

蘇炯武 (C. W. Su, Ph. D) 論文著作 (Publications)

## A. SCI期刊論文(SCI Journal Papers) – From 2000 to 2009

1. C. S. Shern\*, C. W. Su, Y. E. Wu, and T. Y. Fu, "Alloying of Co ultrathin films on Pt(111) with Ag buffer layers", Journal of Applied Physics **88**, 705 (2000). SCI, NSC88-2112-M-003-001 and NSC89-2112-M-003-014.
2. Tsu-Yi Fu, T. F. Liu, C. W. Su, C. S. Shern\*, and R. H. Chen, "Anomalous behavior of LEED bean intensity during annealing", Surface Science **464**, 211 (2000). SCI, NSC89-2112-M-003-014.
3. Y. E. Wu, C. W. Su, C. S. Shern\*, and M.-T. Lin, "Comparative study in magnetic properties of Co ultrathin films on flat and sputtered Pt(111) surfaces", Chinese Journal of Physics **39**, 182 (2001). SCI, NSC89-2112-M-003-014.
4. C. W. Su, Y. E. Wu and C. S. Shern\*, "Comparative study in annealing effects of Ag/Co/Pt(111) and Co/Ag/Pt(111) ultrathin films", Surface Science **482-485**, 898 (2001). SCI, NSC89-2112-M-003-014.
5. C. S. Shern\*, C. W. Su, Y. E. Wu, and S. H. Chen, "Ag induced enhancement of perpendicular magnetic anisotropy", Surface Science Letter **495**, L821 (2001). SCI, NSC89-2112-M-003-039.
6. C. W. Su, H. Y. Ho, C. S. Shern\*, and R. H. Chen, "Structure evolution of Ni ultrathin films on Pt(111)", Surface Science **499**, 103 (2002). SCI, NSC89-2112-M-003-039.
7. Y. E. Wu, C. W. Su, F. C. Chen, C. S. Shern\*, and R. H. Chen, "Capping effect in magnetic properties of Ag ultra-thin films on Co/Pt(111)", Journal of Magnetism and Magnetic Materials **239**, 291 (2002). SCI, NSC89-2112-M-003-039.
8. C. W. Su, F. C. Chen, Y. E. Wu, and C. S. Shern\*, "Magnetic properties of Ag/Co/Pt(111) ultrathin films", Surface Science **507-510**, 492 (2002). SCI, NSC89-2112-M-003-039.
9. F. C. Chen, Y. E. Wu, C. W. Su, C. S. Shern\*, "Ag-induced spin-reorientation transition of Co ultrathin films on Pt(111)", Physical Review B **66**, 184417 (2002). SCI, NSC90-2112-M-003-019.
10. C. W. Su, H. Y. Ho, C. S. Shern\*, and R. H. Chen, "Initial growth and coverage determination of Ni ultrathin films on Pt(111)", Thin Solid Films **425**, 139 (2003). SCI, NSC90-2112-M-003-019.
11. C. W. Su, H. Y. Ho, C. S. Shern\*, and R. H. Chen, "Change in the magnetic anisotropy of Co thin films on Pt(111) capped by Ag overlayers", Chinese Journal of Physics **41**, 519 (2003). SCI, NSC90-2112-M-003-019 and NSC91-2112-M-003-025.
12. C. W. Su, C. L. Tzeng, H. Y. Ho, and C. S. Shern\*, "Magnetic properties of ultrathin Co/Ag/Pt(111) films", Journal of Applied Physics **94**, 5873 (2003). SCI, NSC91-2112-M-003-025.
13. C. L. Tzeng, C. W. Su, H. Y. Ho, and C. S. Shern\*, "Atomic exchange and magnetic properties of Co/Ag/Pt(111)", Thin Solid Films **459**, 82 (2004). SCI, NSC92-2112-M-003-019.
14. C. W. Su\*, C. S. Shern, and Y. D. Yao, "Magnetic properties of ultrathin Ni/Co/Pt(111) films", Journal of Applied Physics **95**, 6568 (2004). SCI, NSC92-2811-M-001-030 and NSC91-2112-M-003-025.

15. C. W. Su\*, Y. D. Yao, and C. S. Shern, "Magnetic properties of ultrathin Co/Ni/Pt(111) films", *Journal of Magnetism and Magnetic Materials* **282**, 84 (2004). SCI, NSC92-2811-M-001-030 and NSC91-2112-M-003-025.
16. H. Y. Ho, C. L. Tzeng, C. W. Su, and C. S. Shern\*, "Enhancement of magneto-optical Kerr effect for Co ultra-thin film on Pt(111) with Ag buffer layer", *Journal of Magnetism and Magnetic Materials* **282**, 69 (2004). SCI, NSC92-2112-M-003-019.
17. H. Y. Ho, C. W. Su, Y. W. Chu, and C. S. Shern\*, "Alloy formation of Ni ultrathin films on Pt(111) with Ag buffer layers", *Applied Surface Science* **237**, 306 (2004). SCI, NSC92-2112-M-003-019 and NTNU ORD 93-1.
18. C. S. Shern\*, H. Y. Ho, S. H. Lin, and C. W. Su, "Structure and magnetic properties of ultrathin Ni films on Pt(111) with Co buffer layers", *Physical Review B* **70**, 214438 (2004). SCI, NSC 93-2112-M-003-016 and NTNU ORD 93-1.
19. C. W. Su\*, J. S. Tsay, C. H. Hwang, and Y. D. Yao, "Magneto-optical properties of Co/Ge(100) with ultrathin Ag buffer layers", *Journal of Applied Physics* **97**, 10J111 (2005). SCI, NSC 92-2811-M-001-030 and NSC 92-2112-M-029-007.
20. C. W. Su, H. Y. Ho, Y. J. Chen and C. S. Shern\*, "Annealing effect of Ag ultrathin films on Ni/Pt(111)", *Journal of Applied Physics* **97**, 124907 (2005). SCI, NSC91-2112-M-003-025 and NSC92-2112-M-003-019.
21. J. S. Tsay\*, C. W. Su, C. H. Huang, and Y. D. Yao, "Low-temperature studies of magnetic phases of the interfacial layers for Co/Ge(100) and Co/Ge(111) films", *Journal of Vacuum Science and Technology A* **23**, 781 (2005). SCI, NSC92-2112-M-194-020, NSC92-2811-M-001-030, and NSC93-2112-M-194-008.
22. C. W. Su\* and C. S. Shern, "Abnormal reduction of coercivity on magnetic Cobalt-Platinum alloy films", *Journal of Magnetism and Magnetic Materials* **303**, e234 (2006). SCI, NSC94-2112-M-415-003 and NSC93-2112-M-0032-016.
23. C. W. Su\*, J. S. Tsay, and Y. D. Yao, "Buffer effects of Ag layers on magneto-optical Co/Ge(100) ultrathin films", *Journal of Magnetism and Magnetic Materials* **304**, e41 (2006). SCI, NSC94-2112-M-415-003, NSC92-2811-M-001-030, NSC93-2112-M-194-008 and NSC92-2112-M-029-007.
24. H. Y. Ho, Y. J. Chen, C. W. Su, R. H. Chen, and C. S. Shern\*, "Layer structure of ultrathin Ag films on Ni/Pt(111)", *Journal of Vacuum Science & Technology A* **24**, 1020 (2006). SCI, NSC94-2112-M-003-016.
25. C. W. Su\*, J. S. Tsay, and Y. D. Yao, "Finding stabilized coercivity in a study of thickness and temperature dependent Co/Ag/Ge(001) ultrathin films", *Thin Solid Films* **516**, 1164 (2008), SCI, NSC95-2112-M-415-001, NSC95-2112-M-003-023-MY2, NSC95-2112-M-001-059-MY3.
26. C. W. Su\*, M. S. Huang, Y. C. Chang, T. H. Tsai, Y. H. Lee and J. C. Lee, "Determination of composition in stoichiometric Co-N ultrathin films by nitrogen plasma sputtering", *Journal of Applied Physics* **105**, 033509 (2009), SCI, NSC 95-2112-M-415-001, NSC 96-2112-M-415-005-MY2 and NCYU96T001-06-04-003.
27. C. W. Su\*, M. S. Huang, Y. C. Chang, T. H. Tsai, Y. H. Lee and J. C. Lee, "Study on nitridation of cobalt ultrathin films on ZnO(002) crystal by Auger electron spectroscopy", *Chinese Journal of Physics* **47**(3), 349 (2009). NSC 95-2112-M-415-001, NSC 96-2112-M-415-005-MY2 and NCYU 96T001-06-04-003.

28. C. W. Su\*, Y. C. Chang, M. S. Huang, T. H. Tsai, S. C. Chang, “Perpendicular magneto-optical properties of ultrathin Co on transparent ZnO(002) crystal induced by low-energy nitrogen sputtering”, (preparation to Applied Physics Letters).
29. C. W. Su\*, T. H. Tsai, M. S. Huang, Y. C. Chang, “Quantitative and statistical analysis of Auger electron spectrum for O-terminated ZnO(002) surface by Inelastic-Mean-Free-Path and Effective-Attenuation-Length models”, (preparation to Journal of Applied Physics).
30. C. W. Su\*, T. H. Tsai, Y. C. Chang, “Surface composition of pseudo-stoichiometric  $\text{Co}_x\text{N}_{1-x}/\text{ZnO}(002)$  ultrathin films dependent on nitrogen ion energy”, (prepare to Journal of Physics D: Applied Physics)
31. C. W. Su\*, Y. C. Chang, “Measurement of high quality magneto-optical Faraday hysteresis for transparent materials by low-energy ion sputtering”, (preparation to Physical Review B).
32. C. W. Su\*, T. H. Tsai, Y. C. Chang, S. C. Chang, Y. C. Lee, “Thickness determination of Co ultrathin films on O-terminated ZnO(002) surface”, (prepare to Thin Solid Films).
33. C. W. Su\*, T. H. Tsai, Y. C. Chang, S. C. Chang, “Fabrication of N:ZnO surface by pre-coated Co ultrathin films”, (prepare to Surface and Coatings Technology)

#### B. Non-SCI期刊論文(Non-SCI Journal Papers)

1. 蘇炯武\*, 張硯筑, 黃銘祥, 蔡宗軒, “高磁場表面磁光效應系統及其關鍵技術之探討”, 科儀新知雙月刊, 第30卷, 第3期(總期數: 第167期), 第73-86頁, 97年12月。
2. 蘇炯武\*, 張勝騏, 張硯筑, “建造一半導體表面照射200-400奈米紫外波段光源進行奈米級薄膜光電反應機制探討及表面磁光技術整合平台”, 準備中 (2009).

#### C. 研討會發表 (Presentation) – From 2000 to 2009

1. C. S. Shern, C. W. Su, and Y. E. Wu, 2000, “Comparative study in annealing effects of Ag/Co/Pt(111) and Co/Ag/Pt(111)”, 19th European Conference on Surface Science (ECOSS-19), Madrid, Spain.
2. C. W. Su, Y. E. Wu, F. C. Chen, and C. S. Shern, 2000, “Exchange effect on alloy formation of Co/Ag/Pt(111) ultrathin films”, Annual Meeting of Chinese Physics Society. (oral)
3. C. W. Su, Y. E. Wu, F. C. Chen, and C. S. Shern, 2001, “The structure evolution of Ni ultrathin films on Pt(111)”, Annual Meeting of Chinese Physics Society. (poster)
4. C. S. Shern, C. W. Su, Y. E. Wu, and F. C. Chen, 2001, “Magnetic properties of Ag/Co/Pt(111) ultrathin films”, 20<sup>th</sup> European Conference on Surface Science (ECOSS-20), Kraków, Poland.
5. C. W. Su, Y. E. Wu, and C. S. Shern, 2001, “Initial Growth and Alloy Formation of Ni Ultrathin Films on Pt(111)”, AVS 48<sup>th</sup> International Symposium, San Francisco, USA. (poster)
6. C. W. Su, Y. W. Chu, C. L. Tzeng, and C. S. Shern, 2002, “Comparative study in annealing effects of Ag/Ni/Pt(111) and Ni/Ag/Pt(111) ultrathin films”, Annual Meeting of Chinese Physics Society. (oral)
7. C. W. Su, Y. W. Chu, H. Y. Ho, C. S. Shern, and R. H. Chen, 2002, “Studies of Alloying on Ag/Ni/Pt (111) and Ni/Ag/Pt (111) Ultrathin Films”, 4<sup>th</sup> Asia Conference on Scanning Probe Microscopy. (poster)

8. C. W. Su, Y. W. Chu, H. Y. Ho, and C. S. Shern, 2002, "Surface Structural Studies of Epitaxial Ag/Ni/Pt(111) and Ni/Ag/Pt(111) Ultrathin Films", AVS 49<sup>th</sup> International Symposium, Denver, USA. (poster)
9. C. W. Su, Y. W. Chu, H. Y. Ho, and C. S. Shern, 2002, "Structural properties of Ag/Ni/Pt(111) and Ni/Ag/Pt(111) nano-scale thin films", Novel Properties of Nano-Material Symposium, Taipei, Taiwan. (poster)
10. C. W. Su, H. Y. Ho, Y. W. Chu, and C. S. Shern, 2003 "Growth and interfacial properties of Ag-based ultrathin films on Ni/Pt(111) surface", Annual Meeting of Chinese Physics Society. (oral)
11. C. W. Su, C. S. Shern, and Y. D. Yao, 2003 "Magnetic properties of ultrathin Co/Ni/Pt(111) films", International Symposium on Advanced Magnetic Technologies, Taipei, Taiwan. (oral)
12. C. W. Su, C. S. Shern, and Y. D. Yao, 2004 "Magnetic properties of ultrathin Ni/Co/Pt(111) films", 9<sup>th</sup> Joint MMM/Intermag Conference, Anaheim, USA. (oral)
13. C. W. Su, C. S. Shern, and Y. D. Yao, 2004 "Magneto-optical properties and composition analysis of ultrathin Ni film on alloyed Co/Pt(111) surface", Annual Meeting of Chinese Physics Society. (oral)
14. C. W. Su, J. S. Tsay, C. H. Huang, K. T. Huang, and Y. D. Yao, 2004 "Magnetic properties of Co/Ge(100) interfaces with Ag buffer layers", The 1<sup>st</sup> Asia Forum on Magnetism, Okinawa, Japan. (oral)
15. C. W. Su, J. S. Tsay, C. H. Huang, and Y. D. Yao, 2004 "Magneto-optical properties of Co/Ge(100) with ultrathin Ag buffer layers", 49<sup>th</sup> Conference on Magnetism and Magnetic Materials, Jacksonville, USA (poster).
16. C. W. Su, J. S. Tsay, C. H. Huang, and Y. D. Yao, 2005 "The effect of Ag underlayer on the magneto-optical properties of Co/Ge(100) thin films", Annual Meeting of Chinese Physics Society, Taiwan. (poster)
17. C. W. Su, J. S. Tsay, Y. D. Yao, 2005 "Buffer effect of silver layers on magneto-optical cobalt/Germanium(100) ultrathin films", 2005 International Symposium on Advanced Magnetic Technologies and International Symposium on Magnetic Materials and Applications, Taipei, Taiwan. (oral)
18. C. W. Su, J. S. Tsay, C. H. Huang, and Y. D. Yao, 2005 "Annealing effects on ferromagnetic Co/Ag/Ge(100) ultrathin films", 23th European Conference on Surface Science, Berlin, Germany. (poster)
19. C. W. Su and C. S. Shern, 2005 "Abnormal reduction of coercivity on magnetic Cobalt-Platinum alloy films", 6<sup>th</sup> International Symposium on Physics of Magnetic Materials, Singapore. (poster)
20. C. W. Su, J. S. Tsay, C. H. Huang, W. K. Shau, and Y. D. Yao, 2006 "Temperature and thickness dependence of magneto-optical properties on ferromagnetic Co/Ag/Ge(001) ultrathin films", Annual Meeting of Chinese Physics Society, Taiwan. (poster)
21. C. W. Su, J. S. Tsay, and Y. D. Yao, 2007 "Thickness and temperature dependence on coercivity of epitaxial magneto-optical Co ultrathin films by intercalation of Ag layers", Annual Meeting of Chinese Physics Society, Taiwan. (poster)

22. C. W. Su and C. S. Shern, 2007 “Abnormal antiferromagnetic-like nickel interface magnetism on magneto-optical properties of cobalt-platinum films”, 2007 MRS Spring Meeting, San Francisco, USA. (poster)
23. C. W. Su and C. S. Shern, 2007 “Antiferromagnetic interface magnetism of nickel thin film layers on magneto-optical cobalt-platinum surface”, 1<sup>st</sup> International Symposium on Advanced Magnetic Materials and Applications, Jelu, Korea. (oral)
24. C. W. Su and C. S. Shern, 2007 “Antiferromagnetic nickel ultrathin films on magneto-optical cobalt-platinum(111) interfaces”, 4th International Conference on Spectroscopic Ellipsometry, Stockholm, Sweden. (poster)
25. C. W. Su and C. S. Shern, 2007 “Antiferromagnetic-like interface magnetism of magneto-optical cobalt-platinum surface by nickel buffer layers”, Taiwan association for magnetic technology & 19<sup>th</sup> annual conference on magnetics, Yunlin, Taiwan. (oral)
26. M. S. Huang, Y. C. Chang, T. S. Tsai, R. Q. Lee, C. W. Su\*, and Y. H. Lee, 2008, “Surface composition of N-incorporated Co/ZnO(002) crystal surface by ultrahigh vacuum sputtering technique”, Annual Meeting of Chinese Physics Society, Hsinchu, Taiwan. (poster)
27. Chiung-Wu Su, Jyh-Shen Tsay, Yeong-Der Yao, 2008, "Effect on thin film magnetic coercivity from investigation of thickness and temperature dependent Co/Ag/Ge(001) surfaces", Taiwan association for magnetic technology & 20th annual conference on magnetics (Jun. 30-Jul. 2), Taipei, Taiwan, (Oral).
28. C. W. Su, M. S. Huang, Y. C. Chang, T. S. Tsai, Y. H. Lee, J. C. Lee, 2008, “Study on nitridation of cobalt ultrathin films on ZnO(002) surface by Auger electron spectroscopy”, 25th European Conference on Surface Science, Jul. 27-Aug. 1, Liverpool, United Kingdom (poster).
29. C. W. Su, M. S. Huang, Y. C. Chang, T. S. Tsai, Y. H. Lee, and J. C. Lee, 2008, “Nitrogen pressed Co/ZnO(002) multilayer thin film growth by ultrahigh vacuum sputtering”, 14th International Conference on Thin Films & Reactive Sputter Deposition (Nov. 17-20), Ghent, Belgium. (withdrawn)
30. Y. C. Chang, C. W. Su\*, M. S. Huang, T. S. Tsai, Y. H. Lee and J. C. Lee, 2008, “Study on ultrathin Co/ZnO(002) crystal surface by magneto-optical Faraday effect”, Asian Magnetism Conference 2008 (Dec. 10-13), Busan, Korea. (poster)
31. T. H. Tsai, Y. C. Chang, S. C. Chang, C. W. Su\*, Jan. 19-21, 2009, “Nitrogen doping on ultrathin Co/ZnO(002) films by low-energy ion sputtering technique”, Annual Meeting of Chinese Physics Society, Changhua, Taiwan. (poster)
32. C. W. Su\*, T. H. Tsai, Y. C. Chang, S. C. Chang, Dec. 14-16, 2009, “Determination of surface compositions of ultrathin Co-N/ZnO(002) films by low-energy N<sup>+</sup> sputtering”, TACT 2009 International Thin Films Conference, Taipei, Taiwan. (Oral)
33. S. C. Chang, Y. C. Chang, T. H. Tsai, and C. W. Su\*, Jan. 3-8, 2010, “Novel Magnetic Generation of Ultrathin Co/ZnO (002) Surface by Post Low-Energy N<sup>+</sup> Sputtering”, 3rd IEEE International NanoElectronics Conference (INEC2010), Hong Kong, China. (poster)
34. Y. C. Chang, S. C. Chang, T. H. Tsai, and C. W. Su\*, Dec. 11-12, 2009, “Study of the Nitridation of Cobalt Ultrathin Films on O-Terminated ZnO(002) Crystal by Surface Magneto-Optical Faraday Effect”, Optics and Photonics Taiwan, Taipei, Taiwan. (poster)