屆觸媒暨反應工程研討會」學生英語演講競賽第三名, 2016
13. 指導 何妤安同學, 參加「第 34 屆觸媒暨反應工程研討會」海報論文競賽第一名, 2016

14. 指導 匡佳謙同學，參加「第 34 屆觸媒暨反應工程研討會」海報論文競賽佳作，2016
15. 指導 劉俊彥和李政泓同學，參加中國工程師學會學生分會「105 年度工程論文競賽」獲得化工組佳作，2016
16. 指導 李端行、林冠宇、范姜維亮與匡佳謙同學，參加「全國儲能應用專題創意競賽」榮獲佳作獎，2016
17. 指導 何好安同學，榮獲財團法人慶恩教育基金會綠色科技論文獎，2016
18. 指導李端行同學，榮獲財團法人中技社科技獎學金，2016
19. 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
20. 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
21. 獲頒台大工學院斌彥先生紀念講座 2018-2020
22. 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
23. 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
24. 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
25. 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
26. 指導王彥涵，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
27. 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

主辦國際會議或活動

1. 2016 兩岸催化研討會，中南民族大學，武漢，2016/7/9-2016/7/12
2. 2018 循環經濟、化學產業及租稅政策國際研討會，國立政治大學，台北，2018/4/2-2018/4/3
3. The 3rd Taiwan-Vietnam Joint Symposium on Catalysis，Department of Chemical Engineering, National Taiwan University，Taiwan，2019/7/7-2019/7/8
4. 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