

## 歷年著作清單：

### Journal paper:

1. C. T. Hsieh, P. R. Ding, C. H. Liao, **Wei-Chia Su**, C. Y. Huang, C. H. Lin, K. Y. Lo, C. J. Tien, and T. F. Hsu, "Polarization-independent distortion corrector fabricated using polymer-dispersed liquid crystals," *Applied Optics*. **53**, 383-387 (2014). (SCI, EI)
2. **Wei-Chia Su\***, W. B. Hung, and L. P. Chen," Parallel optical data storage based on polarization addressed amplitude modulation in dye-doped liquid crystals," *IEEE Journal of Selected Topics in Quantum Electronics*. **19**(6) 3401505-1-3401505-5 (2013). (NSC 101-2221-E-018-017-)
3. Q. L. Deng, **Wei-Chia Su\***, C. Y. Chen, B. S. Lin, and H. W. Ho," Full color image splitter based on holographic optical elements for stereogram application," *Journal of display technology*. **9**(8), 607-612 (2013) (NSC 100-2221-E-018-016-)
4. **Wei-Chia Su\***, W. B. Hung, and H. Y. Hsiao," Switchable holographic image splitter fabricated with dye-doped liquid crystals," *Optics Express*. **21**(5), 6640-6649 (2013) (SCI) (NSC 101-2221-E-018-017-)
5. C. T. Hsieh, Y. F. Hsu, C. W. Chung, M. F. Chen, **Wei-Chia Su**, and C. Y. Huang," Distortion aberration correction device fabricated with liquid crystal lens array," *Optics Express*. **21**, 1937-1943 (2013) (SCI)
6. C. Y. Chen, **Wei-Chia Su**, C. H. Lin, M. D. Ke, Q. L. Deng, and K. Y. Chiu, "Reduction of Speckles and Distortion in Projection System by Using a Rotating Diffuser " *Optical Review*. **19**, 440-443 (2012).
7. **Wei-Chia Su**, C. C. Sun\*, "Review of random phase encoding in volume holographic storage," *Materials*. **5**, 1635-1653 (2012). (SCI)
8. **Wei-Chia Su**, Y. W. Chen\*, Y. J. Chen, S. H. Lin, and L. K. Wang, "Security optical data storage in Fourier holograms," *Applied Optics*. **51**, 1297-1303 (2012). (SCI, EI) (NSC 97-2221-E-108-002-MY3)
9. J. P. Liu\*, **Wei-Chia Su**, J. H. Chen, "The validity of weak-coupling approach for a transmission phase hologram," *Optik*. **123**, 498-501 (2012). (SCI)
10. **Wei-Chia Su**, C. Y. Chen\*, Y. F. Wang, Yu-Wen Chen, and S. S. Yang, "Effect of a diffuser on distortion reduction for virtual image projector" *Journal of Optics*. **13**, 105401 (2011) (SCI)
11. **Wei-Chia Su\***, J. Y. Jiang, H. C. Chen, Yu-Wen Chen, and S. S. Yang, "Dye adsorption induced nonvolatile reading of erasable polarization holograms in

- liquid crystal films,” *Optical Engineering*. **50**, 070502-1- 070502-3 (2011) **(SCI, EI)** **(NSC 97-2221-E-108-002-MY3)**
12. **Wei-Chia Su**, C. Y. Chen\* and Y. F. Wang, “Stereogram implemented with a holographic image splitter,” *Optics Express*. **19**, 9942-9949 (2011) **(SCI, EI)** **(NSC 97-2221-E-108-002-MY3)**
  13. W. H. Su\*, C. H. Hsu, **Wei-Chia Su**, and J. P. Liu, “Projected fringe profilometry using a liquid-crystal spatial light modulator to extend the depth measuring range,” *Optics Express*. **19**, 3272-3283 (2011) **(SCI, EI)**
  14. C. Y. Chen, **Wei-Chia Su\***, Y. F. Wang, and C. H. Chen, “Reduction of distortion aberration in imaging systems by using a microlens array” *Optics Communications*. **283**, 2798–2802. (2010) **(SCI, EI)**
  15. C. Y. Chen\*, T. Y. Hsieh, Q. L. Deng, **Wei-Chia Su**, and Z. S. Cheng, “Design of a novel symmetric microprism array for dual-view display,” *Displays*. **31**, 99–103. (2010) **(SCI, EI)**
  16. **Wei-Chia Su\***, C. Y. Huang, J. Y. Chen, and W. H. Su, “Effect of recording-beam ratio on diffraction efficiency of polarization holographic gratings in dye-doped liquid-crystal films,” *Optics Letters*. **35**, 405-407 (2010). **(SCI, EI)** **(NSC 97-2221-E-108-002-MY3)**
  17. J. P. Liu\*, H. S. Chen, and **Wei-Chia Su**, “Two-color holographic recording in a single-doped photorefractive LiNbO<sub>3</sub> crystal,” *Optical Engineering*. **48**, 030501-1- 030501-3 (2009). **(SCI, EI)**
  18. W. H. Su, **Wei-Chia Su\***, H. J. Kao, and C. Y. Chen, “Correlator-aided alignment of phase key in encrypted holographic storage systems,” *Optics Communications*. **280**, 27-32. (2007). **(SCI, EI)**
  19. C. C. Sun\*, C. Y. Hsu, S. H. Ma, and **Wei-Chia Su**,” Rotation selectivity of random phase encoding in volume holograms,” *Optics Communications*. **276**, 62-66. (2007). **(SCI, EI)**
  20. **Wei-Chia Su\***, C. M. Chen, and Y. Ouyang, “Orthogonal polarization simultaneous readout for volume holograms with hybrid angle and polarization multiplexing in LiNbO<sub>3</sub>,” *Applied Optics*. **46**, 3233-3238 (2007). **(SCI, EI)** **(NSC95-2221-E-018-019-)**
  21. **Wei-Chia Su\***, and C. M. Chen, “Angular selectivity in volume holograms with spherical reference waves implemented by rotating a mirror,” *Optical Engineering*. **46**, 015802 (2007). **(SCI, EI)** **(NSC94-2215-E-018-003-)**
  22. **Wei-Chia Su\***, C. M. Chen, and X. H. Lee, “Enhanced angular selectivity in

- volume holograms with speckle reference waves,” *Optics Communications*. **266**, 450-455. (2006). (SCI, EI) ([NSC94-2215-E-018-003-](#))
23. C. C. Sun and **Wei-Chia Su\***, “Random Phase Encoding in Optical Encryption, Volume Holographic Multiplexing and Optical Sensing,” *SPIE newsletters: Optics in Information Systems*. Vol. **16**, No. 2, July (2005).
  24. **Wei-Chia Su\***, and C. H. Lin, " Three-dimensional shifting selectivity of decryption phase mask in double random phase encoding holographic memory," *Optics Communications*. **241**, 29-41. (2004). (SCI, EI) ([NSC92-2215-E-036-001](#))
  25. B. Wang, J. Y. Chang, **Wei-Chia Su\***, and C. C. Sun, “Optical security using a random binary phase code,” *Optical Engineering*. **43**, 2048-2052 (2004). (SCI, EI)
  26. **Wei-Chia Su\***, C. C. Sun, and W. C. Su “Encryption-selectable holographic storage in LiNbO<sub>3</sub> with angle multiplexing,” *Microwave and Optical Technology Letters*. **42**, 227-230 (2004). (SCI, EI)
  27. **Wei-Chia Su\***, and C. H. Lin, “Enhancement of angular selectivity in encrypted holographic memories,” *Applied Optics*. **43**, 2298-2304 (2004). (SCI, EI) ([NSC91-2215-E-036-001](#))
  28. **Wei-Chia Su**, C. C. Sun\*, Y. C. Chen, and Y. Ouyang, " Duplication of phase key for random-phase-encrypted volume holograms,” *Applied Optics*. **43**, 1728-1733 (2004). (SCI, EI)
  29. C. C. Sun\*, C. Y. Hsu, C. H. Wu, and **Wei-Chia Su**, “Spatial filtering of three-dimensional objects based on volume holography,” *Optical Engineering*. **42**, 2788-2789 (2003). (SCI, EI)
  30. **Wei-Chia Su\***, C. C. Sun, and N. Kukhtarev, “Multiplexed edge-lit holograms,” *Optical Engineering*. **42**, 1871-1872 (2003). (SCI, EI)
  31. **Wei-Chia Su\***, Y. W. Chen, C. C. Sun and Y. Ouyang, “Multilayer storage in a shift-multiplexed holographic disk,” *Optical Engineering*. **42**, 1528-1529 (2003). (SCI, EI)
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  33. **Wei-Chia Su**, C. C. Sun\*, N. Kukhtarev, and A. E. T. Chiou “Polarization-multiplexed volume holograms in LiNbO<sub>3</sub> with 90-deg geometry,” *Optical Engineering*. **42**, 9-10 (2003). (SCI, EI)

34. **Wei-Chia Su**, and C. C. Sun\*, "Optical pattern interconnections using random phase encoding in volume holograms," *Optics Communications*. **213**, 259-265. (2002). (SCI, EI)
35. C. C. Sun\*, C.Y. Hsu, Y. Ouyang, **Wei-Chia Su**, and A. E. T. Chiou, "All-optical angular sensing based on holography multiplexing with spherical waves," *Optical Engineering*. **41**, 2809-2813 (2002). (SCI, EI)
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37. C. C. Sun\*, C. Y. Hsu, **Wei-Chia Su**, Y. Ouyang, and J. Y. Chang, "A novel algorithm for high sensitivity in measuring surface variation based on volume holography," *Microwave and Optical Technology Letters*. **34**, 319-321 (2002). (SCI, EI)
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39. C. C. Sun\*, and **Wei-Chia Su** "Three-dimensional shifting selectivity of random phase encoding in volume holograms," *Applied Optics*. **40**, 1253-1260 (2001). (SCI, EI)
40. C. C. Sun\*, **Wei-Chia Su**, Y. Ouyang, and W. S. Sun, "Applications of random phase encoding in volume holograms," *Optical Memory and Neural Network*. **10**, 25-34 (2001).
41. C. C. Sun\*, Y. M. Chen, and **Wei-Chia Su**, "An all-optical fiber sensing system based on random phase encoding and volume holographic interconnection," *Optical Engineering*. **40**, 160-161 (2001). (SCI, EI)
42. B. Wang, C. C. Sun\*, **Wei-Chia Su**, and A. E. T. Chiou, "Shift tolerance property of an optical double random phase encoding encryption system," *Applied Optics*. **39**, 4788-4793 (2000). (SCI, EI)
43. C. C. Sun\*, **Wei-Chia Su**, B. Wang, and Y. Ouyang, "Diffraction selectivity of holograms with random phase encoding," *Optics Communications*. **175**, 67-74 (2000). (SCI, EI)
44. C. C. Sun\*, M. S. Tsaur, **Wei-Chia Su**, and B. Wang, "Diffraction patterns for reading transmission volume holograms under Bragg mismatch," *Optical and Quantum Electronics*. **32**, 431-442 (2000). (SCI, EI)

45. C. C. Sun\*, **Wei-Chia Su**, Y. N. Lin, Y. OuYang, S. P. Yeh, and B. Wang, "Three dimensional shifting sensitivity of a volume hologram with spherical reference waves," *Optical Memory and Neural Network*. **8**, 229-236 (1999).
46. C. C. Sun\*, M. S. Tsaur, **Wei-Chia Su**, B. Wang, A. E. T. Chiou, and J. Y. Chang, "2-D shifting tolerance of a volume-holographic optical correlator," *Applied Optics*. **38**, 4316-4324 (1999). (SCI, EI)
47. C. C. Sun\*, B. Wang, **Wei-Chia Su**, A. E. T. Chiou, and J. Y. Chang, "Optical symmetry filtering by use of anisotropic self-diffraction in BaTiO<sub>3</sub>," *Applied Optics*. **38**, 3720-3725 (1999). (SCI, EI)
48. C. H. Lee\*, C. S. Hwang, P. K. Tseng, H. C. Tseng, K. L. Yu, **Wei-Chia Su**, J. R. Chen, T. L. Lin and S. L. Chang, "The commissioning of a low cost multipurpose beamline at SRRC," *J. Synchrotron Rad.* **5**, 512-514 (1998). (SCI)

#### Conference paper :

##### 國際會議論文

1. Ming-Hsun Tsai, and Wei-Chia Su "A spectacle-type 3D display based on holographic optical element and planar waveguide," *Proceedings of 3DSA2014*, P4-8 (2014). (NSC 102-2221-E-018-028-)(最佳壁報論文獎)
2. Wei-Chia Su, H. Y. Hsiao, "Enhanced Diffraction Efficiency of Switchable Holographic Splitter for Stereo-Display," *Tech. Digest of IDW'13*. 3DP-5, (2013). (NSC 102-2221-E-018-028-)
3. Wei-Chia Su, L. P. Chen, H.-T. Lin "Full Color Image in a Holographic Head-Mounted Display," *Tech. Digest of IDW'13*. PRJp-5 (2013). (NSC 102-2221-E-018-028-)(傑出壁報論文獎)
4. Wei-Chia Su, and Hiu-Tzu Lin, "Holographic Head-Mounted-Display for Stereo-Vision," *Proceedings of 3DSA2013*, P4-3 (2013). (NSC **101-2221-E-018-017-**)
5. Wei-Chia Su, and Tien-Shou Yeh, "3D Holographic Display Based on Persistence of Vision," *Proceedings of 3DSA2013*, P4-4 (2013). (NSC **101-2221-E-018-017-**)
6. Hiu-Tzu Lin, Wei-Chia Su, and Yu-Wu Wang, "Holographic collimator for reconstruction of display holograms," *Tech. Digest of IDW'12*. 3DP-25, (2012). (NSC **101-2221-E-018-017-**)(傑出壁報論文獎)

7. Hiu-Tzu Lin, Wei-Chia Su, Po-Kuang Chang, and Yu-Wu Wang “Optical lens design for a virtual image projector in a helmet,” Tech. Digest of IDW’12. PRJp - 6 (2012). (NSC **101-2221-E-018-017-**)
8. Wei-Chia Su, Ming-Hsun Tsai, and Hiu-Tzu Lin, “Holographic optical elements based on edge-lit holograms,” Proc. SPIE. 8429, 842920 (2012) (**EI**) (NSC **100-2221-E-018-016-**)
9. Wen-Bin Hung, and **Wei-Chia Su**, “Holographic switch for stereoscopic display,” Tech. Digest of IDW’11. 3DP-3, 277-278 (2011). (NSC **100-2221-E-018-016-**)
10. Chih-Wei Yen, **Wei-Chia Su**, Chien-Yue Chen, Hsin-Wei Ho, and Ming-Hsun Tsai, “Holographic optical elements fabricated with polymer-dispersed-liquid-crystals for head mounted displays,” Tech. Digest of IDW’11. PRJ5-4, 1917-1918 (2011). (NSC **100-2221-E-018-016-**)
11. **Wei-Chia Su**, Chien-Yue Chen, Yi-Fan Wang, and Hsin-Wei Ho, “Holographic optical elements for stereoscopic vision on LCD panel,” Tech. Digest of IDW’10. 3DP-11, 1321-1322 (2010).
12. Kun-Fan Liu, and **Wei-Chia Su**, “Design of a concentrator for III-V photovoltaic cells,” Tech. Digest of ODF’10. 20PSa-27 (2010).
13. **Wei-Chia Su**, and Hui-Chuan Chen, “Polarization holographic gratings in azo-dye-doped liquid crystal films with different liquid-crystal surface alignment direction,” Tech. Digest of ODF’10. 20PSP-41 (2010).
14. Yi-Fan Wang, Chien-Yue Chen, **Wei-Chia Su**, Kuo-Jui Wu, Kun-Fang Liu, and Hsin-Wei Ho, “A compact after-market head-up display system for vehicles,” Tech. Digest of ODF’10. 20PSP-26 (2010).
15. Kuo-Jui Wu, and **Wei-Chia Su**, “Transmission microholographic data storage in an optical disk with angular multiplexing,” Tech. Digest of ODF’10. 20PSP-22 (2010).
16. **Wei-Chia Su**, Wei-Hung Su, and Chung-Shang She, “Extended depth of field in a projected fringe profilometry using a phase mask,” Tech. Digest of MOC’09, J59 (2009).
17. **Wei-Chia Su**, Jhen-Yu Jiang, Ming-Chang Chang, Kuo-Jui Wu, and Kun-Fang Liu, “Non-volatile property of erasable polarization holographic gratings in dye-doped liquid crystals,” Tech. Digest of ISOM’09, 82-83 (2009).
18. **Wei-Chia Su** and Jiun-Jie Chen, “Hybrid shift multiplexing storage in a holographic disk with a fiber array and a random phase diffuser,” Tech. Digest of

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19. **Wei-Chia Su**, Chien-Yue Chen, Yau-Wen Liu, Ching-Huang Lin, and Yueh Ouyang, "Polarization simultaneous readout for volume holographic storage in LiNbO<sub>3</sub>," Proc. SPIE. 6994, 69940Y (2008) **(EI)** **(NSC 96-2221-E-018-029-)**
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22. X. H. Lee, **Wei-Chia Su**, and W. H. Chen,"Wavelength division multiplexing techniques based on cascaded volume holographic filters in LiNbO<sub>3</sub> crystals with 90-degree geometry," Proc. SPIE. **6180**, 61801H (2006) **(EI)**
23. **Wei-Chia Su**, and X. H. Lee, "Holographic memories with encryption-selectable function," Proc. SPIE. **6180**, 61801I (2006) **(EI)** **(NSC93-2215-E-018-006)**
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30. C. C. Sun, C. Y. Hsu, C. H. Wu, **Wei-Chia Su**, and Y. Ouyang, "Detection of 3D displacement of an object based on volume holographic filters," Proc. SPIE 5206, 207-214 (2003). **(EI)**
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34. C. C. Sun, Y. Ouyang, C. Y. Hsu, and **Wei-Chia Su**, "Angular multiplexing with spherical reference wave and the application," Proc. SPIE 4459, 65-70 (2001). **(EI)**
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