

劉柏村

著作目錄

期刊論文

1. P. T. Liu, C. H. Chang, and C. S. Fuh (2016, Nov). Enhancement of reliability and stability for transparent amorphous indium-zinc-tin-oxide thin film transistors. *Royal society of chemistry*, 2016, 6, 106374-106379. 本人為第一作者、通訊作者.
2. P. T. Liu*, C. H. Chang, C. S. Fuh, Y. T. Liao, S. M. Sze (2016, Oct). Effects of Nitrogen on Amorphous Nitrogenated InGaZnO (a-IGZO:N) Thin Film Transistors. *Journal of Display Technology*, 12(10), 1070-1077. (SCIE, 74/257, ENGINEERING, ELECTRICAL & ELECTRONIC). MOST 103-2221-E-009-010-MY3. 本人為第一作者、通訊作者.
3. N. Tiwari, R. N. Chauhan, P. T. Liu*, H. P. D. Shieh (2016, Jul). Modification of intrinsic defects in IZO/IGZO thin films for reliable bilayer thin film transistors. *RSC Advances*, 6(79), 75693-75698. (SCIE, 49/163, CHEMISTR). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
4. P. T. Liu*, C. H. Chang, C. J. Chang (2016, Jun). Suppression of photo-bias induced instability for amorphous indium tungsten oxide thin film transistors with bi-layer structure. *Applied Physics Letters*, 108(26), 261603. (SCI, 28/145, PHYSICS). MOST 103-2221-E-009-010-MY3. 本人為第一作者、通訊作者.
5. G. T. Zheng, P. T. Liu*, M. C. Wu (2016, May). Design of dual-outputs-single-stage a-Si:H TFT gate driver for high resolution TFT-LCD application. *Journal of The Society for Information Display*, 24(5), 330-337. (SCI, 195/257, ENGINEERING). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
6. N. Tiwari, R. N. Chauhan, H. P. D. Shieh, P. T. Liu*, Y. P. Huang (2016, Apr). Photoluminescence and Reliability Study of ZnO Cosputtered IGZO Thin-Film Transistors Under Various Ambient Conditions. *IEEE Transactions on Electron Devices*, 63(4), 1578-1581. (SCIE, 57/257, ENGINEERING). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
7. N. Tiwari, H. P. D. Shieh, P. T. Liu* (2015, Jul). Structural, optical, and photoluminescence study of ZnO/IGZO thin film for thin film transistor application. *Materials Letters*, 151, 53-56. (SCIE, 37/145, PHYSICS). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
8. N. Tiwari, R. N. Chauhan, P. T. Liu*, H. P. D. Shieh (2015, Jun). Electrical

- characteristics of InGaZnO thin film transistor prepared by co-sputtering dual InGaZnO and ZnO targets. *RSC Advances*, 5(64), 51983-51989. (SCIE, 49/163, CHEMISTRY). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
9. Y. S. Fan, P. T. Liu*, C. C. Chen, C. C. Chang (2015, Jun). High Endurance and Multilevel Operation in Oxide Semiconductor-Based Resistive RAM Using Thin-Film Transistor as a Selector. *ECS Solid State Letters*, 4(9), Q41-Q43. (SCIE, 96/145, PHYSICS). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
 10. P. T. Liu*, Y. S. Fan, C. C. Chen (2014, Dec). Improvement of Resistive Switching Uniformity for Al-Zn-Sn-O-Based Memory Device With Inserting HfO₂ Layer. *IEEE Electron Device Letters*, 5(64), 51983-51989. (SCIE, 40/257, ENGINEERING, ELECTRICAL & ELECTRONIC). MOST 103-2221-E-009-010-MY3. 本人為第一作者、通訊作者.
 11. C. S. Fuh, P. T. Liu*, W. H. Huang, S. M. Sze (2014, Nov). Effect of Annealing on Defect Elimination for High Mobility Amorphous Indium-Zinc-Tin-Oxide Thin-Film Transistor. *IEEE Electron Device Letters*, 35(11), 1103-1105. (SCIE, 40/257, ENGINEERING, ELECTRICAL & ELECTRONIC). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
 12. P. T. Liu*, C. S. Fuh, Y. S. Fan, S. M. Sze (2014, Aug). InZnSnO-Based Electronic Devices for Flat Panel Display Applications. *ECS Journal of Solid State Science and Technology*, 3(9), Q3054-Q3057. (SCIE, 68/145, PHYSICS). MOST 103-2221-E-009-010-MY3. 本人為第一作者、通訊作者.
 13. B. T. Jheng, P. T. Liu*, M. C. Wu (2014, Jul). Efficiency enhancement of non-selenized Cu(In,Ga)Se₂ solar cells employing scalable low-cost antireflective coating. *Nanoscale Research Letters*, 9, 331. (SCIE, 34/145, PHYSICS). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
 14. B. T. Jheng, P. T. Liu*, M. C. Wu (2014, Jun). A promising sputtering route for dense Cu₂ZnSnS₄ absorber films and their photovoltaic performance. *Solar Energy Materials and Solar Cells*, 128, 275-282. (SCI, 39/271, MATERIALS SCIENCE). MOST 103-2221-E-009-010-MY3. 本人為通訊作者.
 15. J. S. Meena, M. C. Chu, R. Singh, C. S. Wu, U. Chand, H. C. You, P. T. Liu, H. P. D. Shieh, F. H. Ko (2014, Apr). Polystyrene-block-poly(methylmethacrylate) composite material film as a gate dielectric for plastic thin-film transistor applications. *RSC Advances*, 4(36), 18493-18502. (SCIE, 49/163, CHEMISTRY, MULTIDISCIPLINARY). MOST 103-2221-E-009-010-MY3.
 16. Y. S. Fan, P. T. Liu* (2014, Apr). Characteristic Evolution from Rectifier Schottky Diode to Resistive-Switching Memory with Al-Doped Zinc Tin Oxide Film. *IEEE Transactions on Electron Devices*, 61(4), 1071-1076. (SCIE, 57/257,

- ENGINEERING, ELECTRICAL & ELECTRONIC). 本人為通訊作者。
17. Y. C. Wang, B. Y. Lin, P. T. Liu, H.P.D. Shieh (2014, Jan). Photovoltaic electrical properties of aqueous grown ZnO antireflective nanostructure on Cu(In,Ga)Se₂ thin film solar cells. *Optics Express*, 22(S1), A13-A20. (SCIE, 14/90, OPTICS). MOST 103-2221-E-009-010-MY3.
 18. Chur-Shyang Fuh, Po-Tsun Liu, Li-Feng Teng, Sih-Wei Huang, Yao-Jen Lee, Han-Ping D. Shieh, Simon M. Sze (2013, Sep). Effects of Microwave Annealing on Nitrogenated Amorphous In-Ga-Zn-O Thin-Film Transistor for Low Thermal Budget Process Application. *IEEE Electron Device Letters*, pp. 1157 - 1159. 本人為通訊作者。
 19. Li-Feng Teng, Po-Tsun Liu and Wei-Ya Wang (2013, Sep). Electrical Performance Enhancement of Al-Zn-Sn-O Thin Film Transistor by Supercritical Fluid Treatment. *IEEE Electron Device Letters*, pp. 1154 - 1156. 本人為通訊作者。
 20. Yang-Shun Fan, Po-Tsun Liu, Ching-Hui Hsu (2013, Sep). Investigation on amorphous InGaZnO based resistive switching memory with low-power, high-speed, high reliability. *Thin Solid Films*. (Accepted). 本人為通訊作者。
 21. Bao-Tang Jheng, Po-Tsun Liu, Min-Chuan Wang, and Meng-Chyi Wu (2013, Jul). Effects of ZnO-nanostructure antireflection coatings on sulfurization-free Cu₂ZnSnS₄ absorber deposited by single-step co-sputtering process. *Applied Physics Letters*, 103, 052904-052908. 本人為通訊作者。
 22. Chih-Hsiang Chang, Po-Tsun Liu (2013, Jul). Investigation on plasma treatment for transparent Al-Zn-Sn-O thin film transistor application. *Thin Solid Films*. 本人為通訊作者。
 23. M. C. Chu, J. S. Meena, P. T. Liu, H. P. D. Shieh, H. C. You, Y. W. Tu, F. C. Chang, F. H. Ko (2013, Jul). Oxygen Plasma Functioning of Charge Carrier Density in Zinc Oxide Thin-Film Transistors. *Applied Physics Express*,. 本人為通訊作者。
 24. J. S. Meena, M. C. Chu, R. Singh, H. P. D. Shieh, P. T. Liu*, F. H. Ko (2013, Jun). Controlled deposition of new organic ultrathin film as a gate dielectric layer for advanced flexible capacitor devices. *Journal of Materials Science-Materials in Electronics*, pp. 1807-1812. 本人為通訊作者。
 25. C. H. Hsu, Y. S. Fan, P. T. Liu* (2013, Feb). Multilevel resistive switching memory with amorphous InGaZnO-based thin film. *Applied Physics Letters*, 102, 062905-062907. 本人為通訊作者。
 26. G. T. Zheng, P. T. Liu*, M. C. Wu, L. W. Chu, M. C. Yang (2013, Feb). Design of Bidirectional and Low Power Consumption Gate Driver in Amorphous Silicon Technology for TFT-LCD Application. *Journal of Display Technology*, 9, 91-99.

本人為通訊作者。

27. C. S. Fuh, P. T. Liu*, Y. T. Chou, L. F. Teng, and S. M. Sze (2013, Jan). Role of Oxygen in Amorphous In-Ga-Zn-O Thin Film Transistor for Ambient Stability. *ECS Journal of Solid State Science and Technology*, 2 (1) Q1-Q5. 本人為通訊作者。
28. Li-Feng Teng, Po-Tsun Liu, Yuan-Jou Lo, and Yao-Jen Lee (2012, Sep). Effects of microwave annealing on electrical enhancement of amorphous oxide semiconductor thin film transistor. *Applied Physics Letters*, 101, 132901-132904. NSC 100-2628-E-009-016-MY3. 本人為通訊作者。
29. Bao-Tang Jheng, Po-Tsun Liu*, Meng-Chyi Wu, and Han-Ping D. Shieh (2012, Jul). A non-selenization technology by co-sputtering deposition for solar cell applications. *Optics Letters*, 37, 2760-2762. (SCI).
30. Yang-Shun Fan, Po-Tsun Liu, Li-Feng Teng, and Ching-Hui Hsu (2012, Jul). Bipolar resistive switching characteristics of Al-doped zinc tin oxide for nonvolatile memory applications. *Applied Physics Letters*, 101, 052901-052903. NSC 100-2628-E-009-016-MY3. 本人為通訊作者。
31. Chur-Shyang Fuh, Simon Min Sze, Po-Tsun Liu, Li-Feng Teng, Yi-Teh Chou (2011, Dec). Role of environmental and annealing conditions on the passivation-free in-Ga-Zn-O TFT. *Thin Solid Films*, 520, 1489-1494. 本人為通訊作者。
32. Li-Wei Chu, Po-Tsun Liu, and Ming-Dou Ker (2011, Dec). Design of Integrated Gate Driver With Threshold Voltage Drop Cancellation in Amorphous Silicon Technology for TFT-LCD Application. *Journal of Display Technology*, 7, 657-664. (SCI).
33. Po-Tsun Liu, Yi-Teh Chou, Li-Feng Teng, Fu-Hai Li, Chur-Shyang Fuh, and Han-Ping D. Shieh (2011, Oct). Ambient Stability Enhancement of Thin-Film Transistor With InGaZnO Capped With InGaZnO:N Bilayer Stack Channel Layers. *IEEE Electron Device Letters*, 32, 1397 - 1399. (SCI). 本人為通訊作者。
34. Po-Tsun Liu, and Jeng-Han Lee (2011, Oct). Inspection of the Current-Mirror Mismatch by Secondary Electron Potential Contrast With In Situ Nanoprobe Biasing. *IEEE Electron Device Letters*, 32, 1418-1420. (SCI). 本人為通訊作者。
35. Chen-Shuo Huang and Po-Tsun Liu (2011, Aug). Effect of high-pressure H₂O treatment on elimination of interfacial GeOX layer between ZrO₂ and Ge stack. *Applied Physics Letters*, 99, 082907-082909. (SCI). NSC 100-2628-E-009-016-MY3. 本人為通訊作者。
36. Po-Tsun Liu, and Jeng-Han Lee (2011, Jul). Profiling p⁺/n-Well Junction by Nanoprobe and Secondary Electron Potential Contrast. *IEEE Electron Device Letters*, 32, 868-870. (SCI). 本人為通訊作者。
37. Chen-Shuo Huang and Po-Tsun Liu (2011, Feb). Impact of Negative-Bias-

- Temperature-Instability on Channel Bulk of Polysilicon TFT by Gated PIN Diode Analysis. *Electrochemical and Solid-State Letters*, 14, H194-H196. (SCI). NSC 99-2221-E-009-116. 本人為通訊作者.
38. Li-Wei Chu, Po-Tsun Liu, and Ming-Dou Ker (2011, Feb). Design of Analog Pixel Memory for Low Power Application in TFT-LCDs. *Journal of Display Technology*, 7, 62-69. (SCI). 本人為通訊作者.
39. Po-Tsun Liu, Yi-Teh Chou, Li-Feng Teng, Fu-Hai Li, and Han-Ping Shieh (2011, Feb). Stabilization of oxide-based thin-film transistors. *SPIE Newsroom*, 10.1117/2.1201101.003446. (SCI). 本人為通訊作者.
40. Po-Tsun Liu, Yi-Teh Chou, Li-Feng Teng, Fu-Hai Li, and Han-Ping Shieh (2011, Jan). Nitrogenated amorphous InGaZnO thin film transistor. *Applied Physics Letters*, 98, 052102-052104. (SCI). 本人為通訊作者.

研討會論文

1. P. T. Liu (2015, Jun). Reliability Enhancement of High-Mobility Amorphous Indium-Tungsten Oxide Thin Film Transistor. *Semiconductor Technology for Ultra Large Scale Integrated Circuits and Thin Film Transistors V*. 本人為第一作者、通訊作者.
2. P. T. Liu (2015, Feb). Effects of Nitrogen on Amorphous Nitrogenated InGaZnO (a-IGZO:N) Thin Film Transistors. *The 11th International Thin-Film Transistor Conference (ITC2015)*. 本人為第一作者、通訊作者.
3. G. T. Zheng, P. T. Liu*, C. H. Chang, S. H. Hung, W. C. Wang, Y. H. Chang, W. C. Wang, W. L. Sung (2014, Dec). Amorphous Silicon Integrated Gate Driver Circuits for High Resolution and Narrow Bezel Panel Application. *The 21th International Display Workshops (IDW'14)*. 本人為通訊作者.
4. G. T. Zheng, P. T. Liu*, R. J. Chen, C. Y. Tsai, H. H. Hsieh (2014, Dec). Compensation Circuit for Active Matrix Organic Light Emitting Diode with Organic Thin-Film Transistors. *The 21th International Display Workshops (IDW'14)*. 本人為通訊作者.
5. P. T. Liu*, B. T. Jheng, and M. C. Wu (2014, Oct). Substrate Temperature Effects on Structural Optical and Electrical Properties of Vacuum Sputtered Cu₂ZnSnS₄ Thin Films. *European Photovoltaic Solar Energy Conference and Exhibition*. 本人為第一作者、通訊作者.
6. C. S. Fuh, P. T. Liu*, Y. S. Fan, C. H. Chang, C. C. Chang (2014, Jun). Performance Improvement of High-Mobility Amorphous Indium-Zinc-Tin-Oxide TFTs. *Society of Information Display*. 本人為通訊作者.
7. B. T. Jheng, P. T. Liu*, M. C. Wu (2013, Nov). Zinc oxide nanorod arrays as

anti-reflection layer for chalcopyrite thin film solar cells applications.
International Conference on Nano Science and Technology, Tainan City, Taiwan.
本人為通訊作者.

8. B. T. Jheng, P. T. Liu*, M. C. Wu (2013, Oct). CuIn₃Te₅ thin film solar cells prepared by reactive magnetron sputtering. International Conference Optics & Photonics. 本人為通訊作者.
9. B. T. Jheng, P. T. Liu*, Y. P. Chang and M. C. Wu (2013, Oct). ZnO Nanorod Arrays as an Antireflective Coating for Cu₂ZnSnS₄ Thin Film Solar Cells. 28th European Photovoltaic Solar Energy Conference and Exhibition, Paris. 本人為通訊作者.
10. P. T. Liu*, B. T. Jheng, and M. C. Wu (2013, Oct). ZnO Nanorod Arrays as an Antireflective Coating for Cu₂ZnSnS₄ Thin Film Solar Cells. 28th European Photovoltaic Solar Energy Conference and Exhibition. 本人為第一作者、通訊作者.
11. C. S. Fuh, P. T. Liu*, L. F. Teng, Y. S. Fan, C. H. Chang, Y. T. Wu, S. W. Huang, H. P. D. Shieh (2013, May). Development of Post-annealing Method for Flexible Oxide TFTs Application. Society of Information Display. 本人為通訊作者.
12. C. S. Fuh, P. T. Liu, L. F. Teng, Y. S. Fan, C. H. Chang, Y. T. Wu, S. W. Huang, H. P. D. Shieh (2013, May). Development of Post-annealing Method for Flexible Oxide TFTs Application. Society for Information Display. 本人為通訊作者.
13. C. S. Fuh, L. F. Teng, Y. S. Fan, C. H. Chang and P. T. Liu (2012, Dec). Investigation on Effects of Composition on Transparent Aluminum Zinc Tin Oxide Thin-Film Transistors. The 19th International Display Workshops (IDW'12). 本人為通訊作者.
14. C. S. Fuh, L. F. Teng, Y. S. Fan, C. H. Chang and P. T. Liu* (2012, Dec). Investigation on Effects of Composition on Transparent Aluminum Zinc Tin Oxide Thin-Film Transistors. The International Display Workshops, Japan. 本人為通訊作者.
15. Y. S. Fan, P. T. Liu*, C. H. Hsu, H. Y. Lai (2012, Dec). Non-Volatile Memory Based on Indium-Gallium-Zinc-Oxide with Excellent Reliability and Flexibility. The 19th International Display Workshops (IDW'12), Abstract No. AMDp1-4, Kyoto International Conference Center Kyoto, Japan.. 本人為通訊作者.
16. B. T. Jheng, P. T. Liu*, M. C. Wu (2012, Oct). Polycrystalline Cu(In, Ga)Se₂ thin films and PV devices sputtered from a binary target without additional selenization. The Electrochemical Society's 222nd Meeting Honolulu, Hawaii. 本人為通訊作者.
17. P. T. Liu (2012, Oct). Transparent Amorphous Oxide Semiconductors for System on Panel Applications. PRiME 2012. 本人為第一作者、通訊作者.

18. P. T. Liu* (2012, Oct). (Invited paper), "Transparent Amorphous Oxide Semiconductors for System on Panel Applications". E16 -Thin Film Transistors 11 (TFT 11), PRiME 2012, at Hawaii Convention Center in Honolulu, Hawaii. 本人為第一作者、通訊作者.
19. G. T. Zheng, P. T. Liu*, M. C. Wu, M. C. Yang, L. W. Chu and C. Y. Wu (2012, Jun). Low Power Gate Driver Circuits for Narrow Bezel Panel Application. SID Symposium Digest, P-8, Boston Convention and Exposition Center, Boston, Massachusetts, USA., Boston, Massachusetts, USA. 本人為通訊作者.
20. Y. S. Fan, P. T. Liu*, C. H. Hsu, H. Y. Lai (2012, Jun). Resistive Switching Memory Device Based on Amorphous Al-Zn-Sn-O Film for Flexible Electronics Application. SID Symposium Digest, Boston, Massachusetts, USA. 本人為通訊作者.
21. L. F. Teng, P. T. Liu*, C. S. Fuh, Y. T. Chou, F. H. Li, C. H. Chang and H. P. D. Shieh (2011, Dec). Electrical performance and photo-responses enhancement by in situ nitrogen incorporation to amorphous InGaZnO thin-film transistors. The 18th International Display Workshops (IDW'11), Nagoya, Japan. 本人為通訊作者.
22. L. W. Chu, M. C. Yang, P. T. Liu*, and Y. C. Kuo (2011, Dec). Novel shift register using amorphous silicon TFTs for liquid crystal displays application. The 18th International Display Workshops (IDW'11), Nagoya, Japan. 本人為通訊作者.
23. Y. S. Fan, C. H. Hsu, L. F. Teng, M. C. Yu, and P. T. Liu (2011, Dec). Indium-Gallium-Zinc-Oxide Based Resistive Switching Memory for System-on-Glass Application. The 18th International Display Workshops (IDW'11), Nagoya, Japan.
24. C. S. Fuh, S.M. Sze, P. T. Liu*, L. F. Teng, Y. T. Chou, S. M. Sze (2011, May). Role of environmental and annealing conditions on the passivation-free in-Ga-Zn-O TFT. International Conference on Metallurgical Coatings & Thins, San Diego, CA, USA. 本人為通訊作者.
25. C. S. Fuh, Z. Z. Li, Y. T. Chou, P. T. Liu*, B. M. Chen, S. M. Sze (2011, May). Effects of thermal annealing temperature on environmental sensitivity and stability for InGaZnO TFT technology. International Conference on Metallurgical Coatings & Thins, San Diego, CA, USA. 本人為通訊作者.