

個人著作：(1998-2007)

(甲) 學術期刊論文

1. **Hong, L. S.** and Z. L. Liu\*, "Gas-to-Particle Conversion Mechanism in Chemical Vapor Deposition of Silicon Carbide by  $\text{SiH}_4$  and  $\text{C}_2\text{H}_2$ ", *Ind. Eng. Chem. Res.* **37**, 3602~ 3609 (1998). (NSC85-2214-E-011-007) [SCI]
2. **Hong, L. S.** and H. T. Lai\*, "Pore Structure Modification of Alumina Support by  $\text{SiC-Si}_3\text{N}_4$  Nanoparticles Prepared by the Particle Precipitation Aided Chemical Vapor Deposition ", *Ind. Eng. Chem. Res.* **38**, 950~957 (1999). (NSC87-2214-E-011-021) [SCI]
3. L. L. Lee\*, L. C. Hong\*, **L. S. Hong** and D. S. Tsai<sup>#</sup>, "Pore Structure Modification by Chemical Vapor Deposition in Inorganic Membrane-Numerical Analysis", *J. CICH E*, **30**, 105~115 (1999). (NSC87-2214-E-011-020) [SCI]
4. **Hong, L. S.** and H. T. Lai\*, "Pore Structure Modification of Porous Support by PPCVD: A Technique to Reduce Permeability Decrease", *J. CICH E*, **30**, 189~197 (1999). (NSC86-2214-E-011-021) [SCI]
5. **Hong, L. S.**, Y. Shimogaki<sup>#</sup> and H. Komiyama<sup>#</sup>, "Macro/microcavity Method and Its Application in Modeling Chemical Vapor Deposition Reaction Systems", *Thin Solid Films*, **365**, 176~188 (2000). [SCI]
6. **Hong, L. S.** and C. M. Wu\*, "Composition Determining Path in Synthesis of Silicon Carbide Films from  $\text{SiH}_2\text{Cl}_2/\text{C}_2\text{H}_2/\text{H}_2$  Chemical Vapor Deposition System", *J. CICH E*, **31**, 79~88 (2000). (NSC-83-0402-E011-011) [SCI]
7. **Hong, L. S.** and M. G. Jeng\*, "Film Growth Modeling of Metal Organic Chemical Vapor Deposition of Copper from Cu (hfac)(VTMOS) in the Presence of Hydrogen", *Jpn. J. Appl. Phys.*, **39**, 501~505 (2000). (NSC88-2214-E-011-013) [SCI]
8. **Hong, L. S.** and M. G. Jeng\*, "Incubation Time for Chemical Vapor Deposition of Copper from Hexafluoroacetylacetonate-Copper (I)-Vinyltrimethoxysilane", *Applied Surf. Sci.* **161**, 149~154 (2000). (NSC88-2214-E-011-013) [SCI]

9. **Hong, L. S.** and C. C. Wei\*, "Effect of oxygen pressure upon composition variation during Chemical Vapor Deposition Growth of Lead Titanate Films from Tetraethyl Lead and Titanium Tetraisopropoxide", *Mater. Lett.* **46**, 149~153 (2000). (NSC88-CPC-E-011-011) [SCI]
  
10. **Hong, L. S.** and C. C. Wei\*, "Kinetic Study of the Metalorganic Chemical Vapor Deposition of PbTiO<sub>3</sub> Films from Pb(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub>/Ti(i-OC<sub>3</sub>H<sub>7</sub>)<sub>4</sub>/O<sub>2</sub> Reaction System", *Jpn. J. Appl. Phys.* **39**, 4964~4969 (2000). (NSC88-CPC-E-011-011) [SCI]
  
11. X. Y. Pan, D. S. Tsai, and **L. S. Hong**, "Abnormal Growth of Lead Titanate Thin Film in Chemical Vapor Deposition of Pb(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub>/Ti(i-OPr)<sup>i</sup><sub>4</sub>/O<sub>2</sub>", *Materials Chemistry and Physics*, **70**, 223~230 (2001). [SCI]
  
12. Y. J. Hsu, **L. S. Hong**\*, K. F. Huang, J. E. Tsai, "Low temperature metalorganic chemical vapor deposition of gallium nitride using dimethylhydrazine as nitrogen source", *Thin Solid Films*, **419**, 33~39 (2002). [SCI]
  
13. W. Y. Cheng and **L. S. Hong**\*, "Chemical Vapor Deposition of Pb(Zr<sub>x</sub>Ti<sub>1-x</sub>)O<sub>3</sub> Films by Pb(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub>, Ti(i-OC<sub>3</sub>H<sub>7</sub>)<sub>4</sub>, Zr(t-OC<sub>4</sub>H<sub>9</sub>)<sub>4</sub> and O<sub>2</sub>: Role of Lead Oxide Formation from Pb(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> and O<sub>2</sub> on Film Properties", *Thin Solid Films*, **415**, 94~100 (2002). (NSC88-CPC-E-011-011) [SCI]
  
14. Y. J. Hsu, **L. S. Hong**\*, and J. E. Tsai, "Metalorganic vapor phase epitaxy of GaN from trimethylgallium and tertiarybutylhydrazine", *J. Cryst. Growth*, 252/1-3, 144~151 (2003). (NSC 90-2214-E-011-010) [SCI]
  
15. . Y. J. Hsu, **L. S. Hong**\*, "Effects of Hydrogen on GaN Epitaxy from trimethylgallium and tertiarybutylhydrazine", *J. Cryst. Growth*, *J. Cryst. Growth*, **266**, 347 (2004). (NSC90-2214-E-011-010) [SCI]
  
16. M. S. Hu, **L. S. Hong**, "Surface Carbonization of Si (111) by C<sub>2</sub>H<sub>2</sub> and the Subsequent SiC (111) Epitaxial Growth from SiH<sub>4</sub> and C<sub>2</sub>H<sub>2</sub>", *J. Cryst. Growth*,

265, 382 (2004). (SCI)

17. W.Y. Cheng, **L. S. Hong**, "Growth kinetics of chemical-vapor-deposited  $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  films from a  $\text{Pb}(\text{C}_2\text{H}_5)_4 / \text{Zr}(\text{O}-\text{t}-\text{C}_4\text{H}_9)_4 / \text{Ti}(\text{O}-\text{i}-\text{C}_3\text{H}_7)_4 / \text{O}_2$  reaction system " *J. CICHE*, **35**, (6): 603 (2004) (SCI)
18. T. Yasuda, T. Tada, S. Yamasaki, S. Gwo, **L. S. Hong**, " Position-Specified Formation of Epitaxial Si Grains on Thermally Oxidized Si(001) Surfaces via Isolated Nanodots", *Chem. Mater.*, **16**, 3518 (2004). (SCI)
19. W.Y. Cheng, **L. S. Hong**, "Composition and crystal phase control of chemical-vapor-deposited  $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$  films on various oxide electrodes with reactants  $\text{Pb}(\text{C}_2\text{H}_5)_4$ ,  $\text{Zr}(\text{O}-\text{t}-\text{C}_4\text{H}_9)_4$ ,  $\text{Ti}(\text{O}-\text{i}-\text{C}_3\text{H}_7)_4$  and  $\text{O}_2$  " *Jpn. J. Appl. Phys.*, **44**, 1A, 328 (2005) (SCI)
20. C. L. Sun, L. C. Chen, M. C. Su, **L. S. Hong**, O. Chyan, C. Y. Hsu, K. H. Chen, T. F. Chang, and L. Chang, "Ultrafine Platinum Nanoparticles Uniformly Dispersed on Arrayed  $\text{CN}_x$  Nanotubes with High Electrochemical Activity", *Chem. Mater.*, **17**, 3749 (2005). (SCI)
21. W. Y. Cheng, **L. S. Hong**, J. C. Jiang, Y. Chi and C. C. Lin " Initial growth of chemical-vapor-deposited Ru from bis(hexafluoroacetylacetonate)dicarbonyl ruthenium", *Thin Solid Films*, **483**, 31 (2005). (SCI)
22. Y. J. Hsu, **L. S. Hong**, and J. C. Jiang, "Quantum chemical study on the gas-phase reaction of tertiarybutylhydrazine: A potential nitrogen-bearing compound for GaN film growth", *Thin Solid Films*, **498**, 100 (2006). (SCI)
23. L. C. Chen, C. M. Chen, C. S. Liu, and **L. S. Hong**, "Zinc Oxide Doped Indium Oxide Ohmic Contacts to p-Type GaN", *J. Electrochem. Soc.* **153**, G931 (2006). (SCI)
24. M. S. Hu, H. L. Chen, C. H. Shen, **L. S. Hong**, B. R. Huang, K. S. Chen, and L. C. Chen, "Photosensitive gold-nanoparticle-embedded dielectric nanowires", *Nature Materials*, **5**, 102 (2006). (SCI)
25. M. S. Hu, **L. S. Hong**, W. M. Wang, T. T Chen, C W. Chen, C. C. Chen, Y. F.

Chen, K. H. Chen, L. C. Chen, " Sharp Infrared Emission from Single-crystalline Indium Nitride Nanobelts Prepared using by Guided-Stream Thermal Chemical Vapor Deposition", *Advanced Functional Materials*, **16**, 537 (2006). (SCI)

26. M. S. Hu, G. M. Hsu, K. H. Chen, C. Y. Yu, H. C. Hsu, L. C. Chen, J. S. Hwang, **L. S. Hong**, Y. F. Chen, " Infrared lasing in InN Nanobelts", *Appl. Phys. Letts.*, **90**, 1 (2007). (SCI)

27. C. S. Liu, **L. S. Hong**, M. S. Hu, "Surface carbonization of Si(100) by C<sub>2</sub>H<sub>2</sub> and its effects on the subsequent SiC(100) epitaxial film growth", *Journal of Physics and Chemistry of Solids*, doi: 10.1016/j.jpcs.2007.07.041 (2007) (SCI)

(乙) 研討會論文：(1995~2007)

1. 洪儒生、吳常明, "以 $\text{SiH}_2\text{Cl}_2$ -CVD 反應系合成SiC薄膜之研究", 日本化學工學會第60年會,G-311, 大阪 (1995).
2. 洪儒生, "以 $\text{SiH}_2\text{Cl}_2/\text{C}_2\text{H}_2$ -CVD反應系統低溫合成碳化矽薄膜之研", 國科會化學工學門專題計畫成果發表會, 572~574, 新竹 (1995).
3. **Hong, L. S.** and C. M. Wu, "Variation of Film Precursors Due to Scale-Up of Reactor in  $\text{SiH}_2\text{Cl}_2/\text{C}_2\text{H}_2/\text{H}_2$ -CVD Chemical Vapor Deposition Reaction System", APCCHE'96, Vol. 2, 735~739, Taipei (1996).
4. 洪儒生、林美足, "Cu(hfac)TMVS-MOCVD 法合成銅金屬膜之研究", 日本化學工學會第61年會, E-110, 名古屋 (1996).
5. 洪儒生、劉志涼, " $\text{SiH}_4/\text{C}_2\text{H}_2$ -CVD反應系合成SiC多孔膜時 $\text{NH}_3$ 之添加效果", 日本化學工學會第61年會, E-116, 名古屋 (1996).
6. **Hong, L. S.** and C. R. Liu , "Synthesis of Porous SiC Films by Particle Precipitation Added Chemical Vapor Deposition Using  $\text{SiH}_4$ ," International Conference on Aerosol Science and Technology, 711~717, Taipei (1996).
7. **Hong, L. S.** and C. R. Liu , "Mechanism of Gas-To-Particle Conversion in Preparation of Porous SiC Films by Precipitation of Ultrafine Particles," Proceedings of Taipei-Kyushu Joint Symposium on Chemical Engineering & Symposium on Transport Phenomena, 110~114, Kogoshima (1996).
8. 洪儒生、郭正宏, "AFM對Cu(hfac)(TMVS)-OMCVD法合成金屬銅膜的初期成長機構之解析", 日本化學工學會第62年會, M-319, 東京 (1997).
9. **Hong, L. S.** and C. I. Lee, "Surface Carbination of Silicon Wafer by

Using  $C_2H_2$  as the Carbon Source and Its Role in Epitaxial Growth of SiC ", 1nd

ROC/Japan Symposium on Crystal Growth, Chung-Li (1997).

10. 洪儒生, "無機膜研究群-子計劃三：超微粒子沈積多孔膜之研究 (II)", 國科會化工學門專題計畫成果發表會, 572~574, 新竹 (1997).

11. **Hong, L. S.** and T. W. Ho, "Crystalline Silicon Carbide Thin Film Growth by  $SiH_4/C_2H_2$ -Chemical Vapor Deposition Reaction System", 2nd ROC/Japan Symposium on Crystal Growth, Taipei (1998).

12. 洪儒生, "高能隙半導體碳化矽的單晶薄膜低溫成長", 國科會化工學門專題計畫成果發表會, 316~318, 台北 (1998).

13. 洪儒生、魏崇傑, "以MOCVD法合成鈦酸鉛薄膜的組控制成長機構之探討", 日本化學工學會第32回秋季大會, P-117, 金澤 (1999).

14. 洪儒生, "以有機金屬  $Cu^{(I)}(hfac)(tmvs)$  及  $Cu^{(II)}(hfa)_2$  為化學氣相沈積系統先驅物合成金屬銅膜之研究", Proceedings of the 1999 CICHE Annual Meeting and Conferences Chemical Engineering Technology, 41~44, 高雄 (1999).

15. 洪儒生、楊淑珍, "氣相超微粒子沈積奈米級多孔質二氧化矽低介電層之研究", Proceeding of the 2000 Conference on aerosol Science and Technology, 396~399, 新竹 (2000).

16. L. S. Hong and W. Y. Cheng, "Chemical Vapor Deposition of  $Pb(Zr_xTi_{1-x})O_3$

Films by  $Pb(C_2H_5)_4$ ,  $Ti(i-OC_3H_7)_4$ ,  $Zr(t-OC_4H_9)_4$  and  $O_2$ : Role of Lead Oxide

Formation from  $Pb(C_2H_5)_4$  and  $O_2$  on Film Properties", The Second Asian

Conference on Chemical Vapor Deposition, May 28~31, Kyongju, Korea, (2001).

17. Lu-Sheng Hong, Kau-Fong Huang, Jing-En Tsay, and Yu-Jen Hsu, "Low Temperature Metalorganic Vapor Phase Epitaxy (MOVPE) of GaN using

Hydrazine-Based Compounds”, The Second Asian Conference on Chemical Vapor Deposition, May 28~31, Kyongju, Korea, (2001).

18. Wei-Yuan Cheng, Chien-Ching Lin, and Lu-Sheng Hong\*, ” Initial Growth of  $\text{RuO}_x$  from  $\text{Ru}(\text{hfac})_2(\text{CO})_2$ -CVD: Growth Dependence on Surface”, 2002 Taiwan/Korea/Japan Chemical Engineering Conference, Oct. 30~Nov. 1, Taipei, Taiwan, (2002).
19. Yu Jen Hsu, Lu Sheng Hong\*, Jyh Chiang Jiang and Jing Chong Chang “Effects of hydrogen on GaN metalorganic vapor-phase epitaxy using tertiarybutylhydrazine as nitrogen source”, 4<sup>th</sup> International Workshop on Modeling in Crystal Growth, Nov. 4~7, Fukuoka, Japan, (2003).
20. 洪儒生, 鄭惟元、林建慶, "以選擇性化學氣相沈積技術應用在奈米量子點製作之研究 (1/2)", 化工學會50週年年會學術研討會, 3-40, Nov. 21~22, 台北 (2003).
21. Ming Shien Hu, Lu Sheng Hong, Ching Hsing Shen, Kuei Hsien Chen and Li Chyong Chen, “Synthesis and Potical Properties of Au-filled Silicon Nitride Nanotues”, the 2003 MRS Fall Meeting, December 1~5, Boston MA, (2003).
22. **L. S. Hong**, Wei-Lin Chen, Shuo-Wei Chen, Yu-Jen Hsu, and Jyh-Chiang Jian, “Atomic Layer Epitaxy of Gallium Nitride Using Trimethylgallium and Ammonia”, The 10th Asian Pacific Confederation of Chemical Engineering, Oct. 17-21, Kokura, Japan, (2004).
23. **L. S. Hong**, Wei-Lin Chen, Shuo-Wei Chen, Chen-Yu Wang, “Atomic Layer Epitaxy of Gallium Nitride Using Trimethylgallium and Ammonia”, The Third Asian Conference on Chemical Vapor Deposition, Nov. 12-14, Taipei, Taiwan (2004).
24. Y. J. Hsu, **L. S. Hong**, J. C. Jiang, ” Quantum chemical calculations of gallium nitride in MOCVD system using tertiarybutylhydrazine as nitrogen source: Thermodynamics and kinetics of gas-phase reactions”, The Third Asian Conference on Chemical Vapor Deposition, Nov. 12-14, Taipei, Taiwan (2004).

25. M. S. Hu, **L. S. Hong**, C. H. Shen, K. H. Chen, L. C. Chen, “Fabrication and Characterization of Au<sub>2</sub>Si-filled Silicon Nanotubes and Self-organized Au<sub>2</sub>Si Pea-podded Silicon Nanowires”, ICMCTF, April 18~24, San Diego, USA (2004).
26. M. S. Hu, **L. S. Hong**, C. H. Shen, K. H. Chen, B. W. Ke, L. C. Chen, “Growth and Optical properties of Self-organized Au-nanopeapodded Silica Nanowires”, ICON Conference, Jan. 10~14, Taipei, Taiwan (2005).
27. C. S. Liu, M. S. Hu, **L. S. Hong**, “Surface carbonization of Si(100) by C<sub>2</sub>H<sub>2</sub> and its effects on the subsequent SiC(100) epitaxial film growth”, The 2nd International Symposium on Point Defect and Nonstoichiometry, October 4-6, Kaohsiung, Taiwan (2005)
28. M. S. Hu, **L. S. Hong**, C. H. Shen, K. H. Chen, B. W. Ke, L. C. Chen, “Surface Plasmon Absorption and Photoluminescence of Self-organized Au-nanopeapodded Silica Nanowires”, 2005 MRS Spring Meeting, Mar. 28~April 2, San Francisco, USA (2005).
29. C. S. Liu, **L. S. Hong**, L. W. Chou, J. C. Jiang, “Kinetic study of Ge wetting layer growth on Si(001) 2 × 1 surfaces from GeH<sub>4</sub> UHV-CVD”, ICSS-13, July 2~6, Stockholm, Sweden (2007) (oral presentation)

(丙) 其他論著

1. 洪儒生, “超微粒合成的理論與實際”, 化工雜誌, 第45卷第5期, 49~57, (1998).
2. 洪儒生, “圓管反應動力解析在CVD膜模型化之應用”, 化工雜誌, 第46卷第3期, 43~50, (1999).
3. 洪儒生, 鄭惟元 “鐵電材料的運作原理及其在記憶體上的應用”, 化工資訊月刊, 第2期, (2000).
4. 許育仁, 洪儒生, “薄膜沈積中的磊晶成長”, 化工技術, 第11卷第9期, 140~155, (2003).
5. 劉智生, 洪儒生, “矽晶圓上的異質奈米結構選擇性磊晶成長之研究”, 工程科技通訊, 第82期, P.89~192, (2005)



6. 劉智生, 洪儒生, ” 矽晶圓上的異質奈米結構選擇性磊晶成長之研究”, 工程科技通訊, 3月號 第89期, P.148~153, (2006)
7. 劉智生, 洪儒生, ” ESCA-X射線光電子能譜儀”, 化工技術 2007年 3月號 第168期