

動機系專任教師研究計畫、論文發表統計表

丁 機設組

蕭德瑛 教授(D. Shaw)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	先進智慧個人運輸概念車設計--總計畫(3/3)	506,000
	先進智慧個人運輸概念車設計--子計畫一：先進概念車撓性車體機構設計(3/3)	913,000
	老年人及運動傷害者穿戴式智慧型下肢輔具之設計研發	7,500,000
2007	可變焦距方向與大小之液體充填式透鏡分析、設計與製造（1/3）	2,510,000
2008	可變焦距方向與大小之液體充填式透鏡分析、設計與製造（3/3）	959,000
	機械固力與自動化學門 E 化製造技術應用之現況國外參訪計畫(國外差旅費)	133,214

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2006	東捷科技股份有限公司	1
	工研院能環所	1
2007	東捷科技股份有限公司	1
	工研院能環所	1
	利翔航太電子股份有限公司	1
	固安特精工有限公司	1
2008	東捷科技股份有限公司	1
	德律科技股份有限公司	1
	奇點電子	1
	工研院能環所	1

SCI 論文發表	
年度	論文
2006	M .Y. Chung and D. Shaw, 2006, “Deflection Form Factors of Worm and Worm Gear”, Journal of Mechanics, Vol. 22. No.4 (SCI)

2007	1.Chung MY, and Shaw D, “Parametric study of dynamics of worm and worm-gear set under suddenly applied rotating angle,” JOURNAL OF SOUND AND VIBRATION Volume: 304 Issue: 1-2 Pages: 246-262 Published: 2007 2. Shaw D, Sun TE, “Optical properties of variable-focus liquid-filled optical lenses with different membrane shapes,” OPTICAL ENGINEERING Volume: 46 Issue: 2 Article Number: 024002 Published: 2007 3.Shaw D, Lin CW, “Design and analysis of an asymmetrical liquid-filled lens,” OPTICAL ENGINEERING Volume: 46 Issue: 12 Article Number: 123002 Published: DEC 2007
2008	Shaw, D.;Ou,, G.Y. “Reducing X, Y and Z Axes Movement of a 5-axis AC Type Milling Machine by Changing the Location of the Work-piece “ , Journal of CAD, To be published, can be found in Web. http://dx.doi.org/10.1016/j.cad.2008.09.001

宋震國 教授(C. K Sung)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	次世紀光碟機關鍵機械技術研究--總計畫(2/3)	1,633,000
	奈米壓印技術應用於製作金屬次微米結構之研究--總計畫(3/3)	1,523,000
	奈米壓印技術應用於製作金屬次微米結構之研究--子計畫一：奈米壓印成形機制與製程設備研究(3/3)	808,000
	次世紀光碟機關鍵機械技術研究--子計畫一(2/3)	1,418,000
	六軸 CNC 齒輪振動噪音複合檢測機研發(1/2)	1,200,000
2007	次世代光碟機關鍵機械技術研究--總計畫(3/3)	1,533,000
	次世代光碟機關鍵機械技術研究--子計畫一:次世代光碟機動態穩定技術研究(3/3)	1,137,000
	奈米壓印技術應用於製作金屬次微米結構之研究--總計畫（3/3）	1,755,000
	奈米壓印技術應用於製作金屬次微米結構之研究--子計畫一：奈米壓印技術應用於製作複合材料次波長光學元件之研究(3/3)	782,000
	六軸 CNC 齒輪振動噪音複合檢測機研發(2/2)	1,200,000
2008	多元尺度奈微米大面積壓印技術於顯示器之應用-子計畫四：多元尺度奈微米壓印製程技術與設備之研究之研究（1/3）	1,209,000
	創新高能量密度換能器設計與實現-子計畫一：創新複合式能量獵取系統之機構設計與時作（1/3）	802,000
	多元尺度奈微米大面積壓印技術於顯示器之應用-總計畫（1/3）	3,378,000

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2006	友達光電股份有限公司	1
	教育部	1
2007	教育部	1

	友達光電股份有限公司	1
2008	教育部	1

SCI 論文發表	
年度	論文
2006	1.B. C. Yu, Paul C. -P. Chao, and C. K. Sung, 2006, "Nonlinear Dynamic Effects of Damping Washers on the Performance of Automatic Ball Balancers in Optical Disc Drives," International Journal of Nonlinear Sciences and Numerical simulation, Vol. 7(3), pp. 275 –278. 2.Ming-Chieh Cheng, Yun-liang Hsueh, Hsung-Yu Chen, and Cheng-Kuo Sung, 2006, "Length Effect on Formation of Metallic Patterns by Nanoimprinting Process – Molecular Dynamic Simulation," Materials Science Forum, Vol. 505 –507, pp. 133 – 138 3.Jin-Ray Hsu, Chih-Chung Hsiao, Cheng-Kuo Sung , and Chaug-Liang Hsu, 2006, "Thermo-mechanical Effect on Nanostructure Formation Using Atomic Force Microscopy," Materials Science Forum, Vol. 505 –507, pp. 151 –156. 4.Shiang-Kuo Chang-Jian, Jeng-Rong Ho, J. –W. John Cheng , and Cheng-Kuo Sung, 2006, "Fabrication of Carbon Nanotube Field Emission Cathodes in Patterns by Laser Transfer Method," Nanotechnology, Vol. 17, pp. 1184-1187.
2007	1.Cheng MC, Hsiung HY, Lu YT , and Sung CK, "The effect of metal-film thickness on pattern formation by using direct imprint," JAPANESE JOURNAL OF APPLIED PHYSICS PART 1-REGULAR PAPERS BRIEF COMMUNICATIONS & REVIEW PAPERS olume: 46 Issue: 9B Special Issue: Sp. Iss. SI Pages: 6382-6386 Published: 2007 2.Hsieh CW, and Sung CK, "Atomic-scale friction in direct imprinting process: Molecular dynamics simulation," JAPANESE JOURNAL OF APPLIED PHYSICS PART 1-REGULAR PAPERS BRIEF COMMUNICATIONS & REVIEW PAPERS Volume: 46 Issue: 9B Special Issue: Sp. Iss. SI Pages: 6387-6390 Published: 2007 3.Cheng MC, Sung CK, and Wang WH, "The effects of thin-film thickness on the formaton of metallic patterns by direct nanoimprint," JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 191 Issue: 1-3 Special Issue: Sp. Iss. SI Pages: 326-330 Published: 2007 4.Chao PCP, Sung CK, Wu ST, and Huang JS, "Nonplanar modeling and experimental validation of a spindle-disk system equipped with an automatic balancer system in optical disk drives," MICROSYSTEM TECHNOLOGIES-MICRO-AND NANOSYSTEMS-INFORMATION STORAGE AND PROCESSING SYSTEMS Volume: 13 Issue: 8-10 Pages: 1227-1239 Published: 2007 5.Ho JR, Shih TK, Cheng JWJ, Sung CK, and Chen CF, "A novel method for fabrication of self-aligned double microlens arrays," SENSORS AND ACTUATORS A-PHYSICAL Volume: 135 Issue: 2 Pages: 465-471 Published: 2007 6.Hsieh CW, Hsiung HY, Lu YT, Sung CK, and Wang WH, "Fabrication of subwavelength metallic structures by using a metal direct imprinting process," JOURNAL OF PHYSICS D-APPLIED PHYSICS Volume: 40 Issue: 11 Pages: 3440-3447 Published: 2007

2008	1. Yao CH, Wu CL, Sung CK, "Grain size effect on nanopattern formability in direct imprint," JAPANESE JOURNAL OF APPLIED PHYSICS Volume: 47 Issue: 6 Pages: 5185-5188 Part: Part 2 Published: JUN 2008 2. Yao CH, Wu CL, Sung CK, "Effects of thin film properties on metallic pattern formation by direct nanoimprint," JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 201 Issue: 1-3 Pages: 765-769 Published: MAY 26 2008
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賀陳弘 教授(Hong Hocheng)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	使用微生物之奈米加工製程研究(2/3)	1,528,000
	微型可穿戴自發電式無限傳輸多重健康訊號感測系統--子計畫一：生物相容撓性材料上導線製程與元件整合構裝技術之研究(1/3)	1,780,000
	微型可穿戴自發電式無限傳輸多重健康訊號感測系統--總計畫(1/3)	1,232,000
2007	微型可穿戴自發電式無限傳輸多重健康訊號感測系統--子計畫一：生物相容撓性材料上導線製程與元件整合構裝技術之研究(2/3)	1,780,000
	微型可穿戴自發電式無限傳輸多重健康訊號感測系統--總計畫(2/3)	1,255,000
	使用微生物之奈米加工製程研究 3/3	1,545,000
2008	微型可穿戴自發電式無限傳輸多重健康訊號感測系統--總計畫(3/3)	1,780,000
	微型可穿戴自發電式無限傳輸多重健康訊號感測系統--子計畫一：生物相容撓性材料上導線製程與元件整合構裝技術之研究(3/3)	1,232,000
	微生物奈微米金屬移除及型式印成之探討（1/3）	1,400,000

SCI 論文發表	
年度	論文
2006	1. Hocheng, H. and Nien, C.C., 2006, "Numerical Analysis of Effects of Mold Feature and Contact Friction on Cavity Filling in Nanoimprinting Process", Journal of Microfabrication, Microlithography, and Micromachining, Vol.5, No.1, pp.01 1004-1-7 . {NSC93-2212-E007-010} 2. Lin, Y.C., Hocheng, H., Fang, W.L. and Chen, R., 2006, "Fabrication and Fatigue Testing of an Electrostatically Driven Microcantilever Beam", Materials and Manufacturing Processes, Vol.21, No.1, pp.75-80. {NSC92-2212-E007-048} 3. Hocheng, H. and Taso, C. C., 2006, "Effects of Special Drill Bits on Drilling-Induced Delamination of Composite Materials", International J. Machine Tools and Manufacture, Vol.46, pp.1403-1416. 4. Hocheng, H., and Nien, C.C., 2006, "In-situ Monitoring of Cavity Filling in Nanoimprint by Capacitance", The Japanese Journal of Applied Physics, Vol.45, No.6B, pp.5590-5596. {NSC93-2212-E007-010}

2007	1.Hocheng H, and Wang KY, "Analysis and fabrication of minifeature lamp lens by excimer laser micromachining," APPLIED OPTICS Volume: 46 Issue: 29 Pages: 7184-7189 Published: 2007 2.Hocheng H, and Hsu WH, "Effect of back mold grooves on improving uniformity in nanoimprint lithography," JAPANESE JOURNAL OF APPLIED PHYSICS PART 1-REGULAR PAPERS BRIEF COMMUNICATIONS & REVIEW PAPERS Volume: 46 Issue: 9B Special Issue: Sp. Iss. SI Pages: 6370-6372 Published: 2007 3.Hocheng H, and Huang YL, "In Situ endpoint detection by acoustic emissions in chemical - Mechanical polishing of metal overlay," IEEE TRANSACTIONS ON SEMICONDUCTOR MANUFACTURING Volume: 20 Issue: 3 Special Issue: Sp. Iss. SI Pages: 306-312 Published: 2007 4.Tsao CC, and Hocheng H, "Parametric study on thrust force of core drill," JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 192 Special Issue: Sp. Iss. SI Pages: 37-40 Published: 2007 5.Pa PS, and Hocheng H, "Design of rib plate of electrode in electrochemical smoothing and electrobrightening of large hole," INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY Volume: 34 Issue: 5-6 Pages: 517-526 Published: 2007 6.Tsao CC, and Hocheng H, "Effect of tool wear on delamination in drilling composite materials," INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES Volume: 49 Issue: 8 Pages: 983-988 Published: 2007
2008	1.Hocheng H, Tseng C, "Mechanical and optical design for assembly of vascular endothelial cells using laser guidance and tweezers,"OPTICS COMMUNICATIONS Volume: 281 Issue: 17 Pages: 4435-4441 Published: SEP 1 2008 2.Hocheng H, Wen TT, "Electromagnetic force-assisted imprint technology for fabrication of submicron-structure," MICROELECTRONIC ENGINEERING Volume: 85 Issue: 7 Pages: 1652-1657 Published: JUL 2008 3.Tsao CC, Hocheng H, "Evaluation of thrust force and surface roughness in drilling composite maternal using Taguchi analysis and neural network," JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 203 Issue: 1-3 Pages: 342-348 Published: JUL 18 2008 4.Tsao CC, Hocheng H, "Analysis of delamination in drilling composite materials by core-saw drill," INTERNATIONAL JOURNAL OF MATERIALS & PRODUCT TECHNOLOGY Volume: 32 Issue: 2-3 Pages: 188-201 Published: 2008 5.Hocheng H, Wen TT, Yang SY, "Replication of microlens arrays by gas-assisted hot embossing," MATERIALS AND MANUFACTURING PROCESSES Volume: 23 Issue: 3-4 Pages: 261-268 Published: MAR-APR 2008 6.Chang JH, Hocheng H, Chang HY, Shih A, "Metal removal rate of Thiobacillus thiooxidans without pre-secreted metabolite," JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 201 Issue: 1-3 Pages: 560-564 Published: MAY 26 2008 7.Guu YH, Hocheng H, Chang CH, "Study of piezoelectrically actuated micropumps with multiple parallel chambers," MATERIALS AND MANUFACTURING PROCESSES Volume: 23 Issue: 2 Pages: 210-215 Published: 2008 8.Hong HC, Hung JN, Guu YH, "Various fatigue testing of polycrystalline silicon microcantilever beam in bending,"JAPANESE JOURNAL OF APPLIED PHYSICS Volume: 47 Issue: 6 Pages: 5256-5261 Part: Part 2 Published: JUN 2008

吳隆庸 教授(L. I. Wu)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	共軛凸輪輪廓誤差的簡便檢測法--理論研究與實驗驗證(1/2)	773,000
2007	共軛凸輪輪廓誤差的簡便檢測法--理論研究與實驗驗證(2/2)	1,003,000
2008	凹面從動件之盤型凸輪機構的設計	626,000

SCI 論文發表	
年度	論文
2006	W. T. Chang, and L. I. Wu, March 2006, "Mechanical Error Analysis of Disk Cam Mechanisms with a Flat-Faced Follower," <i>Journal of Mechanical Science and Technology</i> , Vol. 20, No. 3, pp. 345-357. (計畫編號: NSC94-2212-E-007-030, SCI)
2007	L. I. Wu, W. T. Chang, and C. H. Liu, March 2007, "The Design of Varying-Velocity Translating Cam Mechanisms," <i>Mechanism and Machine Theory</i> , Vol. 42, No. 3, pp. 352-364. (計畫編號: NSC93-2212-E-007-045, SCI, EI)
2008	1.W. T. Chang, L. I. Wu, K. H. Fu, and C. C. Lin, Feb. 2008, "Inspecting Profile Errors of Conjugate Disk Cams with Coordinate Measurement," <i>Transactions of the ASME, Journal of Manufacturing Science and Engineering</i>, Vol. 130, No. 1 (011009), pp. 1-9. (計畫編號: NSC95-2212-E-007-012-MY2, SCI, EI) 2.W. T. Chang, C. H. Tseng, and L. I. Wu, April 2008, "Conceptual Innovation of a Prosthetic Hand Using TRIZ," <i>Journal of the Chinese Society of Mechanical Engineers</i>, Vol. 29, No. 2, pp. 111-120. (SCI, EI) 3.W. T. Chang, and L. I. Wu, May 2008, "A Simplified Method for Examining Profile Deviations of Conjugate Disk Cams," <i>Transactions of the ASME, Journal of Mechanical Design</i>, Vol. 130, No. 5 (052601), pp. 1-11. (計畫編號: NSC95-2212-E-007-012-MY2, SCI, EI)

林士傑 教授(S. C. Lin)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	應用三維重建技術於電子產品之檢測(1/2)	703,000
2007	應用三維重建技術於電子產品之檢測(2/2)	634,000
2008	機械固力與自動化學門 E 化製造技術應用之現況國外參訪計畫（國外差旅費）	133,214
	應用錐狀電腦斷層掃描技術於電子產品檢驗可行性研究	706,000

SCI 論文發表

年度	論文
2006	1.S. Y. Chen, S. C. Lin, H. Hocheng, "Polishing Glass-Ceramic Based Ridge Disk," Material Science Forum vol. 505-507, 2006, pp. 1213-1218 (SCI, EI) (計畫編號 NSC93-2212-E007-038) 2.S. C. Lin and C. Li, "3D measurement using shape-from-focus approach," Journal of the Chinese Society of Mechanical Engineering, vol. 27(5), 2006, pp.561-566 (EI).

左培倫教授(P. L. Tso)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	CMP 游離/固定拋光墊之定量評估修整與奈米級拋光墊之研製(2/3)	947,000
	CNC 五軸控制器軟體刀距路徑規劃技術之研究	455,000
2007	CMP 游離/固定拋光墊之定量評估修整與奈米級拋光墊之研製(3/3)	947,000
2008	奈米級表面脆硬材料基板薄化之研究	890,000
	產學合作計畫- 終級鑽石碟刮削脆硬材料之研究	643,000

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2006	中國砂輪企業股份有限公司	1
	晉仲不銹鋼有限公司	1
	中科院	1
	欣昊實業股份有限公司	1
2007	健葳精密機械有限公司	1
	和康機械股份有限公司	1
	柏昶有限公司	1
2008	工研院	1
	和康機械股份有限公司	1
	陳李美瑩	1
	中國砂輪企業股份有限公司	1

SCI 論文發表	
年度	論文

2006	1.Y. Liu, P. Tso, I. Lin, and Y. Tzeng, "Comparative study of nucleation processes for the growth of nanocrystalline diamond", Accepted for publication in Diamond and Related Materials. 2.Pei-Lum Tso, Bo-Huei Yan, Chan Hsing Lo, "Study on Thin Diamond Wire Slicing with Taguchi method", Material Science forum Vol. 505-507 pp1219-1224, Jan. 2006. 3.T. C. Yen , P. L. Tso, " Improvement of Pattern Fidelity in Triangle Arrangement LCD's Color Filter by Optical Proximity Correction Mask Design Method," Accepted for publication in Journal of Micromechanics and Microengineering. 4.左培倫 2006, 1 "工具機產業的過去、現在及未來", 機械工業, 275 期. 5.P. L. Tso, Rick Hsu, "Estimate Chemical Mechanical Polishing Pad Wear with Compressibility," Accepted for publication in The International Journal of Advanced Manufacturing Technology
2007	1.Tso PL, and Ho SY, "Factors influencing the dressing rate of chemical mechanical polishing pad conditioning," INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY Volume: 33 Issue: 7-8 Pages: 720-724 Published: 2007 2.Tso PL , and Hsu R, "Estimating chemical mechanical polishing pad wear with compressibility," INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY Volume: 32 Issue: 7-8 Pages: 682-689 Published: 2007

雷衛台教授(W. T. Lei)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	創新奈米級 X 光多軸微結構加工機設計與開發(II)	971,000
2007	創新奈米級 X 光多軸微結構加工系統之研究開發 (III)	821,000
2008	創新六維運動量測裝置之研究與開發 (1/2)	867,000

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2006	大量科技	1
2007	大量科技	1
	協易機械工業股份有限公司	3
2008	協易機械工業股份有限公司	3

SCI 論文發表	
年度	論文
2006	W. T. Lei, M.P. Sung, L.Y. Lin, J. J. Huang , "Fast real-time NURBS path interpolation for CNC machine tools", accepted by International Journal of Machine Tools & Manufacture, 2006

2007	1.Lei WT, Sung MP, Lin LY, and Huang JJ, "Fast real-time NURBS path interpolation for CNC machine tools," INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE Volume: 47 Issue: 10 Pages: 1530-1541 Published: 2007 2.Lei WT, Sung MP, Liu WL, and Chuang YC, "Double ballbar test for the rotary axes of five-axis CNC machine tools," INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE Volume: 47 Issue: 2 Pages: 273-285 Published: 2007
2008	Lei, W.T., Sung, M.P., "NURBS-based fast geometric error compensation for CNC machine tools", INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, Volume: 48 Issue:3 Pages: 307-319 Published:2008

陳政寰教授(C. H. Chen)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	以準分子雷射製造大晶粒低溫多晶矽膜設備研發--子計畫三：製造大晶粒低溫多晶矽膜之準分子雷射光束操控系統設計與分析	795,000
2007	奈米壓印技術應用於製作金屬次微米結構之研究--子計畫三：奈米壓印結構偏及光學元件特性分析與研究	835,000
	提升產業技術及人才培育研究計畫-車用投影式抬頭顯示器之開發	499,000
2008	多元尺度奈微米大面積壓印技術於顯示器之應用-子計畫一：奈微米壓印結構應用於高效率背光模組之研究（1/3）	873,000

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2006	工研院	3
2007	工研院	3
	創盟科技股份有限公司	1
2008	工研院	1

SCI 論文發表	
年度	論文
2007	Chen CH, Chen CC, and Liang WC, "Light pipe line beam shaper," OPTICAL REVIEW Volume: 14 Issue: 4 Pages: 231-235 Published: 2007
2008	Chen CF, Wang HT, Chen CH, "High throughput reflective light guide for planar illuminator," APPLIED OPTICS Volume: 47 Issue: 6 Pages: 784-791 Published: FEB 20 2008

傅建中教授(C. C. Fu)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	活體單分子膜蛋白 H ⁺ -PPase 之奈米尺度操控、分子間作用力量測、及動態生理特性分析-三度空間奈米結構晶片平台應用於脂質雙層膜成膜以及膜蛋白 H ⁺ -Ppase 操控(2/3)	1,000,000
2007	活體單分子膜蛋白 H ⁺ -PPase 之奈米尺度操控、分子間作用力量測、及動態生理特性分析-三度空間奈米結構晶片平台應用於脂質雙層膜成膜以及膜蛋白 H ⁺ -Ppase 操控(3/3)	1,000,000
	奈米壓印於顯示器關鍵元件技術之基礎理與應用研究、子計畫二：利用創新之次波長雷射干涉技術與類鑽石膜薄技術製作超硬奈米壓印模具之研究	948,000
	非洲王子的水底游記—魚類胸擺動機制的探討及其應用	47,000
2008	多元尺度奈微米大面積壓印技術於顯示器之應用-子計畫一：奈微米壓印結構應用於高效率背光模組之研究（1/3）	873,000
	創新之奈米操控/檢測平台應用於單分子膜蛋白動態研究-3D 奈/微米混合尺度結構應用於人工脂質雙層膜成膜穩定	1,750,000
	多元尺度奈微米大面積壓印技術於顯示器之應用-子計畫三：利用創新之次波長雷射干涉技術製作大面積超硬奈米	1,028,000

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2007	微邦科技股份有限公司	1
	榮台聯大	1
2008	中美矽晶製品股份有限公司	1
	教育部	1

SCI 論文發表	
年度	論文
2007	1. C. Fu, H. Huang, "Different Methods for the Fabrication of UV-LIGA Molds using SU-8 with Tapered De-molding Angles," Microsystem Technology 13, 2007, pp.293-298. (First Author and Corresponding Author) 2. H. Huang and C. Fu, "Different Fabrication Methods of Out-of-Plane Polymer Hollow Needle Array and their Variations", Journal of Micromechanics and Microengineering 17, 2007, pp.393-402 (Corresponding Author) 3. H. Huang, W. Yang, T. Wang and C. Fu, "3D High Aspect Ratio Micro Structures Fabricated by One Step UV Lithography", Journal of Micromechanics and Microengineering 17, 2007, pp.291-296. (Corresponding Author)

2008	1. T. Liou, C. Chan, C. Fu and K. Shih, "Micro-FV and CFD Studies on the Deposition of a Polymer Droplet in a Micro-Cavity Effects of Impact Inertia and Surface Characteristics", IEEE/ASME Journal of MEMS Vol. 17, No.2, 2008, pp.278-287 (SCI, IF=2.659) 2. C. Ting, M. Huang, H. Tsai, C. Chou, C. Fu*, "Low Cost Fabrication of the Large-Area Anti-Reflection Films from Polymer by Nanoimprint/Hotembossing Technology", Nanotechnology 19, 2008, 205301 (Corresponding Author) (SCI, IF=3.037) 3. H. Chen, C. Fu*, "Investigation of the characteristics of the deep reactive ion etching on quartz using SU-8 as mask", Journal of Micromechanics and Microengineering 18, 2008, pp.105001-105008 (Corresponding Author) (SCI, IF=2.321)
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賴梅鳳 教授(M. F. Lai)

研究計畫—國科會		
年度	計畫名稱	總經費
2006	磁性奈米薄膜之自旋轉移相關效應研究(1/2)	2,068,000
2007	磁性奈米薄膜之自旋轉移相關效應研究(2/2)	883,000
2007	自旋極化電流驅動磁壁運動之溫度相關效應研究(1/3)	2,810,000

研究計畫—業界計畫		
年度	合作廠商	計畫件數
2006	台灣積體電路公司	1
2008	上銀科技股份有限公司	1
2008	台達電子	1

SCI 論文發表	
年度	論文
2006	1. Jun-Yang Lai, Zung-Hang Wei, Mei-Feng Lai, Ching-Ray Chang, J. C. Wu and I. C. Lo, "Metastable state before magnetization reversal in single-domain elongated thin films," <i>Journal of Applied Physics</i>, 99, 08G 313 (2006) 2. Y. C. Chang, C. C. Chang, J. C. Wu, Z. H. Wei, M. F. Lai and C. R. Chang, "Probing the Magnetization Reversal of Microstructured Permalloy Cross by Planar Hall Measurement and Magnetic Force Microscopy," <i>IEEE Transactions on Magnetics</i>, 42, no. 10, 2963 (2006) 3. Y. C. Chang, C. C. Chang, Ida Chang, J. C. Wu, Zung-Hang Wei, Mei-Feng Lai, and Ching-Ray Chang, "Investigation of Permalloy cross structure using magnetic force microscope and magnetoresistance measurement," <i>Journal of Applied Physics</i>, 99, 08B710 (2006)

2007	1. Zung-Hang Wei and Mei-Feng Lai, "Mechanisms of magnetization reversals in elliptical thin films," <i>Journal of Applied Physics</i> 101, 09F 515 (2007). 2. Mei-Feng Lai, Zung-Hang Wei, J. C. Wu, W. Z. Shieh, C. R. Chang, and J. Guo, "Field evolution of multivortex and cross-tie states in Permalloy thin films," <i>Journal of Applied Physics</i> 101, 09N111 (2007). 3. C .T. Chao, L.K. Lin, J.C. Wu, Zung-Hang Wei, Mei-Feng Lai, Ching-Ray Chang, "Short-circuiting effect on the magnetoresistance of microstructured permalloy rings," <i>Journal of Magnetism and Magnetic Materials</i> 310, 1986–1988 (2007). 4. C .Y. Kuo, W.S. Chung, J.C. Wu, Lance Horng, Zung-Hang Wei, Mei-Feng Lai, and Ching-Ray Chang, "Magnetoresistance of microstructured permalloy ellipses having multi-domain configurations," <i>Journal of Magnetism and Magnetic Materials</i> 310, e672–e674 (2007). 5. Jen-Hwa Hsu, Zhi-Long Xue, Ta-Chieh Huang, Zung-Hang Wei, and Mei-Feng Lai, "Oscillatory behavior of coercivity in Bi/Co bilayers," <i>Journal of Magnetism and Magnetic Materials</i> 310, 2239–2241 (2007).
2008	1. M. F. Lai, Y. J. Chen, C. N. Liao, T. F. Ho, C. H. San, C. P. Lee, and Y. P. Hsieh, "Field Evolution of Magnetization States with Different Combinations of Vortex Cores and Anti-Vortex Cores in Different Helicities," accepted for publication in <i>IEEE Transactions on Magnetics</i>. 2. M. F. Lai and C. N. Liao, "Size dependence of C and S states in circular and square Permalloy dots," <i>Journal of Applied Physics</i> 103, 07E737 (2008 March) 3. M. F. Lai, C. N. Liao, Z. H. San, C. P. Lee, Y. P. Hsieh, and T. F. Ho, "Dependence of magnetization processes on vortex helicities in Permalloy nanorings," <i>Journal of Applied Physics</i> 103, 07C517 (2008 March).