

國立成功大學教師年度報告(化學工程 系所)統計表

教學

(一) 開授課程

系別	教師人數	大學部 (每人平均學分數)		研究所 (每人平均學分數)		小計 學分數	進修部 (每人平均學分數)		碩士專班 (每人平均學分數)		合計 學分數
		上學期	下學期	上學期	下學期		上學期	下學期	上學期	下學期	
不用填	註 38	4	3.4	1.8	1.5	10.7	0	0	0	0	10.7

註：不包含休假教師

(二) 指導大學部、碩、博士班學生論文，而於 91 學年度畢業之學生數

系別	教師人數	學士班(含進修部)	碩士班(含專班)	博士班	每人指導學生數
不用填	38	145	74	16	6.2

(三) 教學改進計畫

系別	件數	金額
不用填		

研究

(一) 著作

系別	教師人數	EI 篇數	SCI 篇數	SSCI 篇數	小計	其他 期刊 論文	期刊總 篇數		平均 每人 篇數	會議 論文		專 書	專 利
							國內	國外		國內	國外		
不用填	38	7	135	0	135	29	17	147	4.3	102	72	1	13

註：同一篇文章分別在兩種以上不同資料庫登錄者，僅列計一篇。

(二) 研究獎勵

系別	教師人數	國家講座	李遠哲 傑出人 才基金 會獎座	成功大 學講 座	成功大 學特聘 教授	其他 獎助	得獎 總人數	得獎 率 (%)
不用填	38	0	0	0	4	7	8	55

(三) 研究計畫

系別	教師人數	國科會		教師平均		其他各類總計	
		件數	金額	件數	金額	件數	金額
不用填	38	51	47863200	1.3	1259557.9	10	8355490

服務

推廣教育

系別	班 數	經 費
不用填		

本校工作報告項目

舉辦學術研討會或作品發表(展演)概況統計

學術研討會		作品發表(含展演)		其他	
國內	國際	國內	國際	國內	國際
2	1	102	72	0	0

教師獲得特殊成就獎項(與(二)研究獎勵不同)

教師姓名	特殊成就獎項名稱
周澤川	91 年度中國工程師學會「傑出工程教授獎」
劉瑞祥	91 年度高分子學會最佳論文獎
劉瑞祥	國科會技術轉移獎助 40 萬
溫添進	特約研究員
吳逸謨	國科會傑出研究獎
張鑑祥	國工程師學會高雄市分會九十二年度「青年工程師獎」
吳季珍	化工學會學術勵進獎

可自行增加表欄

【註】

- 1、各項統計資料(著作部份除外,請參見註2)皆以91學年度(91年8月至92年7月)為準。
- 2、有關「著作」統計資料,以2002年已發表著作為準。以"每單位一篇"計算論文篇數,

每一文章以本校系所單位發表就算一篇；惟同一著作有多名作者同屬相同系所，則僅計一篇。

3、欄位中「平均」取至小數點後第一位數，第二位數請四捨五入。

陳志勇

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 化工程序實驗	2	化工系		
下學期	* 化工程序實驗	2	化工系		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳志彥	博士	具側鏈亞胺乙酸高分子與金屬離子之螯和性質的探討及其應用	
鄭世楷	博士	以聚乙烯-醋酸乙烯酯共聚物增韌聚甲基丙烯酸甲酯之研究	
黃文旗	碩士	以奈米插層型水滑石催化丙酸與丁醇之酯化反應的研究	

二、研究

(一) 著作

A、期刊論文

- 1.C. H. Tsai, W. J. Lee, C. Y. Chen, W. T. Liao and M. Shih, 2002, 41, "Formation of Solid Sulfur by Decomposition of Carbon Disulfide in the Oxygen-Lean Cold Plasma Environment", Applied Chemistry, 1412-1418.
- 2.C. C. Wang, M. H. Cheng, C. Y. Chen and C. Y. Chen, 2002, 208, "Facilitated Transport of Molecular Oxygen in the Cobalt-Chelated Copolymer Membranes Prepared by Soap-free Emulsion Polymerization", J. Membrane Sci., 133-140.
- 3.C. Y. Chen and C. Y. Chen, 2002, 86, "Stability Constants of Polymer-Bound Iminodiacetate-type Chelating Agents with some Transition-metal Ions", Journal of Applied Polymer Science, 1986-1994.
- 4.Y. H. Hu and C. Y. Chen, 2002, 40(21), "Polymerization of methyl methacrylate by 2-pyrrolidinone and n-dodecyl mercaptan", Journal of Polymer Science Part A: Polymer Chemistry, 3692-3702.
- 5.C. C. Wang and C. Y. Chen, 2002, 86, "The Detection of Lead Ion Binding on Bifunctional Chelating/Ion-exchange Resins by Solid State Nuclear Magnetic Resonance", Journal of Applied Polymer Science, 1986-1994.
- 6.C. C. Wang, W. S. Li, S. K. Cheng, C. Y. Chen, C. Y. Chen and J. F. Kuo, 2002, 51, "Peroxidation of Benzaldehyde by Polymer-Immobilized Cobalt-EDTA Complex",

- React. Funct. Polym., 69-78.
- 7.C. C. Wang, C. Y. Chang and C. Y. Chen, 2002, 84(7), "Synthesis of Chelating Resins with Iminodiacetic Acid and Its Wastewater Treatment Application", *Journal of Applied Polymer Science*, 1353-1362.
 - 8.C. C. Wang, W. S. Li, S. K. Cheng, C. Y. Chen, C. Y. Chen and J. F. Kuo, 2001, 82, "Kinetic Study on Peroxidation of Benzaldehyde by Polymer-Immobilized Cobalt-EDTA Complex", *Journal of Applied Polymer Science*, 3248-3257.
 - 9.C. C. Wang, C. Y. Chen, and C. Y. Chen, 2001, 202, "Study Metal Ions Adsorption of Bifunction Chelating/Ion Exchange Resins", *Makrom. Chem. & Phys.*, 882.
 - 10.C. H. Tsai, W. J. Lee, C. Y. Chen, W. T. Liao, 2001, 40, "Decomposition of CH₃SH in a RF Plasma Reactor: Reaction Products and Mechanisms", *Ind. Eng. Chem. Res.*, 2384-2395.
 - 11.W. T. Liao, W. J. Lee, C. Y. Chen, and M. Shih, 2001, 22, "Decomposition of Ethylene Oxide in the RF Plasma Environment", *Environ. Technol.*, 165-173.
 - 12.C. K. Lin, J. F. Kuo And C. Y. Chen, 2001, 37, "Synthesis and Properties of Novel Polyurethanes Containing the Mesogenic Moiety of α -Methylstilbene Derivatives", *European Polymer Journal*, 303-313.
 - 13.C. H. Wan, J. F. Kuo and C. Y. Chen, 2000, 27(4), "Synthesis and Mesomorphism of 4,4'-Bis-(omega-hydroxyalkoxy)-alpha- methylstilbenes", *Liquid Crystals*, 523-532.
 - 14.W. T. Liao, W. J. Lee, C. Y. Chen, L. T. Hsieh, and C. C. Lai, 2000, 75, "Decomposition of Ethoxyethane in the Cold Plasma Environment", *Journal Chem. Technol. Biot.*, 817-827.
 - 15.C. C. Wang, C. Y. Chen, C. C. Huang, C. Y. Chen and J. F. Kuo, 2000, 4622, "Permeation of Oxygen/Nitrogen in Cobalt-Chelated Polymer Membranes", *Journal of Membrane Science*, 1-11.
 - 16.S. C. Li, J. Y. Wu, C. Y. Chen and T. L. Chen, 2000, 87, "Semicontinuous Production of Lipase by *Acinetobacter Radioresistens* in Presence of Nonwoven Fabric", *Applied Biochemistry and Biotechnology*, 73-80.
 - 17.J. C. Lin, S. L. Tiong and C. Y. Chen, 2000, 11, "Surface Characterization and Platelet Adhesion Studies on Fluorocarbons Prepared by Plasma Induced Graft Polymerization", *Journal of Biomaterials Science, Polymer Edition*, 701-714.
 - 18.M. I. Chen, H. M. Wang, C. Y. Chen and T. L. Chen, 2000, 31, "Recovery of *Acinetobacter Radioresistens* Lipase by Hydrophobic Adsorption on a Nonwoven Fabric", *J. Chin. Inst. Chem. Engrs.*, 595-599.
 - 19.K. Y. Chen, J. F. Kuo and C. Y. Chen, 2000, 21, "Synthesis, Characterization and Platelet Adhesion Studies of Novel Ion-Containing Aliphatic Polyurethanes", *Biomaterials*, 161-171.

- 20.C. C. Wang, C. Y. Chen and J. F. Kuo, 2000, 36, "Polymerization of Styrene Initiated by a Novel Initiator Sodium Formaldehyde Sulfoxylate/Sodium Lauryl Sulfate", European Polymer Journal, 965-974.
- 21.Y. F. Wang, W. J. Lee and C. Y. Chen, 2000, 20, "Reaction Mechanism in Both CCl₂F₂/O₂/Ar and CCl₂F₂/H₂/Ar RF Plasma Environment", Plasma Chemistry and Plasma Processing, 469-494.
- 22.C. K. Lin, J. F. Kuo and C. Y. Chen, 2000, 36, "Synthesis and Mesomorphism of Thermotropic Liquid Crystalline Polyurethanes based on Meta-Diisocyanates with 4,4'-bis(ω -Hydroxyalkoxy) Biphenyls", European Polymer Journal, 1183-1193.

(一) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
含螯合基之高分子固態電解質的研究(2/3)	1,089,800	91/08/01~ 92/07/31	國科會	主持人
層狀複合奈米材料在油墨上的應用	432,000	91/06/01~ 92/05/31	國科會	主持人
新穎奈米材料製備法及其應用之研究 子計畫一：以高分子基板製備奈米微粒之研究(1/3)	3,154,000	91/08/01~ 92/07/31	國科會	主持人

三、服務

(一) 行政工作

1. 化工系 主任
2. 創新育成中心 主任

(二) 委員會(校內)

1. 校園污染防治委員會召集人

(三) 主辦或協辦研討會

1. 高分子年會 主持人，會議期間：(2003年1月17、18日)

(四) 校內其他服務(如導師---)

1. 化工三乙 導師

翁鴻山

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 高等反應工程學	3	化工系碩博	82	蔡少偉、吳季珍
上學期	化學反應工程	3	環工系碩博	16	
下學期	* 化學反應工程	3	化工系	165	鄧熙聖、陽明長
下學期	觸媒之發展及應用	3	化工系碩博	10	陳陵援、何瑞文

(二) 指導於 91 學年度畢業之大學部、碩、博士學生論文名稱

姓名	學位	論文名稱	共同指導教授
鍾協廷	碩士	以液-液-固相間轉移催化技術合成丙烯基苯基醚 - 高分子擔體與無機擔體之比較	
柯子真	碩士	奈米級金屬氧化物擔體觸媒用於以一氧化碳為還原劑之一氧化氮還原反應	
吳育宗	碩士	以反應蒸餾法製備醚類汽油添加劑 II 第三戊基乙基醚之合成	

二、研究

(一) 著作

A、期刊論文

1. Shih-Hsiung Sheu and Hung-Shan Weng, 2001, Determination of Free Cyanide in Sour Water at Fluid Catalytic Cracking(FCC)Plant, Intern. J. Environ. Anal Chem., 78(2), pp.107-115.
2. Shih-Hsiung Sheu and Hung-Shan Weng, 2001, Treatment of Olefin Plant Spent Caustic by Combination of Neutralization and Fenton Reaction, Water Research., 35, pp. 2017-2021.
3. Hsu-Chin Hsiao and Hung-Shan Weng, 2001, Synthesis of n-Butyl Phenyl Ether by Tri-Liquid-Phase Catalysis Using Poly(ethylene glycol)-600 as a Catalyst -

- Analysis of Factors Affecting the Reaction in a Batch Reactor, *J. Chem. Technol. Biotechnol.*, 76, pp. 959-965.
4. Ching-Huei Wang, Shiow-Shyung Lin, Wei-Uie Hwang and Hung-Shan Weng, 2002, Supported Transition-Metal Oxide Catalysis for Catalytic Reduction of SO₂ with CO as a Reducing Agent, *Ind. Eng. Chem. Res.*, 41, pp. 666-671.
 5. Ching-Huei Wang, Shiow-Shyung Lin, Shen-Ben Liou and Hung-Shan Weng, 2002, The Promoting Effect and Reaction Kinetics of the Catalytic Incineration of (CH₃)₂S₂ over an Improved CuO-MoO₃/γ-Al₂O₃ Catalyst, *Chemosphere.*, 49, pp. 389-394.
 6. Ching-Huei Wang, Shiow-Shyung Lin and Hung-Shan Weng, 2002, The Kinetics of Catalytic Incineration of (CH₃)₂S₂ over the CuO-MoO₃/γ-Al₂O₃ Catalyst, *Environ. Sci. Health A*, 37, pp. 1649-1663.
 7. Ching-Huei Wang, Shiow-Shyung Lin, Pei-Chang Sung and Hung-Shan Weng, 2003, Catalytic Reaction of SO₂ over Supported Transition-Metal Oxide Catalysts with C₂H₄ as a Reducing Agent, *Appl. Catal. B*, 40, pp. 331-345.
 8. Hsu-Chin Hsiao and Hung-Shan Weng, Analysis of Factors Affecting the Synthesis of Allyl Phenyl Ether by Tri-Liquid-Phase Catalysis, *Chem. Eng. Comm.*, in press.
 9. Hsu-Chin Hsiao and Hung-Shan Weng, 2002, A Limitation of Reusing the Catalyst in Tri-Liquid-Phase Catalytic Systems, *Chem. Eng. Comm.*, in press.

B、研討會論文

1. 沈孝宗、陳寶丞、翁鴻山，以溶膠凝膠法製備用於一氧化氮還原反應之奈米級波洛斯凱特型觸媒，第二十屆台灣區觸媒及反應工程研討會論文集，台南縣曾文水庫，2002（國立成功大學化工系主辦）。
2. 王清輝、宋培彰、翁鴻山，過渡金屬氧化物擔體觸媒應用於乙烯為還原劑催化二氧化硫選擇性還原反應之研究，第二十屆台灣區觸媒及反應工程研討會論文集，台南縣曾文水庫，2002（國立成功大學化工系主辦）。
3. 蕭旭欽、王敏昌、翁鴻山，以續流攪拌式反應器利用三液相催化技術合成丙烯基苯基醚，第二十屆台灣區觸媒及反應工程研討會論文集，台南縣曾文水庫，2002（國立成功大學化工系主辦）。
4. 蕭旭欽、王凱弘、翁鴻山，以不使用有機溶劑之三液相催化技術合成烯類化合物，第二十屆台灣區觸媒及反應工程研討會論文集，台南縣曾文水庫，2002（國立成功大學化工系主辦）。
5. Hsu-Chin Hsiao, Wei-Chi Li and Hung-Shan Weng, Continuous-Flow Reactors for Liquid-Liquid-Solid phase Transfer Catalysis - Synthesis of n-Butyl Phenyl Ether, The 17th International Symposium on Chemical Reaction Engineering, 2002, Hong Kong, China.
6. Hung-Shan Weng, Bau-Chen Chen and Shiaw-Tzong Shen, Nanosized Perovskite

Catalyst for the Reaction of NO with CO as a Reducing Agent, The 9th APCChE Congress, 2002, Christchurch, New Zealand.

(二) 研究計劃

計畫名稱	經費(額度)	期限	補助單位	擔任職務
以續流攪拌式反應器利用液-液-固相間轉移技術合成醚類(1/3)	919,200	91.8 ~ 92.7	國科會	主持人
以溶膠凝膠法製備用於一氧化氮還原反應之奈米級觸媒(2/2)	972,000	91.8 ~ 92.7	國科會	主持人

(三) 研究獎項

- 1.本校特聘教授。
- 2.國科會專題研究計劃主持費。

三、服務

(一) 委員會

- 1.本校校友傑出成就獎選拔委員會委員。
- 2.本校微奈米科技研究中心指導委員會委員。
- 3.本校研究總中心人員進用及升等決審委員會委員。

(二) 主辦或協辦研討會

- 1.主辦第二十屆台灣區觸媒及反應工程研討會(91年6月20~21日)。
- 2.協辦第三屆海峽兩岸催化學術會議(91年6月19~20日)。

(三) 校內其他服務

- 1.導師
- 2.校務顧問
- 3.協助推動奈米材料整合研究。

(四) 校外服務

- 1.成大化工系友會監事。
- 2.中國化學會高雄分會理事。
- 3.吳金茂紀念文教基金會董事。
- 4.第17屆國際化學反應工程研討會(ISCRE 17)委員。
- 5.論文審查：

Ind. Eng. Chem. Research

J. of Hazardous Materials

Materials Chemistry and Physics

- 6.科學發展月刊觸媒專輯編輯。

周澤川

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	有機化學實驗 (一)	1		52	
上學期	工業電化學	3	大三 甲、乙、丙	40	楊明長
下學期	有機化學實(二)	1		48	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
汪玉銘	博士	定電流聚合導電性高分子法製備葡萄糖生物感測器之研究	
王智永	碩士	應用於濃硫酸之薄膜水份感測器研究	
林碩彥	碩士	電流式醋酸薄膜感測器	
徐嘉穗	碩士	利用薄膜技術製備電化學式丙酮感測器之研究	
周佩蓁	學士	3-ethylaminv-4-methylphenol 分模版製作	

二、研究

(一) 著作

A、期刊論文

- 1.Liao, Y.Y., Chou, T.C. 2000, "An Amperometric Alcohol Sensor by Using Electroless Nickel as Working Electrode", *Electroanalysis*, Vol. 12, pp. 55-59 (in USA) (SCI)
2. Lim, M. Y., Chou, T.C. Lin, X.Z., Chen, C.Y., Ling, T.R. and Shiesh, S.C. 2000, "Application of Nonionic Surfactants Combining Hydrophobic and Hydrophilic Choletholytic Solvents on Dissolution of Gallstones", *Colloids and Surfaces B:Biointerfaces*, Vol. 17, pp. 265-274 (in USA) (SCI) (EI)
- 3.Sun, C. C., Chou, T.C. 2000,"Electrochemically Promoted Photocatalytic Oxidation of Nitrite Ion by Using Rutile Form of TiO₂/Ti Electrode", *J.Mol.Catal A: CHEM.*, Vol. 151, pp. 133-145 (in USA) (SCI)
4. Yen, P. W., Chou, T.C., 2000,"Temperature Programmed Oxidation of Palladium Catalyst: Effect of Support on the Oxygen Adsorption Behavior". *Appl.Catal.A: General*, Vol. 198, pp. 23-31. (in USA) (SCI) (EI)
- 5.Wang, S. H., Chou, T. C., 2000, "Immobilized Ionphore Calcium Ion Sensor

- Modified by Montmorillonite”. *Electroanalysis*, Vol. 12, pp 468-470. (in USA) (SCI)
6. Ng, K. M., Wang, S. H. and Chou, T. C., 2000, “Gold-Solid Polymer Electrolyte Sensor for Detecting Dissolved Oxygen in Water”, *Sensor and Actuators B*, Vol. B66, pp 184-186. (in USA) (SCI)
 7. Lin, X. Z., Jen, C. M., Chou, C. K., Chou, C. S. Sung, M. J. and Chou, T. C., 2000, “Saturated Saline Enhances the Effect of Electrochemical Therapy” *Digestive Diseases and Sciences*, Vol. 45, No. 3, pp 509-514. (in USA) (SCI)
 8. Tsai, M. L., Lee, W. L. and Chou, T. C., 2001, “Degradation of Methyl- orange via Indirect Anodic Oxidation in an Undivided Cell” *J. Chin. Inst. Chem. Engrs.*, Vol. 32, No. 6, pp 517-524 (SCI)
 9. Twu, H. S., Ling, T. R., Chou, T. C. and Yang, M. C., 2001, “Ultrasonic Irradiation Effect in the Impregnation-Reduction Process of Preparing Pg/Nafion^{NH₄⁺} Sensor”, *Ultrasonics Sonochemistry*, Vol. 8, pp. 41-47. (in USA) (SCI)
 10. Pang C. C., Chen M. H., Lin T. Y. and Chou T. C., 2001, “ An Amperometric Ethanol Sensor by Using the Nickel Modified Carbon-Rod Electrode”, *Sensor and Actuators*, Vol. 73, pp. 221-227 (in USA) (SCI)
 11. Lin T. Y., Chen M. H. and Chou T. C., 2001, “Postpolymerization of Quaternary Ammonium Acrylate Polymer Produced by Electropolymerization”, *Journal of Applied Polymer Science*, Vol.82, pp1071-1076. (in USA) (SCI)
 12. Lin, R. C., Ling, R. T., Yang, M. C., and Chou, T. C., 2001, “Synthesis of Propylene Oxide in a Paired Electrolytic System: Studies on the Mechanism and Operating Factors”, *J. Chin. Inst. Chem. Engrs*, Vol. 32, pp.341-349 (SCI)
 13. Chen, M. H., Lin, T. Y. and Chou, T. C., 2001, “Trichloroethylene Sensor by Using Electrodeposited Pb Modified Graphite Strip Electrode”, *J. Electrochem. Soc.*, vol.149 (3), pp.H87-H92 (in USA) (SCI) (EI)
 14. Uang, Y. M., and Chou, T. C., 2002, “Criteria for Designing the Polypyrrole Glucose Biosensor by Galvanostatic Electropolymerization”, *Electroanalysis*, Vol. 14 NO.22 pp 1564-1570 (in USA) (SCI)
 15. Weng, Y. C. and Chou, T. C., 2002, “Ethanol Sensor by Using RuO₂-Modified Ni Electrode”, *Sensors and Actuators*, vol.B85(3) pp.246-255 (in USA) (SCI) (EI)
 16. Tsai, M. L., Cheng, L. F. and Chou, T. C., 2002, “In Situ Oxidative Degradation of Methyl Red via Electrogenated Anodic Br⁻/Br₂ and Cathodic O₂/H₂O₂ Redox Mediator”, *J. Chin. Inst. Chem. Engrs*, vol.33, No.4, pp 415-421. (SCI) (EI)
 17. Chiou, C. Y. and Chou, T. C., 2002, “Amperometric SO₂ Gas Sensors Based on Solid Polymer Electrolyte”, *Sensor and Actuators B* vol. 87, pp1-7. (in USA)

(SCI) (EI)

B、研討會論文

1. Wang, S. H., Liu, C. C. and Chou, T. C., "Extra Low Concentration NO₂ Sensor", The 8th Symposium on Sensing Technology, Yunlin, Taiwan, May 10, 2002.
2. Chen, M. U. and Chou, T. C., "Cathodic Dechlorination of Trichloroethylene", 201st Meeting of The Electrochemical Society, Philadelphia, May 12-17 2002.
3. Uang, Y. M. and Chou, T. C., "Fabrication of the Ppy/GODx Glucose Biosensor by Galvanostatic Method in Aqueous Solution", 7th World Congress on Biosensors, Kyoto, Japan, May 15-17 2002.
4. Uang, Y. M. and Chou, T. C., "The Immobilized GODx Conformation and Characteristics of the Galvanostatic Ppy/GODx Biosensor", 7th World Congress on Biosensors, Kyoto, Japan, May 15-17 2002.
5. Wang, C. C., Chen, M. U. and Chou, T. C., "A Novel Acetone Sensor", 9th International Meeting on Chemical Sensors, Boston, July 7-10, 2002.
6. Chen, W. J., Lin, D. Y. and Chou, T. C., "Synthesis of Ultrathin Molecularly Imprinted Film Composite Membranes for Sensing Cholesterol" 2nd International Workshop on Molecular Imprinting, La Grande Motte, France, September 14-19, 2002.
7. Lin, S., Chou, T. C. and Liu, C. C., "Applying Electropolymerization of Pyrrole to Fabricate Acetylcholine Imprinted Film", 2nd International Workshop on Molecular Imprinting, La Grande Motte, France, September 14-19, 2002.
8. Ou, S. H., Chou, T. C., and Liu, C. C. "Polyacrylamide Gels with Electrostatic Functional Groups for the Molecular Imprinting of Lysozyme", 2nd International Workshop on Molecular Imprinting, La Grande Motte, France, September 14-19, 2002.
9. Lin, T. Y., Hu, C. H., Shieh, S. C. and Chou, T. C., "Molecular Imprinting Polymer for Analysis of Albumin", 2nd International Workshop on Molecular Imprinting, La Grande Motte, France, September 14-19, 2002.
10. Lin, T. Y., Hu, C. H., Chou, T. C. and Liu, C. C., "Molecular Imprinting of Dopamine by Inorganic Matrices for Analysis of Biogenic Amines", 2nd International Workshop on Molecular Imprinting, La Grande Motte, France, September 14-19, 2002.

C、其他著作

1. 周澤川, 2002, 91/06/01~92/05/31, "提升產業技術及人才培育研究計畫—溶氧感測器", NSC 91-2622-E-006-011-CC3, 國科會。
2. 周澤川, 2002, 92/04/01~92/03/31, "分子模版徵感測晶片", 甲-91-E-FA09-5-4,

教育部。

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
提升產業技術及人才培育 研究計畫—溶氧感測器	500,000	91/06/01~92 /05/31	國科會	主持人
分子模版感測晶片	40,394,000	91/04/01~92 /03/31	教育部	總主持人

(三) 研究獎項

1. 李遠哲院長主持之財團法人傑出人才發展基金會傑出人才講座,民國 85 年至 90 年,每年 50 萬。
2. 國科會特約究員。
3. 國立成功大學講座教授

三、服務

(一) 行政工作

1. 國科會工程科技推展中心主任 (兼任)

(二) 委員會(校內)

1. 教育部學術審議委員會,第22屆委員(兼任)
2. 行政院國家科學委員會工程處,諮詢委員(兼任)
3. 中國化學工程學會,理事(兼任)
4. 中國化學會高雄分會,理事(兼任)
5. 中國化學工程學會叢書委員會,主任委員(兼任)
6. 中國化學工程學會會員委員會,委員(兼任)
7. 中國化學工程學會論文委員會,委員(兼任)
8. 教育部獎勵優良期刊評審委員會,委員(兼任)
9. 經濟部重點科技研究發展專案評審委員會,委員(兼任)
10. 農業委員會行政院列管科技研究專業評審委員會,審查委員(兼任)
11. 中國石油學會第23屆技術委員會煉製組委員會,委員(兼任)
12. 行政院勞工委員會,諮詢委員(兼任)
13. 工研院前瞻性研究計畫評審委員(兼任)

(四) 主辦或協辦研討會

1. “The 1st International Meeting on Microsensors and Microsystems”, 主持人, National Cheng Kung University, January 12-14, 2003.

(五) 校內其他服務(如導師---)

1. 國立成功大學化工系系友會,理事(兼任)
2. 系教評會委員
3. 校教評會委員

(六) 校外服務

1. 中國化學工程學刊(英文版), 編輯(兼任)
2. The 2000 International Chemical Congress of Pacific Basin, Co-organizer(兼任)
3. Rhone-Poulenc, Inc., Consultant (兼任)

蔡三元

一、教學

(一) 開授課程

學期	課程名稱	學分	開課班級	學生數	共同擔任老師
上學期	高分子科學	3	化工三	53	
上學期	單元操作實驗	2	化工四甲	27	
上學期	化學與生活	2	通識	56	
下學期	單元操作實驗	2	化工四甲	28	
下學期	電子特用化學品 及實驗	3	化工四 化工研究所	4	王春山
下學期	化學與生活	2	通識	52	

(二) 指導於 91 學年度畢業之碩士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
邱致銘	碩士	可溶性聚醯亞氨/二氧化矽 奈米複合材料之合成與性質研究	
蔡孟峰	碩士	含氟可溶性聚醯亞氨—醯亞氨之合成及 性質研究	

二、研究

(一) 著作

A、期刊論文

- 1.J.H. Hwang , S.Y. Tsay and C. Hwang (1999), A new stability test for discrete system using LDI Routh continued-fraction expansion, International and System Science, Vol. 30 , No 7 , 743-757 (EI)
- 2.C. Hwang , J.H. Hwang and S.Y. Tsay (1999), A stability test for discrete system using Davis'Z-domain continued-fraction expansion, IEEE Transactions on Circuits and System, Part 1, Vol. 46, 1012-1018 (EI)
- 3.J. H. Hwang , S. Y. Tsay and C. Hwang (1999), Variance and covariance computation for 2-DARMA process, Multidimensional System and Signal Processing, Vol. 10, 137-160 (EI)
- 4.C. Hwang , J.H. Hwang and S.Y. Tsay (1999), The evaluation of cross-correlation sequences for 2-D ARMA process, IEEE Transactions on Circuits and System, Part 2, Vol. 46, 1064-1072 (EI)

- 5.C. Y. Yang , S. Y. Tsay and R. C. C. Tsiang (2000), An enhanced process for encapsulating aspirin in ethyl cellulose microcapsules by solvent evaporation in an O/W emulsion , J. Microencapsulation , Vol. 17 , 269-277 (SCI)
- 6.J. F. Leu , S. Y. Tsay and C. Hwang (2000), Use of B-splines to obtain accurate transient responses for feedback control systems with time delays, Chem. Eng. Comm. Vol. 178 , 199-219 (EI,SCI)
- 7.J. H. Hwang , S. Y. Tsay and C. Hwang (2000), Computation of quadratic cost functionals for linear system with multiple time delays, IEEE Transactions on Automatic Control, Vol. 45, No. 4, 800-805 (EI)
- 8.C. Y. Yang , S. Y. Tsay and R. C. C. Tsiang (2001), Encapsulating aspirin into a surfactant-free ethyl cellulose microcapsule using nontoxic solvents by emulsion solvent-evaporation technique, J. Microencapsulation , Vol. 18 , 223-236 (SCI)
- 9.C. Y. Yang , S. Y. Tsay and B. K. Chen (2001), Application of gelatin for encapsulating aspirin into ethyl cellulose microcapsule in an O/W emulsion. Chem. Eng. Comm, Vol.186, 241-255 (EI,SCI)
- 10.J.F.Leu , S.Y.Tsay and C.Hwang (2002) , Design of optimal fractional-order PID controllers , J.Chin. Inst.Chem.Engrs. , Vol.33 , No.2 , 193-202(EI)
- 11.C.Hwang , J.F.Leu and S.Y.Tsay(2002) , A note on time-domain simulation of feedback fractional-order systems.IEEE Transactions on Automatic Control , Vol. 47 , No.4 , 625-631(EI)

B、研討會論文

- 1.J.F.Leu,S.Y.Tsay and C.Hwang(2000),Design of optimal fractional-order PID controllers,Proc.PSE Asia 2000,PS-22,195-200,Kyoto,Japan
- 2.蔡三元 ,陳信元 ,林水淵 (2001), 聚對苯二甲酸乙二醇酯的改質、物性及應用之研究 , 第二十四屆高分子研討會 , PE-06. 610-611

三、服務

(一) 委員會

- 1.化工系 學生事務委員會委員
- 2.化工系 教師評審委員會委員

(二) 校內其他服務

- 1.成功大學校務顧問
- 2.成功大學化工系系友會總幹事

(三) 校外服務

- 1.行政院勞委會技能檢定「化工」職類試題命製委員
- 2.財團法人石延平教授文教基金會董事

楊毓民

一、教學

(一) 開授課程

學期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 單元操作 (二)	6	化工系	157	蔡少偉 張鑑祥
上學期	界面現象	3	化工系碩博	25	張鑑祥
下學期	* 單元操作 (三)	12	化工系	163	蔡少偉 李玉郎
下學期	界面化學	3	化工系	24	張鑑祥

(二) 指導 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳凱斌	博士	在氣/液界面上 DPPC/長碳鏈醇類混合單分子層的行為	張鑑祥
葉紹任	碩士	共溶劑對陰陽離子液胞穩定性的影響	
林琪卿	學士	陰陽離子液胞的製備及其特性探討	

二、研究

(一) 著作

A、期刊論文

1. Jui Fu Shen, Yu Min Yang, and Jer Ru Maa, 2000, Chemical Enhancement for CO₂ Absorption into Dilute Aqueous Amine Solutions, J. Chin. Inst. Chem. Engrs., 31(1), 11-18. (SCI)
2. Tzung Hua Chiang, Tzu Chiang Wu, Yu Min Yang, and Jer Ru Maa, 2000, Bulk Liquid Soluble Surfactant Induced Retardation of the Thermocapillary Migration of a Droplet, J. Chin. Inst. Chem. Engrs., 31(2), 167-175. (SCI)
3. Shu Hao Hsu, Wei Hua Lee, Yu Min Yang, Chien Hsiang Chang, and Jer Ru Maa, 2000, Bubble Formation at an Orifice in Surfactant Solutions under Constant Flow Condition, Ind. Eng. Chem. Res., 39(5), 1473-1479. (SCI)
4. Chin Ming Chen, Chun Hsiung Lu, Chien Hsiang Chang, Yu Min Yang, and Jer Ru Maa, 2000, Influence of pH on the Stability of Oil-in-Water Emulsions Stabilized by a Splittable Surfactant, Colloids and Surfaces A: Physicochem. Eng. Aspects, 170, 173-179. (SCI)
5. Kai Bin Chen, Chien Hsiang Chang, Yu Min Yang, and Jer Ru Maa, 2000, On the Interaction of DPPC with Normal Long-Chain Alcohols in a Mixed Monolayer : A Thermodynamic Study, Colloids and Surfaces A: Physicochem. Eng. Aspects, 170,

- 199-208. (SCI)
6. Chin Ming Chen, Chien Hsiang Chang, Yu Min Yang, and Jer Ru Maa, 2000, Comparisons of the Effects of pH on the Interfacial Tension-Lowering Activity of Surfactants Triton X-100 and Triton SP-190, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 174, 357-365. (SCI)
 7. Yuh Lang Lee, Yung Chang Chen, Yu Min Yang, Chien Hsiang Chang, and Jer Ru Maa, 2000, Surface Characterization of the Monolayer and Langmuir-Blodgett Films of tetra-tert-butyl-Copper Phthalocyanine, *Thin Solid Films*, 370, 278-284. (SCI)
 8. Tzu Chiang Wu, Yu Min Yang, and Jer Ru Maa, 2000, Surfactant-Induced Retardation of the Thermocapillary Flow at a Gas/Liquid Interface, *Int. Comm. Heat Mass Transfer*, 27(5), 655-666. (SCI)
 9. 楊毓民, 林朝陽, 劉明輝, 簡振龍, 馬哲儒, 2000, 表面張力效應對陰陽離子界面活性劑水溶液中池式核沸騰的影響, *界面科學會誌*, 22, 9-18.
 10. Yuh Lang Lee, Wen Ching Tsai, Chien Hsiang Chang, and Yu Min Yang, 2001, Effects of Heat Annealing on the Film Characteristics and Gas Sensing Properties of Substituted and Un-substituted Copper Phthalocyanine Films, *Applied Surface Sci.*, 172, 191-199. (SCI)
 11. Tzu Chiang Wu, Yu Min Yang, and Jer Ru Maa, 2001, A Study of Retardation of the Thermocapillary Flow Caused by Surfactant Addition, *Int. Comm. Heat Mass Transfer*, 28(3), 357-367. (SCI)
 12. 曾元宏, 劉明輝, 楊毓民, 馬哲儒, 2001, 相變材料微膠囊的製備及測試, *界面科學會誌*, 23, 35-44.
 13. Yu Min Yang, Shao Jen Yeh, Chien Kang Hsiung, Chen Lung Chien, Chien Hsiang Chang, and Jer Ru Maa, 2001, Bubble Formation in Catanionic Surfactant Solutions under Constant-Flow Conditions, *J. Chem. Eng. Japan*, 34(4), 563-567. (SCI)
 14. Yu Min Yang and Jer Ru Maa, 2001, On the Criteria of Nucleate Pool Boiling Enhancement by Surfactant Addition to Water, *Chem. Eng. Res. Des., Trans. IChemE*, 79(A4), 409-416. (SCI)
 15. I Hsun Ku, Yuh Lang Lee, Chien Hsiang Chang, Yu Min Yang, and Jer Ru Maa, 2001, Influence of Transfer Promoters on the Deposition and Wettability Characteristics of Copper Tetra-Tert-Butyl Phthalocyanine Langmuir-Blodgett Films, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 191, 223-231. (SCI)
 16. Chao Tai Chen, Jer Ru Maa, Yu Min Yang, and Chien Hsiang Chang, 2001, Drop Formation from Flat Tip Nozzle in Liquid-Liquid System, *Int. Comm. Heat Mass Transfer*, 28(5), 681-692. (SCI)
 17. Ching Wen Sheu, Kuen Mo Lin, I Hsun Ku, Chien Hsiang Chang, Yuh Lang Lee,

- Yu Min Yang, and Jer Ru Maa, 2002, On the Langmuir-Blodgett Transfer of Copper Tetra-tert-butyl Phthalocyanine Monolayers in the Presence of Arachidic Acid, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 207, 81-88. (SCI)
18. Yu Min Yang, Chao Yang Lin, Ming Huei Liu, and Jer Ru Maa, 2002, Lower Limit of the Possible Nucleate Pool Boiling Enhancement by Surfactant Addition to Water, *J. Enhanced Heat Transfer*, 9(3-4), 153-160. (SCI)
19. Chao Tai Chen, Jer Ru Maa, Yu Min Yang, and Chien Hsiang Chang, 2002, Salt Effects on Single Aqueous Drops Falling through an Immiscible Organic Liquid, *Chem. Eng. Comm.*, 189(10), 1297-1313. (SCI)
20. Chung Ching Tung, Yu Min Yang, Chien Hsiang Chang, and Jer Ru Maa, 2002, Removal of Metal Ions and Dissolved Organics from Water Using Micellar-Enhanced Ultrafiltration with Mixed Surfactants, *Waste Management*, 22, 659-701. (SCI)
21. Ching Wen Sheu, Chien Hsiang Chang, Yuh Lang Lee, Yu Min Yang, and Jer Ru Maa, 2002, Fabrication and Morphology of Mixed Copper Tetra-tert-butyl Phthalocyanine/Arachidic Acid Langmuir-Blodgett Films, *J. Chin. Inst. Chem. Engrs.*, 33(6), 573-580. (SCI)
22. Chen Lung Chien, Shao Jen Yeh, Yu Min Yang, Chien Hsiang Chang, and Jer Ru Maa, 2002, Formation and Encapsulation of Catanionic Vesicles, *J. Chin. Colloid Interface Soc.*, 24(1), 31-45.

B、研討會論文

1. Yu Min Yang, Chao Yang Lin, Ming Huei Liu, and Jer Ru Maa, 2002, 8, Pool Boiling Heat Transfer of Binary Refrigerant Mixtures in a Confined Space, *Proc. 12th Int. Heat Transfer Conference*, Paper No. 10-Fourier-11, Grenoble, France.
2. 吳鑫湧, 李玉郎, 張鑑祥, 楊毓民, 2002, 11, 基板效應對物理氣相沈積程序中 Copper tetra-tert-butyl Phthalocyanine 薄膜的成長影響, 輸送現象與其應用專題研討會專輯, 357-360, 台北.
3. 謝秉軒, 張鑑祥, 楊毓民, 馬哲儒, 2002, 11, Triton SP-190/SDS 混合界劑之界面吸附行為的研究, 輸送現象與其應用專題研討會專輯, 361-364, 台北.
4. 張華珍, 張鑑祥, 楊毓民, 2002, 11, Budesonide 分散系統之表面張力行為的研究, 輸送現象與其應用專題研討會專輯, 365-368, 台北.
5. 林琪卿, 楊毓民, 2002, 11, 單鏈陰/陽離子界劑自發性形成類微脂粒液胞之探討, 中國化學工程學會年會暨專題研討會論文集, H-11, 嘉義.
6. 楊毓民, 2002, 11, 氣體感測薄膜的應答特性之研究, 中國化學工程學會年會暨專題研討會論文集, C-22, 嘉義.

C、其他著作

- 1.楊毓民, 2002, 氣體感測薄膜的應答特性之研究(3/3), 國科會專題研究計畫成果報告.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
氣體感測薄膜的應答特性之研究 (3/3)	648,000	90.08-91.07	國科會	計畫主持人
新型液胞傳輸載體之研究 (1/3)	972,100	91.08-92.07	國科會	計畫主持人

(三) 研究獎項

- 1.國科會專題研究計畫研究主持費
- 2.國科會大專學生參與專題研究計畫研究創作獎指導教授

三、服務

(一) 校外服務

- 1.中華民國界面科學學會常務監事
- 2.中國化學工程學會理事
- 3.中國化學工程學會化工會刊副總編輯
- 4.中國化學工程學會會誌編輯委員
- 5.中國工程師學會高雄市分會監事
- 6.中國化學會高雄市分會理事

劉瑞祥

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	有機化學	4	大二		
上學期					
下學期	有機化學	2	大二	58	
下學期	液晶材料及顯示元件	3	碩博	37	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
王宏宇	博士	含光學活性蒽醌基液晶性單體之合成及其在光學元件上之應用研究	
曾貴瑜	碩士	聚合型界面活性劑之合成及其在含奈米無機微粒塑膠光纖之應用研究	
楊博智	碩士	含硝基偶氮苯衍生基光敏性液晶高分子之合成及特性探討	
曾俊杰	碩士	環狀脂肪族高分子之合成及其在化學增幅正型光阻劑之應用研究	

二、研究

(一) 著作

A、期刊論文

1. J.H. Liu, F.R. Tsai, and T.Y. Tsai, 2000, Characterization of polymer-stabilized cholesteric texture devices using chiral monomers derived from borneol, Polym. For Advan. Techno., 11, 228-234. SCI, NSC86-2622-E006-010
2. J.H. Liu, J.L. Chen, H.U. Wang, and F.R. Tsai, 2000, Fabrication of gradient refractive index plastic rod using a novel centrifugal diffusion polymerization, Macromol. Chem. Phys., M99/093, 201, 126-131. SCI NSC88-2216-E006-001
3. J.H. Liu, J.L. Chen, H.U. Wang, and F.R. Tsai, 2000, Preparation and Characterization of Gradient Refractive Index Plastic Rods with Small Calibers, Macromol. Mater. And Eng., 274, 31-35. NSC87-CPC-E006-013
4. J.H. Liu, J.C. Shih, C.H. Shih, and W.T. Chen, 2001, Preparation and Characterization of Copolymers Having (+)-Bornylmethacrylate and Its Racemate for Positive Tone Photoresist, J. Appl. Polym. Sci., 81, 3538.
5. J.H. Liu, S.H. Lin, and J.C. Shie, 2001, Preparation and Characterization of

- Photoreactive Copolymers Containing Curable Pendants for Positive Photoresist, *J. Appl. Polym. Sci.*, 80, 328-333.
6. J.H. Liu, C.H. Shih, and W.T. Chen, 2001, Crosslinkable Positive Tone Photoresist Comprising Polymers with Pendant Carboxyl Groups, *J. Appl. Polym. Sci.*, Vol. 81, 1014.
 7. J.H. Liu, and J.C. Shih, 2001, Novel Crosslinking Method for Negative Tone Photoresist Having Pendant Carboxyl Moieties, *High Performance Polymers*, 13, 1-11.
 8. J.H. Liu, and J.C. Shih, 2001, Preparation and Characterization of Novel Polymers Having Ketal Moieties for Positive Photoresist, *Macromol. Chem. Phys.*, 202, 2986.
 9. J.H. Liu, and J.C. Shih, 2001, Preparation and Lithographic Performance of Novel Copolymers Having Acid-labile Pendant Alicyclic Ether Moieties, *J. Polym. Res.*, 8(2), 143.
 10. J.H. Liu, H.Y. Wang, C.D. Hsieh, 2001, Preparation and Characterization of Rhodamine B doped Gradient Refractive Index Plastic Rods, *Macromol. Chem. Phys.*, 202, 2980.
 11. J.H. Liu, J.C. Shih, 2002, Photocurable positive photoresist comprising copolymers having pendant alkoxy ethyl moieties, *J. Appl. Polym. Sci.*, 83, 4, 889-897.
 12. J.H. Liu, W.T. Chen, F.T. Wu, 2002, Characterization of Negative Tone Photoresist Based on Acid Catalyzed Dehydration Crosslinking of Novolac Resins Having Pendant Carboxyl Groups, *J. Polymer Research*, 9, 251-256.
 13. J.H. Liu, W.C. Chen, Y. Chang, M.H. Wei, H.W. Su, 2002, GI Polymer Optical Fibers, Chapter 2, Gradient-Index Polymer Optical Fibers, American Scientific Publishers, ISBN1-58883-012-8.

B、研討會論文

1. 劉瑞祥，王宏宇，謝慶東，2002，光增幅型塑膠光纖之製備及特性研究，高分子年會。
2. 劉瑞祥，王宏宇，何佳樺，2002，含奈米無機微粒型光纖之製作及光學特性研究，高分子年會。
3. 劉瑞祥，曾伯逸，曾煒展，2002，聚醯胺酸正型光阻劑之製備及特性探討，高分子年會。
4. 劉瑞祥，尤舜宗，吳阜蒼，蔡福人，王素誼，2002，壓克力系單體之合成及其在液晶元件之應用研究，高分子年會。
5. 劉瑞祥，王宏宇，何佳樺，Preparation and Characterization of GRIN Plastic Rods Containing Inorganic Nanoparticles, IUPAC PC-2002, Kyoto, Japan.

6.劉瑞祥，陳違廷，吳阜蒼，Synthesis and Characterization of Novel Photoresist Copolymers Derived From Camphor, IUPAC PC-2002, Kyoto, Japan.

C、其他著作

A	光酸生成劑及含有其之光阻劑	美國	USP No. 6432609B1	劉瑞祥	國科會	2002/08/13-2020/07/20	NSC89-2216-E006-016
---	---------------	----	-------------------	-----	-----	-----------------------	---------------------

技術移轉

技術名稱	專利名稱	授權單位	接受單位	合約期間	國科會計畫編號
塑膠光纖之製程及生產技術	1.折射率分布型GI光學元件之製法 2.集束性塑膠光學元件之製作	國科會 NSC-P-91-017	冠德光電科技股份有限公司	91.11.18-93.11.17	83-0405-E006-028
目前績效：目前正藉由該專利技術試產 GRIN 塑膠光纖。					

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
GI 光纖新製程研發	950000	92.4.1 至 92.12.31	工業局及工研院	主持人
GRIN 光學元件之研究：GRIN 光學元件用耐米微粒之製備及特性研究 (2/3)	1357600	20020801 20030731		主持人
化學增感形光組紀之合成及特性探討 (1/3)	873700	20020801 20030731		主持人

(三) 研究獎項

- 2002年SCI國際高分子學術雜誌，Journal of Polymer Research，最佳論文獎；SCI。
- 91年度國科會計畫主持費。
- 92年度國科會專利技術轉移獎助。

蔡少偉

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	單元操作(二)	6	化工系	160	楊毓民 張鑑祥
上學期	單元操作實驗	2	化工系	14	沈艾霖
上學期	高等反應工程學	6	研究所	89	翁鴻山 吳季珍
下學期	單元操作(三)	12	化工系	160	楊毓民 李玉郎
下學期	酵素及醱酵工程	3	研究所	9	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓 名	學 位	論 文 名 稱	共同指導教授
侯輝昌	碩 士	利用 PEI 修飾脂肪分解酵素進行外消旋 naproxen 三氟乙硫酯之水解動態動力分割	
陳俊吉	碩 士	利用回應曲面法探討添加胺基酸對肌酸酵素生產之影響	

二、研究

(一) 著作

A、期刊論文

- 1.Chen, C. Y., Chang, Y. S., Lin, S. A., Wen, H. I., Cheng, Y. C. and Tsai, S. W. 2002. "Racemization of (S)-profen thioesters by strong neutral bases in nonpolar organic solvents: Implication for ion-pair kinetic basicity", J. Org. Chem. 67, 3323-3326. (SCI)
- 2.Lu, C. S., Cheng, Y. C. and Tsai, S. W. 2002. "Integration of reactive membrane extraction with lipase-hydrolysis dynamic kinetic resolution of naproxen 2,2,2-trifluoroethyl thioester in isooctane", Biotechnol. and Bioeng., 79, 200-210. (SCI, EI)
- 3.Chen, C. Y., Cheng, Y. C. and Tsai, S. W. 2002. "Lipase-catalyzed dynamic kinetic resolution of (R, S)-fenoprofen thioester in isooctane", J. Chem. Technol. Biotechnol., 77, 699-705. (SCI, EI)
- 4.Hsu, C. H. and Tsai, S. W. 2001. "Improvements of Acinetobacter radioresistens lipase adsorption on Celite 535 by adding salts", Tamkang J. of Sci. and Eng., 4,

133-139.

- 5.Chen, J. C. and Tsai, S. W. 2000. "Enantioselective synthesis of (S)-ibuprofen ester prodrug in cyclohexane by *Candida rugosa* lipase immobilized on Accurel MP1000", *Biotechnol. Progress*, 16, 986-992. (SCI, EI)
- 6.Tsai, S. W., Cheng, I. C. and Hung, C. M. 2000. "Effects of hydrolysis and esterification side-reactions on the kinetic resolution of enzyme-catalyzed irreversible transesterification in organic solvents", *Chem. Eng. Sci.*, 55, 4571-4582. (SCI, EI)
- 7.Cheng I. C. and Tsai, S. W. 2000. "Quantitative analysis of enantioselective enzymatic hydrolysis with non-enantioselective removal of chiral products", *Biochem. Eng. J.* 5, 243-248. (SCI, EI)
- 8.Lin, C. N., Tsai, S. W. 2000. "Dynamic kinetic resolution of suprofen thioester via coupled trioctylamine and lipase catalysis", *Biotechnol. and Bioeng.* 69, 31-38. (SCI, EI)
- 9.Cheng, C. H. and Tsai, S. W. 2000. "D-pyroglutamic acid production from L-glutamic acid by successive racemization, resolution and dehydration", *ChIChE*, 31, 177-182. (SCI, EI)

B、研討會論文

- 1.Cheng, Y. C. and Tsai, S. W. 2002. "Effects of side-reactions on the dynamic kinetic resolution of enzyme-catalyzed irreversible acyl transfer under controlled initial water activity", 6th YABEC, Nov, Taipei, ROC.
- 2.Tsai, S. W., Hsu, W. F. and Ng, I. S. 2002. "Purification and characterization of creatinase by recombinant *Escherichia coli*", 9th APCChE Congress and CHEMECA, Christchurch, New Zealand.

C、其他著作及專利

- 1.蔡少偉，以酵素及有機檢為觸媒開發(S)-*-arylamine*之動態動力分割製程(1/3)，國科會計劃報告(NSC 91-2214-E006-024)，中華民國，4頁，2003。
- 2.蔡少偉，以酵素及有機檢為觸媒應用動態動力分割法進行(S)-naproxen生產之製程改善(II)，國科會計劃報告(NSC 91-2214-E006-025)，中華民國，4頁，2003。
- 3.蔡少偉、張春生，2002，光學活性S形-芳香取代基丙酸(profens)或其S形酯類之製造方法，中華民國專利150558號。

(二) 研究獎項

- 1.國科會92年度研究主持費

三、服務

(一) 行政工作

1. 工學院材化資學群副院長

(二) 委員會(校內)

1. 化工系研究生委員會、系館管理委員會、研究發展委員會
2. 院教評會委員、校務會議代表、校申訴委員會委員

(三) 校外服務

1. 中國化學會高雄分會理事 (至六月)
2. 中華生化工程學會理事
3. 中國化學工程師學會「化工會刊」主編 (至四月)

江建利

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 程序設計	3	大四三班	145	陳特良、張珣庭
上學期	* 程序控制	2	大三	48	
上學期	化工應用數值方法	1.5	大三四	18	凌漢辰
上學期	化工科技製程與管理	3	工學院工程 管理班	6	
下學期	* 單元操作 (一)	6	大三三班	158	許梅娟
下學期	單元操作實驗	3	大四	22	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳文利	碩士	含溴化四丁基磷系統之相轉換特性	
張宜溫	碩士	重質油加氫脫氮製程的應用設計	
黃國強	碩士	應用 HAZOP 及 RBI 系統於輕裂工場 風 險 分 析 及 其 效 益 之 研 究	

二、研究

(一) 著作

B、研討會論文

- 1.江建利、施又嘉, 2002年6月, 雙模式觸媒于重質油加氫脫硫製程的應用設計, 二十屆台灣區觸媒及反應工程研討會, p141。

三、服務

(五) 校內其他服務(如導師---)

- 1.工學院院務會議代表
- 2.大一乙班導師
- 3.系管管理委員會委員
- 4.學生事務委員會委員

(六) 校外服務

- 1.中國化學工程學會會刊經理編輯

鍾賢龍

一、教學

(一) 開授課程

學期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	化工熱力學	3	大三	45	
上學期	量子化學與統計熱力學	3	大四	18	
下學期	陶瓷工程	3	碩博	8	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
張智偉	碩士	燃燒法合成氮化鋁粉體之新製程開發	
林智暄	碩士	噴霧乾燥法製備表面改質之氮化鋁粉體	
林瑞明	碩士	氮化鋁陶瓷材料之微波燒結與傳統燒結研究	
劉世量	碩士	提升氮化鋁/環氧樹脂複合材料熱傳導性質之研究	

二、研究

(一) 著作

A、期刊論文

- 1.Chun-Nan Lin and Shyan-Lung Chung, 2001, "Combustion Synthesis of Aluminum Nitride Powder Using Additives", J. Mater. Res., 16(8):2200-2208, 2001. (SCI, EI)
- 2.Chun-Nan Lin and Shyan-Lung Chung, 2001, "A Combustion Synthesis Method for Synthesis of Aluminum Nitride Powder Using Aluminum Containers", J. Mater. Res., 16(12): 3518-3525, 2001.(SCI, EI)
- 3.Chyi-Ching Huang and Shyan-Lung Chung, 2002, " Combustion Synthesis Reaction in theTi + C/Ti + Al System-Influence of Reactant Composition", J. Mater. Science Letters, 21: 447-450, 2002. (SCI, EI)
- 4.Chun-Nan Lin, Cheng-Lieung Liu, and Shyan-Lung Chung, 2003,"Properties and Applications of a Combustion Synthesized AlN Powders", accepted for publication in Bulletin of the Chinese Ceramic Society, 2003.
- 5.Cheng-Yu Hsieh, Chun-Nan Lin, Hung-Jia Chen, Shyan-Lung Chung, Jiping Cheng and Dinesh K. Agrawal, 2002 "Microwave Sintering of a Combustion synthesized AlN Powder", J. Chin. Inst. Chem.Engrs, Festschrift issue in honor of Professor Jer-Ru Maa. 33(6): 621-629(2002)(SCI).
- 6.Shyan-Lung Chung and Wen-Liang Yu, "Method for Preparing Aluminum Nitride

Powders”, ROC and US Patents, (ROC Patent No. 121246, 10/1/2000-3/10/2017; US patent No. 5,846,508,12/8/1998-5/9/2017).

7. Shyan-Lung Chung and Wen-Liang Yu, “Method for Production of AlN Powder”, ROC Patent No. 133194, 5/16/2001-11/23/2017; and US patents in pending.
8. Shyan-Lung Chung and Jan-Ming Soon, “Method for Manufacturing Functionally Gradient Materials”, ROC Patent No. 144007, 10/21/2001-4/29/2018; and US Patent No. 6019936, 2/1/2000-4/30/2019.
9. Shyan-Lung Chung, Chun-Nan Lin and Jan-Shiou Lin, “Method for Synthesis of Aluminum Nitride”, ROC Patent No. 146066, 12/1/2001-2/21/2020; and US patents in pending.

B、研討會論文

1. 邀請演講，鍾賢龍，“高導熱材料-氮化鋁的製造與應用技術”，2002跨世紀科技列車研討會，台南, 2002年4月12日，高雄，2002年4月26日。
2. Cheng-Yu Hsieh, Chun-Nan Lin, Hunh-Jia Chen, Shyan-Lung Chung, Jiping Cheng and Dinesh K Agrawal, 2002, “Microwave Sintering of a Combustion Synthesized AlN Powder”, 3rd World Congress on Microwave & Radio Frequency Applications, Sydney, Sept. 22-26, 2002.
3. 邀請演講，鍾賢龍，“微波燒結氮化鋁陶瓷材料之研究”，微波應用技術研討會，台北，2002年11月1日。

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
微波燃燒合成氮化物陶瓷粉體的研究	1,396,100	90/08/01 91/07/31	國科會	主持人
氮化鋁之合成與應用性質研究(2/2)	1,016,200	90/08/01 91/07/31	國科會	主持人
利用微波能燒結氮化鋁陶瓷材料的研究	400,000	91/03/06 91/11/30	工研院	主持人
氮化鋁合成與應用性質研究(III) NSC-91-2214-E-006-016	968,800	91/8 92/7	國科會	主持人

(三) 研究獎項

國科會研究主持費

三、服務

(二) 委員會(校內)

1. 化工系教評會委員

2. 化工系碩士班甄試委員
 3. 大學部甄試委員
 4. 化工系空間運用及研究發展委員會委員
 5. 工學院院務代表
- (五) 校內及其他服務 (如導師---)
1. 擔任導師

溫添進

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 物理化學(一)	4	化工二甲		
下學期	* 物理化學(二)	2	化工二甲		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳韋志	博士	聚苯胺之電感電容及蕭基行為研究	
王興龍	博士	高分子電解質於發光元件之研究	
陳思聖	碩士	聚苯胺衍生物之合成分析與在發光二極體之應用	
張崇富	碩士	磺酸化聚二苯胺之合成與特性研究	

二、研究

(一) 著作

A、期刊論文

- 1.Ten-Chin Wen, Hwang-Shin Tseng, and Tsung-Tien Cheng, "Composite Electrolytes Comprising Polytetramethylene/Polypropylene Glycol-Based Waterborne Polyurethanes and Polyethylene Oxide via a Mixture Design Approach", Industrial & Engineering Chemistry Research, 39, 72-78 (2000).
- 2.Ten-Chin Wen and Wei-Chih Chen, "Blending Thermoplastic Polyurethanes and Poly(ethylene oxide) for Composite Electrolytes via a Mixture Design Approach", J. Appl. Polym. Sci., 77, 680-692 (2000).
- 3.Ten-Chin Wen, Shih-Sheng Luo, and Chien-Hsin Yang, "Ionic Conductivity of Polymer Electrolytes Derived from Various Diisocyanate-based Waterborne Polyurethanes", Polymer, 41, 6755-6764 (2000).
- 4.Ten-Chin Wen, Hwang-Shin Tseng, and Zhao-Bin Lu, "Co-Solvent Effect on Conduivity of Composite Electrolytes Comprising Polyethylene Oxide and Polytetramethylene Glycol-Based Waterborne Polyurethane via a Mixture Design Approach", Solid State Ionics, 134, 291-301 (2000).
- 5.Chien-Hsin Yang, Cheng-Chieh Lee, and Ten-Chin Wen, "Hypochlorite Generation on Ru-Pt Binary Oxide for Treatment of Dye Wastewater", J. Appl. Electrochem., 30, 1043-1051 (2000).
- 6.V. Rajendran, A. Gopalan, T. Vasudevan, and Ten-Chin Wen, "Electrochemical

- Copolymerization of Diphenylamine with Aniline by Pulse Potentiostatic Method”, *J. Electrochem. Soc.*, 147, 3014-3020 (2000).
- 7.V. Rajendra, A. Gopalan, T. Vasudevan, Wei-Chih Chen, and Ten-Chin Wen, “Growth Behavior of Polyaniline Films Deposited by Pulse Potentiostatic Method”, *Materials Chemistry and Physics*, 65, 320-328 (2000).
 - 8.Hsing-Lung Wang, Hsien-Ming Kao, and Ten-Chin Wen, “Direct ^7Li NMR Spectral Evidence for Different Li^+ Local Environments in a Polyether Poly(urethane-urea) Electrolyte”, *Macromolecules*, 33, 6910-6912 (2000).
 - 9.Tsung-Tien Cheng and Ten-Chin Wen, “Ternary Polymer Composites for Gel Electrolytes via a Mixture Design Approach”, *J. Chin. Inst. Chem. Engrs.*, 31, 533-543 (2000).
 - 10.L.C. Chiang, J. E. Chang, and Ten-Chin Wen, “Destruction of refractory humic acid by electromechanical oxidation process”, *Water Science and Technology*, 42, 225-232 (2000).
 - 11.M. Digar and Ten-Chin Wen, “Ionic Conductivity and Morphological Study of a Thermoplastic Polyurethane Based Electrolyte Comprising of Mixed Soft Segment”, *Polymer Journal*, 32, 921-931 (2000).
 - 12.Ten-Chin Wen and Wei-Chih Chen, “Gelled Composite Electrolyte Comprising Thermoplastic Polyurethane and Poly(ethylene oxide) for Lithium Batteries”, *J. Power Sources*, 92,139-148 (2001).
 - 13.M. Digar and Ten-Chin Wen, “Role of PVME on the ionic conductivity and morphology of a TPU based electrolyte”, *Polymer*, 42, 71-81 (2001).
 - 14.C. Sivakumar, T. Vasudevan, A. Gopalan, and Ten-Chin Wen, “Chemical Oxidative Polymerization and in situ Spectroelectrochemical Studies of a Sulfonated Aniline Derivative by UV-Visible Spectroscopy”, *Industrial & Engineering Chemistry Research*, 40, 40-51 (2001).
 - 15.Hsing-Lung Wang, Hsien-Ming Kao, Mohanlal Digar, and Ten-Chin Wen, “FTIR and Solid State ^{13}C NMR Studies on the Interaction of Lithium Cations with Polyether Poly(urethane urea)”, *Macromolecules*, 34, 529-537 (2001).
 - 16.Ming-Sieng Wu and Ten-Chin Wen, “The Addition of Al_2O_3 in Composite Electrolytes Consisting of Polyethylene Oxide and Polytetramethylene Glycol Based Waterborne Polyurethane”, *J. Chin. Inst. Chem. Engrs.*, 32, 47-56 (2001).
 - 17.Ten-Chin Wen, C. Sivakumar, A. Gopalan, “In situ, UV-Vis spectro-electrochemical studies on the initial stages of copolymerization of aniline with diphenylamine-4-sulphonic acid”, *Electrochimica Acta*, 46, 1071-1085 (2001).
 - 18.R. Anbarasan, N. Muthumani, T. Vasudevan, A. Gopalan, and Ten-Chin Wen, “Chemical Grafting of Polyaniline onto Nylon66 Fiber in Different media”, *Journal of Applied Polymer Science*, 79, 1283-1296 (2001).

19. Ten-Chin Wen, Li-Ming Huang, and A. Gopalan, "Electrochemical Synthesis of A Novel Polyaniline Based Conducting Copolymer with –S-S- Links", *J. Electrochem. Soc.*, 148 (2) D9-D17 (2001).
20. V. Rajendra, A. Gopalan, T. Vasudevan, Wei-Chih Chen, and Ten-Chin Wen, "Deposition of copolymer of aniline with o-chloro aniline by pulse potentiostatic method and characterization", *Materials Chemistry and Physics*, 69, 62-71 (2001).
21. Ten-Chin Wen, Shiue-Liang Hung, and M. Digar, "Effect of Polypyrrole on the Morphology and Ionic Conductivity of TPU Electrolyte Containing LiClO₄", *Synthetic Metals*, 118, 11-18 (2001).
22. Ten-Chin Wen, Han-Hsin Kuo, and A. Gopalan, "Studies on Composite Electrolytes Composed of Thermoplastic Polyurethane and Polyacrylonitrile", *Macromolecules*, 34, 2958-2963 (2001).
23. Ten-Chin Wen and Hsuan-Hsu Chen, "Soft Segmental Effect of Methylene Bis(p-cyclohexyl isocyanate) Based Thermoplastic Polyurethane Impregnated with Lithium Perchlorate/Propylene Carbonate on Ionic Conductivity", *J. Appl. Polym. Sci.*, 80, 935-942 (2001).
24. Ming-Sieng Wu, Ten-Chin Wen, and A. Gopalan, "Electrochemical Copolymerization of Diphenylamine and Anthranilic Acid with Various Feed Ratios", *J. Electrochem. Soc.*, 148, D65-D73 (2001).
25. Ten-Chin Wen, Li-Ming Huang, A. Gopalan, "An in situ spetroelectrochemical investigation on the copolymerization of diamino benzenesulfonic acid with aniline and its derivatives" *Electrochimica Acta*, 46, 2463-2475 (2001).
26. Yu-Lin Du and Ten-Chin Wen, "The feasibility study of composite electrolytes comprising thermoplastic polyurethane and poly(ethylene oxide)", *Materials Chemistry and Physics*, 71, 62-69 (2001).
27. M. Digar, Shiue-Liang Hung, and Ten-Chin Wen, "Blending Poly(Methyl Methacrylate) and Poly(Styrene-co-Acrylonitrile) as Composite Polymer Electrolyte", *J. Appl. Polym. Sci.*, 80, 1319-1328 (2001).
28. Ten-Chin Wen, Jui-Chin Fang, Hung-Jye Lin, and Cien-Hsin Yang, "Characteristics of PPG-Based Thermoplastic Polyurethane Doped with Lithium Perchlorate", *J. Appl. Polym. Sci.*, Vol. 82, 389-399 (2001).
29. Ten-Chin Wen, Jui-Chin Fan, and A. Gopalan, "Morphology and Conductivity Changes in a Thermoplastic Polyurethane Based Copolymer Consisting of Different Soft Segments", *J. Appl. Polym. Sci.*, 82, 1462-1473 (2001).
30. Chein-Yie Chung, Ten-Chin Wen, and A. Gopalan, "Electrochemical Copolymerization of 1-Naphthylamine with Aniline and o-Toluidine", *Materials Chemistry and Physics*, 71, 148-154 (2001).
31. Ten-Chin Wen, Li-Ming Huang, and A. Gopalan, "Spectroscopic and thermal

- properties of the copolymer of aniline with dithiodianiline”, *Synthetic Metals*, 123, 451-457 (2001).
32. Ten-Chin Wen, Han-Hsin Kuo, and A. Gopalan, “Statistical Design Strategies to Optimize Properties in Emulsion Copolymerization of Methyl methacrylate and Acrylonitrile”, *Industrial & Engineering Chemistry Research*, 40, 4536-4542 (2001).
 33. C. Sivakumar, A. Gopalan, T. Vasudevan, and Ten-Chin Wen, “Soluble Conducting Poly(dipropargyl ether) formation through Ultraviolet-Visible Spectroscopy”, *Journal of Materials Science*, 36, 5289-5294 (2001).
 34. Chein-Yie Chung, Ten-Chin Wen, and A. Gopalan, “Identification of Electrochromic Sites In Poly(diphenylamine) Using A Novel Absorbance-Potential-Wavelength Profile”, *Electrochimica Acta*, 47, 423-431 (2001).
 35. Wei-Chih Chen, Ten-Chin Wen, and A. Gopalan, “Electrochemical and Spectroelectrochemical Evidences for Copolymer Formation between 2-Amino Diphenylamine and Aniline”, *J. Electrochem. Soc.*, 148, E427-E434 (2001).
 36. Ming-Sieng Wu, Ten-Chin Wen, and A. Gopalan, “In situ UV-visible spectrochemical studies on the copolymerization of diphenylamine with anthranilic acid”, *Materials Chemistry and Physics*, 74, 58-65 (2002).
 37. Ten-Chin Wen, C. Sivakumar, A. Gopalan, “In situ spectroelectrochemical evidences for the copolymerization of o-toluidine with diphenylamine-4 -sulphonic acid by UV-Visible spectroscopy”, *Spectrochimica Acta Part-A: Molecular and Biomolecular Spectroscopy*, 58, 167-177 (2002).
 38. C. Sivakumar, A. Gopalan, T. Vasudevan, and Ten-Chin Wen, “Kinetics of polymerization of N-methyl aniline using UV-Visible spectroscopy”, *Synthetic Metals*, 126, 123-135 (2002).
 39. S. Parkash, C. Sivakumar, Rajendra, T. Vasudevan, A. Gopalan, and Ten-Chin Wen, “Growth behavior of poly(o-toluidine-co-p-fluoroaniline) deposition by cyclic voltammetry”, *Materials Chemistry and Physics*, 74, 74-82 (2002).
 40. M. Digar S.L. Hung, H.L. Wang, Ten-Chin Wen, and A. Gopalan, “Study of Ionic Conductivity and Microstructure of a Cross-linked Polyurethane Acrylate Electrolyte”, *Polymer*, 43, 681-691 (2002).
 41. Ten-Chin Wen, C. Sivakumar, and A. Gopalan, “Studies on Processable Conducting Blend of Poly(diphenylamine) and Poly(vinylidene Fluoride)”, *Materials Letters*, 54, 430-441 (2002).
 42. Ten-Chin Wen, Yu-Lin Du, and Mohanlal Digar, “Compositional effect on the morphology and ionic conductivity of thermoplastic polyurethane based electrolytes”, *European Polymer Journal*, 38, 1039-1048 (2002).
 43. S.L. Hung, Ten-Chin Wen, and A. Gopalan, “Application of statistical design

- strategies to optimize conductivity of electrosynthesized polypyrrole”, *Materials Letters*, 55, 165-170 (2002).
44. Ten-Chin Wen, Han-Hsin Kuo, and A. Gopalan, “The Influence of Lithium Ions on Molecular Interaction and Conductivity of Composite Electrolyte Consisting of TPU and PAN”, *Solid State Ionics*, 147, 171-180 (2002).
45. C. Sivakumar, T. Vasudevan, A. Gopalan, and Ten-Chin Wen, “Simultaneous synthesis and doping of poly(1,6-heptadiyne-co-dipropargyl ether) using ionic initiators”, *Polymer*, 43, 1781-1787 (2002).
46. M. Digar S.L. Hung, Ten-Chin Wen, and A. Gopalan, “Studies on cross-linked polyurethane acrylate based electrolyte consisting of reactive vinyl/divinyl diluents”, *Polymer*, 43, 1615-1622 (2002).
47. Wei-Chih Chen, Ten-Chin Wen, Chi-Chang Hu and A. Gopalan, “Identification of Inductive Behavior for Polyaniline via Electrochemical Impedance Spectroscopy”, *Electrochimica Acta*, 47, 1305-1315 (2002).
48. Wei-Chih Chen, Ten-Chin Wen, and A. Gopalan, “Negative Capacitance for Polyaniline – An Analysis via Electrochemical Impedance Spectroscopy”, *Synthetic Metals*, 128, 179-189 (2002).
49. Han-Hsin Kuo, Wei-Chih Chen, Ten-Chin Wen, and A. Gopalan, “A Novel Composite Gel Polymer Electrolyte for Rechargeable Lithium Batteries”, *Journal of Power Sources*, 110, 27-33 (2002).
50. Chorng-Fu Chang, Wei-Chih Chen, Ten-Chin Wen, and A. Gopalan, “Electrochemical and Spectroelectrochemical Studies on Copolymerization of Diphenylamine with 2,5-Diaminobenzenesulfonic acid”, *J. Electrochem. Soc.*, 149, E298-E305 (2002).
51. Li-Ming Huang, Ten-Chin Wen, and Chien-Hsin Yang, “Electrochemical copolymerization of aniline and 2,2'-dithiodianiline”, *Materials Chemistry and Physics*, 77, 434-441 (2002).
52. Ten-Chin Wen, Yi-Hsin Chen, and A. Gopalan, “Electrochemical Synthesis and Characterization of A New Conducting Copolymer Having Amino Isoquinoline Units to Influence Redox Characteristics”, *Materials Chemistry and Physics*, 77, 559-570 (2002).
53. Wei-Chih Chen, Ten-Chin Wen, and A. Gopalan, “Role of Anions to Influence Inductive Behavior for Poly(2-Amino Diphenylamine-co-Aniline) — An Electrochemical Impedance Spectroscopic Analysis”, *Synthetic Metals*, 130, 61-71 (2002).
54. Li-Ming Huang, Ten-Chin Wen, and A. Gopalan, “Poly(2,5-dimethoxyaniline) based electrochromic device”, *Materials Chemistry and Physics*, 77, 726-733(2002).

55.Li-Ming Huang, Ten-Chin Wen, and A. Gopalan, "In Situ UV-Visible Spectroelectrochemical Studies on Electrochromic Behavior of Poly(2,5-dimethoxyaniline)", Synthetic Metals, 130, 155-163(2002).

56.Wei-Chih Chen, Ten-Chin Wen, and A. Gopalan, "The Inductive Behavior Derived From Hydrolysis of Polyaniline", Electrochimica Acta, 47, 4195-4206 (2002).

B、研討會論文

1. Ten-Chin Wen, "Redox Behavior of Sulphonated Polyaniline in Iron (III) Environment", 201st Meeting of the Electrochemical Society, Philadelphia, USA, 2002.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
電化學發光元件與電晶體之研究(1/3)	1,731,200	91/08/01~ 92/07/31	國科會	主持人
循環伏安植入奈米聚苯胺於碳材之超高電容器研究	583,200	91/08/01~ 92/07/31	國科會	主持人

(三) 研究獎項

1.國科會特約研究人員

陳 雲

一、教 學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	*儀器分析	2	三甲	48	
上學期	聚合反應原理	3	碩博	27	
上學期	*有機化學實驗	1	二甲	42	
下學期	*儀器分析實驗	1	三甲	47	
下學期	成膜原理與技術	3	碩博	42	郭炳林,洪昭南,楊明長

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓 名	學位	論 文 名 稱	共同指導教授
余昀濤	碩士	主鏈含孤立發光及電子傳遞基團高分子的合成與光電性質	

二、研 究

(一) 著作

A、期刊論文

1. Hsiao-Wen Hwang and Yun Chen*, 2000, "Synthesis and Characterization of New Poly(aryl ether)s Containing Alternate Emitting and Electron Transporting Chromophores", *Polymer*, 41(17), 6581-8. (SCI, EI)
2. Hsiao-Wen Hwang and Yun Chen*, 2000, "Synthesis and Solvatochromism of Soluble Polyethers Containing Isolated Emissive p-Aryl Vinylene Derivatives", *J. Polym. Sci.: Part A: Polym. Chem.*, 38(8), 1311-7. (SCI, EI)
3. Hsiao-Wen Hwang and Yun Chen*, 2001, "Synthesis, Electrochemical and Optical Properties of Novel Poly(aryl ether)s with Isolated Carbazole and p-Quaterphenyl Chromophores", *Macromolecules*, 34(9), 2981-6. (SCI, EI)
4. Yun Chen*, Shiao-Ping Lai, 2001, "Synthesis, Optical and Electrochemical Properties of Novel Polyethers Containing Isolated Distyrylbenzene Derivatives and Side Aromatic 1,3,4-Oxadiazole Chromophores", *J. Polym. Sci.: Part A: Polym. Chem.*, 39, 2571-80. (SCI, EI)
5. Yun Chen* and Tzi-Yi Wu, 2001, "Synthesis, optical and electrochemical properties of luminescent copolymers containing N-hexyl-3,8-iminodibenzyl chromophores", *Polymer*, 42 (25), 9895-9901. (SCI, EI)
6. Yun Chen* and Chih-Feng Huang, 2002, "Aromatic polyethers containing distyrylbenzene and 1,3,4-oxadiazole chromophores: synthesis and electrochemical properties", *Synth. Met.*, 125(3), 379-387. (EI, SCI)

7. Cheng-Jang Tsai, Yun Chen*, 2002, "Synthesis and Properties of Thermotropic Liquid Crystalline Polyoxadiazoles with Flexible Polymethylene Spacers", *J. Polym. Sci.: Part A: Polym. Chem.*, 40(3), 293-301. (EI, SCI)
8. Hao-Shiung Chang, Tzi-Yi Wu and Yun Chen*, 2002, "Synthesis and Properties of TLCs with 2,6-Naphthalene-based Mesogen, Polymethylene Spacer and Non-linear 4,4'-Thiodiphenyl links", *J. Appl. Polym. Sci.*, 83, 1536-46. (EI, SCI)
9. Shiao-Wen Hwang, Shinn-Horng Chen and Yun Chen*, 2002, "Synthesis and Characterization of New Poly(aryl ether)s with Isolated Fluorophores", *J. Polym. Sci.: Part A: Polym. Chem.*, 40, 2215-24. (EI, SCI)
10. Shiao-Wen Hwang and Yun Chen*, 2002, "Photoluminescent and Electrochemical Properties of Novel Poly(aryl ether)s with Isolated Hole-Transporting Carbazole and Electron-Transporting 1,3,4-Oxadiazole Fluorophores", *Macromolecules*, 35(14), 5438-43. (EI, SCI)
11. Yun Chen*, Chi-Kuei Liao, Tzi-Yi Wu, 2002, "Synthesis and Characterization of Luminescent Copolyethers with Alternate Stilbene Derivatives and Aromatic 1,3,4-Oxadiazoles", *Polymer*, 43(17), 4545-55. (EI, SCI)
12. Yun Chen*, Yu-Yi Huang and Tzi-Yi Wu, 2002, "Synthesis and characterization of Luminescent Polyethers with 2,5-Distyrylthiophene and Aromatic Oxadiazole chromophores", *J. Polym. Sci.: Part A: Polym. Chem.*, 40(17), 2927-2936. (EI, SCI)
13. Tzi-Yi Wu and Yun Chen*, 2002, "Synthesis and Characterization of Luminescent Copolymers Containing Iminodibenzyl and Divinylbenzene Chromophores", *J. Polym. Sci.: Part A: Polym. Chem.*, 40(21), 3847-3857. (EI, SCI)
14. Tzi-Yi Wu and Yun Chen*, 2002, "Synthesis, Optical and Electrochemical Properties of Novel Copolymers Containing Alternate 2,3-Quinoxaline and Hole-transporting Units", *J. Polym. Sci.: Part A: Polym. Chem.*, 40(24), 4570~4580. (EI, SCI)
15. Tzi-Yi Wu and Yun Chen*, 2002, "Synthesis and Characterization of Novel Luminescent Polymers with Alternate Phenothiazine and Divinylbenzene Units", *J. Polym. Sci.: Part A: Polym. Chem.*, 40(24), 4452~4462. (EI, SCI)

B、研討會論文

1. 許榮寶, 陳雲, 2002, "含發光基及噁二唑基高分子的合成及光電性質探討", 第二十五屆高分子研討會論文專輯, P.1.
2. 吳知易, 陳雲, 2002, "主鏈含發光基及電洞傳遞基高分子的合成與性質研究", 第二十五屆高分子研討會論文專輯, P.2..
3. 陳信宏, 陳雲, 2002, "主鏈含孤立發光基團3,6-二苯乙烯基口卡口坐及對-

四聯苯高分子的合成及電化學性質”，第二十五屆高分子研討會論文專輯，P.3..

4. 蔡成章，陳雲，2002，”熱向型液晶聚噁二唑之製備與反奇偶效應”，第二十五屆高分子研討會論文專輯，P.5..

5. 黃孝文，陳雲，2002，”主鏈含孤立發光團之聚芳香醚高分子的合成及發光性質研究”，第二十五屆高分子研討會論文專輯，P.115..

C、其他著作

1. 陳雲，2002，”單層發光二極體用共軛高分子的合成及特性(2/3)”，國科會專題研究計畫進度報告，計畫編號: NSC 90-2216-E-006-036。

2. 陳雲，2002，”主鏈含發光基及電子傳遞基高分子的合成與性質(3/3)”，國科會專題研究計畫成果報告，NSC 90-2216-E-006-034。

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
單層發光二極體用共軛高分子的合成及特性(2/3)	932,000	91/08/01 ~ 92/07/31	國科會	主持人

三、服務

(二) 委員會(校內)

1. 化工系課程委員會委員

2. 化工系研究生事務委員會委員

(五) 校內其他服務(如導師---)

1. 化工系一丙導師

郭炳林

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 有機化學 (一)	2	化工系	52	
下學期	* 有機化學 (二)	2	化工系	54	
下學期	成膜原理與劑術	3	化工所	42	陳雲 楊明長 洪昭南
下學期	界面活性劑原理 與應用	3	化工所	14	張鑑祥 陳炳宏

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳韋甫	碩士	以側接寡聚乙烯亞胺之聚丙烯胺擬樹枝狀高分子製備金屬奈米粒子	郭 炳 林

二、研究

(一) 著作

A、期刊論文 (下列期刊論文已全納入SCI中)

- 1.Hou, S. S.; Chung, Y. P.; Chan, C. K.; Kuo, P. L., "Function and Performance of Silicone Copolymer (IV) Curing Behavior and Characterization of Epoxy-Siloxane Copolymers Blended with Diglycidyl Ether of Bisphenol-A", Polymer, 41, 3263, 2000.
- 2.Kuo, P. L.; Chen, C. L.; Hou, S. S., "Function and Performance of Silicone Copolymers (V). Synthesis and Properties of Novel Acrylized-Silica Monomer", Macromolecular Chem. & Phys., 201, 1451, 2000.
- 3.Wang, T. L.; Lee, H. M.; Kuo, P. L., "Functional Polymers for Colloidal Applications. XIV Syntheses of Differently Charged Styrene-Maleic Anhydride Copolymer and Their Dispersing Behavior to Clay Particles", J. Appd. Polymer Sci., 78, 592, 2000.
- 4.Hou, S. S.; Kuo, P. L., "Synthesis and Characterization of Amphiphilic Graft Copolymers Based on Poly (styrene-co-maleic anhydride) with Oligo(oxyethylene) Side Chains and Their GPC Behavior", Polymer, 42, 2387, 2000
- 5.Tseng, W. T.; Kuo, P. L.; Liao, C. L.; Lu, Rick; Lin, J. F., "Novel Polymeric Surfactants for Improving Chemical Mechanical Polishing Performance of

- Silicone Oxide”, *Electrochemical and Solid-State Letters*, 4(5), G42-G45, 2001.
6. Kuo, P. L.; Hou, S. S.; Teng, C. K.; Liang, W. J., “Function and Performance of Silicone Copolymer (VI): Synthesis and Novel Solution Behaviors of Water-Soluble Polysiloxane with Different Hydrophiles”, *Colloid & Polymer Sci.*, 279, 286, 2001.
 7. Wang, T. L.; Cho, Y. L.; Kuo, P. L., “Flame-Retarding Material (II). Synthesis and Flame-Retarding Properties of Phosphorus-on-pendent and Phosphorus-on-Skeleton Polyol Copolymers and Their Corresponding Polyurethanes”, *J. Appd. Polymer Sci.*, 82, 343, 2001.
 8. Liang, W. J.; Kuo, P. L., “Synthesis of Acrylic Copolymers with Pendant Hydrophilic Groups and Comparative Solution Behaviors”, *Macromolecular Chem. & Phys.*, 202, 1902, 2001.
 9. Kuo, P. L.; Wang, J. S.; Chen, P. C.; Chen, L. W., “Flame-Retarding Materials (IV), Tailor Made Thermal-Stability Epoxy Curing Agents Containing Difunctional Phosphoric Amide Groups”, *Macromolecular Chem. & Phys.*, 202, 2175, 2001.
 10. Hou, S. S.; Kuo, P. L., “Morphological, Thermal and Solid-State NMR Study on A Novel PMMA/Crosslinked Silicone Semi-IPN”, *Polymer*, 42, 9505, 2001.
 11. Kuo, P. L.; Liao, C. L.; Ghosh, Swapan K., “Superior Chemical-Mechanical Polishing (CMP) Performance of Silica Slurries Made of Surface Active Siloxane/Acrylic Polymers”, *Colloid & Polymer Sci.*, 279, 1212, 2001.
 12. Kuo, P. L.; Ghosh, Swapan K.; Liang, W. J.; Hsieh, Yun-Tsung, “Hyperbranched Poly (ethylene imine) Architecture onto Poly (allylamine) by Simple Synthetic Approach and the Chelating Characters”, *J. Polymer Sci. Part A: Chem. Ed.*, 39, 3018, 2001.
 13. Liang, W. J.; Kuo, P. -L., “Function and performance of silicone copolymer (VII). Dispersing Ability of Hydrophile-Grafted Acrylic Copolymers and the Corresponding Siloxane Copolymers to Fumed Silica. The effect of pH”, *Colloid & Polymer Sci.*, 279, 1200, 2001.
 14. Hou, S. S.; Graf R.; Spiess H. W.; Kuo, P. L., “An Investigation into PEO/Crosslinked-Silicone Semi-Interpenetrating Polymer Network Using ^1H Solid-State NMR Spectroscopy under Fast MAS”, *Macromol. Rapid Commun*, 22, 1386, 2001.
 15. Kuo, P. L.; Liang, W. J.; Lin, C. L., “Solid Polymer Electrolytes (II), Preparation and Ionic Conductive Properties of Solid Polymer Electrolytes Based on Segmented Polysiloxane Modified Polyurethane”, *Macromolecular Chem. & Phys.*, 203, 230, 2002.
 16. Chen, C. C.; Liang, W. J.; Kuo, P. L., “Solid Polymer Electrolytes III: Preparation, Characterization, and Ionic Conductivity of New Gelled Polymer Electrolytes

- Based on Segmented Perfluoropolyether-Modified Polyurethane”, J. Polymer Sci. Part A: Polymer Chem., 40, 486, 2002.
17. Liang, W. J.; Kuo, C. L.; Lin, C. L.; Kuo, P. L., “Solid Polymer Electrolyte (IV): Preparation and Characterization of Novel Crosslinked Epoxy-Siloxane Polymer Complexes as Polymer Electrolytes”, J. Polymer Sci. Part A: Polymer Chem., 40, 1226, 2002.
 18. Lin, C. L.; Kao, H. M.; Wu, R. R.; Kuo, P. L., “Multinuclear Solid-State NMR, DSC, and Ionic Conductivity of Solid Polymer Electrolytes Based on Polyurethane/Polydimethylsiloxane Segmented Copolymers”, Macromolecules, 35, 3083, 2002.
 19. Ni, S. C.; Kuo, P. L., “Effect of Amino and Polysiloxane Groups on Chemical Adsorption of Polymers Containing Thiophosphate at Oil/Metal interface under Extreme Pressure”, J. Polym. Sci. Part B: Phys. Ed., 40, 1795, 2002
 23. Ni, S. C.; Kuo, P. L.; Lin, J. F., “Antiwear performance of polysiloxane-containing copolymers at oil/metal interface under extreme pressure”, Wear, 253, 862, 2002
 20. Lee, C. F.; Hsieh, P. H.; Ghosh, Swapan K.; Kuo, P. L., “Emulsifying and Self-Emulsified Properties of Siloxane Polymer Grafted with Easy Hydrophile”, J. Appd Polymer Sci., 86, 2408, 2002

B、研討會論文

1. 郭炳林、陳廷彥 “ 新型聚醚類固態高分子電解質之製備及特性探討 ” ，第二十五屆高分子研討會，2002，P3
2. 郭炳林、汪富瑜 “ 異丙烯醚基為核心之擬樹枝狀高分子之合成與其物性研究 ” ，第二十五屆高分子研討會，2002，P30
3. 郭炳林、蔡侑霖 “ Function and Performance of Novel Hyperbranched Polysiloxane Polymer ” ，第二十五屆高分子研討會，2002，P31

其他著作

1. 郭炳林、梁武智、侯聖澍、廖金龍， “ 聚矽氧烷型界面活性劑與其製造方法 ” ，中華民國專利，專利證書編號：09081033673號 (2002) 。
2. 郭炳林、林岳亮， “ 質輕的防火隔熱板材 ” ，中華民國專利，專利證書編號：09181002569號 (2002) 。
3. 郭炳林、林岳亮， “ 防火蕊材及其製造方法 ” ，中華民國專利，專利證書編號：09181008268號 (2002)
4. 郭炳林、陳昭霖、鍾彥斌、張簡國， “ 強耐熱性之有機高分子燒結矽砂共聚物 ” ，中華民國專利，專利證書編號：09154018457號 (2002)

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
混成型高分子電解質之製備與其導電機構 (1/2)	<u>876,000</u>	20020801 20030731	國科會	主持人
以水浴性擬樹枝狀高分子製備金屬奈米粒子	<u>982,800</u>	20020801 20030731	國科會	主持人
新穎含磷氮難燃環氧樹脂之工業化製備與應用	<u>400,600</u>	20021201 20031130	國科會	主持人

三、服務

(一) 行政工作

- 1.成大防火安全研究中心主任

(四) 主辦或協辦研討會

- 1.防火研討會

(六) 校外服務

- 1.中華民國界面學會名譽理事長
- 2.中華民國特化協會理事
- 3.中華防火材料協會常務理事

吳逸謨

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	儀器分析	2	三乙	45	個人
下學期	儀分實驗	3	三乙	45	個人

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
伍碧玲	博士	Melting behavior, crystalline morphology, and polymorphism in polyester.	無
張莉苓	博士	Morphology, microheterogeneity, and miscibility in binary vs. ternary blends of styrenic polymers.	無
施志寬	碩士	Miscibility in blends of poly (ether imide) and polyester.	無
黃鐙河	碩士	Crystalline morphology, miscibility, and transesterification of poly (ethylene-2, 6-naphthalate)(PEN) and its blends with other polyester.	無

(四) 教學獎項

1. 國立成功大學 特聘教授 (2002/8 - present)

二、研究

(一) 著作

A、期刊論文 2002 (year total 13)

1. S. C. Lee and E. M. Woo*, "Binary vs. Ternary Interactions in a Completely Miscible Three-Homopolymer Blend System: Poly(ϵ -caprolactone) with Two Methacrylic Polymers", J. Polym. Sci., Polym. Phys., 40, 747-754 (2002). (SCI/i.f. :1.18)
2. Y. P. Huang and E. M. Woo*, "Physical Miscibility and Chemical Reactions between Diglycidylether of bisphenol-A Epoxy and Poly(4-vinyl phenol)", Polymer, 43, 6795-6804 (2002). (SCI/i.f. :1.681)
3. J. Xiao, H. L. Zhang, X.-H. Wan, D. Zhang, Q.-F. Zhou*, E. M. Woo, and S. R. Turner*, "Crystallization Kinetics of New Copoly(ethylene terephthalate-imide)s," Polymer, 43, 3683-3690 (2002). (SCI/i.f. :1.681)
4. H. L. Zhang, Y. Tu, X. -H. Wan, Q. -F. Zhou*, E. M. Woo, "Atom-Transfer Radical Polymerization to Synthesize Novel Liquid Crystalline Diblock Copolymers with Polystyrene and Mesogen-jacketed Liquid Crystalline Polymer Segments", J. Polym. Res., 9, 11-16 (2002). (SCI/i.f. :0.469)

5. H. L. Zhang, X.-H. Wan, Q. -F. Zhou*, E. M. Woo, and S. R. Turner*, "Effect of Molecular Weight on Liquid-Crystalline Behavior of a Mesogen-jacketed Liquid Crystalline polymer Synthesized by Atom transfer radical polymerization", *Polymer*, 43, 2357-2361 (2002). (SCI/i.f. :1.681)
6. J. Xiao, H. L. Zhang, X. -H. Wan, D. Zhang, Q. -F. Zhou*, E. M. Woo, and S. R. Turner*, "Effect of Rod-like imide unit on crystallization of copoly(ethylene terephthalate-imide)", *Polymer*, 43, 7377-7387 (2002). (SCI/i.f. :1.681)
7. E. M. Woo*, I.-C. Chou, and L.T. Lee, "Experimental Verification on Upper Critical Solution Temperature (UCST) Behavior in Blend of Poly(□□-dimethyl p-phenylene oxide) with Poly(4-methyl styrene)", *Polymer*, 43, 4225-4230 (2002). (SCI/i.f. :1.681)
8. Y. S. Sun and E. M. Woo*, "Temperature and Composition Effects on Polymorphism Changes in Cold-Crystallized Miscible Blends of Syndiotactic and Atactic Polystyrenes", *J. Polym. Sci., Polym. Phys.* 40, 176-180 (2002). (SCI/i.f. :1.18)
9. P. L. Wu and E. M. Woo*, "Linear vs. Nonlinear Determinations of Equilibrium Melting Temperatures of Poly(trimethylene terephthalate) and Miscible Blend with Poly(ether imide) Exhibiting Multiple Melting Peaks", *J. Polym. Sci., Polym. Phys. Ed.*, 40, 1571-1581 (2002). (SCI/i.f. :1.18)
10. I.-C. Chou, P.-L. Wu, and E. M. Woo*, "Ternary Upper Critical Solution Temperature Behavior in a Blend System of Poly(2,6-dimethyl p-phenyleneoxide), Poly(4-methyl styrene), and Polystyrene", *Colloid Polym. Sci.*, 280, 410-415 (2002). (SCI/i.f. :1.186)
11. R.-R. Wu, H.-M. Kao,* J.-C. Chiang, and E. M. Woo, "A Solid-State NMR Study on Phase Behavior and Motional Mobility in Binary Blend of Polystyrene/ Poly(cyclohexyl methacrylate)", *Polymer*, 43, 171-176 (2002). (SCI/i.f. :1.681)
12. C. P. Yang*, R. S. Chen, K. S. Hung, and E. M. Woo, "Syntheses and properties of poly(amide-imide)s based on N,N'-bis(4-carboxyphenyl)-4,4'-oxydiphthalimide, p-aminobenzoic acid and various aromatic diamines," *Polymer Inter.*, 51, 406-416 (2002). (SCI/i.f. :0.882)
13. W. P. Liao, T. L. Lin, E. M. Woo, and C. Wang*, "Lamellar Thickness of a Syndiotactic Polystyrene Determined from Small-Angle X-ray Scattering and Transmission Electron Microscopy", *J. Polym. Res.*, 9, 91-97 (2002). (SCI/i.f. :0.469)

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
高分子多成分系統微 奈及分子級相型態的研究 (1/3)	1,359,700	90/8/1~91/7/31	(國科會)	主持人
半結晶性高分子系之多晶相態 熱行為及排向性質之比較(2/3)	900,700	90/8/1~91/7/31	(國科會)	主持人
新型對排聚苯乙烯及其各共聚高分子的結晶動力及組成加工與形態關係	514,800	89/10/01~90/09/30	(中油)	主持人

(三) 研究獎項

- 1.國科會 傑出研究獎.(2003-2005) (第四次)
- 2.2002年, 成功大學 第二屆研究優良獎

三、服務

(六) 校外服務

委員會

- 1.國際塑膠工程師學會 理事
2. Editorial board member, Journal of Polymer Research.
3. Board member, Society of Plastics Engineers (SPE, Taiwan Chapter).

受邀擔任國際知名期刊審查專家，如下：

1. Macromolecules (USA)
2. Polymer (England)
3. Journal of Polymer Science, Polym. Phys. Ed.(USA)
4. Polymer Engineering & Science (USA, Society of Plastics Engineers)
5. Composite Interfaces (USA)
6. Polymers & Polymer Composites (England)
7. Composites, Part B: Engineering (England)
8. J. Solids and Structures (England)
9. J. of Polymer Research (Netherland)
10. Materials Chemistry and Physics (Taiwan)
11. Journal of Institute of Chinese Chemical Engineers (CIChE).
12. J. Applied Polymer Science

陳進成

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	*工程數學(I)	4	大學部	47	
上學期	雷射工程概論	3	碩博	5	
下學期	*工程數學(II)	2	大學部	36	
下學期	光學薄膜工程	3	碩博	9	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

吳文志	碩士	In ₂ Te ₃ 相變型光碟材料之研究及熱傳之有限元素法模擬	
楊尚仁	碩士	共蒸鍍法製備鋅錳氧化薄膜氣體感測器之研究	
陳彥宇	碩士	正丁醇蒸汽在帶電與中性 SiO ₂ 不可溶奈米微粒上之非均勻相核凝	

二、研究

(一) 著作

A、期刊論文

1. Chin-Cheng Chen, Chun-Ju Tao, and Hau-Ren Hsu, 2000, "Heterogeneous Nucleation of n-Butanol Vapor on Submicrometer Particles of Lactose and Monosodium Glutamate," J. Colloid and Interface Sci. 224, 11-22.(SCI, EI)
2. Chin-Cheng Chen and Chun-Ju Tao, 2000, "Condensation of a Supersaturated Water Vapor on Submicrometer Particles of SiO₂ and TiO₂," J. Chem. Phys. 112, 9967-9977.(SCI)
3. Chin-Cheng Chen and Wen-Tin Tsai, 2002, "Heterogeneous Nucleation of n-Butanol Vapor on Charged/Neutral Nanoparticles of D-Mannose and L-Rhamnose," J. Colloid and Interface Sci. 246, 270-280.(SCI, EI).
4. Chin-Cheng Chen, Chun-Ju Tao, and Hsiu-Chin Cheng, 2002, "Condensation of Supersaturated Water Vapor on Charged/Neutral Nanoparticles of Glucose and Monosodium Glutamate," J. Colloid and Interface Sci. 255, 158-170.(SCI, EI).
5. Chao-Cheng Lee and Chin-Cheng Chen, 2002, "A Simulation of the Contact Angle for Organic Vapors to Cause the Same Probability of the Heterogeneous and Homogeneous Nucleation," J. Chin. Inst. Chem. Engrs. 33 (6), 645-656.(SCI, EI)

B、研討會論文

1. Hsiu-Chin Cheng and Chin-Cheng Chen, 2002, "Heterogeneous Nucleation of Water Vapor on Nanoparticles of SiO₂," Sixth International Aerosol Conference, Taipei, Taiwan, ROC, September 9-13, p183.
2. Chin-Cheng Chen and Hsiu-Chin Cheng, 2002, "Production of Nanoparticles of SiO₂ by Electrospray," Sixth International Aerosol Conference, Taipei, Taiwan, ROC, September 9-13, p203.
3. 陳朝煌,陳進成, 2002, "Sb₂Se₃相變型光碟材料之研究及熱傳之有限元素法模擬," 2002 輸送現象與其應用專題研討會,台北,11月22日.
4. 莊鴻億,陳進成, 2002, "摻雜鈮與鉑之鋅銻氧化薄膜氣體感測器之研究," 九十一年度化工年會及專題研討會,民雄,11月30日.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
蒸氣在奈米微粒上非均勻相核凝之探討(2/3)	1060600	91,8,1-92,7,31	國科會	主持人

三、服務

(二) 委員會(校內)

- 1.成大教師申訴評議委員會, 委員
- 2.成大經費稽核委員會, 委員
- 3.成大校務發展委員會, 委員
- 4.成大宿舍配住委員會, 委員
- 5.化工系儀器委員會, 委員
- 6.化工系經費運用委員會, 委員

(五) 校內其他服務(如導師---)

- 1.導師
- 2.成大教師會理事長

(六) 校外服務

- 1.全國教師會大專教師委員會,南區聯絡人
- 2.台南師院教師申訴評議委員會, 委員

張珣庭

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 程序設計	9	系	120	江建利、陳特良
上學期	* 程序控制	2	系	40	
下學期	製程安全技術	3	系碩博	5	林洪志
下學期	工業安全與衛生	9	系	120	林洪志 李明遠 黃耀輝
下學期	* 程序控制實驗	4.5	系	40	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
賴昭安	碩士	化工廠流量感測器網路之最適配置及維修策略	
王聖尤	碩士	多變項失誤監視系統之使用規則	黃世宏

二、研究

(一) 著作

A、期刊論文

- 1.N. Balasubramanian, C. T. Chang and Y. F. Wang, 2002, "Petri-Net Models for Risk Analysis of Hazardous Liquid Loading Operations," Ind. Eng. Chem. Res. 41, 4823-4836 (EI,SCI).
- 2.S. Y. Chang, C. R. Lin and C. T. Chang, 2002, "A Fuzzy Diagnosis Approach Using Dynamic Fault Trees," Chem. Eng. Sci. 57, 2971-2985.(EI,SCI)
- 3.C. T. Chang, Y. S. Lin and C. Georgakis, 2002, "A Simple Graphic Approach for Observer Decomposition," Journal of Process Control 12, 857-873. (EI,SCI)
- 4.Y. F. Wang, J. Y. Wu and C. T. Chang, 2002, "Automatic Hazard Analysis of Batch Operations with Petri Nets," Reliab. Eng. Sys. Saf. 76, 91-104. (EI,SCI)
- 5.M. J. Tsai and C. T. Chang, 2001, "Water Usage and Treatment Design Using Genetic Algorithms," Ind. Eng. Chem. Res. 40, 4874-4888. (EI,SCI) (NSC89-2214-E006-027)
- 6.C. T. Chang, C. S. Tsai and K. H. Chen, 2000, "Resilient Alarm Logic Design for Process Networks," Ind. Eng. Chem. Res. 39, 4974-4985. (EI,SCI)

7.C. S. Tsai, C. T. Chang, S. W. Yu and C. S. Kao, 2000, "Robust Alarm Generation Strategy," Comput. & Chem. Engng. 24, 743-748. (EI,SCI)

B、研討會論文

- 1.N. Balasubramanian and C. T. Chang, December 4-6, 2002, "Modeling Metabolic Phenotype with Petri Nets," PSEASIA2002, Taipei, Taiwan, R.O.C.
- 2.Y. F. Wang and C. T. Chang, December 4-6, 2002, "A Petri-Net Based Deductive Reasoning Algorithm for Hazard Analysis of Batch Processes," PSEASIA2002, Taipei, Taiwan, R.O.C.
- 3.Y. F. Wang and C. T. Chang, September 16-18, 2002, "Computer-Aided Hazard Identification in Batch Processes Using Petri Nets," KES2002, Crema, Italy.
- 4.S. Y. Chang and C. T. Chang, September 16-18, 2002, "A Fuzzy-Logic Based Fault Diagnosis Strategy for Process Control Loops," KES2002, Crema, Italy.
- 5.N. Balasubramanian and C. T. Chang, May 26-29, 2002, "Biochemical Reaction Pathway Analysis Using Petri net," ESCAPE-12, The Hague, The Netherlands.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
在程序控制迴路中以失誤樹為基礎之模糊診斷策略的發展(NSC91-2214-E006-014)	383,400	90.8.1-91.7.31	國科會	主持人
批式製成危害分析的演繹推理演算法(NSC91-2214-E006-013)	600,600	91.8.1-92.7.31	國科會	主持人

(三) 研究獎項

- 1.國科會甲等研究獎

三、服務

(二) 委員會(校內)

- 1.化工系教評會、化工系研究生事務委員會、化工系學生事務委員會

(五) 校內其他服務(如導師---)

- 1.化工系 導師

陳特良

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	程序設計	9	化工系大四	150	江建利、張珣庭
上學期	微生物應用工業	3	化工系碩博	10	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
王惠民	博士	正十六烷在回收 <i>Acinetobacter radioresistens</i> 脂肪酵素上之應用	
陳昱丞	碩士	以滲透壓衝擊回收基因重組大腸桿菌之間質蛋白	
洪金榮	碩士	以基因重組大腸桿菌生產白細胞介素 20 號：誘導劑添加方式之研究	
郭匡甫	碩士	誘導後比生長速率對基因重組大腸桿菌生產白細胞介素 20 號的影響	

二、研究

(一) 著作

A、期刊論文

1. S. C. Li, J. Y. Wu, C. Y. Chen and T. L. Chen, 2000, "Semicontinuous Production of Lipase by *Acinetobacter radioresistens* in Presence of Nonwoven Fabric," *Appl. Biochem. Biotechnol.*, 87(2), 7380. (SCI)
2. M. I. Chen, H. M. Wang, C. Y. Chen, J. Y. Wu and T. L. Chen, 2000, "Recovery of *Acinetobacter radioresistens* Lipase by Hydrophobic Adsorption on a Nonwoven Fabric," *J. Chin. Inst. Chem. Engrs.*, 31(6), 595599. (SCI)
3. C. Y. Li, C. Y. Cheng and T. L. Chen, 2001, "Production of *Acinetobacter radioresistens* Lipase Using Tween 80 as the Carbon Source," *Enzyme Microb. Technol.*, 29(45), 258263. (SCI)
4. Y. C. Lin, J. Y. Wu and T. L. Chen, 2001, "Production of *Acinetobacter radioresistens* Lipase with Repeated Batch Culture in Presence of Nonwoven Fabric," *Biotechnol. Bioeng.*, 76(3), 214218. (SCI)
5. C. P. Lin, T. J. Wang, J. Y. Wu, L. I. Hor and T. L. Chen, 2002, "Enhanced Nuclease Production with a Recombinant *Escherichia coli* by Magnesium Salts," *J. Chin. Inst. Chem. Engrs.*, 33(2), 175180. (SCI)
6. L. C. Cheng, J. Y. Wu and T. L. Chen, 2002, "A Pseudo-Exponential Feeding

Method for Control of Specific Growth Rate in Fed-Batch Cultures,” Biochem. Eng. J., 10(3), 227-232. (SCI)

B、研討會論文

1. 程麗君、陳特良，“饋料批次式醱酵中控制細胞生長速率的進料策略研究”，第七屆生化工程研討會，2002，pp. 710。

C、其他著作

1. 陳特良，2002，“饋料批式醱酵之進料策略”，化工技術，10(4)，190-195。

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
以正十六烷-水之界面吸附回收脂肪酵素	984,000	91/08/01~ 92/07/31	國科會	主持人

(三) 研究獎項

1. 成功大學特聘教授

三、服務

(二) 委員會(校內)

1. 化工系經費應用委員會委員
2. 化工系系館管理委員會委員
3. 化工系系教評會委員
4. 工學院院務會議代表

(五) 校內其他服務

1. 化工系大學部二乙導師
2. 化工系碩士論文口試委員
3. 微生物暨免疫學研究所演講

(六) 校外服務

1. 南台科技大學化工系碩士論文口試委員

黃世宏

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 程序控制	2	大學部	57	
上學期	* 計算機概論	3	大學部	51	
上學期	高等電腦程序控制	3	碩博	5	
下學期	* 程序控制實驗	4.5	大學部	60	
下學期	高等輸送現象	2	碩博	90	凌漢辰

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
王力威	博士	穩定、積分及不穩定連續程序之鑑別與控制	
賴世宗	碩士	利用兩階段最小平方演算法進行連續含時延系統之鑑別	
蔡名杰	碩士	利用埃氏有限迴圈軌跡理論進行鑑別二階時延模式	

二、研究

(一) 著作

A 期刊論文

1. Lin, M. L. and S. H. Hwang, 2002, "Robust Design Method for Discrete-Time Controllers with Simple Structures," Ind. Eng. Chem. Res. (SCI), 41, 2705-2715.
2. Hwang, S. H. and L. W. Wang, 2002, "On the Identification of Stable, Integrating, and Unstable Processes with Unknown Orders and Delays," J. Chem. Eng. Japan (SCI), 35, 794-805.
3. Hwang, S. H. and M. L. Lin, 2002, "A Method for Identification of Discrete Parametric Models with Unknown Orders and Delays," J. Chin. Inst. Chem. Engrs. (SCI), 33, 373-388.

B、研討會論文

1. Hwang, S. H. and L. W. Wang, "On the Identification of Stable, Integrating and Unstable Processes Based on a Single Biased Relay Test," Proceedings

AdCONIP'02, Kumamoto, Japan (2002).

2.Wang, L. W. and S. H. Hwang, "Design Methodology of Robust Optimal Controllers for Stable, Integrating and Unstable Processes," PSE Asia 2002, Taipei, Taiwan (2002).

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
在模型結構和負載擾動未知情況下穩定、積分及不穩定程序之系統鑑別方法	59萬9千5百元	91.8~92.7	國科會	主持人

三、服務

(二) 委員會(校內)

- 1.化工系經費應用委員會
- 2.化工系儀器設備委員會

(五) 校內其他服務

- 1.化工三丙導師
- 2.化工系電腦教室管理

洪昭南

一、教學

(一) 開授課程

學期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	材料科學導論	3	化工系	95	陳慧英
上學期	半導體物理與元件	3	化工系	65	
下學期	半導體材料與製程	3	化工系	45	吳季珍
下學期	薄膜技術與原理	3	化工系碩博	25	郭炳林、楊明腸、陳雲

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳建華	碩士	P 型透明導電膜應用於有機發光二極體	
王家俊	碩士	以射頻磁控濺鍍法成長摻雜氫之氧化鋅薄膜	
何政昌	碩士	常壓電漿技術之研究	
郭福升	碩士	大面積常壓電漿技術之研究	孫亦文
張峻榮	碩士	以電漿化學氣相離子披覆法蒸鍍超硬耐磨耗薄膜	

二、研究

(一) 著作

A、期刊論文

1. K. F. Lin & F. C. N. Hong, 1979, "Effect of operation parameters on the performance of CCSTR", J. Chinese I. Ch. E., V. 10, p.63-71
2. F. Hong & K. Kung, 1982, "Catalytic oxidation of carbon monoxide on Ni-Y zeolite", J. Catalysis, V. 77, p561-564
3. B. L. Yang, F. Hong & H. H. Kung, 1984, "Crystallite size effect in the selective oxidation of butene to butadiene on iron oxide. II: Reaction studies", J. Physical Chemistry, V. 88, p.2531-2534.
4. F. Hong, B. L. Yang, L. H. Schwartz & H. H. Kung, 1984, "Crystallite size effect in the selective oxidation of butene to butadiene on iron oxide. I: Mossbauer, X-ray and magnetization characterization on the catalysis", J. Physical Chemistry, V. 88, p.2525-2530.
5. C. J. Machiels, W. H. Cheng, U. Chowdhry, W. E. Farneth, F. Hong, E. M. McCarron & A. W. Sleight, 1986, "The effect of the structure of molybdenum

- oxides on the selective oxidation of methanol", *Appl. Catalysis*, V. 25, p.249-256
6. Franklin Chau-Nan Hong, Hon-Ming Chang, Jing-Chuang Hsieh, Jen-Haw Hwang and Jih-Jen Wu, 1992, "Growth of diamond film by a plug-flow flat flame method", *Thin Solid Films*, V. 212, p.127-132.
 7. F. C. N. Hong, J. C. Hsieh, J. J. Wu, G. T. Liang and J. H. Hwang, 1993, "Low-temperature deposition of diamond using chloromethane in a hot-filament chemical vapor deposition reactor", *Diamond and Related Materials*, v2, p.365-372.
 8. G. T. Liang, J. J. Wu, D. Chang, J. C. Hsieh and F. C. N. Hong, 1993, "Low temperature growth of diamond films using chloromethane", *J. of the Chin. I. Ch. E.*, V24, p.331-341
 9. F. C. N. Hong, G. T. Liang, J. J. Wu, D. Chang, and J. C. Hsieh, 1993, "Diamond deposition from halogenated methane reactant in a hot-filament chemical vapor deposition reactor", *Applied Physics Letters*, V.63, p.3149-3151
 10. Jih-Jen Wu, Shih-Hsien Yeh, Chin-Ta Su, and Franklin Chau-Nan Hong, 1996, "Characterization of Diamond Deposition from Chloromethane reactants by Laser Reflective Interferometry", *Applied Physics Letters*, v68, pp.3254-3256.
 11. Jih-Jen Wu and Franklin Chau-Nan Hong, 1997, "Direct Identification of Diamond Growth Precursor Using Almost Pure CH₄ or C₂H₂ near Growth Surface", *Applied Physics Letters*, v70, Iss.2, pp.185-187.
 12. Jih-Jen Wu and Franklin Chau-Nan Hong, 1997, "The Effect of Chlorine Addition on Diamond Growth Using Methane/Hydrogen Reactants", *Journal of Applied Physics*, v81, Iss.8, pp. 3647-3651.
 13. Jih-Jen Wu and Franklin Chau-Nan Hong, 1997, "Diamond Growth by Injecting Thermally Decomposed Chlorine Atoms into Methane/Hydrogen Mixture", *Journal of Applied Physics*, v81, Iss.8, pp. 3652-3659.
 14. Gou-Tsau Liang and Franklin Chau-Nan Hong, 1997, "Diamond growth by Dual Hollow Cathode Arc Chemical Vapor Deposition", *Japanese Journal of Applied Physics*, Vol. 36, Part 2, No. 10B, pp. L1406 – L1409.
 15. Chia-Yuan Hsu, Liang-Yih Chen and Franklin Chau-Nan Hong, 1998, "Properties of Diamond-Like Carbon Films Deposited by an Ion Plating Method with Pulsed Substrate Bias", *Diamond and Related Materials*, vol. 7, pp.884-891.
 16. Jih-Jen Wu and Franklin Chau-Nan Hong, 1998, "The Effect of Chloromethane on Diamond Nucleation and Growth in a Hot-Filament Chemical Vapor Deposition Reactor", *Journal of Materials Research*, vol. 13, No. 9, pp.2498-2504.
 17. Gou-Tsau Liang and Franklin Chau-Nan Hong, 1998, "Diamond Growth by Hollow Cathode Arc Plasma Chemical Vapor Deposition", *Journal of Materials Research*, vol. 13, No. 11, pp. 3114-3121.

18. Chia-Yuan Hsu and Franklin Chau-Nan Hong, 1998 "Deposition of micro-crystalline β -C₃N₄ films by inductively-coupling-plasma (ICP) sputtering method.", Japanese Journal of Applied Physics, vol. 37, Part 2, No. 6A, pp. L675-L678.
19. Chia-Yuan Hsu and Franklin Chau-Nan Hong, 1998, "Enhanced Growth of β -C₃N₄ Crystallites at a High Substrate Temperature"; Japanese Journal of Applied Physics, vol. 37, Part 2, No. 9A/B, pp. L1058-L1061.
20. Chia-Yuan Hsu and Franklin Chau-Nan Hong, 1999, "The Effect of Substrate Temperature on the Growth of β -C₃N₄ Micro-Crystallites by an Inductively-Coupled-Plasma (ICP) Sputtering Method"; Diamond and Related Materials, vol. 8, 1315-1323.
21. Gou-Tsau Liang and Franklin Chau-Nan Hong, 1999, "Characterization of Dual Hollow Cathode Arc Chemical Vapor Deposition by Optical Emission Spectroscopy", Japanese Journal of Applied Physics, vol. 38, part1, No.11, 6438-6444.
22. Yih-Ming Shyu, Franklin Chau-Nan Hong, 2001, "The effects of pre-treatment and catalyst composition on growth of carbon nanofibers at low temperature, Diamond and Related Materials, vol. 10 (2001) 1241-1245.
23. Liang-Yih Chen, Franklin Chau-Nan Hong, 2001, "Effects of SiO_x-incorporation Hydrocarbons on the Tribological Properties of DLC Films", Diamond and Related Materials, vol. 10 p. 1058-1062.
24. Yih-Ming Shyu and Franklin Chau-Nan Hong, 2001, "Low Temperature Growth and Field Emission of Aligned Carbon Nanotubes by Chemical Vapor Deposition," Materials Chemistry and Physics v.72 p.223-227.
25. Liang-Yih Chen, Chiao-Yang Cheng, and Franklin Chau-Nan Hong, 2002, "Properties of Carbon Nitride (CN_x) Films Deposited by a High Density, plasma Ion Plating Method", Diamond and Related Materials, v.11, p.1172
26. I-Min Chan, Weng-Cheng Cheng, and Franklin Chau-Nan Hong, 2002, "Enhanced Performance of Organic Light Emitting Devices by Atmospheric Plasma Treatment of Indium Tin Oxide Surface", Applied Physics Letters, v.80 p.13-15.
27. I-Min Chan, Tsung-Yi Hsu, and Franklin Chau-Nan Hong, 2002, "Enhanced Hole Injections in Organic Light-Emitting Devices by Depositing Nickel Oxide on Indium-Tin Oxide Anode", Applied Physics Letters, v.81 p.1899-1901
28. Yoou-Bin Guo and Franklin Chau-Nan Hong, 2003, "Radio-frequency Microdischarge Arrays for Large-area Cold Atmospheric Plasma Generation", Applied Physics Letters, v.82, p. 337-339
29. Yoou-Bin Guo and Franklin Chau-Nan Hong, 2003, "Adhesion Improvements for

- Diamond-like Carbon Films on Polycarbonate and Polymethylmethacrylate Substrates”, *Diamond and Related Materials*.
30. Liang-Yih Chen and Franklin Chau-Nan Hong, 2003, “Surface tension studies of (Si, N)-containing diamond-like carbon films deposited by Hexamethyldisilazane”, *Diamond and Related Materials*.
 31. Liang-Yih Chen and Franklin Chau-Nan Hong, 2003, “Diamond-Like Carbon Nanocomposite Films”, *Applied Physics Letters*.
 32. I-Min Chan, Weng-Cheng Cheng, and Franklin Chau-Nan Hong, 2003, “Plasma Treatments of Indium Tin Oxide Anodes in CF₄/O₂ to Improve the Performance of Organic Light-Emitting Devices”, Accepted, *Thin Solid Films*.
 34. I-Min Chan, and Franklin Chau-Nan Hong, 2003, “Enhancing the Performance of OLED Devices by Using Transparent Conductive Nickel Oxide Anode”, Accepted, *Thin Solid Films*.
 35. You-Bin Guo and Franklin Chau-Nan Hong, 2003, “Characteristics of Radio-frequency Microdischarge Arrays for Large-area Cold Atmospheric Plasma Generation”, Accepted, *Japanese Journal of Applied Physics*.
 36. Liang-Jun Wang, Franklin Chau-Nan Hong, 2003, “Carbon Molecular Sieve Membranes for Gas Separation by Inductively-Coupled-Plasma Chemical Vapor Deposition”, submitted to *Journal of Membrane Science*.
 37. I-Min Chan, and Franklin Chau-Nan Hong, 2003, Strong Exciplex and Electroplex Emission of Organic Light-Emitting Diodes with Fuzzy-Junction Structure, submitted to *Journal of the American Chemical Society*.
 38. Liang-Yih Chen and Franklin Chau-Nan Hong, 2003, Visible Light Catholuminescence from Si Nanocrystal Embedded in Amorphous Silicon Nitride by Inductively-Coupled Plasma Assisted Electron Beam Evaporation, submitted to *Advanced Materials*.

B、研討會論文

1. F. C. N. Hong, G. T. Liang, D. Chang & S. C. Yu, 1991, "The growth of diamond film by halogenated methane", *Applications of Diamond Films and Related Materials*, edited by Y. Tzeng et al, Elsevier, p.577-582.
2. F. C. N. Hong, H. M. Chang, J.C. Hsieh, G. T. Liang and D. Chang, 1991, "The growth diamond film by flat flame combustion method" ,*Applications of Diamond Films and Related Materials*, edited by Y. Tzeng et al, Elsevier, p.503-508.
3. 謝錦全, 吳季珍, 洪昭南, 1992, " 氯化甲烷低溫成長鑽石晶粒", 中國材料學會1992年度年會論文集,p.530.
4. 陳隆, 黃貞浩, 吳皇輝, 梁國超, 洪昭南, 1992, "直流電漿化學氣相沉積法成長鑽石薄膜", 中國材料科學學會,1992年度年會論文集, p.532.

5. F. C. N. Hong, J. C. Hsieh and J. J. Wu, 1992, "Low temperature growth of diamond film using chloromethane in a hot-filament CVD reactor", Diamond 1992 conference, Aug. 31, Heidelberg, Germany.
6. F. C. N. Hong, L. Chen, H.H. Wu, J.C. Hsieh, and J.H. Hwang, 1993, "Diamond film growth using chloromethane by DC plasma chemical vapor deposition" oral presentation, Third International Symposium on Diamond Materials, May 16-12, Honolulu, Hawaii, U.S.A.
7. C. S. Yuan, F.C.N. Hong, and C. S. Tai, 1993, "Decomposition of ammonia via radio-frequency plasma", Proceedings of 86th Annual Meeting of Air & Waste Management Association, 93-WP-94.04(14 pages), Denver, Colorado, USA, June.
8. F. C. Hong, C.Y. Hsu, M. Chang, G.T. Liang and J.J. Wu, 1994, "Diamond film growth using halomethane by DC plasma chemical vapor deposition", P.23-26. Oral presentation, Fourth International Conference on New Diamond Science and Technology, July 18-22, Kobe, Japan.
9. F. C. Hong, J.J. Wu, C.T. Su and S.H. Yeh, 1994, "Mechanistic studies of diamond growth using chloromethane reactants in a hot-filament CVD reactor", P.85-88. Fourth International Conference on New Diamond Science and Technology, July 18-22, Kobe, Japan.
10. F. C. Hong, J.H. Hwang, M.C. Yeh, G.T. Liang and H. C. Chien, 1994, "Diamond film growth by a hollow cathode CVD method", p. 77-80. Fourth International Conference on New Diamond Science and Technology, July 18-22, Kobe, Japan.
11. Chia-Yun Hsu, Jih-Jen Wu, Han-Chung Chien, Chii-Hsing Chang and Franklin Chau-Nan Hong, 1995, "Diamond-like Carbon (DLC) Coatings by an Ion Plating Method with Pulsed Substrate-bias", Diamond Film '95 European conference, Sep.10-15, Barcelona, Spain.
12. Jih-Jen Wu, Chin-Ta Su, Shih-Hsien Yeh and Franklin Chau-Nan Hong, 1995, "Mechanistic Studies of Diamond Nucleation Using Chloromethane Reactant in a Hot-filament CVD Reactor", Diamond film '95 European conference, Sep.10-15, Barcelona, Spain.
13. C. Y. Hsu, L. Y. Chen and F. C. N. Hong, 1996, "Tribology Properties of Nitrogen Incorporate Diamond-like Carbon Films Deposited by Ion Plating with Pulse Substrate-Bias", Fifth International Conference on the New Diamond Science and Technology, 8-13 September, Vinci, France.
14. J. J. Wu and F. C. N. Hong, 1996, "Diamond Film Growth by Injecting Thermally Decomposed Chlorine Atoms into CH₄/H₂ Reactants", Fifth International Conference on the New Diamond Science and Technology, 8-13 September, Vinci, France.
15. C. Y. Hsu and F. C. N. Hong, 1998, "Growth of C₃N₄ crystallites using an

- Inductively Coupled Plasma Sputtering Method”, Workshop on Material Chemistry, 19 March, Taipei, Taiwan.
16. F. C. N. Hong and L. J. Wang, 1999, “Diamond-Like Carbon Films as Carbon Molecular Sieve for Gas Separation”, SMAC’99, 2ND Specialist Meeting on Amorphous Carbon 1999, Singapore.
 17. F. C. N. Hong, Y.-B. Guo, J.-Y. Wang, 1999, ”Modifications of DLC films for MEMS applications”, SPIE’S 1999 Symposium on Micromachining and Microfabrication, Oral presentation, Conf. 3857, Materials and Device Characterization in Micromachining, Santa Clara, CA, USA.
 18. Yih-Ming Shyu and Franklin Chau-Nan Hong, 2000 “Low Temperature Growth and Field Emission of Aligned Carbon Nanotubes by Chemical Vapor Deposition” Taiwan Internal Conference on Diamond and Related Materials Science and Technology, Conf. Ts14, Academia Sinica, Taipei, Taiwan.
 19. F. C. Hong, L. Y. Chen, 2000” Effect of SiO_x-incorporation Hydrocarbons on the Tribological Properties of DLC Film”, 11th European Conference on diamond, Diamond-Like Materials, Carbon Nanotube, Nitrides and Silicon Carbide, conf: DIAMAT 2143, Porto, Portugal.
 20. Yih-Ming Shyu and Franklin Chau-Nan Hong, 2000 “The Effects of Catalyst Compositions on the Low Temperature Growth of Aligned Carbon Nanotubes” 11th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotube, Nitrides and Silicon Carbide, Conf: DIAMOND 2094, Porto, Portugal.
 21. I-Min Chan, Weng-Cheng Cheng, and Franklin Chau-Nan Hong, 2001, Improved OLED Device Performance by Pretreating Indium Tin Oxide Anode Surface with CF₄/O₂ Plasma, Proceedings of Asia Display/ IDW’01, OELp-10.
 22. Liang-Yih Chen, Chiao-Yang Cheng, and Franklin Chau-Nan Hong, 2001, Properties of Carbon Nitride (CN_x) Films Deposited by a High Density plasma Ion Plating Method, 12th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, Nitrides, and Silicon carbide.
 23. Yoou-Bin Guo and Franklin Chau-Nan Hong, 2002, Adhesion Improvements for Diamond-like Carbon Films on Polycarbonate and Polymethylmethacrylate Substrates, 13th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, Nitrides, and Silicon carbide.
 24. Liang-Yih Chen and Franklin Chau-Nan Hong, 2002, Surface tension studies of (Si, N)-containing diamond-like carbon deposited by Hexamethyldisilazane, 13th European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, Nitrides, and Silicon carbide.
 25. Liang-Yih Chen and Franklin Chau-Nan Hong, 2002, The Deposition of Si Nanoparticle Composite Films for Light Emission, Materials Research Society’s

2002 Fall Meeting, Boston, MA, December 2-6.

C、專利

- 1.電漿處理裝置, 洪昭南等人(中華民國專利號碼87217987)
- 2.在多孔性基材上製備碳分子篩膜的方法, 洪昭南等人(中華民國專利號碼88121024)
- 3.一種製備類鑽碳膜與鋼材間高附著力的中間層方法, 洪昭南等人(中華民國專利號碼88122690)
- 4.光碟片及類似光碟片之模具表面附著處理, 洪昭南等人(中華民國專利號碼89112492)
- 5.感應耦合電漿清潔裝置及方法, 洪昭南等人(中華民國專利號碼89203818)
- 6.電漿清潔方法, 洪昭南等人(中華民國專利號碼91109654)
- 7.電漿清潔裝置改良, 洪昭南等人(中華民國專利號碼91206562)
- 8.電漿清潔裝置, 洪昭南等人(中華民國專利號碼91116697, 審理中)
- 9.測試之零組件及相關設備之電漿清潔與處理方法, 洪昭南等人(中華民國專利號碼91137258, 審理中)

(二) 研究計畫

計畫名稱	期限	補助單位	擔任職務
新型光電元件結構與奈米光電材料之研究	92.8.1 93.7.31	國科會	主持人
開發以微壓印蝕刻製造常壓電漿電極之技術			

三、服務

(二) 委員會 (校內)

- 1.化工系研究生事務委員會
- 2.化工系課程委員會
- 3.工學院材化資學群諮詢委員會委員

(五) 校內其他服務

- 1.化工系三乙導師

鄧熙聖

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	孔洞材料之吸附原理與結構分析	3	化工系碩博		
上學期	化工熱力學	3	化工系		
下學期	化學反應工程	3	化工系		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
徐禮業	博士	利用銅在碳及其他載體上為觸媒以 NH ₃ 還原 NO 反應之研究	
戴佑理	碩士	鎳之奈米化及孔洞畫在電化學電池上之應用	
林育潤	碩士	以新穎的聚苯胺植入法增進碳電極之電化學超電容	
鄭焯哲	碩士	碳纖維表面含氧及含銅官能基之電化學行為探討	

二、研究

(一) 著作

A、期刊論文

1. Huang, M.-C., Chou, C.-H. and Teng, H., "Pore Size Effects on Activated Carbon Capacities for Volatile Organic Compound Adsorption", *AIChE J.* 2002, Vol. 48, pages 1804-1810. (SCI)
2. Nian, Y.-R. and Teng, H., "Nitric Acid Modification of Activated Carbon Electrodes for Improvement of Electrochemical Capacitance", *Journal of the Electrochemical Society* 2002, Vol. 149, pages A1008-A1014. (SCI)
3. Lin, Y.-R. and Teng, H., "Mesoporous Carbons from Waste Tire Char and Their Application in Wastewater Discoloration", *Microporous and Mesoporous Materials* 2002, Vol. 54, pages 167-174. (SCI)
4. Lin, C.-C. and Teng, H., "Influence of Formaldehyde-to-Phenol Ratio in Resin Synthesis on the Production of Activated Carbons from Phenol-Formaldehyde Resins", *Industrial & Engineering Chemistry Research* 2002, Vol. 41, pages 1986-1992. (SCI)
5. Huang, M.-C. and Teng, H., "Urea Impregnation to Enhance the Porosity of Carbons Prepared from Phenol-Formaldehyde Resins with Steam Activation", *Carbon* 2002, Vol. 40, pages 955-958. (SCI)
6. Hwang, S.-R. and Teng, H., "Capacitance Enhancement of Carbon Fabric Electrodes in Electrochemical Capacitors through Electro-deposition with Copper", *Journal of the Electrochemical Society* 2002, Vol. 149, pages A591-A596. (SCI)

- 7.Hsieh, C.-T. and Teng, H., "Influence of Oxygen Treatment on Electric Double-Layer Capacitance of Activated Carbon Fabrics", *Carbon* 2002, Vol. 40, pages 667-674. (SCI)
- 8.Teng, H. and Weng, T.-C., "Transformation of Mesophase Pitch into Different Carbons by Heat Treatment and KOH Etching", *Microporous and Mesoporous Materials* 2001, Vol. 50, pages 53-60. (SCI)
- 9.Hsu, L.-Y. and Teng, H., "Catalytic Reduction of NO with NH₃ over Carbons Modified by Acid Oxidation and by Metal Impregnation and Its Kinetics", *Applied Catalysis B-Environmental* 2001, Vol. 35, pages 21-30. (SCI)
- 10.Teng, H., Chang, Y.-J. and Hsieh, C.-T., "Performance of Electric Double-Layer Capacitors Using Carbons Prepared from Phenol-Formaldehyde Resins by KOH Etching", *Carbon* 2001, Vol. 39, pages 1981-1987. (SCI)
- 11.Teng, H., Hsu, L.-Y. and Lai, Y.-C., "Catalytic Reduction of NO with NH₃ over Carbons Impregnated with Cu and Fe", *Environmental Science & Technology* 2001, Vol. 35, pages 2369-2374. (SCI)
- 12.Weng, T.-C. and Teng, H., "Characterization of High Porosity Carbon Electrodes Derived from Mesophase Pitch for Electric Double-Layer Capacitors", *Journal of the Electrochemical Society* 2001, Vol. 148, pages A368-A373. (SCI)
- 13.Teng, H., Tu, Y.-T., Lai, Y.-C. and Lin, C.-C., "Reduction of NO with NH₃ over Carbon Catalyst - the Effects of Treating Carbon with H₂SO₄ and HNO₃", *Carbon* 2001, Vol. 39, pages 575-582. (SCI)
- 14.Hsieh, C.-T. and Teng, H., "Studies on the Kinetics of Nitrous Oxide Adsorption on Resin Char", *Separation Science & Technology* 2001, Vol. 36, pages 1-12. (SCI)
- 15.Teng, H., Lin, Y.-C. and Hsu, L.-Y., "Production of Activated Carbons from Pyrolysis of Waste Tires Impregnated with KOH", *Journal of the Air & Waste Management Association* 2000, Vol. 50, pages 1940-1946. (SCI)
- 16.Hsieh, C.-T. and Teng, H., "Langmuir and Dubinin-Radushkevich Analyses on Equilibrium Adsorption of Activated Carbon Fabrics in Aqueous Solutions", *Journal of Chemical Technology & Biotechnology* 2000, Vol. 75, pages 1066-1072. (SCI)
- 17.Hsieh, C.-T. and Teng, H., "Liquid-Phase Adsorption of Phenol onto Activated Carbons Prepared with Different Activation Levels", *Journal of Colloid and Interface Science* 2000, Vol. 230, pages 171-175. (SCI)
- 18.Hsu, L.-Y. and Teng, H., "Influence of Different Chemical Reagents on the Preparation Activated Carbons from Bituminous Coal", *Fuel Processing Technology* 2000, Vol. 64, pages 155-166. (SCI)
- 19.Teng, H. and Wang, S.-C., "Influence of Oxidation on the Preparation of Porous

- Carbons from Phenol-Formaldehyde Resins with KOH Activation", Industrial & Engineering Chemistry Research 2000, Vol. 39, pages 673-678. (SCI)
- 20.Hsieh, C.-T. and Teng, H., "Influence of Mesopore Volume and Adsorbate Size on Adsorption Capacities of Activated Carbons in Aqueous Solutions", Carbon 2000, Vol. 38, pages 863-869. (SCI)
- 21.Teng, H. and Wang, S.-C., "Preparation of Porous Carbons from Phenol-Formaldehyde Resins with Chemical and Physical Activation", Carbon 2000, Vol. 38, pages 817-824. (SCI)

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
碳觸媒之金屬離子和表面官能基對氮還原氮氧化物之影響	725,700	91.8-92.7	國科會	主持人
介孔電極材料的研製及其超電容機制的探討	813,300	91.8-92.7	國科會	主持人
O ₃ 串聯活性碳吸附流程為生化廢水三及處理之 GAC 選擇及運轉模式評估	727,740	92.3-93.1	中國鋼鐵公司	主持人

(三) 研究獎項

1. 國科會研究計畫主持費

三、服務

(一) 行政工作

1. 工學院化學工廠主任

(二) 委員會

1. 化工系儀器委員會委員
2. 化工系研究生事務委員會委員

(六) 校外服務

1. 審查國際期刊論文

許梅娟

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	休假				
上學期	休假				
下學期	單元操作一	3	大二		陳特良、江建利
下學期	類神經網路與 應用	3	博碩		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
鄧景鴻	碩士	以膽紅素為模版材料之製備及吸脫付感測之探討	
粘友明	碩士	膽紅素模版材料之等溫吸附建模吉選擇性探討	

二、研究

(一) 著作

A、期刊論文

- 1.Meij-J. Syu, "A minireview – Biological production of 2,3-butanediol," Appl. Microbiol. Biotechnol., 55, pp. 10-18, 2001. (SCI)

B、研討會論文

- 1.Yu-Chieh Liao and Mei-Jywan Syu, "Investigation of β -cyclodextrin based material for the affinity adsorption and desorption of α -amylase", p. 189, 英文口頭發表特優, 第八屆生化工程研討會, 六月二十七、二十八日, 高雄義手大學化工系, 2003.
- 2.Jing-H. Deng, You-Ming Nian, and Mei-J. Syu, "Investigation of binding specificity of imprinted PMAA toward α -bilirubin", PP2, pp. 146-147, The 1st International Meeting on Microsensors and Microsystems, National Cheng Kung University, Tainan, Taiwan, January 12-14, 2003.
- 3.Jing-H. Deng, You-Ming Nian, and Mei-J. Syu, "pH influence on desorption and adsorption of polymethacrylic acid for α -bilirubin", P3, pp. 115-116, The 1st International Meeting on Microsensors and Microsystems, National Cheng Kung University, Tainan, Taiwan, January 12-14, 2003.

4. Young Wei and Mei-J. Syu, Chung-Cheng University, Chia-Yi, November 30, 2002.
5. Chun-Yen Chen and Mei-Jywan Syu, "Immobilization of microbes for acetone degradation", 9th YABEC, November 10-12, 2002, Taipei, Taiwan.
6. Tai-Cheng Chou and Mei-Jywan Syu, "Preparation of β -cyclodextrin-based affinity material for the adsorption/desorption of α -amylase", 9th YABEC, November 10-12, 2002, Taipei, Taiwan.
7. Chia-Wen Chen and Mei-Jywan Syu, Preparation of biocompatible copolymer for carrying hydrocortisone", 9th YABEC, November 10-12, 2002, Taipei, Taiwan.
8. Wen-Shyan Chen and Mei-Jywan Syu, "Feeding strategy for the fed-batch fermentation of alkali lipase by *Acinetobacter radioresistens*", October 30-November 1, 2002, Taipei, Taiwan.
9. Jing-H. Deng and Mei-J. Syu, "Adsorption and desorption study of α -bilirubin by molecularly imprinted polymethacrylic acid", 2002 Second International Workshop on Molecularly Imprinted Polymers, p. 89, September 16-19, 2002, La Grande Motte, France.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
NSC 91-2214-E-006-027 以活性碳固定微生物之串聯 填充管柱系統進行連續進流 廢水丙酮成份處理之探討	1,047,700	91.08.01-9 2.07.31	國科會	主持人

(三) 研究獎項

1. 國科會研究計劃主持費

三、服務

(二) 委員會(校內)

1. 化工系研究生事務委員會成員
2. 化工系經費運用委員會成員

(四) 主辦或協辦研討會

1. 協辦第一屆微感測與微系統國際學術會議 (The First International Meeting on Microsensor and Microsystems), secretariat, 會議期間: 01/12-01/14, 2003

(五) 校內其他服務(如導師---)

1. 化工系一乙導師

張鑑祥

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 單元操作	6	化工三	160	蔡少偉 楊毓民
上學期	* 化工程序實驗	2	四乙	21	
上學期	界面現象	3	碩博	25	楊毓民
上學期	生醫工程	3	碩博	12	林睿哲
下學期	* 化工程序實驗	2	四乙	28	
下學期	界面化學	3	化工三	24	楊毓民
下學期	界面活性劑 原理與應用	3	碩博	14	郭炳林 陳炳宏

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
曾展皓	學士	非離子型與陰陽離子型界面活性劑在氣液界面上的動態吸附行為	
林郁舜	碩士	在氣液界面上陰/陽離子混合界劑單分子層行為的研究	
鄭靈珍	碩士	以 Brewster Angle Microscopy 探討氣/液界面上 DPPC/Albumin 混合單分子層的行為	

二、研究

(一) 著作

A、期刊論文

- 1.C.-C. Cheng and C.-H. Chang*, January 2000, "Retardation Effect of Tyloxapol on Inactivation of Dipalmitoyl Phosphatidylcholine Surface Activity by Albumin," Langmuir, 16, 437-441. (EI, SCI)
- 2.C.-T. Hsu, C.-H. Chang, and S.-Y. Lin*, February 2000, "Study on Surfactant Adsorption Kinetics: Effects of Interfacial Curvature and Molecular Interaction," Langmuir, 16, 1211-1215. (EI, SCI)
- 3.T.-H. Chou and C.-H. Chang*, February 2000, "Thermodynamic Behavior and Relaxation Processes of Mixed DPPC/Cholesterol Monolayers at the Air/Water Interface," Colloids and Surfaces B: Biointerfaces, 17, 71-79. (EI, SCI)
- 4.T.-H. Chou and C.-H. Chang*, April 2000, "Thermodynamic Characteristics of Mixed DPPC/DHDP Monolayers on Water and Phosphate Buffer Subphases," Langmuir, 16, 3385-3390. (EI, SCI)
- 5.S.-H. Hsu, W.-H. Lee, Y.-M. Yang*, C.-H. Chang and J.-R. Maa, May 2000, "Bubble Formation at an Orifice in Surfactant Solutions under Constant-Flow

- Conditions,” *Industrial and Engineering Chemistry Research*, 39, 1473-1479. (EI, SCI)
- 6.C.-H. Chang*, S.-C. Tseng, and T.-K. Chuang, May 2000, “Inhibitory Effects of Tyloxapol on the Surface Activity of Albumin at the Air/Liquid Interface,” *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 164, 287-295. (EI, SCI)
 - 7.C.-H. Chang*, S.-D. Yu, T.-K. Chuang, and C.-N. Liang, July 2000, “Roles of α -Globulin in the Dynamic Interfacial Behavior of Mixed Dipalmitoyl Phosphatidylcholine/ α -Globulin Monolayers at Air/Liquid Interfaces,” *Journal of Colloid and Interface Science*, 227, 461-468. (EI, SCI)
 - 8.Y.-L. Lee*, Y.-C. Chen, Y.-M. Yang, C.-H. Chang, and J.-R. Maa, July 2000, “Surface Characterization of the Monolayer and Langmuir-Blodgett Films of tetra-tert-butyl-Copper Phthalocyanine,” *Thin Solid Films*, 370, 278-284. (EI, SCI)
 - 9.C.-M. Chen, C.-H. Lu, C.-H. Chang*, Y.-M. Yang, and J.-R. Maa, September 2000, “Influence of pH on the Stability of Oil-in-Water Emulsions Stabilized by a Splittable Surfactant,” *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 170, 173-179. (EI, SCI)
 - 10.K.-B. Chen, C.-H. Chang*, Y.-M. Yang, and J.-R. Maa, September 2000, “On the Interaction of Dipalmitoyl Phosphatidylcholine with Normal Long-Chain Alcohols in a Mixed Monolayer: A Thermodynamic Study,” *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 170, 199-208. (EI, SCI)
 - 11.C.-M. Chen and C.-H. Chang*, October 2000, “Surfactant Concentration-Dependent Effects of pH on the Interfacial Properties of a Splittable Surfactant,” *Industrial and Engineering Chemistry Research*, 39, 3726-3731. (EI, SCI)
 - 12.C.-W. Huang and C.-H. Chang*, November 2000, “A Laboratory Study on Foam-Enhanced Surfactant Solution Flooding in Removing N-Pentadecane from Contaminated Columns,” *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 173, 171-179. (EI, SCI)
 - 13.C.-M. Chen, C.-H. Chang*, Y.-M. Yang, and J.-R. Maa, December 2000, “Comparisons of the Effects of pH on the Interfacial Tension-Lowering Activity of Surfactants Triton X-100 and Triton SP-190,” *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 174, 357-365. (EI, SCI)
 14. Y.-L. Lee*, W.-C. Tsai, C.-H. Chang, and Y.-M. Yang, March 2001, “Effects of Heat Annealing on the Film Characteristics and Gas Sensing Properties of Substituted and Un-substituted Copper Phthalocyanine Films,” *Applied Surface Science*, 172, 191-199. (EI, SCI)
 15. Y.-M. Yang*, S.-J. Yeh, C.-K. Hsiung, C.-L. Chien, C.-H. Chang, and J.-R. Maa,

- April 2001, "Bubble Formation in Catanionic Surfactant Solutions under Constant-Flow Conditions," *Journal of Chemical Engineering of Japan*, 34, 563-567, 2001. (EI, SCI)
16. Y.-L. Liu and C.-H. Chang*, June 2001, "Dynamic Surface Tension Behavior of a Mixed Insoluble/Soluble Surfactant Dispersion at Pulsating Air/Liquid Interfaces: Roles of the Soluble Surfactant," *Journal of Colloid and Interface Science*, 238, 85-90. (EI, SCI)
17. C.-T. Chen, J.-R. Maa*, Y.-M. Yang, and C.-H. Chang, July 2001, "Drop Formation from Flat Tip Nozzles in Liquid-Liquid System," *International Communications in Heat and Mass Transfer*, 28, 681-692. (EI, SCI)
18. I.-H. Ku, Y.-L. Lee, C.-H. Chang*, Y.-M. Yang, and J.-R. Maa, November 2001, "Influence of Transfer Promoters on the Deposition and Wettability Characteristics of Copper tetra-tert-butyl Phthalocyanine Langmuir-Blodgett Films," *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 191, 223-231. (EI, SCI)
19. T.-H. Chou, I.-M. Chu*, and C.-H. Chang, June 2002, "Interaction of Paclitaxel with DSPC in Monolayers at the Air/Water Interface at Different Temperatures," *Colloids and Surfaces B: Biointerfaces*, 25, 147-155. (EI, SCI)
20. Y.-L. Liu and C.-H. Chang*, July 2002, "Inhibitory Effects of Fibrinogen on the Dynamic Tension-Lowering Activity of Dipalmitoyl Phosphatidylcholine Dispersions in the Presence of Tyloxapol," *Colloid and Polymer Science*, 280, 683-687. (EI, SCI)
21. C.-W. Sheu, K.-M. Lin, I.-H. Ku, C.-H. Chang*, Y.-L. Lee, Y.-M. Yang, and J.-R. Maa, July 2002, "On the Langmuir-Blodgett Transfer of Copper tetra-tert-butyl Phthalocyanine Monolayers in the Presence of Arachidic Acid," *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 207, 81-88. (EI, SCI)
22. C.-T. Chen, J.-R. Maa*, Y.-M. Yang, and C.-H. Chang, October 2002, "Salt Effects on Single Aqueous Drops Falling Through an Immiscible Organic Liquid," *Chemical Engineering Communications*, 189, 1297-1313. (EI, SCI)
23. C.-C. Tung, Y.-M. Yang*, C.-H. Chang, and J.-R. Maa, 2002, "Removal of Copper Ions and Dissolved Phenol from Water Using Micellar-Enhanced Ultrafiltration with Mixed Surfactants," *Waste Management*, 22, 695-701. (EI, SCI)
24. C.-W. Sheu, C.-H. Chang, Y.-L. Lee, Y.-M. Yang*, and J.-R. Maa, November 2002, "Fabrication and Morphology of Mixed Copper Tetra-tert-Butyl Phthalocyanine/Arachidic Acid Langmuir-Blodgett Films," *Journal of the Chinese Institute of Chemical Engineers*, 33, 573-580. (EI, SCI)

B、研討會論文

1. Dorcas, H.-C. Chang, C.-H. Chang, Y.-J. Lin, and T.-F. Yeh, 2002, "Influence of Budesonide (B) on the Dynamic Surface Tension Behavior of Surfactant (Survanta) (S) at Pulsating Air-Liquid Interfaces," Pediatric Academic Societies' 2002 Annual Meeting, Baltimore, Maryland, U.S.A.
2. 謝秉軒, 張鑑祥, 楊毓民, 馬哲儒, 2002, "Triton SP-190/SDS混合界面劑之界面吸附行為的研究," 輸送現象與其應用專題研討會, pp. 361-364, Taipei, Taiwan, R.O.C.
3. 張華珍, 張鑑祥, 楊毓民, 2002, "Budesonide分散系統之表面張力行為的研究," 輸送現象與其應用專題研討會, pp. 365-368, Taipei, Taiwan, R.O.C.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
血漿蛋白質對磷脂質 DPPC 在氣/液界面上動態界面活性之抑制機制的研究(1/3)	1,071,600	91.08 - 92.07	國科會	主持人
大眾科學教育的研究與推動(2/3)	1,200,600	91.08 - 92.07	國科會	主持人

三、服務

(五) 校內其他服務

1. 化工系一乙導師
2. 化工系系館管理委員會召集人
3. 化工系經費運用委員會委員

(六) 校外服務

1. 中華民國界面科學學會理事

王紀

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 計算機概論	3	化工一丙	51	
上學期	高分子物性及機械性質	3	化工碩博	25	
上學期	* 專題討論	0	化工碩博	?	
下學期	* 質能均衡	3	化工一甲	51	
下學期	高分子物理	3	化工三	77	
下學期	* 專題討論	0	化工碩博	?	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱
陳仲秋	碩士	溶劑與回火溫度對對排聚苯乙烯晶體轉換的研究
范永達	碩士	以穿透式電顯觀察對排聚苯乙烯之微結構

二、研究

(一) 著作

A、期刊論文

1. Chi Wang and C.I. Chang, 2000, "Fracture energies and tensile strength of an EPDM/PP thermoplastic elastomer", Journal of Applied Polymer Science, 75, p.1033-1044. (SCI, EI).
2. Chi Wang, M.-C. Chu, T.-L. Lin, S.-M. Lai, H.-H. Shih and J.-C. Yang, 2001, "Microstructures of a highly short-chain branched polyethylene", Polymer, 42, p. 1733-1741 (SCI, EI).
3. Chi Wang, Y.-C. Hsu and C.-F. Lo, 2001, "Melting behavior and equilibrium melting temperatures of syndiotactic polystyrene in α and β crystalline forms", Polymer, 42, p. 8447-8460 (SCI, EI).
4. Y.S. Sun, Chi Wang and E.M. Woo, 2001, "Infrared spectroscopy study on crystalline and conformational changes in solution-cast syndiotactic polystyrene". J. Polym. Research, 8, p. 59-67 (SCI, EI).
5. Chi Wang, 2001, "Tear strength of styrene-butadiene-styrene block copolymers", Macromolecules, 34, p.9006-9014 (SCI, EI).
6. Chi Wang, and C.-C. Chen, 2002, "Interfacial strength of PTFE fiber/i-PP

composites with transcrystalline layers of different thickness". Polymer Composites, 23, p.104-109 (SCI, EI).

7. Chi Wang et al, 2002, "Lamellar morphology and equilibrium melting temperature of syndiotactic polystyrene in α crystalline form", Journal of Polymer Science, Polymer Physics Edition, 40, p.1626-1636 (SCI, EI).
8. Chi Wang et al, 2002, "Simultaneous presence of positive and negative spherulites in syndiotactic polystyrene and its blends with atactic polystyrene". Polymer, 43, p. 5271-5279 (SCI, EI).
9. Chi Wang et al, 2002, "Lamellar thickness of a syndiotactic polystyrene determined from small-angle X-ray scattering and transmission electron microscopy". J. Polymer Research, 9, p.91-96. (SCI, EI).

B、研討會論文

1. 鄭詠文，廖巍博，王敏玲，王紀，2002, "aPS之添加對sPS板晶形態的影響", Proceedings of the 25th ROC Polymer Symposium.
2. Chi Wang, Wei-Po Liao, Yong-Wen Cheng, 2002, "Presence of microvoids and determination of lamellar thickness of syndiotactic polystyrene in α '- and β '- crystal form probed by small-angle X-ray scattering and transmission electron microscopy", XII International Conference On Small-angle Scattering, Venice, Italy, August 25-29.
3. Chi Wang, Yong-Wen Cheng and Wei-Po Liao, 2002, "Morphological features of syndiotactic polystyrene at the micro and nano scales", 第二屆高分子物理研討會, Taipei, October 4.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
高分子薄膜微結構與小分子吸附之關聯(2/2)	1,050,900	2002/08 至 2003/07	國科會	主持人

(三) 研究獎項

1. 國科會研究獎勵 (九十一學年度研究主持費)

三、服務

(二) 委員會(校內)

1. 化工系經費運用委員會委員
2. 化工系課程委員會委員
3. 化工系九十一學年度碩士班甄試入學招生委員會委員

(四) 主辦或協辦研討會

1. 協辦高分子聯合會議 (募款組), 會議期間: 民國九十二年一月十七日至一月十八日共二天。

(五) 校內其他服務

1. 化工四甲班導師

(七) 校外服務

Reviewers of scientific journals such as

1. Journal of Polymer Science, Polymer Physics Edition (USA)
2. Polymer Composites(USA)
3. Macromolecular Chemistry and Physics (Germany)
4. Journal of Polymer Research (Taiwan).
5. Journal of the Chinese Institute of Chemical Engineers (Taiwan).
6. Journal of Materials Science (England)

張嘉修

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	應用環境生物技術	3	化工系碩博	5	
下學期	生物技術特論	3	化工系碩博	12	
下學期	*質能均衡	3	化工系	48	
下學期	專題討論	2	化工系碩博		

二、研究

(一) 著作

A、期刊論文

- 1.Chang, J.-S. (2002) "Bioprocess development for mercury detoxification and azo-dye decolorization" in ACS Symposium Series Book "Advances in Fermentation Process Development" B. Saha (Ed.) published by American Chemical Society (in press).
- 2.張嘉修、李國興、林屏杰、吳石乙 (2002) , 以環境生物技術生產清潔能源—氫氣, 化工 Vol. 49, No. 6, pp.85-104.
- 3.Sue-Ye Wu, Chi-Neng Lin, Kuo-Shing Lee, Ping-Jei Lin, and Jo-Shu Chang* (2002) "Microbial hydrogen production with immobilized anaerobic cultures" Biotechnology Progress Vol. 18, No. 5, 921-926 [SCI]
- 4.Chang, J.-S., Lee, K.-S. and Lin, P.-J. (2002) "Biohydrogen production with biofilm processes" International Journal of Hydrogen Energy Vol. 27, No. 11-12, 1167-1174 [SCI]
- 5.張嘉修、李國興、林屏杰 (2002) , 生物技術在廢水資源化之利用, 環保月刊 , Vol. 14, 150-159.
- 6.Chen, C.-C., Lin, C.-Y., and Chang, J.-S.* (2001) "Kinetics of hydrogen production with continuous anaerobic cultures utilizing sucrose as the limiting substrate" Applied Microbiology and Biotechnology Vol. 57, No. 1-2, 56-64. [SCI]
- 7.Chang, J.-S., and Lin, C.-Y. (2001) "Decolorization of an azo dye with recombinant Escherichia coli strain harboring azo-dye-decolorizing determinants

- from *Rhodococcus* sp." *Biotechnology letters* Vol. 23, No. 8, 631-636. [SCI] (supported by NSC90-2214-E-006-027)
- 8.Chang, J.-S., Chou, C., Lin, Y.-C., Ho, J.-Y., Lin, P.-J. and Hu, T. L. (2001) Kinetic characteristics of bacterial azo-dye decolorization by *Pseudomonas luteola*. *Water Research* Vol. 35, No. 12, 2841-2850. [SCI] (supported by NSC89-2214-E-035-015)
- 9.張嘉修 (2001) "微生物技術在環境污染防治之應用", *化工技術*, Vol. 95, 202-227。
- 10.Chang, J.-S., Chou, C., and Chen, S. Y. (2001) Decolorization of azo dye with immobilized cells of *Pseudomonas luteola*. *Process Biochemistry* Vol. 36, No. 8-9, 757-763. [SCI]
- 11.Chang, J. S. and Lin, Y.-C. (2000) Fed-batch bioreactor strategies for microbial decolorization of azo dye using a *Pseudomonas luteola* strain. *Biotechnology Progress* Vol. 16, No. 6, 979-985 [SCI]
- 12.Chen, B.Y. and Chang, J.-S., (2000) Toxicological threshold of mercuric ions to *Pseudomonas aeruginosa* PU21 (Rip64). *Bioprocess Engineering* Vol. 23, No. 6, 675-680 [SCI]
- 13.Chang, J. S., Tai-Shin Kuo (2000) Kinetics of bacterial decolorization of azo dye with *Escherichia coli* NO3. *Bioresource Technology*, Vol. 75 No. 2, 107-111. [SCI]
- 14.Chang, J. S., Tai-Shin Kuo, Yun-Peng Chao, Jin-Yen Ho, and Ping-Jei Lin (2000) Azo dye decolorization with a mutant *Escherichia coli* strain. *Biotechnology Letters*, Vol. 22, No. 9, 807-812. [SCI]
- 15.張嘉修 (2000) "Application of immobilized cell and enzyme in heavy metal remediation processes" in *Immobilization of Enzymes and Cells in Bioindustry*, Chapter 10, pp. 313-351, 茂昌圖書公司。
- 16.羅文鑫、張嘉修 (2000) "生物技術在含汞廢水處理上之應用", *工業污染防治*, Vol. 19, No.3, pp.1-25.
- 17.張嘉修 (2000) "微生物之脫色機制在去除廢水色度之應用", *生物產業*, Vol. 11, No. 1, pp. 21-33.

B、研討會論文

- 1.李國興、羅泳勝、羅泳中、吳季芳、林屏杰、張嘉修，November 2002，以生物填充床反應器進行連續氫氣醱酵，第27屆廢水處理研討會 (in CD-ROM Collection)
- 2.張嘉修、葉茂淞、林永盛，November, 2002，以間歇曝氣式CSTR與填充床生物反應器進行廢水褪色處理，第27屆廢水處理研討會 (in CD-ROM Collection)
- 3.林孟毅 張嘉修 陳博彥，November, 2002，廢水褪色中混合菌相之生態工程

- 探討，第27屆廢水處理研討會 (in CD-ROM Collection)
- 4.楊立豪、林屏杰、張嘉修，November, 2002，饋料批次進流策略對厭氧SBR反應器生物產氫之影響，第27屆廢水處理研討會 (in CD-ROM Collection)
 - 5.王美雲、郭鵬輝、張嘉修，November, 2002，以菌種改良策略促進大腸桿菌之染料生物褪色能力，第27屆廢水處理研討會 (in CD-ROM Collection)
 - 6.吳坤哲、宋逸詩、陳文華、黃文俊、侯彥希、柯政男、黃郁智、郭曉婷、張嘉修，November, 2002，應用固定化細胞材料的改質於生物產氫醱酵最佳化之探討，第27屆廢水處理研討會 (in CD-ROM Collection)
 - 7.范姜楷、林屏杰、張嘉修，November, 2002，以中空纖維微過濾膜結合CSTR反應器進行產氫醱酵，第27屆廢水處理研討會 (in CD-ROM Collection)
 - 8.Chang, J.-S., Huang, C.-C., Su, C.-C., Hsieh, J.-L., Tseng, C.-P., and Lin, P.-J., November 2002, The 8th Young Asian Biochemical Engineers Community (YABEC) Symposium in Taipei, Taiwan. "Polypeptides for heavy metal biosorption: capacity and specificity of two heterogeneous MerP proteins". (in CD-ROM collection)
 - 9.Chang, J.-S., Lee, K.-S., and Lin, P.-J., April, 2002, Biohydrogen 2002, in Ede, The Netherlands. Title:"Biohydrogen production with fixed-bed bioreactors". pp. 49
 - 10.張嘉修、林孟毅、陳姍玗、陳博彥，脫色菌相生物補強之生態工程評估，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 295-302，Lin-Kou, Taiwan, R.O.C.
 - 11.張嘉修、陳姍玗，處理含染料廢水之固定化生物觸媒，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 303-308，Lin-Kou, Taiwan, R.O.C.
 - 12.張嘉修、范姜楷、林屏杰，以中空纖維膜生物反應器進行高效能厭氣產氫，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 543-550，Lin-Kou, Taiwan, R.O.C.
 - 13.張嘉修、林永盛，生長與染料降解過程代謝產物對混合染料生物褪色之影響，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 551-556，Lin-Kou, Taiwan, R.O.C.
 - 14.張嘉修、劉宏秀、林屏杰，以SILICONE固定化產氫污泥進行連續式產氫，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 557-562，Lin-Kou, Taiwan, R.O.C.
 - 15.張嘉修、楊立豪、李國興、林屏杰，以饋料批次結合厭氧SBR反應器進行生物產氫，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 563-570，Lin-Kou, Taiwan, R.O.C.
 - 16.張嘉修、葉茂淞，以天然與基因重組菌種進行混合染料之生物分解，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp.

571-578 , Lin-Kou, Taiwan, R.O.C.

- 17.張嘉修、李國興、林屏杰，以生物膜反應器進行連續氫氣醱酵，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 579-586，Lin-Kou, Taiwan, R.O.C.
- 18.張嘉修、蘇啟嘉、曾曉萍、林屏杰、謝儒樑、黃介辰，June 2002，基因改質大腸桿菌之重金屬生物吸附能力之探討，Proceedings of the 7th Conference on Biochemical Engineering，pp. 587-592，Lin-Kou, Taiwan, R.O.C.
- 19.張嘉修、謝家琦、李國興、林屏杰，June 2002，以改良式固定化顆粒填充床進行連續式厭氣產氫操作，Proceedings of the 7th Conference on Biochemical Engineering，pp. 593-598，Lin-Kou, Taiwan, R.O.C.
- 20.張嘉修、吳石乙、林祺能、李國興，流化床生物產氫特性之研究，June 2002，Proceedings of the 7th Conference on Biochemical Engineering，pp. 599-604，Lin-Kou, Taiwan, R.O.C.

C、其他著作

1. 張嘉修，2001.08-2002.07，”廢水褪色基因重組菌之開發與應用(1/2)”，國科會補助專題計畫成果報告，計畫編號：NSC90-2214-E-006-027。

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
廢水褪色基因重組菌之開發與應用(2/2)	982,900	91/8 - 92/7	國科會	主持人
學界科專三年計畫：分子生物技術於環境工程研究之應用- 子計畫(1.2) 生物界面活性劑之活性指標監測及量產精製技術	1,680,000	91/12-92/11	經濟部	主持人
以固定化細胞進行連續產氫醱酵之研究	39,000	91/7-92/2	國科會	主持人

三、服務

(二) 委員會(校內)

- 1.化工系研究生事務委員會委員
- 2.化工系課程委員會委員暨召集人

(五) 校內其他服務

- 1.大學部導師

(六) 校外服務

1. 苗栗縣環保局空污計劃工廠評鑑審查委員
2. 苗栗縣環境保護基金管理委員會委員
3. 苗栗縣環保局「空氣品質改善相關計畫」採購評選委員

林睿哲

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	單操實驗 *	2	化學工程系	25	
上學期	工程概論	3	工學院通識	120	常正之
上學期	生醫工程	3	化學工程研究所	30	張鑑祥
下學期	單操實驗 *	2	化學工程系	25	
下學期	工程概論	3	工學院通識	120	常正之
下學期	組織工程	3	醫學工程研究所	50	蘇芳慶、黃玲惠、張憲彰、林瑞模、楊俊佑、林聖哲等

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
王嘉薇	碩士	丁醃化幾丁聚醣之研究	
彭美娟	碩士	聚胺基甲酸酯之磺酸化改質與蛋白質前吸附處理於人工膽管支架之膽汁相容性探討	
蔡心怡	碩士	金基材之再利用-以表面氧化法進行金基材上自我聚集單分子層之移除	

(三) 教學改進計畫

計畫名稱	經費	期限	補助單位	擔任職務
組織工程整合教育研究計劃	5,989,200	90/10/1~93/9/1	國科會	共同主持人

二、研究

(一) 著作

A、期刊論文

1. Mei-Chuan Peng, Jui-Che Lin, Chiung-Yu Chen, Jiunn-Jong Wu, Xi-Zhang Lin, "Studies of Sulfonated Polyethylene for Biliary Stent Application", submitted to Journal of Biomedical Materials Research: Applied Biomaterials August 2002.
2. H.-H. Pan, M.-C. Peng, Jui-Che Lin, C.-Y. Chen, J.-J. Wu, X.-Z. Lin, "Studies of Ionic Polyurethanes for Biliary Stent Applications", in Advances in Biomaterials and Drug Delivery System, Ging-Ho Hsiue, Teruo Okano, Un Young Kim, Hsing-Wen Sung, Nobuhiko Yui and Ki Dong Park Eds. Princeton International

Publishing Co. Ltd. Taipei, Taiwan 301-312, 2002

3. Huai-Song Han, Shiao-Ling Yang, Hsi-Yi Yeh, Jui-Che Lin, Hua-Lin Wu, Guey-Yueh Shi, "Studies of a Novel Human Thrombomodulin Immobilized Substrate: Surface Characterization and Anticoagulation Activity Evaluation", *Journal of Biomaterials Science: Polymer Edition*, 12, 1075-1089 (2001) (SCI)
4. Meng-Yen Tsai and Jui-Che Lin, "Preconditioning Gold Substrates Influence Organothiol Self-Assembled Monolayer (SAM) Formation", *Journal of Colloid and Interface Science*, 238, 259-266 (2001) (SCI)
5. Chia-Wen Lin and Jui-Che Lin, "Surface Characterization and Platelet Compatibility Evaluation of Surface Sulfonated Chitosan Membrane", *Journal of Biomaterials Science: Polymer Edition*, 12, 543-557 (2001) (SCI)
6. Meng-Yen Tsai and Jui-Che Lin, "Surface Characterization and Platelet Adhesion Studies for the Self-Assembled Monolayer (SAM) with Phosphonate Ester and Phosphonic Acid Functionalities", *Journal of Biomedical Materials Research*, 55, 554-565 (2001) (SCI)
7. Jui-Che Lin, Chia-Wen Lin, and Xi-Zhang Lin, "In Vitro and In Vivo Studies for the Modified Ethyl Cyanoacrylate Regimens for Sclerotherapy", *Journal of Biomedical Materials Research: Applied Biomaterials*, 53, 799-805 (2000) (SCI)
8. Chung-Min Jen, Jui-Che Lin, Shih-Chin Lee, Hong-Min Tsai and Xi-Zhang Lin, "Expandable Metallic Esophageal Stent: Preliminary Report of a Lab-built Process, In Vitro Expansile Stiffness Test, and In Vivo Placement in a Pig", *Gastroenterology Journal Taiwan*, 17, 16-25 (2000) (Non-SCI Journal, Official Journal of Domestic Professional Society)
9. Jui-Che Lin and Shang-Ming Tseng, "Surface Characterization and Platelet Adhesion Studies on Polyethylene Surface with Hirudin Immobilization", *Journal of Materials Science: Materials in Medicine*, 12, 827-832 (2001) (SCI)
10. Jui-Che Lin, Sun-Lee Tiong and Chuh-Yung Chen, "Surface Characterization and Platelet Adhesion Studies of Plasma Induced Graft Polymerization of Fluorocarbons", *Journal of Biomaterials Science: Polymer Edition*, 11, 701-714 (2000) (SCI)
11. Jui-Che Lin and Wen-Hsi Chuang, "Synthesis, Surface Characterization and Platelet Reactivity Evaluation for the Self-Assembled Monolayer of Alkanethiol with Sulfonic Acid Functionality", *Journal of Biomedical Materials Research*, 51, 413-423 (2000) (SCI)

B、研討會論文

1. "Synthesis and Property Evaluations for Photocrosslinkable Chitosan Derivative and Its Mixture with PEG", presented at 28th Society for Biomaterials Annual

Meeting, Tampa, Florida, USA, April 24-April 27, 2002 (with Bin-Hong Tsai)

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
具有不同離子性及親疏水性末端官能基硫醇之製備及其自我聚集單分子層之表面性質與血小板接觸性質之探討(2/2)	893,200	91/8/1~92/7/31	國科會	主持人

三、服務

(二) 委員會(校內)

1. 化工系學生事務委員會委員
2. 化工系儀器委員會委員
3. 工學院精英培訓計劃籌畫委員

(四) 主辦或協辦研討會

1. 2003高分子年會籌備委員 2003/1

(五) 校內其他服務(如導師---)

1. 化工系三丙導師
2. 國科會台南貴儀中心固態核磁共振儀指導教授

(六) 校外服務

1. 經濟部標準檢驗局醫療器材標準審議委員
2. 中華民國生醫材料及藥物制放學會理事
3. IUSBSE (國際生醫材料及工程學會聯盟) Delegate

陳東煌

一、教學

(一) 開授課程

學 期	課程名稱	學 分	開課班級	學生數	共同擔任教師
上學期	物理化學(一)	3	化工系(二甲)		
上學期	物理化學實驗(二)	1	化工系(三乙)		
下學期	物理化學(二)	3	化工系(二甲)		
下學期	物理化學實驗(一)	1	化工系(二甲)		
下學期	奈米材料與奈米技術	3	化工碩博		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
廖敏宏	博士	磁性奈米載體在生物觸媒和生化分離之應用	
黃世宏	碩士	氧化鐵磁性奈米粒子在酵素固定化及分離上之應用研究	
王君庭	碩士	金奈米粒子及金屬/高分子微球核殼型複合奈米粒子之製備	
吳建成	碩士	樹狀高分子包覆鎳奈米粒子及逐層自組裝奈米結構複合膜之製備	

二、研究

(一) 著作

A、期刊論文

- 1.Chen, D. H., J. H. Chen and T. C. Huang, 2000, Preparation and Characterization of Silver Ultrafine Particles in AOT Reverse Micelles, J. Chinese Inst. Chem. Eng., 31 (3), 203-210.
- 2.Chen, D. H. and S. H. Wu, 2000, Synthesis of Nickel Nanoparticles in Water-in-Oil Microemulsions, Chem. Mater., 12(5), 1354-1360.
- 3.Chen, D. H. and Y. Y. Chen, 2001, Synthesis of Strontium Ferrite Nanoparticles Using Microemulsion Processing, J. Colloid Interface Sci., 236, 41-46.
- 4.Chen, D. H. and Y. Y. Chen, 2001, Synthesis of Barium Ferrite Ultrafine Particles by Coprecipitation in the Presence of Polyacrylic Acid, J. Colloid Interface Sci., 235, 9-14.
- 5.Lai, L. B., D. H. Chen and T. C. Huang, 2001, Preparation and Characterization of

- Ti-Supported Nanostructured Pt Electrodes by Electrophoretic Deposition, *Mater. Res. Bull.*, 36, 1049-1055.
6. Wang, C. C., D. H. Chen and T. C. Huang, 2001, Preparation of Pd/Ti Nanostructured Electrodes by Electrophoretic Deposition, *J. Chinese Inst. Chem. Eng.*, 32(4), 289-294.
 7. Wang, C. C., D. H. Chen and T. C. Huang, 2001, Synthesis of Palladium Nanoparticles in Water-in-Oil Microemulsions, *Colloids Surfaces A*, 189, 145-154.
 8. Wu, M. L., D. H. Chen and T. C. Huang, 2001, Preparation of Au/Pt Bimetallic Nanoparticles in Water-in-Oil Microemulsions, *Chem. Mater.*, 13(2), 599-606.
 9. Wu, M. L., D. H. Chen and T. C. Huang, 2001, Synthesis of Au/Pd Bimetallic Nanoparticles in Reverse Micelles, *Langmuir*, 17, 3877-3883.
 10. Lai, L. B., D. H. Chen and T. C. Huang, 2001, Preparation and Electrocatalytic Activity of Pt/Ti Nanostructured Electrodes, *J. Mater. Chem.*, 11(5), 1491-1494.
 11. Chen, D. H. and X. R. He, 2001, Synthesis of Nickel Ferrite Nanoparticles by Sol-Gel Method, *Mater. Res. Bull.*, 36, 1369-1377.
 12. Wu, M. L., D. H. Chen and T. C. Huang, 2001, Preparation of Pd/Pt Bimetallic Nanoparticles in Water/AOT/Isooctane Microemulsions, *J. Colloid Interface Sci.*, 243, 102-108.
 13. M. H. Liao and Chen, D. H., 2001, Immobilization of Yeast Alcohol Dehydrogenase on Magnetic Nanoparticles for Improving Its Stability, *Biotechnol. Lett.*, 23(20), 1723-1727.
 14. Chen, D. H. and M. H. Liao, 2002, Preparation and Characterization of YADH-Bound Magnetic Nanoparticles, *J. Mol. Catal. B. Enzymatic*, 16, 283-291.
 15. Chen, D. H. and Y. Y. Chen, 2002, Synthesis of Strontium Ferrite Nanoparticles by Coprecipitation in the Presence of Polyacrylic Acid, *Mater. Res. Bull.*, 37(4), 801-810.
 16. Chen, D. H. and C. J. Chen, 2002, Formation and Characterization of Au/Ag Bimetallic Nanoparticles in Water-in-Oil Microemulsions, *J. Mater. Chem.*, 12, 1557-1562.
 17. Chen, D. H. and C. H. Hsieh, 2002, Synthesis of Nickel Nanoparticles in Aqueous Cationic Surfactant Solutions, *J. Mater. Chem.*, 12(8), 2412-2415.
 18. Liao, M. H. and D. H. Chen, 2002, Characteristics of Magnetic Nanoparticles-bound YADH in Water/AOT/Isooctane Microemulsions, *J. Mol. Catal. B. Enzymatic*, 18(1-3), 75-81.
 19. Chen, D. H. and M. H. Liao, 2002, Effects of Mixed Reverse Micellar Structure on Stability and Activity of Yeast Alcohol Dehydrogenase, *J. Mol. Catal. B. Enzymatic*, 18(1-3), 149-156.
 20. Liao, M. H. and D. H. Chen, 2002, Fast and Efficient Adsorption/Desorption of

- Protein by a Novel Magnetic Nano-adsorbent, *Biotechnol. Lett.*, 24, 1913-1917.
21. Liao, M. H. and D. H. Chen, 2002, Preparation and Characterization of a Novel Magnetic Nano-adsorbent, *J. Mater. Chem.*, 12, 3654-3659.
22. Chen, D. H. and Y. W. Huang, 2002, Spontaneous Formation of Ag Nanoparticles in Dimethylacetamide Solution of Poly(ethylene glycol), *J. Colloid Interface Sci.*, 255, 299-302.

B、研討會論文

1. Wu, S. H. and D. H. Chen, 2002, Synthesis of Copper Nanoparticles in Aqueous CTAB Solution, International Chemical Conference, Taipei (ICCT2002), Feb. 23-26, Taipei, P0A34.
2. Wu, S. H. and D. H. Chen, 2002, Preparation and Catalytic Properties of Nickel Nanoparticles, Proceedings of The Twentieth R.O.C. Symposium on Catalysis and Reaction Engineering, June 20-21, Tainan, 85-90.
3. Chen, D. H., S. H. Wu and S. R. Wang, 2002, Preparation of Ni-core/Au-shell and Ni-core/Ag-shell nanoparticles, 2002奈米科技學術研討會暨國科會成果發表會, 6月27-28日, 台北, O-4.
4. Chen, D. H. and J. P. Lin, 2002, Single-stage formation of metal nanoshells on polystyrene microspheres, 2002奈米科技學術研討會暨國科會成果發表會, 6月27-28日, 台北, P-51.
5. Huang, S. H., M. H. Liao and D. H. Chen, 2002, Preparation and Performance of Lipase-Bound Magnetic Nanoparticles, Proceedings of The Seventh Conference on Biochemical Engineering, June 28-29, Taipei, 727-733.
6. Wu, S. H. and D. H. Chen, 2002, Formation and Protection Mechanism of Nickel Nanoparticles in Aqueous CTAB Solution, P-MA-012, 中國化學會九十一年年會, 台北, 91年10月25-27日.
7. Liao, M. H. and D. H. Chen, 2002, Preparation and Characterization of Magnetic Nano-adsorbents, Proceedings of 2002 Taiwan/Korea/Japan Chemical Engineering Conference, Oct 30- Nov 1, Taipei, 154.
8. Liao, M. H. and D. H. Chen, 2002, Preparation and Performance of Enzyme-Bound Magnetic Nanoparticles, Proceedings of YABEC 2002 Symposium, Nov 10-12, Taipei, 113.
9. Liao, M. H., K. Y. Wu and D. H. Chen, 2002, Fast and Efficient Adsorption/Desorption of Crystal Violet by a Novel Magnetic Nano-Adsorbent, Proceedings on the 2002 Symposium of Transport Phenomena and Applications / Solid-Liquid Separation Forum, Nov 22, Taipei, 83-86.
10. 陳東煌, 張揚狀, 黃琪傑, 2002, 以溶熱法製備硫化鋅奈米薄片之研究, Proceedings of The 2002 Annual Conference of The Chinese Society for Materials

Science., November 22-23, Taipei, 113.

- 11.Chen, D. H., 2002, Preparation and Applications of Core-Shell Magnetic Composite Nanoparticles, 2nd Cross-Strait Workshop on Nano Science & Technology (CSWNST-2), December 9-11, Hong Kong, Abstract 7.3.

C、其他著作

- 1.陳東煌，2002，具奈米金屬殼導電粉體暨以鎳為基材之金屬奈米粉體與複合材料，2002跨世紀科技列車，國科會工程處工程科技推展中心，4月12日，編號107 (P.16-18).
- 2.陳東煌，2002，奈米粒子的被覆與應用，國科會工程處奈米材料研究成果發表會及產官學研座談會，國科會工程處工程科技推展中心，5月8日，99-103.
- 3.陳東煌，2002，奈米複合薄膜的製備與特性分析，工程科技通訊，國科會工程處工程科技推展中心，62(化工(高分子、化工、食品))，105-108.
- 4.吳明立，陳東煌，黃定加，2002，微乳化系統中雙金屬奈米粒子形成程序之探討，化工，49(3)，1-16.
- 5.陳東煌，2002，奈米複合薄膜的製備與特性分析(II)，國家科學委員會專題研究計畫研究報告.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
以逐層自組裝技術製備奈米結構複合膜(1/2)	1,485,100	9108-9207	國科會	主持人

三、服務

(五) 校內其他服務(如導師---)

- 1.化工系導師

洪嘉宏

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	*化學工業程序	3	化工系		
	*化工程序實驗	2	化工系		
下學期	*化工程序實驗	2	化工系		

莊和達

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	*化工數學	2	化工系		
	*工程數學(一)	4	化工系		
下學期	*工程數學(二)	2	化工系		
	廢水工程設計規劃	3	化工系		

林洪志

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 分析化學	3	系	141	
上學期	* 化學工業程序	3	系	25	
上學期	高等分離程序	3	碩博	7	
下學期	分析化學(生物系)	3	系	14	
下學期	* 工業安全與衛生	3	系	60	李明遠
下學期	工業觸媒	3	系	51	
下學期	製程安全技術	3	碩博	5	張珪庭
下學期	相平衡	3	碩博	3	

二、研究

(一) 著作

A、期刊論文:

1. Ten-Chin Wen, Jui-Chin Fang, Hung-Jye Lin, and Cien-Hsin Yang, "Characteristics of PPG-Based Thermoplastic Polyurethane Doped with Lithium Perchlorate", J. Appl. Polym. Sci., Vol. 82, 389-399 (2001).

B、研討會論文:

1. Lin, Fred Hung-Jye, "Azeotropic Distillation for Absolute Alcohol with n-Pentane as the Entrainer", 2002年工業減廢暨環境管理研討會, Taipei, (2002).
2. Lin, Fred Hung-Jye, "A Cleaner Ethanol Dehydration Process by Azeotropic distillation", Proceeding 2002 Symposium on Transport Phenomena and Applications, Taipei, (2002).

三、服務

(六) 校外服務

1. 行政院環保署, 諮詢委員.
2. 台南市消防隊, 火災鑑定委員.

凌漢辰

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 工程數學	4	化工系二乙	58	
上學期	化工應用數值方法	3	化工系三、四	15	江建利
下學期	* 工程數學	2	化工系二乙	58	
下學期	高分子加工概論	3	化工系三、四	39	
下學期	高等輸送現象	3	化工研究所(A)	62	黃世宏
下學期	高等輸送現象	3	化工研究所(B)	28	黃世宏
下學期	服務學習	1	化工系一甲	51	

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
蕭培宏	碩士	半徑基底函數法解微分方程式之探討與應用	

二、研究

(一) 著作

B、研討會論文

1. H. -C. Ling, "Study of Detection the Composition of Multi-Component Absorbate by Single Quartz Crystal Sensor", Poster Session PS-08, PSE Asia 2002, December 4 - 6, 2002 Taipei, Taiwan.

鄭智元

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	課程碼	共同擔任教師
上學期	日文(一)	2	大三	E32141	
上學期	* 化工程序實驗	2	大四	E34110	張鑑祥

二、研究

(一) 著作

A、期刊論文

- 1.Chen, S.-J.; Cheng, C.-Y.; and Chen, T.-L.: A strategy for lipase production by *Acinetobacter radioresistens* from n-hexadecane. *J. Chin. Inst. Chem. Engrs.* 30, 283-288 (1999).
- 2.Li, C.-Y.; Cheng, C.-Y.; and Chen, T.-L.: Production of *Acinetobacter radioresistens* lipase using Tween80 as the carbon source. *Enzyme Microb Technol.* 29, 258-263 (2001).

三、服務

(五) 校內其他服務(如導師---)

1. 學生事務委員會委員

楊明長

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	分析電化學	3	(化工)碩 博	18	
上學期	工業電化學	3	(化工)三	14	周澤川
下學期	*化學反應工 程	9(三班)	(化工)三甲 乙丙	154	翁鴻山、鄧熙聖
下學期	*質能均衡	3	(化工)一乙	65	
下學期	成膜原理與技 術	3	(化工)碩 博	42	郭炳林、洪昭南、 陳雲

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
陳勝捷	碩士	薄膜類固醇分子模版之研究	
薛志鴻	碩士	質子交換膜型燃料電池電極在 CO 存在下之阻抗分析	
蕭方瑋	大學專題生	Nafion 膜的製備條件對平板一氧 化碳感測器感測行為的影響	
林靜宜	大學專題生	間接方式感測 1,2-二氯乙烷之研 究	

二、研究

(一) 著作

A、期刊論文

1. Hung-Sen Twu, Tzong-Rong Ling, Tse-Chuan Chou and Ming-Chang Yang, 2001, "Ultrasonic Irradiation Effect in the Impregnation-Reduction Process of Preparing Pt/Nafion NH₄⁺ Sensor," Ultrasonic Sonochemistry Vol. 8, pp. 41-47 (SCI). NSC86-2214-E-006-020
2. Tzong-Rong Ling, Zwen-Chun Lin, Ming-Chang Yang, and Tse-Chuan Chou, 2001, "Synthesis of Propylene Oxide in a paired Electrolytic System: Studies on the Mechanism and Operating Factors", J. Chin. Inst. Chem. Engrs., Vol. 32, No. 4, pp. 341-349.
3. Min-Chieh Chuang and Ming-Chang Yang, 2002, "Electrochemical Detection of Gaseous Vinyl Chloride with a Sputtered Au/Porous Alumina Substrate/Pt Electrode Assembly," Electroanalysis, 14, pp. 1209-1214 (SCI, EI). NSC89-EPA-Z-006-003

B、研討會論文

1. Yuh-Lung Sun, and Ming-Chang Yang, May 12-17, 2002, "A Study on Carbon Monoxide Sensor Based on Lanthanum Fluoride Electrolyte," Abstract No. 1367, 201st Meeting of The Electrochemical Society, Philadelphia, PA, U.S.A.
2. Min-Chieh Chuang, and Yuh-Lung Sun, May 12-17, 2002, "An Electrochemical Detector for Vinyl Chloride in Gaseous Phase," Abstract No. 1568, 201st Meeting of The Electrochemical Society, Philadelphia, PA, U.S.A.
3. Feng-Huang Hsiao, and Ming-Chang Yang, May 12-17, 2002, "Effect of Sn on Pt Electrode for Planar CO Sensor," Abstract No. 1518, 201st Meeting of The Electrochemical Society, Philadelphia, PA, U.S.A.
4. Pei-Hung Hsieh, and Ming-Chang Yang, May 12-17, 2002, "The Study of the Electrodeposition of Nickel-alumina Composite," Abstract No. 496, 201st Meeting of The Electrochemical Society, Philadelphia, PA, U.S.A.
5. San-Jet Chen and Ming-Chang Yang, Sep. 16-19, 2002, "On the Parameter Effects during the Synthesis of Molecularly Imprinted Polymer with Steroids", Proceedings of the Second International Workshop on Molecular Imprinting Polymers, La Grande Mott, France., p. 104.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
電化學氯乙烯感測器之研發	712,800	90/08 ~ 91/07	國科會	主持人
阻抗分析在質子交換膜燃料電池之應用	741,000	91/08 ~ 92/07	國科會	主持人

三、服務

(一) 委員會

1. 中華台灣化學感測器科技協會 副理事長

陳慧英

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
學期(一)	* 物理化學(一)	3	化工二丙		
學期(一)	材料科學	3			洪昭南
學期(一)	* 物理化學實驗 (二)	1	化工三丙		
學期(二)	* 物理化學(二)	3	化工二丙		
學期(二)	物理化學	3	資源三		
學期(二)	* 物理化學實驗 (一)	1	化工二丙		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
熊健剛	碩士	無電鍍鈀/砷化鎵式氫氣感測器之製備及氫氣感測之研究	
林育右	碩士	以化學還原法合成導電性銅奈米微粉之研究	
蘇乾元	學士	鎳/氧化鎂觸媒之再生處理-金屬含浸量及孔隙分析之探討	

二、研究

A、期刊著作

1. Huey-Ing Chen, Yen-I Chou, and Chin-Yi Chu, "A Novel High-Sensitivity Pd/InP Hydrogen Sensor Fabricated by Electroless Plating"; Sens. Actuators B, 85, 10-18 (2002). (EI, SCI)
2. Ting-Chia Huang, Ming-Chi Wei, and Huey-Ing Chen, "A Study of the Hydrogen Transport Properties of Palladium/Alumina Composite Membranes"; Sep. Sci. Technol., 189, 1340-1359 (2002). (EI, SCI)
3. His-Jen Pan, Kun-Wei Lin, Kuo-Hui Yu, Chin-Chuan Cheng, Kong-Beng Thei, Wen-Chau Liu, and Huey-Ing Chen, "Highly Hydrogen-sensitive Pd/InP Metal-Oxide-Semiconductor Schottky Diode Hydrogen Sensor"; IEE Electronics Lett., 38(2), 92-94 (2002). (EI, SCI)
4. Wen-Chau Liu, H. J. Pan, Huey-Ing Chen, K. W. Lin, and C. K. Wang, "Comparative hydrogen-sensing study of Pd/GaAs and Pd/InP

- metal-oxide-semiconductor Schottky diodes”; *Jpn. J. App. Phys.*, 40(11), 6254-6259 (2002). (EI, SCI)
5. Wen-Chau Liu, Kun-Wei Lin, Huey-Ing Chen, Chih-Kai Wang, Chin-Chuan Cheng, Shiong-Ying Cheng, and Chun-Tsen Lu, “A New Pt/Oxide/In_{0.49}Ga_{0.51}P MOS Schottky Diode Hydrogen Sensor”; *IEEE Electron Dev. Lett.*, 23(11), 640-642 (2002). (EI, SCI)
 6. Huey-Ing Chen, Hung-Yi Chang, and Po-Hung Chen, “High-Pressure Phase Equilibria of Carbon Dioxide + 1-Butanol, and Carbon Dioxide + Water + 1-Butanol Systems”; *J. Chem. Eng. Data*, 47, 776-780 (2002). (EI, SCI)
 7. H. I. Chen, W. T. Huang, and Y. Y. Lin, “Preparation of Ultra-Fine Cerium Dioxide Power”; *J. Mater. Sci. Eng.*, 34 (3), 179-184 (2002).

B、研討會論文

1. Huey-Ing Chen, Chin-Yi Chu, and Ting-Chia Huang, “Characterization of Palladium-Silver/Alumina Composite Membranes Prepared by Electroless Codeposition”; *Proceedings of the Second Conference on Membrane Science & Technology*, 107-110, 2002, (May, 2002, Chungli).
2. Huey-Ing Chen, Jang-Daw Shiau, Chin-Yi Chu, and Ting-Chia Huang, “Synthesis and Characterization of Palladium Clusters Dispersed Alumina Membranes”; *7th International Conference on Inorganic Membranes*, June 23-26, 2002, Dalian, China.
3. Chien-Kang Hsiung, Huey-Ing Chen, and Yen-I Chou, “Well-behaved Pd/GaAs Schottky Diodes Fabricated by Electroless Plating”; Abstract No. 48, 201th Meeting of Electrochemical Society, May 12-17, 2002, Philadelphia, PA, USA.
4. Chin-Yi Chu and Huey-Ing Chen, “Preparation and Characterization of PdAg Layer on Al₂O₃ Substrate by Electroless Co-deposition”; Abstract No. 515, 201th Meeting of Electrochemical Society, May 12-17, 2002, Philadelphia, PA, USA.
5. Huey-Ing Chen, Ming-Jen Lo, and Yu-Yu Lin, “Multi-cycle Operations for Lithium Extraction-insertion in the Spinel Manganese Oxide Adsorbents”; Abstract No. 114, 201th Meeting of Electrochemical Society, May 12-17, 2002, Philadelphia, PA, USA.
6. Yen-I Chou, Huey-Ing Chen, and Chien-Kang Hsiung, “Hydrogen Detection Analysis for Pd/InP Schottky Diode Sensors”; Abstract No. 1520, 201th Meeting of Electrochemical Society, May 12-17, 2002, Philadelphia, PA, USA.
7. Ting-Chia Huang, Ming-Chi Wei, and Huey-Ing Chen, “A Study on the Preparation of Palladium-Silver Alloy Composite Membranes and Its Hydrogen Permselectivity”; *7th International Conference on Inorganic Membranes*, June 23-26, 2002, Dalian, China.

8. Huey-Ing Chen, Ming-Jen Lo, Chin-Yi Chu, and Gerng-Ho Chang, "Study on Adsorption-Desorption of Lithium by Spinel Manganese Oxide Adsorbents"; Taiwan/Korea/Japan Chemical Engineering Conference, Oct. 30 ~ Nov. 1, 2002, Taipei, Taiwan.
9. Huey-Ing Chen, Chieh-Kang Hsiung, and Yen-I Chou, "Characterization on Pd/GaAs Schottky Diodes Fabricated by Electroless Plating Technique"; Taiwan/Korea/Japan Chemical Engineering Conference, Oct. 30 ~ Nov. 1, 2002, Taipei, Taiwan.
10. Huey-Ing Chen, Po-Hung Chen, Hung-Yi Chang, and Jun-Shun Yau, "High-Pressure Vapor-Liquid Equilibrium for Carbon Dioxide + Isomeric Butanol Binary Systems"; Taiwan/Korea/Japan Chemical Engineering Conference, Oct. 30 ~ Nov. 1, 2002, Taipei, Taiwan.
11. Huey-Ing Chen, Ming-Jen Lo, Yen-I Chou, and Meng-Chin Huang, "XAS Investigation of Spinel Manganese Oxide Adsorbents in Repeating Recovery of Lithium from Aqueous Solutions"; SRRC Eighth Users' Meeting and Workshop on Application of Synchrotron Radiation in Biology, Oct. 31 ~ Nov. 1, 2002, Hsin-Chu, Taiwan.
12. Huey-Ing Chen, Zhang-Yuan Wang, Yen-I Chou, and Zong-Whie Shih, "Synthesis of Ag/Pd Nanoparticles by Chemical Reduction Method"; 2002 MRS Fall Meeting, Dec 2-6, 2002, Boston, Massachusetts, USA.
13. Huey-Ing Chen, Zong-Whie Shih, Yen-I Chou, Zhang-Yuan Wang, and Ho-Jen Huang, "Preparation and Characterization of Silver-Palladium Nanoparticles", Proceedings 2002 Symposium of Transport Phenomena and Applications / Solid-Liquid Separation Forum, 491-494 (2002).
14. Ming-Chi Wei, Ting-Chia Huang, and Huey-Ing Chen, "The Preparation of Defect-Free Palladium/ Alumina Composite Membranes", Proceedings 2002 Symposium of Transport Phenomena and Applications / Solid-Liquid Separation Forum, 417-420 (2002).

C、其他著作

1. 陳慧英, 黃定加, 張宏毅, 林育右, 王鈺源, 史宗淮, 微波吸收原材料鎳微粉製備研究, 中山科學研究院委託研究計畫報告, 1-92 (2002).
2. 陳慧英, 張耿豪, 駱明仁, 蘇乾元, 薛家宏, 吳寶旺, 氨裂解觸媒再生過程影響活性因素之探討, 中國鋼鐵公司委託研究計畫期中報告, 1-34, July 31, 2002.
3. 陳慧英, 張耿豪, 駱明仁, 蘇乾元, 薛家宏, 吳寶旺, 氨裂解觸媒再生過程影響活性因素之探討, 中國鋼鐵公司委託研究計畫期末總報告, 1-73, Dec. 25, 2002.
4. 陳慧英, 姚俊旭, 張宏毅, 熊健剛, 黃盟欽, 國內超臨界流體技術應用與研發

之調查，國科會工程科技推廣中心委託研究計畫報告，1-98 (2002).

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
以無電鍍技術製備鈮/半導體氫氣感測器及其應用(1/3)	994,800	91/08~92/07	國科會	主持人
氨裂解觸媒再生過程影響活性因素之探討	300,300	91/04~91/10	中鋼	主持人
國內超臨界流體技術應用與研發之調查	198,000	91/10~91/12	國科會	主持人
化學濕法合成奈米級導電金屬微粉研究	507,600	91/01~91/12	中科院	協同研究人員

三、服務

(二) 委員會(校內)

1. 學生事務委員會 (召集人)
2. 經費運用委員會
3. 研究發展委員會

(五) 校內其他服務(如導師---)

1. 導師 (化一丙)

(七) 服務獎項

1. 在本校連續任職滿二十年，獲頒二等服務獎章。(行政院院授人考字第0910037698號)(91.11.20)

李玉郎

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	表面分析	3	碩博	57	
上學期	氣相鍍膜技術	3	化工(四)	39	
上學期	*專題討論	1	碩博		
下學期	*單元操作 (三)	12	化工(三)	163	楊毓民 蔡少偉
下學期	*專題討論	1	碩博		

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
劉國良	學士	硬脂酸及硬脂胺混合單分子膜鬆弛行為的探討	

二、研究

(一) 著作

A、期刊論文

1. L. H. Chen, and Y. L. Lee* “Adsorption Behavior of Surfactants and the Mass Transfer in Single-Drop Extraction” AICHE Journal, vol.46, p160-168, (2000), (SCI)
2. Y.L. Lee*, Y.C. Chen, C.H. Chang, Y.M. Yang, and J.R.Maa, “Surface Characterization of the Monolayer and Langmuir-Blodgett Films of tetra-tert-butyl-Copper Phthalocyanine,” Thin Solid Films, vol. 379, p278-284 (2000), (SCI)
3. L. H. Chen, C. Y. Chen, Y. L. Lee* “Nucleation and Growth of Clusters on Heterogeneous Surfaces,” Int. commu. Heat Mass Transfer., vol. 27, p705-717 (2000), (SCI)
4. Y.L. Lee*, “Response to the Letter of Dr. Amiri on Article: The Effects of a Surfactant on the Mass Transfer in Spray-Tower Extraction Column,” Chem. Eng. Journal, vol. 81, p345-346 (2001). (SCI)
5. Y.L. Lee*, W.C. Tsai, C.H. Chang, Y.M. Yang, “Effects of Heat Annealing on the Film Characteristics and Gas Sensing Properties of Substituted and Un-substituted Copper Phthalocyanine Films,” Applied Surface Science, vol. 172, p191-199 (2001) (SCI)
6. Y.L. Lee*, W.C. Tsai, J.R. Maa, “Effects of Substrate Temperature on the Film

- Characteristics and Gas Sensing Properties of Copper Phthalocyanine Films,” Applied Surface Science, vol. 173, p352-361 (2001) (SCI)
7. H. Ku, Y.L. Lee, C.H. Chang, Y.M. Yang, J.R. Maa, “Influence of Transfer Promoters on the Deposition and Wettability Characteristics of Copper tetra-tert-butyl phthalocyanine Langmuir-Blodgett Films”, Colloids and Surfaces A, vol. 191, p223-231 (2001) (SCI)
 8. C. Y. Chen and Y. L. Lee*, “Surface Wettability of Langmuir-Blodgett Films of Stearic Acid ,” J. Chin. Inst. Chem. Eng., vol. 32, p461-468 (2001) (SCI)
 9. 陳祉雲, 陳亮惠, 李玉郎, 沈育仁, 楊曉菁, “動態接觸角分析法在 Langmuir-Blodgett分子膜表面性質的鑑定,” 化工, vol. 48, p1-15(2001)
 10. C. W. Sheu, K. M. Lin, I. H. Ku, C. H. Chang, Y. L. Lee, Y. M. Yang, J. R. Maa, “On the Langmuir-Blodgett Transfer of Copper Tera-tert-butyl Phthalocyanine Monolayers in the Presence of Arachidic Acid,” Colloids and Surfaces A: Physicochem. Eng. Aspects, vol.207, p81-88 (2002). (SCI i.f.:1.098)
 11. C. W. Sheu, C. H. Chang, Y. L. Lee, Y. M. Yang, J. R. Maa, “Fabrication and Morphology of Mixed Copper Tetra-tert-Butyl Phthalocyanine/Arachidic Acid Langmuir-Blodgett Films,” J. Chin. Inst. Chem. Engrs., vol. 33, p573-580 (2002). (SCI i.f.:0.292)

B、研討會論文

1. Y. L. Lee*, W.C. Tsai, Y.M. Yang, 2000, “Effects of Substrate Temperature on the Film Structure and Gas Sensing Properties of Organic Thin Films”, Proceeding Symposium on Transport Phenomena and Application, p403-406.
2. 陳亮惠, 陳博賢, 李玉郎, 2001, 12, Effects of Surfactants on Mass Transfer in Single Drop Extraction, 輸送現象與其應用專題研討會專輯, 467-471, 台北.
3. 楊曜嘉, 陳宇康, 陳亮惠, 李玉郎, 2001, 12, 硬脂胺/硬脂酸混合單分子膜熱力學特性及其Langmuir-Blodgett膜潤濕性的探討, 輸送現象與其應用專題研討會專輯, 463-466, 台北.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
鈦花青薄膜製備及其在氣體感測應用之研究(2/2) (NSC 91-2214-E006-007)	938,600	91/08-92/07	國科會	主持人

三、服務

(二) 委員會(校內)

1. 經費運用委員會 (召集人)
2. 研究生事務委員會 (委員)

(五) 校內其他服務(如導師---)

- 1.導師 (二丙 :15人)
- 2.協助研究所碩士班入學測驗
3. 協助工學院學生專題論文創意競賽之評審
4. 協助工學院學生領袖菁英培育班評審(任口試委員)

吳季珍

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	* 儀器分析	2	化工系	56	
上學期	* 專題討論	0	研究所		王紀、張嘉修、李 玉郎
上學期	* 高等反應工 程學	3	研究所		翁鴻山、蔡少偉
上學期	半導體物理與 元件	3	化工系	98	洪昭南
下學期	* 儀器分析實 驗	1	化工系	38	
下學期	* 專題討論	0	研究所		王紀、張嘉修、李 玉郎
下學期	半導體材料與 製程	3	化工系	45	洪昭南

(二) 指導於 91 學年度畢業之大學部、碩、博士班學生論文名稱

姓名	學位	論文名稱	共同指導教授
溫慧怡	碩士	高長寬比氧化鋅奈米柱之生成 - 氫氣 後處理效應之研究	
尤啟中	碩士	以化學氣相沉積法成長 SiO _x 與 TiO ₂ 一維奈米結構之研究	
陳寬	碩士	氯輔助成長奈米鑽石薄膜與奈米鑽石/ 氮化矽複合薄膜之研究	

二、研究

(一) 著作

A、期刊論文

1. Jih-Jen Wu, Te-Chi Wong and Chi-Chung Yu, 2002, "Growth and Characterization of Well-Aligned nc-Si/SiO_x Composite Nanowires," Adv. Mater. Vol. 14, p.1643-1646. (SCI)
2. Jih-Jen Wu and Sai-Chang Liu, 2002, "Catalyst-Free Growth and Characterization of ZnO Nanorods," J. Phys. Chem. B, Vol. 106, p.9546-9551. (SCI)
3. Sai-Chang Liu and Jih-Jen Wu, 2002, "Low-Temperature and Catalyst-Free

- Synthesis of Well-Aligned ZnO Nanorods on Si (100)," *J. Mater. Chem.*, Vol. 12, p.3125-3129. (SCI)
4. Jih-Jen Wu, Sai-Chang Liu, Chien-Ting Wu, Kuei-Hsien Chen and Li-Chyong Chen, 2002, "Heterostructures of ZnO-Zn Coaxial Nanocables and ZnO Nanotubes," *Appl. Phys. Lett.*, Vol. 81, p.1312-1314. (SCI)
 5. Ko-Wei Chang and Jih-Jen Wu, 2002, "Low Temperature Catalytic Synthesis of Gallium Nitride Nanowires," *J. Phys. Chem. B*, Vol. 106, p.7796-7799. (SCI)
 6. Te-Chi Wong, Chi-Chung Yu and Jih-Jen Wu, 2002, "Low Temperature Growth and Structural Characterization of Nanocrystalline Silicon Films," *J. Cryst. Growth*, Vol. 243, p.419-426. (SCI)
 7. Jih-Jen Wu and Sai-Chang Liu, 2002, "Low Temperature Growth of Well-Aligned ZnO Nanorods by Chemical Vapor Deposition," *Adv. Mater.* Vol. 14, p.215-218. (SCI)
 8. Te-Chi Wong and Jih-Jen Wu, 2001, "Low Temperature Growth of Polycrystalline Silicon Films by Hot-wire Chemical Vapor Deposition using SiCl₄/ H₂ Gases," *Jpn. J. Appl. Phys.*, Vol. 40, p.L1207 - L1210. (SCI)
 9. H. M. Tsai, J. C. Jan, J. W. Chiou, W. F. Pong, M. H. Tsai, Y. K. Chang, Y. Y. Chen, Y. W. Yang, L. J. Lai, J. J. Wu, C. T. Wu, K. H. Chen and L. C. Chen, 2001, "Electronic and bonding structures of amorphous Si-C-N thin films by x-ray absorption spectroscopy," *Appl. Phys. Lett.* Vol. 79, p. 2393-2395. (SCI)
 10. G. Lehmann, P. Hess, J.-J. Wu, C. T. Wu, K. H. Chen, L. C. Chen, H.-Y. Lee, M. Amkreutz and Th. Frauenheim, 2001, "Structure and Elastic Properties of Amorphous Silicon Carbon Nitride Films," *Phys. Rev. B*, Vol. 64, p. 165305-165314. (SCI)
 11. L. C. Chen, S. W. Chang, C. S. Chang, C. Y. Wen, J.-J. Wu, Y. F. Chen, Y. S. Huang, and K. H. Chen, 2001, "Catalyst-free and controllable growth of SiC_xN_y nanorods," *J. Phys. Chem. Solids*, Vol. 62, p. 1567-1576. (SCI)
 12. J. J. Wu, K. H. Chen, C.-Y. Wen, L. C. Chen, Y.-C. Yu, C.-W. Wang, and E.-K. Lin, 2001, " Effect Of Dilution Gas On Silicon Nitride Films Growth Using Methylamine," *Mater. Chem. Phys.* Vol. 72, p. 240-244. (SCI)
 13. H.C. Lo, J. J. Wu, C.Y. Wen, T.S. Wong, S.T. Lin, K.H. Chen, and L.C. Chen, 2001, "Bonding Characterization and Nano-indentation Study of the Amorphous SiC_xN_y Films with and without Hydrogen Incorporation," *Diamond and Related Mater.*, Vol. 10, p. 1916-1920. (SCI)
 14. C.-C. Chen, C.-C. Yeh, C. H. Chen, M. Y. Yu, H. L. Liu, J. J. Wu, K. H. Chen, L. C. Chen, J. Y. Peng, and Y. F. Chen, 2001, "Catalytic Growth and Characterization of Gallium Nitride Nanowires," *J. Am. Chem. Soc.*, Vol. 123, p. 2791-2798. (SCI)
 15. F. G. Tarntair, J.-J. Wu, K. H. Chen, C. Y. Wen, L. C. Chen, and H. C. Cheng,

2001 "Field Emission Properties of Two-layer Structured SiCN Films", Surface & Coating Tech., Vol. 137, p. 152-157. (SCI)

16. L. C. Chen, P. D. Kichambare, K. H. Chen, J. J. Wu, J. R. Yang, and S. T. Lin, 2001, "Growth of Highly Transparent Nano-crystalline Diamond Films and a Spectroscopic Study of the Growth" J. Appl. Phys. Vol. 89, p. 753-759. (SCI)

B、研討會論文

1. Te-Chi Wong, Chi-Chung Yu and, Jih-Jen Wu, Low Temperature Synthesis of Nanocrystalline Silicon in SiO_x Nanorods using Hot-Wire CVD method, MRS 2002 Fall Meeting, Dec. 2-6, 2002, Boston.
2. Sai-Chang Liu and Jih-Jen Wu, Catalyst-Free Growth and Characterization of ZnO Nanorods, 2002 奈米科技學術研討會。
3. Ko-Wei Chang and Jih-Jen Wu, Low Temperature Catalytic Synthesis of Gallium Nitride Nanowires, 2002 奈米科技學術研討會。
4. T.-C. Wong, J.-J. Wu, Low Temperature Syntheses of Nano-crystalline Silicon Films and Si Nanowires by Hot-Wire CVD, MRS 2002 Spring Meeting, Apr. 1-5, 2002, San Francisco.
5. C.-H. Ku, T.-C. Wong, J.-J. Wu, C. T. Wu, K. H. Chen and L. C. Chen, Growth of nanocrystalline diamond films by hot filament chemical vapor deposition using CCl₄/H₂ gases, ICMCTF 2002, Apr. 22-26, 2002, San Diego.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
氮輔助成長奈米鑽石薄膜之研究(1/2)	1,302,600	91/08/01-92/07/31	國科會	計劃主持人

(三) 研究獎項

1. 中國化學工程學會學術勵進獎

三、服務

(二) 委員會(校內)

1. 化工系儀器委員會委員
2. 化工系系館管理委員會委員
3. 化工系系友事務委員會委員
4. 化工系研究發展委員會委員

黃耀輝

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	化工概論	0	化工系	140	陳炳宏
上學期	廢水高級處理	3	化工系碩博	6	
下學期	* 工業安全	3	化工系	50	李明遠
下學期	工業減廢	3	化工系	45	
下學期	工業廢水	3	化工系碩博	5	
下學期	專題討論	1	化工系	140	陳炳宏

二、研究

(一) 著作

A、期刊論文

- 1.Huang Y. H., Cheng C. C., Huang G. H., and Chou S., Huang G. H. and Cheng S. S. (2001), Comparison of a novel electro-Fenton method with Fenton's reagent in treating a highly contaminated wastewater, Water Sci. Tech. 43 (2), 17-24. (SCI)
- 2.Chou S., Huang C. and Huang Y. H. (2001), Heterogeneous and homogeneous catalytic oxidation by supported FeOOH in a fluidized-bed reactor: kinetic approach, Environ. Sci. Technol. 35, 1247-1250. (SCI)
- 3.Huang Y. H., Huang G. H., Chou S., and Cheng S. S. (2000), Hydrogen as a quick indicator of organic shock loading in UASB, Water Sci. Tech. 42 (3-4), 43-50. (SCI)
- 4.黃耀輝, 2001, 有機廢液資源化考量, 工業污染防治, 20(4), 118-138.

B、研討會論文

- 1.Yao-Hui Huang, Ming-Chun Lu and Chan-Li Hsueh (2002), Chemical Nickel Plating Wastewater Treatment by Fered-Fenton Process,. Asian Regional Conference on Environmental and Hazardous Waste Treatment Technologies P34-41.

C、其他著作

1. 黃耀輝, 黃國豪, 2002, 廢水厭氣處理自動化監測之探討, 環保月刊, 2(4), 95-06.

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
一種新的電解氧化法於廢水處理上的應用	594900	91/06/01-92/05/31	國科會	計畫主持人
高分子纖維製備無機奈米微粒複合材料及其應用之研究	964500	91/08/01-92/07/31	國科會	計畫主持人

三、服務

(五) 校內其他服務

1. 導師。

陳炳宏

一、教學

(一) 開授課程

學 期	課程名稱	學分	開課班級	學生數	共同擔任教師
上學期	高等化工熱力學	3	碩博	47	
上學期	化工概論	0	大一		黃耀輝 教授
下學期	專題討論	1	大四		
下學期	統計熱力學	3	碩博	7	
下學期	界面活性劑原理與應用	3	碩博		郭炳林、 張鑑祥教授

二、研究

(一) 著作

A、期刊論文

1. B.-H. Chen, C. A. Miller, J. M. Walsh, P. B. Warren, J. N. Ruddock, P. R. Garrett, F. Argoul and C. Leger, 2000, 16(12), "Dissolution Rates Of Pure Nonionic Surfactants" Langmuir, 5276 – 5283 (SCI).
2. B.-H. Chen, B. Payandeh, M. Robert, 2000, 62(2), "Order Parameter and Interfacial Tension of a Colloid-Polymer System", Physical Review E, 2369 – 2372 (SCI).
3. B.-H. Chen, C. A. Miller, P. R. Garrett, 2001, 183–185, "Dissolution of Nonionic Surfactant Mixtures", Colloids and Surfaces A, 191-202 (SCI).
4. B.-H. Chen and D.J. Lee, 2001, 90(10), "Slow Release of Drug Through Deformed Coating Film: Effects of Morphology and Drug Diffusivity in the Coating Film", J. Pharm. Sci., 1478–1496 (SCI).
5. Y. C. Liao, D. J. Lee, and B.-H. Chen, 2001, 119(2–3), "Description of Multi-particle Systems Using Voronoi Polyhedra", Powder Technology, 81–88 (SCI).
6. B.-H. Chen, B. Payandeh, M. Robert, 2001, 64(4), "Turbidity and Critical Behavior of a Colloid-Polymer System", Physical Review E, 042401 (SCI).
7. Dongshun Bai, Jingliang Li, SB Chen and B-H Chen, 2001, 35(19), "A Novel Cloud-point Extraction Process for Preconcentrating Selected Polycyclic Aromatic Hydrocarbons in Aqueous Solution", Environmental Science and Technology, 3936–40 (SCI).

8. C.Y. Sin, B.-H. Chen, W.L. Loh, J. Yu, P. Yelehanka, and L. Chan, 2001, 1, “Sub-0.1 μ m MOSFET fabrication using 248nm lithography by resist trimming technique in high density plasmas”, Proceedings of the 2001 6th International Conference on Solid-State And Integrated-Circuit Technology (Organized and Sponsored IEEE), 460.
9. H. Zhang, B.-H. Chen, J.H. Ye, S.Y.M. Chooi, R. Cha and L. Chan, 2001, PV2001-26, “Corrosive Behavior of Tungsten in Post-etch Residue Remover”, in the Electrochemical Society Proceedings Series PV 2001–26: Cleaning Technology in Semiconductor Device Manufacturing VII (eds. J. Ruzyllo, R. Novak, T. Hatori, R. Opila), 295–300.
10. B.-H. Chen and D.J. Lee, 2002, 234(1–2), “Finite Element Analysis of Slow Release of Drug Through Deformed Coating Film: Effects of Morphology and Average Thickness of Coating Film”, International Journal of Pharmaceutics, 25–42 (SCI).
11. B.-H. Chen, L. Hong, Y. Ma and T.-M. Ko, 2002, 41(11), “Effect of Surfactants in Electroless Plating Bath on the Properties of the Ni-P Alloy Deposits”, Industrial and Engineering Chemistry Research, 2668–78 (SCI).
12. S. S. Feng, B.-H. Chen and D. Pack, 2002, 20(1–2), “Polymeric Nanospheres Fabricated With Natural Emulsifiers For Clinical Administration Of An Anticancer Drug Paclitaxel (Taxol)”, Materials Science and Engineering C, 85–92 (SCI).
13. J. Li and B.-H. Chen, 2002, 57(14), “Solubilization of Model Polycyclic Aromatic Hydrocarbons by Nonionic Surfactant Solutions”, Chemical Engineering Science, 2825–2835 (SCI).
14. C.Y. Sin, B.-H. Chen, W.L. Loh, J. Yu, P. Yelehanka, A. See and L. Chan, 2002, 20(5), “Resist trimming in high density CF₄/O₂ plasmas for sub-0.1 μ m device fabrication”, Journal of Vacuum Science and Technology B, 1974–1981 (SCI).
15. J. Li and B.-H. Chen, 2002, 33(6), “Cloud-Point Extraction of Phenanthrene by Nonionic Surfactants”, J. of the Chinese Institute of Chemical Engineers, 581–589 (SCI).
16. X.Y. Liu, P.D. Sawant, W.B. Tan, I.B.M. Noor, C. Pramesti and B.-H. Chen, 2002, 124(50), “Creating New Supramolecular Materials by Architecture of Three-Dimensional Nanocrystal Fiber Networks”, J. of the American Chemical Society, 15055–63 (SCI).

B、研討會論文

1. B.-H. Chen, C.-Y. Sin, L. Chan, and P. Yelehanka, “Effect of Halogen Additive in High-density Plasma on Photoresist Trimming”, Presented at 2002 AIChE Annual Meeting (Indianapolis, IN).

2. B.-H. Chen, S.Y. Kok, and J. Y. Lee, "Determination of Reaction Order in Formation of Tin Hydroxide Nanoparticles by Reverse Microemulsions", Presented at 2002 AIChE Annual Meeting (Indianapolis, IN).
3. J.-L. Li and B.-H. Chen, "Study of Equilibrium Partition of Polycyclic Aromatic Hydrocarbons in a Cloud-Point Extraction Process", Presented at 2002 AIChE Annual Meeting (Indianapolis, IN)

(二) 研究計畫

計畫名稱	經費	期限	補助單位	擔任職務
界面活性劑水相行為和其在化學微量分析的應用	753,800	91/09/01~ 92/07/31	國科會	主持人