

Wu, Kevin Chia-Wen (吳嘉文)

Professor

B.S. in Agricultural Chemistry
National Taiwan University, 1998
M.S. in Agricultural Chemistry
National Taiwan University, 2000
Ph.D. in Materials Science and Engineering
The University of Tokyo, Japan, 2005
Post-doc in Applied Chemistry,
Waseda University, Japan, 2006
Post-doc in Chemistry, Iowa State University
& U.S. DOE Ames National Lab, 2008

Research and Professional Interests

Nanoporous materials (metal-organic frameworks (MOFs), mesoporous materials)
Biomedical applications (drug delivery system, 3D culture of stem cells)
Energy applications (biofuels from cellulose and microalgae)
Photo-electronic applications (dye-sensitized solar cells and super-capacitors)

Journal Papers

1. C. V. Nguyen, Y. T. Liao, T. C. Kang, J. E. Chen, T. Yoshikawa, Y. Nakasaka, T. Masuda and **K. C. W. Wu**, "A metal-free;high nitrogen-doped nanoporous graphitic carbon catalyst for an effective aerobic HMF-to-FDCA conversion", *Green Chemistry*, 18(22), 5957-5961, 2016, (IF: 8.506)
2. Y. H. Deng, J. T. Chen, C. H. Chang, K. S. Liao, K. L. Tung, W. E. Price, Y. Yamauchi and **K. C. W. Wu**, "A Drying-Free;Water-Based Process for Fabricating Mixed-Matrix Membranes with Outstanding Pervaporation Performance", *Angewandte Chemie-International Edition*, 55(41), 12793-12796, 2016(Oct), (IF: 11.709)
3. N. D. Thorat, R. A. Bohara, S. A. M. Tofail, Z. A. Alothman, M. J. A. Shiddiky, M. S. A. Hossain, Y. Yamauchi and **K. C. W. Wu**, "Superparamagnetic Gadolinium Ferrite Nanoparticles with Controllable Curie Temperature - Cancer Theranostics for MR-Imaging-Guided Magneto-Chemotherapy", *European Journal of Inorganic Chemistry*, (28), 4586-4597, 2016(Oct), (IF: 2.686)
4. N. L. Liu, S. Dutta, R. R. Salunkhe, T. Ahamad, S. M. Alshehri, Y. Yamauchi, C. H. Hou and **K. C. W. Wu**, "ZIF-8 Derived;Nitrogen-Doped Porous Electrodes of Carbon Polyhedron Particles for High-Performance Electrosorption of Salt Ions", *Scientific Reports*, 6, 28847, 2016(Jul), (IF: 5.578)
5. N. D. Thorat, R. A. Bohara, V. Malgras, S. A. M. Tofail, T. Ahamad, S. M. Alshehri, **K. C. W. Wu** and Y. Yamauchi, "Multimodal Superparamagnetic Nanoparticles with Unusually Enhanced Specific Absorption Rate for Synergetic Cancer Therapeutics and Magnetic Resonance Imaging", *Acs Applied Materials & Interfaces*, 8(23), 14656-14664, 2016(Jun), (IF: 7.145)
6. G. Darabdhara, P. K. Boruah, P. Borthakur, N. Hussain, M. R. Das, T. Ahamad, S. M. Alshehri, V. Malgras, **K. C. W. Wu** and Y. Yamauchi, "Reduced graphene oxide nanosheets decorated with Au-Pd bimetallic alloy nanoparticles towards efficient photocatalytic degradation of phenolic compounds in water", *Nanoscale*, 8(15), 8276-8287, 2016, (IF: 7.394)
7. S. Dutta, S. Y. Huang, C. Chen, J. E. Chen, Z. A. Alothman, Y. Yamauchi, C. H. Hou and **K. C. W. Wu**, "Cellulose Framework Directed Construction of Hierarchically Porous Carbons Offering High-Performance Capacitive Deionization of Brackish Water", *Acs Sustainable Chemistry & Engineering*, 4(4), 1885-1893, 2016(Apr), (IF: 4.642)

8. Y. Huang, W. C. Chang, W. Y. Ma and **K. C. W. Wu**, "Synthesis of Copper/Silver Core/Shell Nanoparticles by a Transmetallation Method", *Nanoscience and Nanotechnology Letters*, 8(3), 247-250, 2016(Mar), (IF: 1.431)
9. C. V. Nguyen, Y. C. Chang, T. Yoshikawa, T. Masuda and **K. C. W. Wu**, "CrCl₃ center dot 6H(2)O and Boric Acid as a New Catalytic System: Enhanced 5-Hydroxymethylfurfural Production from Cellulose Under Milder Conditions", *Nanoscience and Nanotechnology Letters*, 8(3), 273-276, 2016(Mar), (IF: 1.431)
10. D. Cempel, M. T. Nguyen, Y. Ishida, H. Tsukamoto, H. Shirai, Y. M. Wang, **K. C. W. Wu** and T. Yonezawa, "Au Nanoparticles Prepared Using a Coated Electrode in Plasma-in-Liquid Process: Effect of the Solution pH", *Journal of Nanoscience and Nanotechnology*, 16(9), 9257-9262, 2016(Sep), (IF: 1.556)
11. J. E. Chen, Y. D. Chiang, T. Ahamad, S. M. Alshehri, Y. Yamauchi, V. Malgras and **K. C. W. Wu**, "Ethanol Dissolution-Assisted Synthesis of Ordered Mesoporous Titania Spheres", *Journal of Nanoscience and Nanotechnology*, 16(9), 9245-9249, 2016(Sep), (IF: 1.556)
12. C. I. Yen, S. M. Liu, W. S. Lo, J. W. Wu, Y. H. Liu, R. J. Chein, R. Q. Yang, **K. C. W. Wu**, J. R. Hwu, N. H. Ma and F. K. Shieh, "Cytotoxicity of Postmodified Zeolitic Imidazolate Framework-90 (ZIF-90) Nanocrystals: Correlation between Functionality and Toxicity", *Chemistry-a European Journal*, 22(9), 2925-2929, 2016(Feb), (IF: 5.731)
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16. H. Shirai, Y. Y. Huang, T. Yonezawa, T. Tokunaga, W. C. Chang, S. M. Alshehri, B. Jiang, Y. Yamauchi and **K. C. W. Wu**, "Hard-templating synthesis of macroporous platinum microballs (MPtM)", *Materials Letters*, 164, 488-492, 2016(Feb), (IF: 2.489)
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19. **K. C. W. Wu**, C. H. Kang, Y. F. Lin, K. L. Tung, Y. H. Deng, T. Ahamad, S. M. Alshehri, N. Suzuki and Y. Yamauchi, "Towards Acid-Tolerated Ethanol Dehydration: Chitosan-Based Mixed Matrix Membranes Containing Cyano-Bridged Coordination Polymer Nanoparticles", *Journal of Nanoscience and Nanotechnology*, 16(4), 4141-4146, 2016(Apr), (IF: 1.556)

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31. Y. Li, J. Kim, J. Wang, N. L. Liu, Y. Bando, A. A. Alshehri, Y. Yamauchi, C. H. Hou and **K. C. W. Wu**, "High performance capacitive deionization using modified ZIF-8-derived;N-doped porous carbon with improved conductivity", *Nanoscale*, 10(31), 14852-14859, 2018(Aug), (IF: 7.367), Selected as Front Cover.

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35. J. Wang, Y. L. Xu, B. Ding, Z. Chang, X. G. Zhang, Y. Yamauchi and **K. C. W. Wu**, "Confined Self-Assembly in Two-Dimensional Interlayer Space: Monolayered Mesoporous Carbon Nanosheets with In-Plane Orderly Arranged Mesopores and a Highly Graphitized Framework", *Angewandte Chemie-International Edition*, 57(11), 2894-2898, 2018(Mar), (IF: 11.994), Selected as Front Cover.
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37. B. M. Matsagar, S. A. Hossain, T. Islam, Y. Yamauchi and **K. C. W. Wu**, "A Novel Method for the Pentosan Analysis Present in Jute Biomass and Its Conversion into Sugar Monomers Using Acidic Ionic Liquid", *Jove-Journal of Visualized Experiments* (136), 2018(Jun), (IF: 1.232)
38. P. Y. Hsu, T. Y. Hu, S. R. Kumar, C. H. Chang, **K. C. W. Wu**, K. L. Tung and S. J. Lue, "Highly Zeolite-Loaded Polyvinyl Alcohol Composite Membranes for Alkaline Fuel-Cell Electrolytes", *Polymers*, 10(1), 2018(Jan), (IF: 3.364)
39. Q. Ma, S. Dutta, **K. C. W. Wu** and T. Kimura, "Analytical Understanding of the Materials Design with Well-Described Shrinkages on Multiscale", *Chemistry-a European Journal*, 24(27), 6886-6904, 2018(May), (IF: 5.317)
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53. C. A. Chen, S. C. Chen, M. J. A. Shiddiky, C. F. Chen and **K. C. W. Wu**, "DNA-Templated Copper Nanoprobes: Overview;Feature;Application;and Current Development in Detection Technologies", *Chemical Record*, 2019(Jul), (IF: 5.387)
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Conference Papers

1. **(Invited talk) Kevin Chia-Wen Wu**, “Synthesis of Inorganic Nanoporous Materials for Energy Storage, Energy Saving, and Bio-renewable Energy”, WINTech-2016, Kobe, Japan, Mar. 6, 2016.
2. **(Keynote talk) Kevin Chia-Wen Wu**, “Reduced Graphene Oxide Nanosheet Decorated with Au-Pd Bimetallic Alloy Nanoparticles Towards Efficient Photocatalytic Degradation of Phenolic Compounds”, International Symposium on Nanostructured Photocatalysts and Catalysts (NPC2016), Osaka, Japan, April 8-10, 2016.
3. **(Invited talk) Kevin Chia-Wen Wu**, “Synthesis of Functional Nanoporous Materials for Environmental Applications”, The 13th Conference on Environmental Protection and Nanotechnology, Taipei, Taiwan, May 27, 2016.
4. **(Invited talk) Kevin Chia-Wen Wu**, “Synthesis of Functional Nanoporous Materials for Energy Applications”, Japan-Taiwan Joint Seminar on Energy and Environment for Young Chemists (JP-TW EEYC), Kaohsiung, Taiwan, Jun. 23-25, 2016.
5. **(Invited talk) Kevin Chia-Wen Wu**, “Multi-functionalized Nanoporous Silica Heterogeneous Catalysts for Biofuel Production from Lignocellulosic Biomass”, International Symposium on Catalytic Conversion of Biomass, Taipei, Taiwan, Jun. 27-30, 2016.
6. **(Keynote talk)** “Functional Nanospace Materials: Green Synthesis and Energy Applications”, 2017 International Conference on Nanospace Materials, Shanghai, China, Aug. 25-27, 2017.
7. **(Plenary talk)** “De Novo Synthesis of Functional Metal-Organic Frameworks (MOFs) for Catalysis Applications”, 2017 Osaka-Kansai International Symposium on Catalysis (OKCAT), Osaka, Japan, Oct. 27-28, 2017.
8. **(Invited Speaker) Kevin C.W. Wu**, MOF-based Nanocatalysts for Lignocellulosic Biomass Conversion, International Symposium on Relations between Homogeneous and Heterogeneous Catalysis (ISHHC18), Sydney, Australia. 22-25 July, 2018.
9. **(Keynote Speaker) Kevin C.W. Wu**, Functional Nanoporous Materials for Lignocellulosic Biomass Conversion, The 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan. 5-10 August, 2018.
10. **(Plenary Speaker) Kevin C.W. Wu**, Harnessing of Micro-, Meso-, and Macroporous Materials in Chemical Engineering Applications, The 6th International Symposium on Process Intensification, Taipei, Taiwan. 7-8 November, 2018.
11. **(Invited Speaker) Kevin C.W. Wu**, Metal-Organic Frameworks (MOFs)-derived Nanoporous Materials for Photocatalysis and Solar Cells, IWGCP3, 中国 武汉 2019年3月23-26日
12. **(Invited Speaker) Kevin C.W. Wu**, Functional nanoporous materials for lignocellulosic biomass conversion and chemical engineering applications, ACS Spring Meeting - 2019 ACS Sustainable Chemistry and Engineering Lectureship Awards: Symposium in Honor of Kevin Wu, Florida, USA. 31 March – 3 April, 2019.
13. **(Invited Speaker) Kevin C.W. Wu**, Metal-Organic Frameworks (MOFs) Derived Effective Solid Catalysts for Lignocellulosic Biomass Valorization, BEEM2019, The Hong Kong Polytechnic University, Hung Hom, 14th June, 2019 (Fri).

14. **(Invited Speaker) Kevin C.W. Wu**, Water-based Synthesis of Metal-Organic Frameworks (MOFs) derived Nanocatalysts for Lignocellulosic Biomass Conversion. APCAT-8, Bangkok, Thailand August 4th-7th, 2019.
15. **(Invited Speaker) Kevin C.W. Wu**, de novo Synthesis of Metal NPs-Loaded Metal-Organic Frameworks (M@MOFs) for Heterogeneous Catalysis, 2019 ICNM, Queensland, Australia from 3rd Oct 2019.
16. **(Invited Speaker) Kevin C.W. Wu**, Water-based Synthesis of Metal-Organic Frameworks (MOFs) Derived Catalysts for Lignocellulosic Biomass Conversion, Green China, 中国 北京 Oct 17, 2019
17. **(Invited Speaker) Kevin C.W. Wu**, Production of Fine Chemicals from Rice Straw Using MOF-derived Catalysts in Aqueous Reaction Systems, International Symposium on Porous Materials 2019, Tokyo, Japan. 11-19 November, 2019.
18. **(Invited Speaker) Kevin C.W. Wu**, Metal-Organic Frameworks (MOFs) Derived Nanomaterials for Catalytic Conversion of Lignocellulosic Biomass, Materials Research Meeting 2019, Yokohama, Japan. 10-14 December, 2019.

Books/Chapters

1. **Kevin C.-W. Wu***. "Synthesis of Multi-functionalized Mesoporous Silica Nanoparticles for Cellulosic Biomass Conversion," RSC Green Chemistry Series: Heterogeneous Catalysis for Today's Challenges. Thomas Graham House, Cambridge CB4 0WF, UK (July 2014). ISBN 9781849736275
2. **Kevin C.-W. Wu**, Ken Miki. "臺大教授帶你留學日本" 書泉, TW (January 2021). ISBN : 9789864512065

Honors and others

1. 王毓璞同學/指導教授:吳嘉文教授參加 2014 年中華民國界面科學學會年會暨論文發表會在壁報展示競賽部分獲得佳作
2. 為期刊 Chemical Communications 撰寫專題文章並被期刊引用為封面圖
3. 榮獲 2014 日本化學學會 The Distinguished Lecture Award (最佳演說獎) for Inorganic Porous Materials
4. 白井宏明/指導教授:吳嘉文教授北海道大學日籍交換學生在台研究成果獲日學術會議肯定
5. "Energy & Environmental Science"期刊封面
6. "Green Chemistry "期刊封面

7. 發表在期刊"Science and Technology of *Advanced Materials* (STAM)"上的文章獲選為 Best Paper Award 2014
8. 碩士研究生鄧有衡同學/指導教授:吳嘉文教授 The International Conference on Nanocatalysts and Nanomaterials for Green Technologies」最佳海報競賽榮獲銀獎, 2014
9. Best poster award : 陳靖天同學 /指導教授吳嘉文教授 2014 年台灣化學工程學會 61 周年年會暨國科會化工學門成果發表會 觸媒及反應工程組海報優等獎 2014/12/13-14.
10. Best poster award : 鄧有衡同學 /指導教授吳嘉文教授 2014 年台灣化學工程學會 61 周年年會暨國科會化工學門成果發表會 薄膜分離組海報優等獎 2014/12/13-14.
11. 論文被 *Chemcatchem* 接受並選為期刊封底(2015/03/17)
12. *ChemSusChem* 接受並選為期刊封面內頁文章(2015/03/18)
13. 擔任國際重要期刊 *Scientific Reports* 的編輯委員(2015/06/069)
14. SCI 國際期刊 *Scientific Reports* (Nature Publishing Group) (IF: 5.578)的 Editor and Editorial Board Member.
15. SCI 國際期刊 *Advanced Powder Technology* (IF: 1.612)的 Editor and Editorial Board Member.
16. SCI 國際期刊 *Journal of Nanoscience and Nanotechnology* (IF: 1.149)的 Guest Editor.
17. SCI 國際期刊 *Science and Technology of Advanced Materials* (IF: 3.752)的 Guest Editor.
18. 榮獲 104 度吳大猷先生紀念獎(2015/10/08)
19. 臺大 SMART Center」與日本研究機構 NIMS 共同合作完成研究成果-應用奈米顆粒萃取海藻油脂, 可將廢食用油轉化為綠色能源,研究成果已發表於永續資源國際知名期刊 *ChemSusChem*, 獲選為期刊封面。(2015/11/18)
20. 功能性奈米孔洞材料研究室(吳嘉文教授主持)學術文章被接受發表至 *Chemcatchem* 並被選為封面, 2016
21. 榮獲科技部「吳大猷先生紀念獎」, 2016
22. 指導王正彥同學, 中油新能源創意競賽榮獲第 3 名實用獎, 2016
23. 榮獲第 2 屆台灣觸媒年會最佳研究論文獎, 2016

24. 指導 廖祐德同學，參加「第 34 屆觸媒暨反應工程研討會」學生英語演講競賽第一名，2016
25. 指導 康庭慈同學，榮獲 2016 國際生質物催化轉化會議學生海報競賽第 2 名，2016
26. 指導 王正彥同學，榮獲 104 年度大專學生研究計畫研究創作獎，2016
27. 2016 Green Tech 東元科技創意競賽亞軍，2016
28. 指導 陳珮鵬同學，參加"有機/無機混成材料與紡織品工業基礎計術深耕計畫. 2016 年專題論文競賽."榮獲佳作的成績，2016
29. 指導 葉俊毅同學，榮獲「第 63 屆台灣化學工程學會年會」壁報論文競賽優勝獎，2016
30. 指導 張家豪同學，榮獲「第 63 屆台灣化學工程學會年會」壁報論文競賽優勝獎，2016
31. 指導 王正彥同學，榮獲「第 63 屆台灣化學工程學會年會」中文口頭報告競賽優勝獎，2016
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33. 2017 年 11 月: 榮獲化學學會傑出青年化學家獎
34. 2017 年 9 月: 榮獲化工學會賴再得獎
35. 2018 年 5 月: 榮獲 106 度科技部傑出研究獎
36. 2019 年: 李長榮教育基金會傑出青年教授獎
37. 2019 年: 2019 Outstanding Researcher Award from Asia-Pacific Associations of Catalysis Societies (APCAS).
38. 2020 年: 榮獲 Materials Advances (RSC Publisher) 期刊選為 2020 年的傑出審稿者 (Outstanding Reviewer)

International Cooperation Project

1. Nanoarchitectonics of Metal-Organic Frameworks (MOFs): Design, Dielectric Properties, and Organic Catalysis
有機金屬骨架的奈米構築: 設計, 介電特性及有機催化
Kevin Chia-Wen Wu, sponsored by the Ministry of Science and Technology (科技部)
(台拉立計畫)

- Contract # MOST 106-2923-E-002-003-MY3, 01/01/2017-12/31/2020.
2. Fabrication of Continuous Sub-nanochannel Metal-Organic Frameworks UiO-66-NH₂ Membranes for a Bioinspired Osmotic Power Generator
製備次奈米通道有機金屬框架 UiO-66-NH₂ 連續薄膜於生物啟發式滲透能發電機
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