

教師個人資料

姓名 Name	張禎祐
職稱 Title	專任教授
學歷 Education	國立中興大學環境工程學系博士 國立交通大學土木所碩士 國立中興大學環境工程學系學士
學術專長 Academic specialty	環境工程、土木工程、勞工安全衛生
分機 Extension	7010
電子信箱 E-mail	cyc1136@ntc.edu.tw
經歷 Experience	國立臺東專科學校副校長 國立臺東專科學校教務主任 國立臺東專科學校總務主任 國立臺東專科學校專任副教授 行政院公共工程委員會工程品質查核委員 行政院原住民委員會工程查核及督導委員 環境部審查委員 經濟部審查委員 教育部區域環境教育輔導團（東區）專家顧問委員 教育部區域防災教育服務團訪視委員(南區) 勞動部安全與衛生訓練課程講師 工業技術研究院政府業務組諮詢輔導委員 臺東縣政府公害糾紛調處委員會委員 臺東縣環保局審查委員 明道大學專任副教授 中臺科技大學專、兼任副教授 朝陽科技大學兼任副教授 國立空中大學兼任講師、副教授

學術著作目錄 (研討會)

1.	<u>Chang C.Y.</u> [†] , C.T.Wu., Y.Y. Li, Y.H. Hsieh (2017) A Study on Brine Resource Utilization in Desalination Plants. 2017 2 nd International Conference on Environmental Science and Engineering (ESE 2017), Xiamen, China.
2.	Liu J.X., C.H. Yen, C.H. Chen, H.C. Huang, Y.Y. Li, Y.H. Hsieh, <u>C.Y. Chang</u> [†] (2016) Multi-oxidants produced by deep sea water brine are used for postharvest storage of custard apples (<i>Annona squamosa</i> L.). 2 nd International Conference on Energy, Environment and Materials Science (EEMS 2016), Singapore.
3.	Tsai Y.T., Y.H. Hsieh, C.T. Wu, Y.Y. Li, K.Y. Cheng, T.L. Sung, <u>C.Y. Chang</u> [†] (2016) A

	Study on Dyeing Wastewater Treatment by Applying Pulsed Non-Thermal Plasma. 2016 International Conference on Water Resource and Environment (WRE2016), Shanghai, China.
4.	Cheng K.Y., Y.H. Hsieh, Y. T., Y. T. Tsai, <u>C.Y. Chang</u> [†] , C.Y. Chang, K.J. Ding, Y.C. Chang and C.C. Wang (2015) Ultrasonic Effect on the Photodegradation of 2,4-Dichlorophenol Wastewater. 3 rd International Scientific Conference on Applied Sciences and Engineering (3 rd ISCASE, 2015), 45-3 rd ISCASE-15, Bangkok, Thailand.
5.	Liu J.X., Y.Y. Li, C.T. Wu, Y.H. Hsieh, <u>C.Y. Chang</u> [†] , N.T. Chen, H.C. Huang, C.H. Yen, C.H. Chen, W.W. Liao, J.W. Yang, S.M. Chang (2015) Effect of multiple oxidant chlorine dioxide manufactured by deep sea water treatment on postharvest storage quality of custard apples (<i>Annona squamosa</i> L.). International Conference on Material Technology and Environmental Engineering (MTEE 2015), Shanghai, China.
6.	Liu J.X., Y.Y. Li, C.T. Wu, Y.H. Hsieh, <u>C.Y. Chang</u> [†] , N.T. Chen, H.C. Huang, C.H. Yen, C.H. Chen, W.W. Liao, J.W. Yang, S.M. Chang (2015) Atemoya treated with multiple oxidants containing chlorine oxide by using electrolytic deep sea water. International Conference on Material Technology and Environmental Engineering (MTEE 2015), Shanghai, China.
7.	Cheng K.Y., Y.H. Hsieh, Y.T. Tsai, C.Y. Chang and <u>C.Y. Chang</u> [†] (2014) Decomposition of wastewater containing methyl tert-butyl ether using the gamma-ray/hydrogen peroxide process. 2014 International Conference on the "Challenges in Environmental Science and Engineering" (CESE-2014), WATI-39, Johor Bahru, Malaysia.
8.	Lin C.M., Y.H. Hsieh, T.W. Liao, Y.T. Tsai and <u>C.Y. Chang</u> [†] (2014) Photocatalytic bactericidal effect of hospital fluorescent light irradiated TiO ₂ /V thin film on nosocomial infections control. 2014 International Conference on the "Challenges in Environmental Science and Engineering" (CESE-2014), ADVI-08, Johor Bahru, Malaysia.
9.	Hsieh Y.H., <u>C.Y. Chang</u> [†] , M.W. Chen, M.K. Shen (2014) Degradation of azo dye wastewater by UV/TiO ₂ combined with an ultrasonic procedure. 2014 International Conference on Advanced Nano-Technology and Biomedical Material (ANTBM2014), A074, Guangzhou, China.
10.	<u>Chang, C.Y.</u> [†] , Y.Y. LI, C.T. Wu, H.J. huang, J.J. Yan and W.X. Sun (2014) Preservation and Bacterial Inhibition of Electrolytic Deep Sea Water on <i>Allium fistulosum</i> . 2014 Global Conference on Environmental Engineering, G067, Hong Kong
11.	Lin C.H., Y.H. Hsieh and <u>C.Y. Chang</u> [†] (2013) Catalytic Destruction and Removal of Dichloromethane in the Microwave/Fe ₄ O ₃ System. 2013 3 rd International Conference on Advanced Design and Manufacturing Engineering, LN1249, Anshan, China.
12.	<u>Chang, C.Y.</u> [†] , Y. H., Hsieh and T.W. Liao (2012) Photocatalytic bactericidal effect of

	Ag/TiO ₂ nano-thin film on nosocomial infections control. The 2012 International Conference on Agricultural, Food and Biological Engineering, AF6047, Guangzhou, China.
13.	Yao, K.S., J.J. Hsu and C.Y. Chang† (2011) Study on the photocatalytic degradation of wastewater under the optimal preparation of the activated carbon supported TiO ₂ thin film. International Conference on Energy, Environment and Sustainable Development, 313-317, Shanghai, China.
14.	Hsieh, Y.H and C.Y. Chang† (2010) Study on the ultrasonic-photodegradation of 2,4-dichlorophenol wastewater. 2010 International Advanced Oxidation Processes (AOPs) Conference, p.48, Taichung, Taiwan.
15.	Cheng, K.Y., K.S. Yao, H.H. Lo, C.Y. Chang† and P.H. Chen (2010) Photoelectrocatalytic degradation of isopropyl alcohol by TiO ₂ /Ti thin-film electrode. The 3rd International Conference on Multi-functional Materials and Structures, 165-168, Jeonju, Korea.
16.	Chang, C.Y. †, Y.C. Lee, C.H. Lin, J.W. Lee, Y.J. Chang and J.H. Chen (2010) Degradation of volatile acetone by a photocatalytic reactor with TiO ₂ coated sieve. The 3rd International Conference on Multi-functional Materials and Structures, 919-922, Jeonju, Korea.
17.	Yao, K.S., Y.H. Hsieh, Y.J. Chang, C.H. Lin, C.Y. Chang† and Y.C. Chiang (2010) The study on the decomposition of azo dye by La-modified TiO ₂ . The 3rd International Conference on Multi-functional Materials and Structures, 276-279, Jeonju, Korea.
18.	Chang, C.Y. †, Y.J. Chang, Y.H. Hsieh, C.H. Lin and S.H. Yen (2010) Azo dye-Yellow 17 wastewater Photocatalytic degradation of by UV/TiO ₂ combined with ultrasonic procedure. The 3rd International Conference on Multi-functional Materials and Structures, 11-14, Jeonju, Korea.
19.	Lin, C.H., C.Y. Chang, Y.J. Chang, Y.C. Lee, M.Y. Hwa and Y.S. Chang (2010) Photosensitization of Dye/TiO ₂ Thin Films by Using Natural Dye of TCPP. The 3rd International Conference on Multi-functional Materials and Structures, 923-926, Jeonju, Korea.
20.	Hsieh, Y.H and C.Y. Chang† (2010) Study on the ultrasonic-photodegradation of 2,4-dichlorophenol wastewater. 2010 International Advanced Oxidation Processes (AOPs) Conference, p.48, Taichung, Taiwan.
21.	Chang, M.Y., Y.H. Hsieh, K.Y. Cheng, K.S. Yao, C.Y. Chang†, C.T. Ho (2009) Degradation of azo dye wastewater by UV/TiO ₂ combined with ultrasonic procedure. 3rd IWA-ASPIRE Conference and Exhibition, p.83-84, Taipei, Taiwan.
22.	Lin, C.H., Y.J. Chang, M.Y. Hwa, C.Y. Chang† and S.H. Yeh (2009) Decomposition of toluene in optimal TiO ₂ thin film photocatalytic process using the Taguchi method. The 2nd International Conference on Multi-functional Materials and Structures, 647-650, Qingdao, China.
23.	Cheng, T.C., K.S. Yao, Y.H. Hsieh, M.Y. Chang, C.Y. Chang† and G. H. Wang (2009)

	Visible light activated photocatalytic degradation effect of V-TiO ₂ on azo dye wastewater. The 2nd International Conference on Multi-functional Materials and Structures, 969-972, Qingdao, China.
24.	Shen, C.H., S.L. Lo and C.Y. Chang† (2009) Degradation of MTBE by using a novel magnetic composite TiO ₂ /Fe ₃ O ₄ photoreactor design. The 2nd International Conference on Multi-functional Materials and Structures, 321-324, Qingdao, China.
25.	Chang, M.Y., W.F. Wang, Y.H. Hsieh and C.Y. Chang (2009) Characterization and photocatalytic activity of composite La-TiO ₂ /ITO thin-film electrodes. The 2nd International Conference on Multi-functional Materials and Structures, 899-902, Qingdao, China.
26.	Lin, C.H., C.Y. Chang, Y.J. Chang, J.W. Lee, M.Y. Hwa, and Y.C. Lee (2009) Glass fibers covered with TiO ₂ thin films by sol-gel method as a photocatalyst reactor to degradation toluene. The 2nd International Conference on Multi-functional Materials and Structures, 927-930, Qingdao, China.
27.	Chang, M.Y., Y.H. Hsieh, H.L. Shyu, L.L. Hsieh, Y.C. Yen and C.Y. Chang† (2009) Photoelectrocatalytic degradation of sodium oxalate by TiO ₂ /Ti thin-film electrode. International Conference on Plasma Surface Engineering (AEPSE2009), p254, Korea.
28.	Chang, Y.J., C.H. Lin, M.C. Wei, Y.C. Liu and C.Y. Chang† (2009) Visible light activated photocatalytic degradation effect of V-TiO ₂ on MTBE. International Conference on Plasma Surface Engineering (AEPSE2009), p414, Korea.
29.	Lin, C.H., Y.J. Chang, C.Y. Chang, J.W. Lee, Y.C. Lee and M.Y. Hwa (2009) Novel TiO ₂ thin films/glass fiber photocatalytic reactor on the removal of bioaerosol. International Conference on Plasma Surface Engineering (AEPSE2009), p415, Korea.
30.	Chang, Y.J., C.H. Lin, Y.C. Lee, J.W. Lee, C.Y. Chang and M.Y. Hwa (2009) Photocatalytic deactivation of airborne microbial cells by the stainless steel sieves with surface coated TiO ₂ thin films. International Conference on Plasma Surface Engineering (AEPSE2009), p417, Korea.
31.	Wei, M.C., Y.J. Chang, C.H. Lin, Y.H. Hsieh, W.S. Shu and C.Y. Chang† (2009) Photoelectrocatalytic degradation of isopropyl alcohol by TiO ₂ /Ti thin-film electrode. TACT 2009 International Thin Films Conference, B149, Taiwan.
32.	Chang, C.Y., Y.J. Hong, Y.H. Hsieh, T.C. Cheng, M.C. Wei, L.L. Hsieh, M.T. Wu and K.S. Yao (2009) Study on the photocatalytic degradation of wastewater under the optimal preparation of the activated carbon supported TiO ₂ thin film. TACT 2009 International Thin Films Conference, C280, Taiwan.
33.	Chang, C.Y., L.L. Hsieh, H.L. Shyu, C.A. Tsou, H.H. Lo (2009) Evaluation of TiO ₂ /Ag Thin Film for Inhibition of Nosocomial Pathogen <i>Acinetobacter baumannii</i> . TACT 2009 International Thin Films Conference, E207, Taiwan.
34.	Chang, C.Y., S.K. Hsu, C.J. Chang, C.L. Chang, H.H. Lo (2009) Evaluation of Visible Light-Activated TiO ₂ Thin Film for Control of Nosocomial Pathogens. TACT 2009 International Thin Films Conference, B161, Taiwan.

35.	Cheng, T.C., C.Y. Chang†, C.I. Chang, H.C. Hsu, C.J. Hwang, D.Y. Wang and K.S. Yao (2009) Bactericidal effect of TiO ₂ particle with magnetic core on fish pathogens. 36th International Conference on Metallurgical Coatings and Thin Films, San Diego, California, USA. (poster)
36.	Yao, K.S., C.Y. Chang†, Y.H. Hsieh, M.Y. Chang, T.C. Cheng, C.Y. Cheng (2008) The Investigation on the Formation of Hydroxyl Radical in Optimal Thin Film Photocatalytic Process. 35th International Conference on Metallurgical Coatings and Thin Films, San Diego, California, USA.(poster)
37.	Cheng, T.C., C.Y. Chang, C.I. Chang, C.C. Hwang, H.H. Shu, D.Y. Wang and K.S. Yao (2008) Photocatalytic Bactericidal Effect of TiO ₂ Thin Film on Fish Pathogens. 35th International Conference on Metallurgical Coatings and Thin Films, San Diego, California, USA.(poster)
38.	Yao, K.S., T.C. Cheng, S.J. Li, L.Y. Yang, K.C. Tzeng, Y. Ko, C.Y. Chang† (2008) Comparison of Photocatalytic Activities of Various Dye-Sensitized TiO ₂ Thin Films Under Visible Light. 35th International Conference on Metallurgical Coatings and Thin Films, San Diego, California, USA.(poster)
39.	Cheng, T.C., C.Y. Chang†, K.S. Yao, Y.H. Hsieh, L.L. Hsieh and P.S. Wang (2008) Optimization of preparation of the TiO ₂ photocatalytic reactor using the Taguchi method. International Conference on Multifunctional Materials and Structures, p. 54, Hong Kong.
40.	Chang, M.Y., C.Y. Chang†, Y.H. Hsieh, K.S. Yao, T.C. Cheng, C.T. Ho (2008) Photocatalytic degradation of Methylene blue using Porphyrin/TiO ₂ complexes activated by visible light. International Conference on Multifunctional Materials and Structures, p. 61, Hong Kong.
41.	Cheng, K.Y., C.Y. Chang†, Y.H. Hsieh, K.S. Yao, T.C. Cheng, C.Y. Cheng (2008) Catalytic destruction and removal of toluene by microwave/Fe ₃ O ₄ system. International Conference on Multifunctional Materials and Structures, p.53, Hong Kong.
42.	Yao, K.S., C.Y. Chang†, T.C. Cheng, Y.H. Hsieh, S.R. Weng (2008) Using catalyst and electrolysis diaphragm method to produce multiple oxidants to remove the scaling and slime in cooling system. International Conference on Multifunctional Materials and Structures, p. 53, Hong Kong.
43.	Yao, K.S., C.Y. Chang†, T.C. Cheng, Y.H. Hsieh, M.Y. Chang and Y.C. Liu (2008) Decomposition of toluene in the optimal TiO ₂ thin film photocatalytic process using the Taguchi method. The 4th International Conference on Technological Advances of Thin Films & Surface Coatings (Thin Film 2008), p. 218, Singapore.
44.	Chang, C.Y. †, Yao, K.S., T.C. Cheng, Y.H. Hsieh, M.Y. Chang, K.Y. Cheng and L.L. Hsieh (2008) Study on the preparation and characterization of activated carbon supported TiO ₂ thin film. The 4th International Conference on Technological Advances of Thin Films & Surface Coatings (Thin Film 2008), 146-147, Singapore.
45.	Cheng, T.C., K.S. Yao, C.Y. Chang†, Y.H. Hsieh, M.C. Wei and Z.L. Hu (2008) Study on photocatalytic degradation of methylene blue by V-TiO ₂ thin film under visible light. The

	4th International Conference on Technological Advances of Thin Films & Surface Coatings (Thin Film 2008), p. 218, Singapore.
46.	Lin, C.H., Y.J. Chang, M.Y. Hwa, C.Y. Chang†, C.Y. Cheng, S.H. Yeh (2008) Catalytic destruction and removal of isopropyl alcohol by microwave/Fe ₃ O ₄ system. 1st International Conference on Microelectronics and Plasma Technology, p.138, Jeju, Korea.
47.	Chang, M.Y., Y.H. Hsieh, C.Y. Chang†, K.S. Yao, T.C. Cheng, C.T Ho (2008) Photocatalytic degradation of 2,4-dichlorophenol wastewater using porphyrin/TiO ₂ complexes activated by visible light. 1st International Conference on Microelectronics and Plasma Technology, p.45, Jeju, Korea.
48.	Chang, M.Y., C.Y. Chang†, Y.H. Hsieh, L.L. Hsieh, K.S. Yao, C.Y. Cheng (2008) Formation and Calculation of Hydroxyl radical in Thin Film Photocatalytic Processes. IWA World Water Congress and Exhibition, p.125, Vienna, Austria.
49.	鄭鈞陽、張禎祐†、謝永旭、姚國山、葉士鴻 (2008) 應用微波加熱四氧化三鐵去除異丙醇之可行性研究. 第十二屆海峽兩岸環境保護學術研討會, pp.4-161 – 4-167 台灣, 高雄.
50.	張恩榮、鄭凱元、姚國山、張禎祐†、鄭鈞揚、陳俊丞 (2007) . 以統計方法搭配 γ -ray 過氧化氫處理含異丙醇廢水之最佳化研究. Proceeding of the Eleventh Mainland-Taiwan Environmental Protection Academic Conference.1.221-223, 哈爾濱, 中國.
51.	姚國山、張禎祐、廖慧玲、蔣沂恬、翁佳琪、葉馨 (2007) . 二氧化氯對灌溉水中植物病原細菌之殺菌評估. Proceeding of the Eleventh Mainland-Taiwan Environmental Protection Academic Conference.2.1193-1195, 哈爾濱, 中國.
52.	Yao, K.S., C.Y. Chang, C.C. Hwang, and T.C. Cheng (2007) . Inactivation effect of chlorine dioxide on phytopathogenic bacteria in irrigation water in Taiwan. 2nd IWA – ASPIRE, Asia-Pacific Regional Group Conference & Exhibition Water and Sanitation in the Asia-Pacific Region: Opportunities, Challenges and Technology, Perth, Australia, (poster)
53.	Cheng, K.Y., C.Y. Chang †, Y. H. Hsieh, E. J. Chang, M.Y. Chang and P.Y. Hu (2007) . Decomposition of wastewater containing isopropyl alcohol using the gamma-ray/hydrogen peroxide procedure. 2nd IWA – ASPIRE, Asia-Pacific Regional Group Conference & Exhibition Water and Sanitation in the Asia-Pacific Region: Opportunities, Challenges and Technology, p.119, Perth, Australia.
54.	Yao, K.S., D.Y. Wang, C.Y. Chang, K.W. Weng, L.Y.ang (2007) . Photocatalytic Disinfection of Phytopathogenic Bacteria by Dye-Sensitized TiO ₂ Thin Film Activated by Visible Light. 34th International Conference on Metallurgical Coatings and Thin Films, San Diego, California, USA.(poster)
55.	Chang, C.Y. †, K.S Yao, J.H. Lee and C.H Chen (2007). Formation and Calculation of Hydroxyl Radical in the Optimal Photocatalytic Process using the Taguchi method. 6th International Conference on Environmental Informatics, p. 42, Bangkok, Thailand.
56.	張禎祐†、謝永旭、姚國山、胡伯瑜、鄭鈞陽、顏義展 (2007) 薄膜光催化程序中氫

	氧自由基的生成與計算.中華民國環境工程學會 2007 廢水處理技術研討會, p. 119.台灣, 高雄.
57.	鄭達智、張禎祐†、謝永旭、姚國山、翁世仁、王紹琪、殷豪章、胡伯瑜(2007) 以二氧化氯應用於冷卻系統除垢、殺菌之研究. 第三屆兩岸四地環境論壇, p. 28. 台灣, 高雄
58.	姚國山、張禎祐†、謝永旭、鄭達智、鄭鈞陽、馮偉哲(2007) 應用微波加熱四氧化三鐵去除甲苯之可行性研究. 第三屆兩岸四地環境論壇, p. 134. 台灣, 高雄
59.	張名毅、謝永旭、姚國山、鄭達智、張禎祐†、陳佳暉、陳煥文 (2007) 以 Porphyrin/TiO ₂ 程序進行光催化分解有機污染物之研究. 第三屆兩岸四地環境論壇, p. 138. 台灣, 高雄.
60.	張禎祐†、姚國山、翁世仁、鄭達智、謝永旭、胡伯瑜、柯勇 (2007) 以觸媒高電壓隔膜電解法產生二氧化氯及其對水中植物病原菌之殺菌評估. 第三屆兩岸四地環境論壇, p. 37. 台灣, 高雄.
61.	姚國山、劉興隆、張禎祐、楊廉毅、曾國欽 (2006) .摻雜光敏素之光觸媒薄膜對彩色海芋軟腐病原細菌抑菌之探討.中華植物保護學會暨中華民國植物病理學會 95 年聯合年會, 論文摘要.86-87.
62.	姚國山、張禎祐、鄭達智、黃清江 (2006) .螢光二氧化矽奈米探針製備及在植物病害診斷之應用.中華植物保護學會暨中華民國植物病理學會 95 年聯合年會, 論文摘要. 101-102.
63.	鄭凱元、張禎祐†、張恩榮 (2006) . 加瑪射線/過氧化氫程序分解含異丙醇廢水之研究.中華民國環境工程學會第十八屆年會暨各專門學術研討會. (Wat20060221)
64.	Yao, K.S., D. Y. Wang, C.Y. Chang, W. Y. Ho, L. Y. Yang (2006) . Characteristics and photocatalytic activity of TiO ₂ thin film sensitized with a porphyrin dye. The 3rd International Conference on Advances of Thin Films and Coatings, Singapore.
65.	姚國山、張禎祐†、魏銘琪 (2005) .二氧化氯對植物病原細菌殺菌效果之探討.第十屆海峽兩岸環境保護學術研討會,p.107.
66.	Chang, C.Y. †, Y. H. Hsieh, K.S. Yao and K. H. Wang (2002). Effects of Hydroxyl Free Radicals on the Heterogeneous Photocatalytic Degradation of Chlorophenol Aqueous Solution in the UV/TiO ₂ Processes. IWA 3rd World Water Congress, Melbourne, Australia.
67.	Chang, C.Y. †, Y. H. Hsieh, K.S. Yao and K. H. Wang (2002). A Study on Hydroxyl Free Radical Reaction in the Photocatalytic Processes. IWA 3rd World Water Congress, Melbourne, Australia
68.	Chang, C.Y. †, Y. H. Hsieh, Y. M. Lin, P. Y. Hu, C. C. Liu and K. H. Wang (2001). The Effect of the Molecular Mass of the Organic Matter in Raw Water on the Formation of Disinfection By-products. Proc. 1st IWA Asia-Pacific Regional Conference, 49-54.
69.	Chang, C.Y.†., Y. H. Hsieh, C. C. Liu, P. Y. Hu, K. S. Yao and K. H. Wang (2001). The Effect of Different Dosage Ratios on the Formation of Disinfection By-products. Proc. 1st IWA Asia-Pacific Regional Conference, 61-66.
70.	張禎祐†、謝永旭、劉謹銓、吳致成 (2000) .不同劑量比對消毒副產物生成之影響.

	第二十五屆廢水處理技術研討會論文集, 1018-1023.
71.	Wang, K.H., Y.H. Hsieh, M. Y. Chang and C.Y. Chang (2000). The Photocatalytic Degradation of Textile Wastewater on Immobilized Titanium Dioxide”, 1st World Congress of the International Water Association, Paris, France.
72.	Chang, C.Y. †, Y. H. Hsieh, C. C. Chen and K. H. Wang (1999). Study on the Reaction of Chlorine Dioxide Disinfection and the By-Products Produced Using Humic Acid as a Precursor. Proc. 7th IAWQ Asia Pacific Regional Conference on Water Quality and Pollution Control, 872-877, Taipei, Taiwan.
73.	Wang, K. H., Y. H. Hsieh, T. S. Chia and C.Y. Chang(1999). The Study of Photocatalytic Reaction of Co-existing Chlorophenols by Titanium Dioxide Suspensions in Aqueous Solution. Proc. 7th IAWQ Asia Pacific Regional Conference on Water Quality and Pollution Control, 529-534, Taipei, Taiwan.
74.	Wang, K. H., Y. H. Hsieh, R. C. Ko and C.Y. Chang (1999) . Photocatalytic Degradation of Wastewater from Manufactured Fiber by Titanium Dioxide suspensions in Aqueous Solution – A Feasibility Study. Waste Minimisation and End of Pipe Treatment in Chemical and Petrochemical Industries, IAWQ International Specialty Conference of the Chemical Industry Group, 529-534 , Merida, Mexico.
75.	張禎祐†、謝永旭、林育民 (1999) .不同有機前質對二氧化氯進行原水消毒副產物生成之研究.第二十四屆廢水處理技術研討會論文集, 951-956.
76.	張禎祐†、謝永旭、林育民 (1999) .以二氧化氯進行原水消毒副產物生成之研究.第二十四屆廢水處理技術研討會論文集, 957-962.
77.	張禎祐†、謝永旭、方文虹 (1998) .以二氧化氯進行原水消毒反應之研究.第十五屆自來水研究發表會論文集,199-212.

學術著作目錄 (期刊論文)

1.	<u>Chang, C.Y. †</u> , Y.H. Hsieh, Y.Y. Li, C.T. Wu, K.Y. Cheng, C.Y. Chang (2016) Ultrasonic effect on the photodegradation of 2,4-dichlorophenol wastewater. The International Journal of Biotechnology, 5(2), 26-34.
2.	李奕穎、劉炯錫、 <u>張禎祐†</u> 、顏嘉慧、黃厚嘉(2016) 以深層海水鹵水電解製備多重氧化劑應用於蔬果保鮮之研究. 臺東大學綠色科學學刊, 6(1), 123-136.
3.	Wu C.T., <u>C.Y. Chang</u> , Y.Y. Li, Y.L. Kuan, P.H. Lin (2018) An efficiency analysis for the production of Chlorine dioxide by the electrolysis of brine in seawater desalination plants. Water Quality Research Journal, 54(2), 127-133.
4.	Wu C.T., <u>C.Y. Chang</u> , Y.Y. Li, P.H. Lin (2018) Feasibility study for the production of multi-oxidants from the desalination of seawater brine. Water Quality Research Journal, 54(3), 242-248.
5.	Tsai Y.T., Y.H. Hsieh, C.T. Wu, Y.Y. Li, K.Y. Cheng, T.L. Sung, <u>C.Y. Chang†</u> ,(2016) A Study on dyeing wastewater treatment by applying pulsed non-thermal plasma. Journal of Water Resource and Hydraulic Engineering, 5(2), 62-67.
6.	Liu J.X., Y.Y. Li, C.T. Wu, Y.H. Hsieh, <u>C.Y. Chang†</u> , N.T. Chen, H.C. Huang, C.H. Yen, C.H. Chen, W.W. Liao, J.W. Yang, S.M. Chang (2016) Effect of multiple oxidant chlorine

	dioxide manufactured by deep sea water treatment on postharvest storage quality of custard apples (<i>Annona squamosa</i> L.). Focusing on Modern Food Industry (FMFI), 5, 32-36.
7.	Liu J.X., N.T. Chen, H.C. Huang, C.H. Yen, C.H. Chen, W.W. Liao, J.W. Yang, S.M. Chang, <u>C.Y. Chang</u> [†] (2016) Effect of Postharvest Storage Quality of Atemoya Treated with Multiple Oxidants Containing Chlorine Oxide by Using Electrolytic Deep Sea Water. Focusing on Modern Food Industry (FMFI), 5, 1-5.
8.	劉炯錫、張禎祐 [†] 、時雨青、陳念廷、關宇倫、李奕穎、顏嘉慧、黃厚嘉(2015) 以深層海水鹵水製備二氧化氯之研究應用. 臺東大學綠色科學學刊, 5(1), 103-116.
9.	Hsieh Y.H., <u>C.Y. Chang</u> [†] , M.W. Chen, M.K. Shen (2014) Degradation of azo dye wastewater by UV/TiO ₂ combined with an ultrasonic procedure. Applied Mechanics and Materials, 618, 164-169. (EI and CPCI-S)
10.	Tsai, Y.T., J.H. Chang, <u>C.Y. Chang</u> [†] , Y. H., Hsieh and S.Y. Shen (2014) The efficiency and mechanisms of chlorine dioxide generation by an electrocatalytical process. Journal of the Taiwan Institute of Chemical Engineers. 45(2), 404-410 (SCI; 2013Impact Factor: 2.63)
11.	劉炯錫,...,張禎祐,...(2013)臺東大學深層海水產業合作展望：邁向以科學為基礎的綠色產業. 臺東大學綠色科學學刊,3(3), 37-53.
12.	Lin C.H., Y.H. Hsieh and <u>C.Y. Chang</u> [†] (2013) Catalytic Destruction and Removal of Dichloromethane in the Microwave/Fe ₄ O ₃ System. Applied Mechanics and Materials, 395-396, 595-600. (EI and CPCI-S)
13.	<u>Chang, C.Y.</u> [†] , Y. H., Hsieh and T.W. Liao (2013) Photocatalytic bactericidal effect of Ag/TiO ₂ nano-thin film on nosocomial infections control. Journal of Bionanoscience, 7, 215-218. (EI and CPCI-S)
14.	<u>Chang, C.Y.</u> [†] , Y. H., Hsieh and T.W. Liao (2013) Photocatalytic bactericidal effect of Ag/TiO ₂ nano-thin film on nosocomial infections control. Journal of Bionanoscience, 7, 215-218. (EI and CPCI-S)
15.	Tsai, Y.T., <u>C.Y. Chang</u> [†] , and Y. H., Hsieh (2013) The generation of chlorine dioxide by electrochemistry technology. <u>Advanced Science Letters</u> . 19, 3285-3288. (SCI; 2010 Impact Factor: 1.253)
16.	Tsai, Y.T., <u>C.Y. Chang</u> [†] , and Y. H., Hsieh (2013) Improving the aquaculture water by multie-oxidants that generate by electrochemistry technology. <u>Advanced Science Letters</u> . 19, 3338-3341. (SCI; 2010 Impact Factor: 1.253)
17.	Hsu J.J., <u>C.Y. Chang</u> , and M.C. Wu (2013) Treatment of electrolytic water on Preservation and Bacterial inhibition in Scallion (<i>Allium fistulosum</i>). <u>Advanced Science Letters</u> . 19, 2755-275. (SCI; 2010 Impact Factor: 1.253)
18.	Yang L.Y., <u>C.Y. Chang</u> , J.J. Hsu, and K.S. Yao (2013) Biosynthesis and Antibacterial Assessment of Silver Nanoparticles Using Plant Extract. Journal of Bionanoscience, 7(2), 181-1844. (EI and CPCI-S)
19.	<u>Chang, C.Y.</u> , M.Y. Hwa, Y.C. Lee, C.H. Lin, and W.M. Tseng (2013) Microwave Catalytic Process for the Production of Biodiesel. Journal of Biobased Materials and

	Bioenergy. 7. 198-201 (SCI; 2013 Impact Factor: 0.586)
20.	Yeh, N., Y.C. Lee, C.Y. Chang, T.C. Cheng (2013) Anti-fish bacterial pathogen effect of visible light responsive Fe ₃ O ₄ @TiO ₂ nanoparticles immobilized on glass using TiO ₂ sol-gel. Thin solid films, 549, 93-97. (SCI; 2013 Impact Factor: 1.867)
21.	Chang, C.Y. †, M.Y. Hwa, Y.C. Lee, C.H. Lin, W.M. Tseng and Y. H., Hsieh (2012) Microwave Catalytic Process for the Production of Biodiesel. Journal of Biobased Materials and Bioenergy. 6. 1-4 (SCI; 2011 Impact Factor: 1.037)
22.	Chang, C.Y. † and Y. H., Hsieh (2012) Degradation of semiconductor manufacturing wastewater by using a novel magnetic composite TiO ₂ /Fe ₃ O ₄ photoreactor design. Journal of Nanomaterials. 2012, Article ID 413542, 6 pages. (SCI; 2011 Impact Factor: 1.376)
23.	Chang, C.Y., M.Y. Hwa, Y.C. Lee, C.H. Lin and W.M. Tseng (2012) Microwave catalytic process for the production of biodiesel. Journal of Biobased Materials and Bioenergy, 6, 1-4. (SCI; 2011 Impact Factor: 1.037)
24.	Hsu J.J., C.Y. Chang, and M.C. Wu (2012) Application of Preservation and Bacterial inhibition of Electrolytic Water on Water Convolvulus (<i>Ipomoea aquatica</i> Forsk). Journal of Biobased Materials and Bioenergy. 6, 1-4 (SCI; 2011 Impact Factor: 1.037)
25.	Chang, C.Y. †, Y. H., Hsieh and Y.Y., Chen (2012) Photoelectrocatalytic degradation of sodium oxalate by TiO ₂ /Ti thin film electrode. International Journal of Photoenergy. 2012, Article ID 576089, 6 pages. (SCI; 2011 Impact Factor: 1.769)
26.	Yao, K.S., J.J. Hsu and C.Y. Chang† (2012) Study on the photocatalytic degradation of wastewater under the optimal preparation of the activated carbon supported TiO ₂ thin film. Advanced Materials Research 356-360, 313-317. (EI and CPCI-S)
27.	Cheng, T.C., K.S. Yao, N. Yeh, C.I. Chang, H.C. Hsu, F. Gonzalez and C.Y. Chang† (2011) Bactericidal effect of blue LED light irradiated TiO ₂ /Fe ₃ O ₄ particles on fish pathogen in seawater. Thin solid films, 519, 5002-5006. (SCI; 2011 Impact Factor: 1.890)
28.	Hsieh B.T., C.Y. Chang, Y.C. Chang, K.Y. Cheng (2011) Relationship between the level of essential metal elements in human hair and coronary heart disease. Journal of Radioanalytical and Nuclear Chemistry, 290(1), 165-169. (SCI; 2012 Impact Factor: 1.527; DOI 10.1007/s10967-011-1174-z)
29.	Shen C.H., C.Y. Chang and S.L. Lo (2011) Visible light activated photo catalytic degradation effect of V-TiO ₂ on Methyl Tert-Butyl Ether. Advanced Materials Research 255-260, 2705-2709. (EI and CPCI-S)
30.	Chang, Y.J., J.W. Lee., C.H. Lin., C.Y. Chang., Y.C. Lee and M.Y. Hwa (2010) Photocatalytic deactivation of airborne microbial cells by the stainless steel sieves with surface coated TiO ₂ thin films. Surface & Coatings Technology, 205, s328-s323. (SCI; 2011 Impact Factor: 1.867)
31.	Lin, C.H., J.W. Lee, C.Y. Chang, Y.J. Chang, Y.C. Lee and M.Y. Hwa (2010) Novel TiO ₂ thin films/glass fiber photocatalytic reactors in the removal of bioaerosols. Surface & Coatings Technology, 205, s341-s344. (SCI; 2011 Impact Factor: 1.867)

32.	Cheng, T.C., K.S. Yao, Y.H. Hsieh, L.L Hsieh, Chang, C.Y. † (2010). Optimization of preparation of the TiO ₂ photocatalytic reactor using the Taguchi method. <i>Materials and Design</i> 31, 1749-1751. (SCI; 2011 Impact Factor: 2.200)
33.	Lin, C.H., Y.J. Chang, Y.T. Chang, C.Y. Chang, Y.S. Chang (2010). The relationship of wastewater treatments and microbial community structures on different area of a constructed wetland. <i>Journal of Biotechnology</i> 150S, S258. (SCI; 2011 Impact Factor: 3.045; doi:10.1016/j.jbiotec.2010.09.148) (Abstract)
34.	Lin, C.H., C.Y. Lee, C.Y. Chang, Y.J. Chang (2010). The microbial compositions and path adaptation between freshwater adapted cultures and saline-water adapted cultures. <i>Journal of Biotechnology</i> 150S, S255-S256. (SCI; 2011 Impact Factor: 3.045; doi:10.1016/j.jbiotec.2010.09.141) (Abstract)
35.	Yao, K.S., Y.H. Hsieh, Y.J. Chang, C.Y. Chang†, T.C. Cheng, H. L. Liao and Z.Z. Shu (2010) Inactivation effect of chlorine dioxide on phytopathogenic bacteria in irrigation water. <i>Journal of Environmental Engineering and Management</i> 20(3), 157-160. (環工學門重點期刊)
36.	Cheng, K.Y., L.L. Hsieh, C.H. Lin, M.Y. Hwa, E.J. Chang and C.Y. Chang† (2010) Decomposition of wastewater containing isopropyl alcohol using the gamma-ray/hydrogen peroxide procedure. <i>Journal of Environmental Engineering and Management</i> 20(3), 151-156. (環工學門重點期刊)
37.	Chang, Y.J., M.Y. Hwa, C.H. Lin, Y.H. Hsieh, M.C. Wei and C.Y. Chang† (2010). Study on the decomposition of isopropyl alcohol by using microwave/Fe ₃ O ₄ catalytic system. <i>Journal of Environmental Engineering and Management</i> 20(2), 63-68. (環工學門重點期刊)
38.	Hsieh, L.L., C.Y. Chang, H.L. Shyu, C.A. Tsou and H.H. Lo (2010) The Inhibition Effect of TiO ₂ /Ag Thin Film on <i>Acinetobacter baumannii</i> . <i>Advanced Materials Research</i> 123-125, 272-275. (EI and CPCI-S)
39.	Cheng, K.Y., K.S. Yao, H.H. Lo, C.Y. Chang† and P.H. Chen (2010) Photoelectrocatalytic degradation of isopropyl alcohol by TiO ₂ /Ti thin-film electrode. <i>Advanced Materials Research</i> 123-125, 165-168. (EI and CPCI-S)
40.	Lin, C.H., C.Y. Chang, Y.J. Chang, Y.C. Lee, M.Y. Hwa and Y.S. Chang, (2010) Photosensitization of Dye/TiO ₂ Thin Films by Using Natural Dye of TCPP. <i>Advanced Materials Research</i> 123-125, 923-926. (EI and CPCI-S)
41.	Chang, C.Y., Y.C. Lee, C.H. Lin, J.W. Lee, Y.J. Chang and J.H. Chen, (2010) Degradation of volatile acetone by a photocatalytic reactor with TiO ₂ coated sieve. <i>Advanced Materials Research</i> 123-125, 919-922. (EI and CPCI-S)
42.	Yao, K.S., Y.H. Hsieh, Y.J. Chang, C.H. Lin, C.Y. Chang† and Y.C. Chiang, (2010) The study on the decomposition of azo dye by La-modified TiO ₂ . <i>Advanced Materials Research</i> 123-125, 276-279. (EI and CPCI-S)
43.	Chang, C.Y., Y.J. Chang, Y.H. Hsieh, C.H. Lin and S.H. Yen, (2010) Azo dye-Yellow 17 wastewater Photocatalytic degradation of by UV/TiO ₂ combined with ultrasonic

	procedure. Advanced Materials Research 123-125, 11-14. (EI and CPCI-S)
44.	Chang, C.Y. †, S.K. Hsu, C.J. Chang, Y.N. Shieh, C.L. Chang and H.H. Lo (2010) The Effect of Visible Light-activated TiO ₂ Thin Film on Nosocomial Pathogens. Advanced Materials Research 123-125, 268-271. (EI and CPCI-S)
45.	Lin, C.H., Y.J. Chang, M.Y. Hwa, K.S. Yao, T.C. Cheng and <u>C.Y. Chang</u> [†] (2010). Study on the decomposition of toluene by using microwave/Fe ₃ O ₄ catalytic system. Materials and Manufacturing Processes. — — — > Accepted. (SCI; 2007 Impact Factor: 0.612)
46.	Cheng, T.C., K.S. Yao, Y.H. Hsieh, Y.T. Tsai and <u>C.Y. Chang</u> [†] (2010). Removal of scaling and slime using multiple oxidants produced by catalyst and electrolysis diaphragm method. Materials and Manufacturing Processes. — — — > Accepted. (SCI; 2007 Impact Factor: 0.612)
47.	Cheng, K.Y., K.S. Yao, H.H. Lo, <u>C.Y. Chang</u> [†] and P.H. Chen (2010) Photoelectrocatalytic degradation of isopropyl alcohol by TiO ₂ /Ti thin-film electrode. Advanced Materials Research 123-125, 165-168. (EI and CPCI-S)
48.	Yao, K.S., Y.H. Hsieh, Y.J. Chang, <u>C.Y. Chang</u> [†] , T.C. Cheng, H. L. Liao and Z.Z. Shu (2010) Inactivation effect of chlorine dioxide on phytopathogenic bacteria in irrigation water. Journal of Environmental Engineering and Management 20(3), 157-160. (環工學門重點期刊)
49.	<u>Chang, C.Y.</u> [†] , Y.C. Lee, C.H. Lin, J.W. Lee, Y.J. Chang and J.H. Chen (2010) Degradation of volatile acetone by a photocatalytic reactor with TiO ₂ coated sieve. Advanced Materials Research 123-125, 919-922. (EI and CPCI-S)
50.	Cheng, T.C., K.S. Yao, Y.H. Hsieh, L.L Hsieh, <u>Chang, C.Y.</u> [†] (2010). Optimization of preparation of the TiO ₂ photocatalytic reactor using the Taguchi method. Materials and Design 31, 1749-1751. (SCI; 2008 Impact Factor: 1.107)
51.	Yao, K.S., Y.H. Hsieh, Y.J. Chang, C.H. Lin, <u>C.Y. Chang</u> [†] and Y.C. Chiang (2010) The study on the decomposition of azo dye by La-modified TiO ₂ . Advanced Materials Research 123-125, 276-279. (EI and CPCI-S)
52.	Cheng, K.Y., L.L. Hsieh, C.H. Lin, M.Y. Hwa, E.J. Chang and <u>C.Y. Chang</u> [†] (2010) Decomposition of wastewater containing isopropyl alcohol using the gamma-ray/hydrogen peroxide procedure. Journal of Environmental Engineering and Management 20(3), 151-156. (環工學門重點期刊)
53.	<u>Chang, C.Y.</u> [†] , Y.J. Chang, Y.H. Hsieh, C.H. Lin and S.H. Yen (2010) Azo dye-Yellow 17 wastewater Photocatalytic degradation of by UV/TiO ₂ combined with ultrasonic procedure. Advanced Materials Research 123-125, 11-14. (EI and CPCI-S)
54.	Lin, C.H., <u>C.Y. Chang</u> , Y.J. Chang, Y.C. Lee, M.Y. Hwa and Y.S. Chang (2010) Photosensitization of Dye/TiO ₂ Thin Films by Using Natural Dye of TCPP. Advanced Materials Research 123-125, 923-926. (EI and CPCI-S)
55.	Chang, Y.J., M.Y. Hwa, C.H. Lin, Y.H. Hsieh, M.C. Wei and <u>C.Y. Chang</u> [†] (2010). Study on the decomposition of isopropyl alcohol by using microwave/Fe ₃ O ₄ catalytic system. Journal of Environmental Engineering and Management 20(2), 63-68. (環工學門重點期

	刊)
56.	<u>Chang, C.Y.</u> [†] , Y.H. Hsieh, L.L. Hsieh, T.C. Cheng and K.S. Yao (2009). Establishment of Activity indicator of TiO ₂ photocatalytic reaction --- Hydroxyl radical trapping method. Journal of Hazardous Material 166, 897-903. (SCI; 2008 Impact Factor: 2.973)
57.	Chang, M.Y., Y.H. Hsieh, <u>C.Y. Chang</u> [†] , K.S. Yao, T.C. Cheng and C.T. Ho (2009). Photocatalytic degradation of 2,4-dichlorophenol wastewater using porphyrin/TiO ₂ complexes activated by visible light. Thin solid films 517, 3888-3891. (SCI; 2008 Impact Factor: 1.884)
58.	Cheng, T.C., K.S. Yao, N. Yeh, C.I. Chang, H.C. Hsu and <u>C.Y. Chang</u> [†] (2009) Visible light activated bactericidal effect of TiO ₂ /Fe ₃ O ₄ magnetic particles on fish pathogens. Surface & Coatings Technology, 204, 1141-1144. (SCI; 2008 Impact Factor: 1.860)
59.	Shen, C.H., S.L. Lo and <u>C.Y. Chang</u> [†] (2009) Degradation of MTBE by using a novel magnetic composite TiO ₂ /Fe ₃ O ₄ photoreactor design. Advanced Materials Research 79-82, 321-324. (EI and CPCI-S)
60.	Lin, C.H., Y.J. Chang, M.Y. Hwa, <u>C.Y. Chang</u> [†] and S.H. Yeh (2009) Decomposition of toluene in optimal TiO ₂ thin film photocatalytic process using the Taguchi method. Advanced Materials Research 79-82, 647-650. (EI and CPCI-S)
61.	Chang, M.Y., W.F. Wang, Y.H. Hsieh and <u>C.Y. Chang</u> [†] (2009) Characterization and photocatalytic activity of composite La-TiO ₂ /ITO thin-film electrodes. Advanced Materials Research 79-82, 899-902. (EI and CPCI-S)
62.	Cheng, T.C., K.S. Yao, Y.H. Hsieh, M.Y. Chang, <u>C.Y. Chang</u> [†] and G. H. Wang (2009) Visible light activated photocatalytic degradation effect of V-TiO ₂ on azo dye wastewater. Advanced Materials Research 79-82, 969-972. (EI and CPCI-S)
63.	Cheng, T.C., Y.T. Huang, <u>C.Y. Chang</u> , K.S. Yao, C.C. Hwang (2009). Molecular recognition of sulfaquinoxaline and sulfapyridine with molecularly imprinted polymer. Journal of the Chilean Chemical Society, 54, N° 3. (SCI; 2007 Impact Factor: 0.386)
64.	Yao, K.S., S.J. Li, K.C. Tzeng, T.C. Cheng, <u>C.Y. Chang</u> , C.Y. Chiu, C.Y. Liao, J.J. Hsu and Z.P. Lin (2009). Fluorescence Silica Nanoprobe as a Biomarker for Rapid Detection of Plant pathogens. Advanced Materials Research 79-82, 513-516. (EI and CPCI-S)
65.	Lin, C.H., <u>C.Y. Chang</u> , Y.J. Chang, J.W. Lee, M.Y. Hwa, and Y.C. Lee (2009) Glass fibers covered with TiO ₂ thin films by sol-gel method as a photocatalyst reactor to degrade toluene. Advanced Materials Research 79-82, 927-930. (EI and CPCI-S)
66.	Hsieh, L.L., H.J. Kang, H.L. Shyu and <u>C.Y. Chang</u> (2009). Optimal degradation of dye wastewater by ultrasound/Fenton method in the presence of nanoscale iron. Water Science & Technology 60(5), 1295-1301. (SCI; 2008 Impact Factor: 1.24)
67.	Yao, K.S., T.C. Cheng, S.J. Li, L.Y. Yang , K.C. Tzeng, <u>C.Y. Chang</u> [†] and Y. Ko (2008) . Comparison of Photocatalytic Activities of Various Dye-Sensitized TiO ₂ Thin Films Under Visible Light. Surface & Coatings Technology 203, 922-924. (SCI; 2008 Impact Factor: 1.860)
68.	Cheng, K.Y., <u>C.Y. Chang</u> [†] , Y.H. Hsieh, K.S. Yao, T.C. Cheng and C.Y. Cheng (2008).

	Catalytic destruction and removal of toluene by microwave/Fe ₃ O ₄ system. Advanced Materials Research 47-50, 335-338. (EI and CPCI-S)
69.	Yao, K.S., <u>C.Y. Chang</u> [†] , T.C. Cheng, Y.H. Hsieh, S.R. Weng (2008). Using catalyst and electrolysis diaphragm method to produce multiple oxidants to remove the scaling and slime in cooling system. Advanced Materials Research 47-50, 339-342. (EI and CPCI-S)
70.	Chang, M.Y., <u>C.Y. Chang</u> [†] , Y.H. Hsieh, K.S. Yao, T.C. Cheng, C.T. Ho (2008). Photocatalytic degradation of methylene blue using porphyrin/TiO ₂ complexes activated by visible light. Advanced Materials Research 47-50, 471-474. (EI and CPCI-S)
71.	Yao, K.S., D.Y. Wang, <u>C.Y. Chang</u> , W.Y. Ho and L.Y. Yang (2008). Characteristics and photocatalytic activity of TiO ₂ thin film sensitized with a porphyrin dye. Journal of Nanoscience and Nanotechnology 8, 2699-2702 (SCI; 2008 Impact Factor 2.194)
72.	Cheng, T.C., <u>C.Y. Chang</u> , C.I. Chang, C.J. Hwang, H.C. Shu, D.Y. Wang and K.S. Yao (2008). Photocatalytic Bactericidal Effect of TiO ₂ Thin Film on Fish Pathogens. Surface & Coatings Technology 203, 925-927. (SCI; 2008 Impact Factor: 1.860)
73.	Wang K.H., Y.H. Hsieh, T.T. Lin, <u>C.Y. Chang</u> (2008). Effects of temperature on the properties of TiO ₂ photocatalysts prepared by the chemical vapor deposition (CVD) method. Reaction Kinetics and Catalysis Letters 95(1), 39-46. (SCI; 2008 Impact Factor: 0.505)
74.	姚國山、 <u>張禎祐</u> [†] 、李淑娟(2007)，二氧化氯對噬菌體 MS2 及其宿主細胞之殺菌效果評估。明道學術論壇 3(1).1-6.
75.	K.S. Yao, D.Y. Wang, <u>C.Y. Chang</u> , K.W. Weng, L.Y. Yang, S.J. Lee, T.C. Cheng, C.C. Hwang(2007). Photocatalytic disinfection of phytopathogenic bacteria by dye-sensitized TiO ₂ thin film activated by visible light. Surface & Coatings Technology, 202, 1329-1332. (SCI; 2008 Impact Factor: 1.860)
76.	Hu, P. Y., Y. H. Hsieh, J.C. Chen and <u>C. Y. Chang</u> (2004) . Characteristics of Manganese-Coated Sand using SEM and EDAX Analysis. Journal of Colloid and Interface Science 272, 308-313. (SCI; 2008 Impact Factor: 2.443)
77.	Hu, P. Y., Y. H. Hsieh, J.C. Chen and <u>C. Y. Chang</u> (2004) . Adsorption of divalent manganese ion on manganese-coated sand. Journal of Water Supply: Research and Technology- AQUA 53.3, 151-158. (SCI; 2008 Impact Factor: 1.24)
78.	Wang, K. H., J. M. Jehen, Y. H. Hsieh and <u>C. Y. Chang</u> (2002) . The Reaction Pathway for the Heterogeneous Photocatalysis of Trichloroethylene in Gas Phase. Journal of Hazardous Material B90, 63-75. (SCI; 2008 Impact Factor: 2.973)
79.	Wang, K. H., Y. H. Hsieh, Pen-Wen Chao and <u>C. Y. Chang</u> (2002) . The Photocatalytic Degradation of Trichloroethane by Chemical Vapor Deposition Method Prepared Titanium Dioxide Catalyst. Journal of Hazardous Material B95, 161-174. (SCI; 2008 Impact Factor: 2.973)
80.	<u>Chang, C. Y.</u> [†] , Y. H. Hsieh, Y. M. Lin, P. Y. Hu, C. C. Liu and K. H. Wang (2001). The Organic Precursors Affecting the Formation of Disinfection By-Products with Chlorine Dioxide. Chemosphere 44,1153-1158. (SCI; 2008 Impact Factor: 3.054)

81.	<u>Chang, C. Y.</u> [†] , Y. H. Hsieh, Y. M. Lin, P. Y. Hu, C. C. Liu and K. H. Wang (2001). The Effect of the Molecular Mass of the Organic Matter in Raw Water on the Formation of Disinfection By-products. Journal of Water Supply: Research and Technology 50.1, 39-45. (SCI; 2008 Impact Factor: 1.24)
82.	<u>Chang, C. Y.</u> [†] , Y. H. Hsieh, I. C. Shih, S. S. Hsu and K. H. Wang (2000). The Formation and Control of Disinfection By-products Using Chlorine Dioxide. Chemosphere 41,129-134. (SCI; 2008 Impact Factor: 3.054)
83.	<u>Chang, C. Y.</u> [†] , Y. H. Hsieh, S. S. Hsu, P. Y. Hu and K. H. Wang(2000). The Formation of Disinfection By-products in Water Treated with Chlorine Dioxide. Journal of Hazardous Material 79, B1/2, 89-102. (SCI; 2008 Impact Factor: 2.973)
84.	Wang, K. H., Y. H. Hsieh, C. H. Wu and <u>C. Y. Chang</u> (2000). The pH and Anion Effects on the Heterogeneous Photocatalytic Degradation of O-Methylbenzoic Acid in TiO2 Aqueous Suspension. Chemosphere 40, 389-394. (SCI; 2008 Impact Factor: 3.054)
85.	Hsieh Y. H., K. H. Wang, R. C. Ko and <u>C. Y. Chang</u> (2000). Photocatalytic Degradation of Wastewater from Manufactured Fiber by Titanium Dioxide Suspensions in Aquowous Solution: A Feasibility Study. Water Science and Technology 42, 5-6, 95-99. (SCI; 2008 Impact Factor: 1.24)
86.	Wang, K. H., Y. H. Hsieh, R. C. Ko and <u>C. Y. Chang</u> (1999). Photocatalytic Degradation of Wastewater from Manufactured Fiber by Titanium Dioxide Suspensions in Aqueous Solution. Environmental International 25, 671-676. (SCI; 2008 Impact Factor: 3.516)
87.	Wang, K. H., Y. H. Hsieh, C. H. Lin and <u>C. Y. Chang</u> (1999) . The Study of the Photocatalytic Degradation Kientics for Dichloroethylene in vapor phase. Chemosphere 39, 1371-1384. (SCI; 2008 Impact Factor: 3.054)
88.	Wang, K. H., Y. H. Hsieh, M. Y. Chou and <u>C. Y. Chang</u> (1999) . Photocatalytic Degradation of 2-Chloro and 2-Nitrophenol by Titanium Dioxide Suspensions in Aqueous Solution. Applied Catalysis B: Environmental 21, 1-8. (SCI; 2008 Impact Factor: 4.853)
學術著作目錄 (專書)	
1.	<u>張禎祐</u> 等. (2009). 化學,新文京開發出版股份有限公司, 台北市. (ISBN 978-986-150-998-3)
2.	<u>張禎祐</u> 等. (2008). 醫護化學,新文京開發出版股份有限公司, 台北市. (ISBN 978-986-150-956-3)
3.	<u>張禎祐</u> 等. (2007). 化學, 新文京開發出版股份有限公司, 台北市. (ISBN 957-512-191-0)
4.	<u>張禎祐</u> 等,. (2007). 生命科學概論, 新文京開發出版股份有限公司, 台北市. (ISBN : 978-986-150-649-4)
5.	<u>張禎祐</u> 等,. (2007). 科學文獻選讀,新文京開發出版股份有限公司, 台北市.(ISBN : 978-986-150-682-1)
6.	<u>張禎祐</u> 等,. (2007). 生物化學, 新文京開發出版股份有限公司, 台北市. (ISBN : 978-986-150-746-0)
7.	<u>張禎祐</u> 等,. (2007). 生命關懷暨實務, 新文京開發出版股份有限公司, 台北市.

8.	張禎祐等. (2004). 生命關懷, 新文京開發出版股份有限公司, 台北市. (ISBN 986-150-074-X)
9.	張禎祐. (2000). 以二氧化氯為替代消毒劑之副產物生成與控制研究. 博士論文, 國立中興大學, 台中.
10.	徐惠麗,劉東明,方偉平,魏銘琪,張禎祐.(1999). 化學. 文京圖書公司, 台北市. (ISBN 957-512-190-0)
11.	徐惠麗,劉東明,方偉平,魏銘琪,張禎祐.(1999). 化學(精華版). 文京圖書公司, 台北市. (ISBN 978-957-512-191-4)

專利

1.	張禎祐、劉炯錫(2017). 以深層海水製備之花卉蔬果保鮮劑結構(新型第 M537402 號)。
2.	張禎祐、劉炯錫(2017). 以深層海水製備之乾洗手劑的包裝結構(新型第 M537573 號)。
3.	姚國山、張禎祐、許浩展、鄭達智(2014). 具磁性之二氧化鈦光觸媒粉末複合材料及其合成方法(發明第 I434732 號)。
4.	張禎祐 (2014).多重氧化劑製造設備(新型, M479932)。
5.	鄭達智,李英杰,張禎祐,姚國山,許浩展 (2013). 以光觸媒組合物抑制病原菌生長之方法(發明, I412496 號)。
6.	林景行,張禎祐, 張育傑, 曾韋銘, 莊雅婷 (2010). 一種生產生質柴油的微波觸媒反應器(新型, M391419)。
7.	張禎祐,謝永旭,姚國山,,楊月琴 (2007). 高效能二氧化氯電解法製造機(新型第 M 322947 號)。
8.	楊月琴,張禎祐, (2007). 多功能電解產生機(新型第 M 318019 號)。
9.	張禎祐,王文山 (2007). 揮發性有機物處理裝置(新型第 M 309457 號)。
10.	姚國山,張禎祐 (2007). 光觸媒貼片(新型第 M 316079 號)。

專案計畫

1.	教育部 107.01~111.12 107-111 年教育部「高等教育深耕計畫」
2.	教育部 2018.01~2018.12 107 年教育部補助大專院校安全衛生教育訓練計畫「花東地區校園安全衛生管理人員研習營」(臺教資(六)字第 1070053885C 號核准)
3.	國立臺東專科學校 2017.09~ 2018.09 106 年國立臺東專科學校產學合作計畫「生質能工業爐之效能開發及提升應用產值計畫」(計畫代號: 106B2006)
4.	經濟部 2016.05~2016.10 105 年度學界協助中小企業科技關懷計畫「超導共振加熱系統應用於污泥乾燥系統之效能及提升工業與環境產值計畫」(計畫代號: PC105140160)
5.	教育部 2016.01~2016.12 105 年教育部補助大專院校安全衛生教育訓練計畫 (臺教資(六)字第 1050052546I 號)

	核准)
6.	教育部 2016.04~2016.11 105 年環境教育推廣活動輔導計畫 (臺教資(六)字第 1050043385C 號函核准)
7.	科技部 2015.08~2017.07 以輻射技術應用於含有機磷及氨基甲酸鹽農藥廢水之可行性研究 (計畫編號: MOST 104-2221-E-602 -001 -MY2)
8.	經濟部 2015.05~2015.10 104 年度學界協助中小企業科技關懷計畫「LED 光能應用於養殖業之效能及產值提升計畫」(計畫代號: PC104140090)
9.	教育部 2015.01~2015.12 104 年教育部補助大專院校安全衛生教育訓練計畫 (台教資(六)字第 1040035561I 號函核准)
10.	教育部 2015.01~2015.12 104 年教育部補助大專院校安全衛生通識課程計畫 (台教資(六)字第 1040035449E 號函核准)
11.	經濟部 2014.05~2014.10 103 年度學界協助中小企業科技關懷計畫「提昇養殖業環境用藥效能與產值計畫」(計畫代號: PC103140243)
12.	經濟部 2013.11~2016.10 經濟部 102 年度學界科專計畫「深層海水在觀光休閒保健服務之應用研究 3 年計劃---子計畫-海洋深層水於蔬果、肉品及漁獲保鮮品質之探討」(計畫代號: 102A023-04)
13.	教育部 2013.08~2012.07 102 年度「補助大專校院安全衛生通識課程及教育訓練計畫」(臺教資(六)字第 1020044212X 號函核准)
14.	教育部 2013.03~2013.12 102 年度「補助大專校院安全衛生通識課程及教育訓練計畫」(臺教資(六)字第 1020044212E 號函核准)
15.	科技部 2013.11~2014.10 海水淡化廠鹵水資源化利用之研究---以馬祖南竿 3 期海水淡化廠為研究對象 (計畫編號: NSC 102-2622-E-602 -001 -CC2)
16.	科技部 2012.08~2015.07 水中脈衝放電之能量對於提昇高級氧化程序效率之研究 (計畫編號: NSC 101-2221-E-602 -001 -MY3)
17.	經濟部 2012.05~2012.10 經濟部工業局 101 年度中小企業即時技術輔導計畫「提昇養殖業環境用藥效能與產值計畫---以養雞場為輔導對象」(計畫代號: 10110445)
18.	經濟部 2012.05~2012.10 101 年度學界協助中小企業科技關懷計畫「提昇環境用藥二氧化氯電解產生機效能與產值計畫」(計畫代號: PC101140292)
19.	經濟部 2012.05~2012.10 101 年度學界協助中小企業科技關懷計畫「提昇二氧化氯環境用藥效能與產值計畫」(計畫代號: PC101140291)

20.	教育部 2012.04~2012.11 101 年環境教育推廣活動輔導計畫（台環字第 1010048897-Y 號書函核准）
21.	教育部 2012.08~2013.01 101 年度「教育部補助大專院校安全衛生通識課程」計畫（台環字第 1010037622A 號書函核准）
22.	教育部 2012.02~2012.11 101 年度「教育部補助大專院校安全衛生教育訓練」計畫（台環字第 1010037743B 號書函核准）
23.	科技部 2011.08~2012.07 以輻射技術應用於半導體廢水處理可行性之研究 (計畫編號：NSC 100-2221-E-602 -002 -)
24.	科技部 2010.08~2011.07 以混合性二氧化氯做為養殖池水及其實廠應用之研究 (計畫編號：NSC 99-2221-E-005 -040 -)
25.	國科會 2009.10~2011.10 以二氧化氯做為自來水替代消毒劑及應用之實廠研究---以烈嶼(小金門)淨水場為例(計畫編號：99-2622-E-451-002-CC2)
26.	國科會 2010.08~2011.07 以混合性二氧化氯做為養殖池水及其實廠應用之研究（計畫編號：NSC 99-2221-E-005 -040）
27.	國科會 2009.08~2010.07 以微波結合光觸媒程序應用於含異丙醇廢水之除汙研究（計畫編號：NSC 98-2221-E-451 -004）
28.	環保署 2009.06~2009.10 98 年「大專院校環保初體驗執行計畫」（環署綜字第 0980038650D 號函核准）
29.	教育部 2009.03~2009.08 97 學年度「教育部補助大專院校安全衛生通識課程」計畫（台環字第 0980042203 號書函核准）
30.	國科會 2007.08~2009.07 高級氧化程序(AOPs)中氫氧自由基的生成與反應動力之研究(II-III)(計畫編號：NSC 96-2221-E-451 -001 -MY2)
31.	國科會 2008.07~2009.02 大專學生參與專題研究計畫--計畫名稱：二氧化氯應用於農業組培之殺菌控制研究 (計畫編號：97-2815-C-451 -003 -B)
32.	國科會 2007.05~2008.04 提升產業技術及人才培育研究計畫－處理揮發性有機物之微波磁化裝置實廠規模機組之研究開發（計畫編號：NSC 96-2622-E-451-002-CC3）
33.	教育部 2007.09~2008.01

	96 學年度「教育部補助大專院校安全衛生通識課程」計畫（台環字第 0960039026A 號函核准）
34.	工業技術研究院 2007.06~2008.05 能環所 96 年度產學研合作計畫-「綠色氧化與殺菌技術(電解產生二氧化氯)」研究計畫
35.	勞委會 2007.04~2008.03 全國職場 233 減災計畫--「特定化學物質之危害與預防教案」
36.	國科會 2006.08~2007.07 高級氧化程序(AOPs)中氫氧自由基的生成與反應動力之研究。（計畫編號：NSC 95-2221-E-451-010）。
37.	國科會 2006.05~2007.04 以二氧化氯應用於冷卻系統除垢、殺菌之研究（計畫編號：NSC 95-2622-E-166-002-CC3）。
38.	國科會 2006.08~2007.07 輻射技術於降解事業廢水之研究-以 TCE、PCE 為例(計畫編號：NSC 95-2113-M-166-004-)
39.	國科會 2006.10~2006.12 工業技術研究院 「以隔膜電解技術結合觸媒反應產生二氧化氯多重氧化劑之生成機開發」研究計畫先期性可行性評估。（計畫編號：5355F21000）
40.	國科會 2005.08~2006.07 光-費頓程序中氫氧自由基的生成與反應之探討（計畫編號：NSC 94-2211-E-166-004）。
41.	國科會 2003.08~2004.07 水環境中氫氧自由基的生成與控制研究之探討（II）（計畫編號：NSC 92-2211-E-166-001）。
42.	經濟部 2003.05~2004.07 高效能二氧化氯染整廢水處理應用技術（專案編號：IZ920032）
43.	國科會 2002.08~2003.07 水環境中氫氧自由基的生成與控制研究之探討（I）（計畫編號：NSC 91-2211-E-166-001）。
44.	經濟部 2002.05~2002.10 高效能二氧化氯染整廢水處理技術（專案編號：IZ900263）