

Chen, Hsien-Yeh (陳賢燁)

Professor

B.S. in Chemical Engineering	Research and Professional
Interests	
National Taiwan University, 1999	Biomaterials
M.S. in Chemical Engineering	Biomolecular Engineering
University of Michigan, 2004	Tissue Engineering
Ph.D. in Chemical Engineering	Nanoparticles
University of Michigan, 2008	CVD Polymerization Process

Journal Papers¹⁻⁴⁶

1. Hsing-Ying Tung, Ting-Pi Sun, Ho-Yi Sun, Zhen-Yu Guan, Shu-Kai Hu, Ling Chao, **Hsien-Yeh Chen*** “Construction and Control of 3D Porous Structure Based on Vapor Deposition on Sublimation Solids,” *Applied Materials Today*, 7, 77-81 (2017). (IF: **7.970**)
2. Chih-Yu Wu, Hui-Yu Liu, Chao-Wei Huang, Shu-Yun Yeh, Nai-Chen Cheng, Shih-Torng Ding, **Hsien-Yeh Chen*** “Synergistically Controlled Stemness and Multilineage Differentiation Capacity of Stem Cells on Multifunctional Biointerfaces,” *Advanced Materials Interfaces*, 1700243-1700253 (2017). (Materials Science, Multidisciplinary: 48/275=17.5%, IF: **4.948**)
3. Chao-Wen Chang, Zhen-Yu Guan, Ming-Yang Kan, Li-Wei Lee, **Hsien-Yeh Chen***, Dun-Yen Kang* “Vapor-phase synthesis of poly(p-xylylene) membranes for gas separations,” *Journal of Membrane Science*, 539, 101-107 (2017). (Polymer Science: 4/86=4.7%, IF: **7.183**)
4. Zhen-Yu Guan, Chih-Yu Wu, **Hsien-Yeh Chen*** “Stepwise and Programmable Cell Differentiation Pathways of Controlled Functional Biointerfaces,” *ACS Biomaterials Science & Engineering*, 3, 1815-1821 (2017). (Materials Science, Biomaterials: 14/33=42.4%, IF: **4.513**)
5. **Hsien-Yeh Chen*** “Micro- and nano-surface structures based on vapor-deposited polymers,” *Beilstein Journal of Nanotechnology*, 8, 1366-1374 (2017). (Physics, Applied: 34/148=23.0%, IF: **2.612**)
6. Ya-Ting Tsai, Chih-Yu Wu, Zhen-Yu Guan, Ho-Yi Sun, Nai-Chen Cheng, Shu-Yun Yeh, **Hsien-Yeh Chen*** “Topologically Controlled Cell Differentiation Based on Vapor-Deposited Polymer Coatings,” *Langmuir*, 33, 8943-8949 (2017). (Materials Science, Multidisciplinary: 54/275=19.6%, IF: **3.557**)
7. Chih-Yu Wu, Chun-Wei Chang, Ruei-Hung Yuan, Yu-Chih Chiang, Jiun-Tai Chen, Dun-Yen Kang, **Hsien-Yeh Chen*** “Multifunctional nanoparticles with controllable dimensions and tripled orthogonal reactivity,” *Nanoscale* (2017), 9, 14787-14791. (Materials Science, Multidisciplinary: 23/275=8.4%, IF: **6.895**)
8. Pei-Ru Chen, Ting-Ching Wang, Shih-Ting Chen, **Hsien-Yeh Chen**, Wei-Bor Tsai* “Development of Antifouling Hyperbranched Polyglycerol Layers on Hydroxyl Poly-p-xylylene Coatings,” *Langmuir*, 33, 14657-14662 (2017). (Materials Science, Multidisciplinary: 54/275=19.6%, IF: **3.557**)
9. Zhen-Yu Guan, Yi-Kai Chen, Chih-Yu Wu, Shinn-Chih Wu*, Jiashing Yu*, **Hsien-Yeh Chen*** “Surface modification: activation and deactivation of osteogenic differentiation

- based on detachable growth factor protein,” *Journal of Materials Chemistry B*, DOI: 10.1039/c7tb02758c (2017). (Materials Science, Biomaterials: 6/33=18.2%, **IF: 5.787**)
10. Chih-Yu Wu, Hung-Pin Hsieh, Shih-Ting Chen, Ting-Yu Liu, **Hsien-Yeh Chen*** “Fabrication of Functional Polymer Structures through Bottom-Up Selective Vapor Deposition from Bottom-Up Conductive Templates”, *Langmuir*, DOI: 10.1021/acs.langmuir.7b04008 (2018) (Materials Science, Multidisciplinary: 54/275=19.6%, **IF: 3.557**)
 11. Hsing-Ying Tung, Zhen-Yu Guan, Ting-Yu Liu, **Hsien-Yeh Chen*** “Vapor Sublimation and Deposition to Build Porous Particles and Composites,” *Nature Communications* (2018) 9, 2564. (Multidisciplinary Sciences: 3/64=4.7%, **IF: 15.805**)
 12. Shih-Ting Chen, Chih-Yu Wu, **Hsien-Yeh Chen***. "Enhanced Growth Activities of Stem Cell Spheroids Based on a Durable and Chemically Defined Surface Modification Coating." *ACS Applied Materials & Interfaces*, 10: 31882-31891 (2018). (Materials Science, Multidisciplinary: 22/275=8.0%, **IF: 9.022**)
 13. Zhen-Yu Guan, Yi-Kai Chen, Chih-Yu Wu, Shinn-Chih Wu, Jiashing Yu, **Hsien Yeh Chen*** “Surface modification: activation and deactivation of osteogenic differentiation based on detachable growth factor protein,” *Journal of Materials Chemistry B*, 2018,6, 236-240 (2019). (**IF: 5.787**)
 14. Zhen-Yu Guan, Chih-Yu Wu, Ting-Yo Chen, Sheng-Tung Huang, Yu-Chih Chiang, **Hsien-Yeh Chen*** “Clickable and Photo-Erasable Surface Functionalities by Using Vapor-Deposited Polymer Coatings,” *ACS Biomaterials Science & Engineering*, 5, 4, 1753-1761 (2019). (**IF: 4.152**)
 15. Ahmed, Ibrahim Nasser, Ray Chang, Ming-Chun Keng, Hsiu-Wen Chien, **Hsien-Yeh Chen**, Wei-Bor Tsai* “Immobilization of functional polymers on poly(4-benzoyl-pxylylene-co-p-xylylene) films via photochemical conjugation for modulation of cell adhesion”, *Colloids and Surfaces B: Biointerfaces*, 174: 360-66 (2019). (Biophysics: 16/73=21.9%, **IF: 3.997**)
 16. **Conference Paper** Wu, Chih-Yu, Zhen-Yu Guan, Pin-Chen Lin, Shih-Ting Chen, Po-Kang Lin, Po-Chun Chen, Pen-Hsiu Grace Chao, **Hsien-Yeh Chen*** “Defined cell adhesion for silicon-based implant materials by using vapor-deposited functional coatings”, *Colloids and Surfaces B: Biointerfaces*, 175: 545-53 (2019). (Biophysics: 16/73=21.9%, SCI: 3.887) (**IF: 3.997**)
 17. **Hsien-Yeh Chen***, Tomohiro Hayashi, Meike Koenig, James J. Lai “Editorial: Polymer Surface Chemistry: Biomolecular Engineering and Biointerfaces,” *Frontiers in Chemistry*, DOI: 10.3389/fchem.2019.00271 (2019). (**IF: 3.994**)
 18. Yao-Tsung Hsu, Chih-Yu Wu, Zhen-Yu Guan, Ho-Yi Sun, Chieh Mei, Wen Chien Chen, Nai-Chen Cheng, Jiashing Yu, **Hsien-Yeh Chen*** “Characterization of Mechanical Stability and Immunological Compatibility for Functionalized Modification Interfaces,” *Scientific Reports*, 9, 7644 (2019). (**IF: 3.998**)
 19. Yu-Chih Chiang, Cuei-Ping Ho, Yin-Lin Wang, Po-Chun Chen, Peng-Yuan Wang, **Hsien-Yeh Chen*** “Vapor-Deposited Reactive Coating with Chemically and Topographically Erasable Properties,” *Polymers*, 11, 1595 (2019). (**IF: 4.284**)
 20. Kao-Chun Tang, Kai-Chiang Yang, Che-Wei Lin, Yi-Kai Chen, Ting-Yu Lu, **Hsien-Yeh Chen**, Nai-Chen Cheng, Jiashing Yu* (2019, Oct). Human Adipose Derived Stem Cell Secreted Extracellular Matrix Incorporated into Electrospun Poly(Lactic-co-Glycolic Acid) Nanofibrous Dressing for Enhancing Wound Healing,” *Polymers*, 11, 1609 (2019). (**IF: 4.284**)
 21. Ya-Ru Chiu, Yao-Tsung Hsu, Chih-Yu Wu, Tzu-Hung Lin, Yu-Zhen Yang, **Hsien-Yeh Chen*** “Fabrication of Asymmetrical and Gradient Hierarchy Structures of Poly-p-

- xylylenes on Multiscale Regimes Based on A Vapor-Phase Sublimation and Deposition Process,” *Chemistry of Materials*, 32, 1120-1130 (2020). (IF: 9.451)
22. Yue Shi, Kun Liu, Xuelian Tao, Zhen Zhang, **Hsien-Yeh Chen***, Peng-Yuan Wang* “Decoration of Material Surfaces with Complex Physicochemical Signals for Biointerface Applications,” *ACS Biomaterials Science & Engineering*, accepted (2020). (Review Paper) (IF: 4.152)
 23. C.-W. Lin, Z.-Y. Guan, M. Lu, T.-Y. Wu, N.-C. Cheng, **H.-Y. Chen***, J. Yu, Synergistically Enhanced Wound Healing of a Vapor-Constructed Porous Scaffold, *ACS Applied Bio Materials*, 3 (2020) 5678-5686. (IF: 3.25)
 24. Y. Shi, K. Liu, Z. Zhang, X. Tao, **H.-Y. Chen***, P. Kingshott, P.-Y. Wang, Decoration of Material Surfaces with Complex Physicochemical Signals for Biointerface Applications, *ACS Biomaterials Science & Engineering*, 6 (2020) 1836-1851. (IF: 4.152)
 25. C.-Y. Wu, C.-L. Guo, Y.-C. Yang, C.-W. Huang, J.-Y. Zeng, Z.-Y. Guan, Y.-C. Chiang, P.-Y. Wang, **H.-Y. Chen***, Parylene-Based Porous Scaffold with Functionalized Encapsulation of Platelet-Rich Plasma and Living Stem Cells for Tissue Engineering Applications, *ACS Applied Bio Materials*, 3 (2020) 7193-7201. (IF: 3.25)
 26. T.-Y. Wu, C. Gao, M.-C. Huang, Z. Zhang, P.-Y. Wang, **H.-Y. Chen***, G. Chen, H.-Y. Chen, Vapor-Stripping and Encapsulating to Construct Particles with Time-Controlled Asymmetry and Anisotropy, *Coatings*, 10(12), 1248 (2020). (IF: 2.896)
 27. **H.-Y. Chen***, P.-Y. Wang, Special Issue: Biointerface Coatings for Biomaterials and Biomedical Applications, *Coatings*, 11(4), 423 (2021). (IF: 2.896)
 28. S.-M. Hu, C.-Y. Lee, Y.-M. Chang, J.-Q. Xiao, T. Kusanagi, T.-Y. Wu, N.-Y. Chang, J. Christy, Y.-R. Chiu, C.-W. Huang, Y.-C. Yang, Y.-C. Chiang, **H.-Y. Chen***, Vapor-Phase Fabrication of a Maleimide-Functionalized Poly-p-xylylene with a Three-Dimensional Structure, *Coatings*, 11(4): 466. (2021). (IF: 2.896)
 29. C.-Y. Lee, S.-M. Hu, J.-Q. Xiao, Y.-M. Chang, T. Kusanagi, T.-Y. Wu, Y.-R. Chiu, Y.-C. Yang, C.-W. Huang, **H.-Y. Chen***, Vapor Sublimation and Deposition to Fabricate a Porous Methyl Propiolate-Functionalized Poly-p-xylylene Material for Copper-Free Click Chemistry, *Polymers*, 13 (2021). (IF: 4.284)
 30. Y.-C. Yang, W.-S. Huang, S.-M. Hu, C.-W. Huang, C.-H. Chiu, **H.-Y. Chen***, Synergistic and Regulatable Bioremediation Capsules Fabrication Based on Vapor-Phased Encapsulation of Bacillus Bacteria and its Regulator by Poly-p-Xylylene, *Polymers*, 13 (2021). (IF: 4.284)
 31. C.-Y. Wu, T.-Y. Wu, Z.-Y. Guan, P.-Y. Wang, Y.-C. Yang, C.-W. Huang, T.-H. Lin, **H.-Y. Chen***, Vapor-Phased Fabrication and Modulation of Cell-laden Scaffolding Materials, *Nature Communications*, DOI: 10.1038/s41467-021-23776-8. (2021) (Multidisciplinary Sciences: 3/64=4.7%, IF: 15.805)
 32. T.-Y. Wu, C.-Y. Wu, J. Christy, Y.-C. Chiang, Z.-Y. Guan, J.-S. Yu, **H.-Y. Chen***, "Vapor-Phase Fabrication of Cell-Accommodated Scaffolds with Multicomponent Functionalization for Neuronal Applications." *Advanced Materials Interfaces* 8.24 (2021): 2100929. (IF: 6.389)
 33. C.-Y. Wu, Y.-C. Chiang, J. Christy, P.-H. Huang, N.-Y. Chang, Wenny, Y.-C. Chiu, Y.-C. Yang, P.-C. Chen, P.-Y. Wang, **H.-Y. Chen***, "Guiding Stem Cell Differentiation and Proliferation Activities Based on Nanometer-Thick Functionalized Poly-p-xylylene Coatings." *Coatings* 11.5 (2021): 582. (IF: 3.236)
 34. Y.-C. Chiang, H.-W. Yeh, S.-M. Hu, C.-Y. Wu, T.-Y. Wu, C.-H. Chen, P.-C. Liao, Z.-Y. Guan, N.-C. Cheng*, **H.-Y. Chen*** “Vapor construction and modification of stem

- cell-laden multicomponent scaffolds for regenerative therapeutics“, *Materials Today Bio*, 13, 100213 (2022). (Engineering, Biomedical: 11/98=11.2%, **IF: 10.761**)
35. Y.-M. Chang, J.-Q. Xiao, J. Christy, C.-Y. Wu, C.-W. Huang, T.-Y. Wu, Y.-C. Chiang, T.-H. Lin, **H.-Y. Chen*** “Ice-templated synthesis of multicomponent porous coatings via vapour sublimation and deposition polymerization,” *Materials Today Bio*, 16, 100403 (2022). (Engineering, Biomedical: 11/98=11.2%, **IF: 10.761**)
 36. T.-Y. Wu, T.-H. Lin, and **H.-Y. Chen*** "Controlling the asymmetry of densified and porous hybrid coatings based on vapor sublimation and deposition." *Materials Today Advances*, 16, 100292 (2022). (**IF: 9.918**)
 37. C.-Y. Lee, S.-M. Hu, J. Christy, F.-Y. Chou, T.-C. Ramli, **H.-Y. Chen*** "Biointerface Coatings With Structural and Biochemical Properties Modifications of Biomaterials." *Advanced Materials Interfaces*, 2202286 (2023). (**IF: 6.389**)

Conference Papers

1. **Hsien-Yeh Chen***. “Advances in Biomaterial development for tissue engineering & regenerative medicine”, TERMIS World Congress 2021, (Online).
2. **Hsien-Yeh Chen***. “Vapor-Phased Synthesis of Polymers from Coatings to Porous Materials”, 70th Symposium on Macromolecules 2021 (Tokyo, Japan / Online) invited speaker.
3. **Hsien-Yeh Chen***. “Vapor deposition to construct particles and scaffolding materials for regenerative medicine”, European Advanced Materials Congress 2021, (Stockholm, Sweden / Online) invited speaker.
4. **Hsien-Yeh Chen***. “Vapor Deposition and Constructions from Coatings to Porous Materials for regenerative medicine”, International Workshop on the Symbiosis of Biology and Nanodevices 2021, (Kyoto, Japan / Online) invited speaker.
5. **Hsien-Yeh Chen***. “Vapor Deposition to Construct Reactive Polymer Coatings, Devices, and 3D Bulk Materials,” National Taiwan University Sogang University 2nd ChemE symposium on Energy & Environment Engineering Energy, Seoul 2019.
6. **Hsien-Yeh Chen***. “Vapor-Deposited Nanoscaled Polymer Coatings for Biointerface,” the 24th Symposium of Young Asian Biological Engineer’s Community (YABEC), Taipei 2018.
7. **Hsien-Yeh Chen***. “Controlling Biointerface Activities by Using Vapor-Phased Functional Polymer Coatings,” the Asian Pacific Society for Materials Research (APSMR) 2018 Annual Meeting, 2018, Hokkaido, Japan.
8. **Hsien-Yeh Chen***. “Directed Cellular Activities Based on Vapor-Deposited Polymers,” TERMIS World Congress, September 4-7, 2018, Kyoto, Japan
9. **Hsien-Yeh Chen***. “Controlling Cell Growth Activities Based on Vapor-Deposited Polymer Coatings,” International Conference of Layers, Films and Membranes for Green, Environmental and Biomedical Sciences (LFM), Taipei 2018.
10. **Hsien-Yeh Chen***. “Directed Cell Growth Activities Based on Vapor-Deposited Polymer Coatings,” Advanced Materials World Congress (AMWC), Singapore 2018. (Invited Lecture) (IAAM Scientist Medal Awardee)
11. **Hsien-Yeh Chen***, Chih-Yu Wu, Zhen-Yu Guan, Shih-Torng Ding, Nai-Chen Cheng. “Directed Cell Growth Activities Based on Vapor-Deposited Polymer Coatings,” The 8th International Symposium on Surface Science (ISSS-8), Tsukuba, Japan 2017. (Invited Lecture)

12. Zhen-Yu Guan, **Hsien-Yeh Chen**. "Directional Gradients of Biointerfaces Based on Dual Reverse Click Reactions," 2017 MRS Fall Meeting, Boston, MA, USA 2017.
13. Shih-Ting Chen, **Hsien-Yeh Chen**. "Fabrication of Functional Nanostructured Surfaces based on Selective Vapor Deposition," 2017 MRS Fall Meeting, Boston, MA, USA 2017.

Patents

1. 陳賢燁、官振禹、吳治宇、「位在基材上的化學膜具有N - 羥基琥珀醯亞胺基的聚對二甲苯以及其形成方法、製作具有N - 羥基琥珀醯亞胺基的對環芬的方法」，中華民國發明專利 (2015)，第 I508948 號。
2. 陳賢燁、官振禹、吳治宇、「CHEMICAL FILM ON SUBSTRATE AND METHOD OF FORMING THE SAME, METHOD OF FORMING N-HYDROXYSUCCINIMIDE ESTER-FUNCTIONALIZED PARACYCLOPHANE」，美國發明專利 (2015)，US9771324B2。
3. 陳賢燁、黃聲東、蔡孟諭、「CHEMICAL FILM ON SUBSTRATE AND METHOD OF FORMING THE SAME, METHOD OF FORMING N-HYDROXYSUCCINIMIDE ESTER-FUNCTIONALIZED PARACYCLOPHANE」，美國發明專利 (2016)，US9771324B2。
4. 陳賢燁、黃聲東、蔡孟諭、「基材上的聚合物組成物以及表面改質方法」，中華民國發明專利 (2016)，第 I535750 號。
5. 陳賢燁、鄭必群、「一種仿金屬生物基複合基材」，中華民國發明專利 (2015)，第 I563037 號。
6. 陳賢燁、鄭必群、「一种仿金属生物基复合基材」，中華人民共和國發明專利 (2015)，CN106608979B。
7. 陳賢燁、官振禹、吳治宇、「位在基材上的化學膜及其形成方法、製作具有雙硫鍵官能基的對環芬的方法」，中華民國發明專利 (2017)，第 I577656 號。
8. 陳賢燁、官振禹、吳治宇、「CHEMICAL FILM ON SUBSTRATE AND METHOD OF FORMING THE SAME, METHOD OF FORMING PARACYCLOPHANE CONTAINING FUNCTIONAL GROUP WITH DISULFIDE BOND」，美國發明專利 (2017)，US10246412B2。
9. 陳賢燁、官振禹、吳治宇、「Method of forming paracyclophane containing functional group with disulfide bond」，美國發明專利 (2017)，US10336692B2。
10. 陳賢燁、鄭必群、「製備仿金屬生物基複合基材的方法」，中華民國發明專利 (2017)，第 I600543 號。
11. 陳賢燁、范士岡、吳軍靈、「人工水晶體以及其製作方法」，中華民國發明專利 (2017)，第 I606850 號。

12. 陳賢燁、范士岡、吳軍霆、「人工水晶体以及其制造方法」，中華人民共和國發明專利(2017)·CN106901872B。
13. 陳賢燁、范士岡、吳軍霆、「眼内レンズ及の製造方法」，日本發明專利(2017)·特許第 6129946 號。
14. 陳賢燁、范士岡、吳軍霆、「인공 수정체 및 그 제조방법」，韓國發明專利(2017)·10-1783275。
15. 陳賢燁、童星穎、「聚對二甲苯的三維多孔性結構」，中華民國發明專利(2017)·第 I607032 號。
16. 陳賢燁、童星穎、「ポリ-p-キシリレンの3次元多孔質構造」，日本發明專利(2017)·特許第 6626854 號。
17. 陳賢燁、童星穎、「ポリ-p-キシリレンの3次元多孔質構造」，日本發明專利(2017)·特許第 6701313 號。
18. 陳賢燁、童星穎、「파릴렌의 3차원 다공성 구조」，韓國發明專利(2017)·第 10-1987720 號。
19. 陳賢燁、童星穎、「聚對二甲苯的三維多孔性結構及其方法」，中華人民共和國發明專利(2017)·CN108314779B。
20. 陳賢燁、官振禹、「生醫材料及其製作方法」，中華民國發明專利(2019)·第 I651105 號。
21. 陳賢燁、官振禹、「生体材料のびその製造方法」，日本發明專利(2019)·特許第 6501817 號。
22. 陳賢燁、官振禹、「생물학적 재료 및 의 제조 방법」，韓國發明專利(2019)·10-2005966。
23. 陳賢燁、吳治宇、「圖案化鍍膜結構、圖案化鍍膜複合結構、選擇性抑制有機鍍膜形成的方法與選擇性調整有機鍍膜厚度的方法」，中華民國發明專利(2019)·第 I647101 號。
24. 陳賢燁、吳治宇、「PATTERNED FILM STRUCTURE, PATTERNED FILM COMPOSITE STRUCTURE, METHOD OF SELECTIVE INHIBITION OF FORMATION OF ORGANIC FILM AND METHOD OF SELECTIVE ADJUSTMENT OF THICKNESS OF ORGANIC FILM」，美國發明專利(2019)·US10035875B2。
25. 陳賢燁、吳治宇、「選擇性抑制有機鍍膜形成的方法與選擇性調整有機鍍膜厚度的方法」，中華民國發明專利(2019)·第 I647328 號。

Technology Transfer

1. 建教合作計畫：功能性生醫鍍膜及其在生醫元件改質技術之應用研究 (NTD 115,000 美樺興業股份有限公司)
2. 建教合作計畫：綠色環保奈米鍍膜技術 (NTD 276,000 松果綠能科技有限公司)
3. 產學合作計畫：開發新世代生醫鍍膜及其原料 (NTD 410,000 赫禮翁生物科技股份有限公司)
4. 技轉/產學合作計畫：聲學海綿研究計畫 (NTD 460,000 台灣立訊精密有限公司)
5. 技轉/產學合作計畫：高解析度與腦神經纖維束圖譜開發研究計畫 (NTD 805,000 上頂醫學影像科技股份有限公司)
6. 技轉/產學合作計畫：新型 AS Coating 鍍膜研發 (NTD 3,000,000 華碩 ASUS 電腦股份有限公司)

Honors and Others

職務

2020年 國立臺灣大學分子生醫影像研究中心主任

2022年 中華民國界面科學學會監事

2022年 台灣分子生物影像學會理事

其他學術榮譽

1. 指導學生吳亭瑩(博士生)·李沁芸(碩士生)·蕭家麒(碩士生)·「新型可調控光學特性及生物功能之人工水晶體」·2020 年經濟部技術處第 10 屆搶鮮大賽創業規劃類·亞軍。
2. 指導張育銘(碩士生)·胡書嫻(碩士生)·張乃云(計畫研究員)·「氣相結構操控制程創建多功能之硬骨及軟骨組織修復裝置」·2020 年經濟部技術處第 10 屆搶鮮大賽創業規劃類·冠軍。
3. 2021 第十七屆 IIP 國際傑出發明家-學術國光獎章。
4. 2021 第十七屆 IIP 國際傑出發明家-學術國光獎章。
5. 2021 行政院環保署-第 2 屆綠色化學應用及創新獎。
6. 2021 The SCEJ (日本) Award for Outstanding Asian Researcher and Engineer。
7. 陳賢燁帶領團隊：吳亭瑩(博士生)·張育銘(碩士生)·蕭家麒(碩士生)·李沁芸(碩士生)·胡書嫻(碩士生)·草彌達也(碩士生)·魏婉瑩(大學生)·張乃云(計畫研究

- 員)·吳治宇(博士後研究員)·楊晏清(博士後研究員)·黃晁璋(博士後研究員)·
「多功能之硬骨及軟骨組織修復裝置」·2021年化學產業菁英獎榮獲「卓越研發獎」。
8. 指導學生張育銘(碩士生)·胡書嫻(碩士生)·草弼達也(碩士生)·張乃云(計畫研究員)·「氣相結構操控製程創建多功能之硬骨及軟骨組織修復裝置」·2021年第三屆綠點子國際發明暨設計競賽·鈦金獎。
 9. 指導學生吳亭瑩(博士生)·李沁芸(碩士生)·蕭家麒(碩士生)·魏婉瑩(碩士生)·
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