

List of the Publications

Main Journal Papers:

1. **Jen-Chun Chen**, C. G. Chao, Numerical simulation and experimental investigation for design of a carbon fiber tow pneumatic spreading system; *CARBON*, in press (2005). [**Impact Factor (2003)= 3.12**]
2. **Jen-Chun Chen**, C. G. Chao, Numerical and Experimental Study of Internal Flow Field for a Carbon Fiber Tow Pneumatic Spreader; *Metallurgical and Transaction B*, vol. 32 B, p329-339, (2001). [**Impact Factor (2002)= 1.219**]

Relative Journal Papers:

1. K. C. Tsai, W. F. Wu, **Jen-Chun Chen**, T. J. Pan, and C. G. Chao, Numerical and Experimental Analysis of Cu Diffusion in Plasma-Treated Tungsten Barrier; *Journal of The Electrochemical Society*, 152 (1) G83-G91 (2005). [**Impact Factor (2003)= 2.361**]
2. Wen-Fa Wu, Kou-Chiang Tsai, Chuen-Guang Chao, **Jen-Chung Chen**, and Keng-Liang Ou, A Novel Multilayered Ti/TiN Diffusion Barrier for VLSI Technology; *Journal of Electronic Materials*, in press (2005). [**Impact Factor (2003)= 1.457**]
3. K. C. Tsai, W. F. Wu, T. J. Pan, **Jen-Chun Chen**, and C. G. Chao, Influence of N₂O plasma treatment on microstructure and thermal stability of WN_x barriers for Cu interconnection; *Journal of Vacuum Science & Technology B*22(3), 993 (2004). [**Impact Factor (2003)= 1.664**]

International Conference Papers:

1. **Chen JC**, Tsai KC, Chao CG., Development of a Novel Process for Metal Coated on a Carbon Fiber Tow by PVD and Electroless Deposition; The 3rd Asian Conference on Chemical Vapor Deposition. Nov. 2004; 82-83.
2. K. C. Tsai, W. F. Wu, **Jen-Chung Chen**, T. J. Pan, and C. G. Chao, Highly thermally stable W-based barriers formed by plasma treatment for Cu interconnection; The 3rd Asian Conference on Chemical Vapor Deposition, Nov. 2004.
3. **Jen-Chung Chen** and Chuen-Guang Chao, Fabrication of Nano-thin Film in a Carbon Fiber Tow by a Novel Process-Fiber Pneumatic Spreading System;

IUMRE ICA, 2004.

Conference Papers:

1. **Jen-Chung Chen**, Kou-Chiang Tsai, Chi-Yuan Lin and Chuen-Guang Chao. A study of Flow Field in the Fiber Pneumatic Spreader by Numerical Simulation and Experiment; The 11th National CFD Conference, August, 2004.
2. **Jen-Chung Chen**, H. J. Bou, C. G. Kou and Chuen-Guang Chao. Design of an Efficiency Pneumatic Spreader by Three-Dimensional Flow Analysis; The 11th National CFD Conference, August, 2004.
3. K. C. Tsai, W. F. Wu, **Jen-Chung Chen**, T. J. Pan, and C. G. Chao, Simulation of Copper/Tungsten Interdiffusion following Plasma Treatment; Proc. of The 2004 Annual Conf. of The Chinese Soc. For Mat. Sci.
4. **Jen-Chun Chen**, K. C. Tsai, and C. G. Chao, Fabrication of a Nano-thin Film in a Carbon Fiber Tow by Electroless Nickel Plating; *Symposium on Nano Device Technology*, p309, 2002.
5. **Jen-Chun Chen**, K.C. Tsai, F.W. Chou and C.G. Chao, An Investigation on the Mechanism of Electroless Nickel plating in a Carbon Fiber Tow for EMI Shielding; *Electronics Devices and Materials Symposia*, p716-721, 2001.
6. W. F. Wu, K. C. Tsai, T. J. Pan, **Jen-Chun Chen** and C. G. Chao, Barrier Properties of Reactively Sputtered and Plasma Treated W-N Films for Cu Metallization; *Electronics Devices and Materials Symposia*, p461-464, 2001.
7. **Jen-Chun Chen**, C.C. Chen, K.C. Tsai and C.G. Chao, A Study of Fiber Pneumatic Spreading System for Electroless Nickel Coating in a Carbon Fiber Tow; *Journal of the Vacuum Society of Taiwan*, p18, 2001.
8. **Jen-Chun Chen**, C.Y. Tsai, and C.G. Chao, An Investigation of Electroless Nickel plating in a Carbon Fiber Tow; *Proc. Of the 2001 Annual Conf. of The Chinese Soc. For Mat. Sci.*, p124 -127, 2001.
9. K. C. Tsai, W. F. Wu, C. G. Chao, and **Jen-Chun Chen**, A study of the Nitrogen Flow Ratio on the Characteristics of Tantalum Nitride Barrier; *Proc. of the 1999 Annual Conf. of The Chinese Soc. For Mat. Sci.*, 1999.
10. **Jen-Chun Chen**, C. G. Chao, S. H. Lee.; A Study of the Methodology in Designing Carbon Fibers Pneumatic Spreader; *The 1999 CChE Annual Meeting and Conferences*; p21-24, 1999.
11. **Jen-Chun Chen**, C. G. Chao, D. K. Tsai; "Numerical Study of the Pneumatic Spreader

for carbon Fiber Tows”; *Proc. of the 16th National Conf. on Mechanical Engineering, The Chinese Soc. Of Mech. Sci.*, p205-213, 1999

12. K. C. Tsai, C. G. Chao, W. F. Wu, and **Jen-Chun Chen**, A study of the Multilayered Ti/TiN for Al Metallization; *Proc. of the 1999 Annual Conf. of The Chinese Soc. For Mat. Sci.*, 1999.
13. D. K. Tsai, C. G. Chao, **Jen-Chun Chen**; “Improvement of the Surface Treatment on Metal matrix Composites”; *Proc. of the 1999 Annual Conf. of The Chinese Soc. for Mat. Sci.*, p21, 1999.



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★ 創作及獎項:

1. 經濟部第十屆創新研究獎,2003.
2. 經濟部智慧財產局全國發明展入圍,2003.
3. 訊號回饋網路撥號系統設計與製作,2002.
4. 碳纖維氣動展開床設計製作,1996-1999.
5. 濺鍍機試片夾具製作, 1999.
6. 公司企業人事薪工及進銷貨資料庫程式設計,1992-1994.

證照

內政部鉗工技能檢定丙級技術士。



專長

1. 電化學與化學液相沉積薄膜。
2. 有機與無機材料合成與界面分析
3. 超高分子量聚丙烯與聚乙烯凝膠薄膜沉積。
4. 計算流體力學數值模擬與分析。
5. Data Base 資料庫程式設計。
6. UNIX 系統操作。
7. 個人電腦硬體組裝維護與系統安裝檢修。
8. 儀器分析與操作。