

# 師資介紹



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分機：23388

參考資料目錄:

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- A. Papers (期刊論文)
- B. Symposium papers (研討會論文)
- C. Research project (研究計畫)
- D. Patent (專利)
- E. International journal reviewer (國際期刊審查委員)

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- A. Papers(期刊論文)

- A1. Y. H. Yeh, C. D. Yang, C. Y. Lee, Y. C. Tseng, and J. D. Tsai "Performance enhancement of InGaN LEDs with Al-graded GaN/AlGaIn multiple electron blocking layers", *Jpn. J. Appl. Phys.*, vol. 56, 062102, 2017.
- A2. K. F. Lu, T. K. Lin, J. K. Liou, C. D. Yang, C. Y. Lee, and J. D. Tsai, "Effect of p-GaN layer grown with H<sub>2</sub> carrier gas on wall-plug efficiency of high-power LEDs", *Solid State Electron.*, vol. 132, pp. 86-90, 2017.
- A3. C. H. Yen, Y. J. Liu, K. H. Yu, P. L. Lin, T. P. Chen, L. Y. Chen, T. H. Tsai, N. Y. Huang, C. Y. Lee, and W. C. Liu, "On an AlGaInP-based light-emitting diode with an ITO direct ohmic contact structure", *IEEE Electron Device Letters*, vol. 30, no. 4, pp. 359-361, 2009.04
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- A5. S. C. Hsu, D. S. Wu, C. Y. Lee, J. Y. Su, and R. H. Horng, "High-efficiency 1-mm<sup>2</sup> AlGaInP LEDs sandwiched by ITO omni-directional reflector and current-spreading layer", *IEEE Photon. Technol. Lett.*, vol. 19, no. 7, pp. 492-494, 2007.04
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- A8. C. Y. Lee, C. H. Yen, J. Y. Su, H. W. Lin and W. C. Liu, "Enhanced luminescence and reduced junction temperature in n-type modulation-doped AlGaInP multiquantum-well light-emitting diodes", *Jpn. J. Appl. Phys.*, vol. 45, no. 5A, pp. 4000-4002, 2006.05
- A9. C. Y. Lee, J. Y. Su, and C. M. Kuo, "630-nm n-type modulation-doped AlGaInP/AlInP multiquantum-well light-emitting diode", *IEEE Photon. Technol. Lett.*, vol. 18, no. 1, pp. 25-27, 2006.01
- A10. C. Y. Lee, H. P. Shiao, K. C. Kuo, H. Y. Wu, and W. H. Lin, "Mobility and charge density tuning in double-doped enhancement-mode pseudomorphic high-electron-mobility transistors grown by metalorganic chemical vapor deposition", *Jpn. J. Appl. Phys.*, vol. 44, no. 8, pp. 5909-5912, 2005.08
- A11. C. Y. Lee, W. J. Jiang, M. C. Wu, and W. J. Ho, "The influence of InGaP barrier layer on the characteristics of 1.3  $\mu\text{m}$  strain-compensated multiple quantum well InAsP/InP/InGaP laser diodes", *Solid State Electron.*, vol. 46, pp. 1389-1394, 2002.09
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- A19. C. Y. Lee, M. C. Wu, and S. C. Lu, "Comparison of single- and double-heterostructure AlGaAs/InGaP red light-emitting diodes prepared by liquid-phase epitaxy", *J. Appl. Phys.*, vol. 71, no. 8, pp. 3940-3944, 1992.04
- A20. S. C. Lu, M. C. Wu, C. Y. Lee, and Y. C. Yang, "Temperature dependence of photoluminescence of Mg-doped In<sub>0.5</sub>Ga<sub>0.5</sub>P grown by liquid-phase epitaxy", *J. Appl. Phys.*, vol. 70, no. 4, pp. 2309-2312, 1991.08
- A21. M. C. Wu, S. C. Lu, C. Y. Lee, and Y. C. Yang, "Interface abruptness and LED performance of the AlGaAs/InGaP single heterostructure grown by liquid-phase epitaxy", *J. Cryst. Growth*, vol. 112, pp. 803-807, 1991.03
- A22. S. C. Lu, M. C. Wu, C. Y. Lee, and Y. C. Yang, "Growth and characterization of single-heterostructure AlGaAs/InGaP red light-emitting diodes by liquid-phase epitaxy", *J. Appl. Phys.*, vol. 69, no. 1, pp. 481-487, 1991.01
- A23. S. C. Lu, M. C. Wu, C. Y. Lee, and Y. C. Yang, "Liquid-phase epitaxy growth of InGaP for red electroluminescent

devices", *Solid State Electron.*, vol. 34, no. 8, pp. 843-851, 1991.01

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## B. Symposium papers(研討會論文)

- B1. C. H. Lin, C. C. Lin, S. P. Chang, C. Y. Lee, S. J. Chang (2019, May). Effects of graphene oxide quantum dots via different processes on ZnO nanorods for photoelectrochemical application. 2019 17th Conference on Microelectronics Technology and Applications.
- B2. 朱廉軒、郭鐘亮、李重義(2021年05月)。過驅動下的UV及IR發光二極體之可靠度測試與故障分析。2021微電子技術發展與應用研討會。
- B3. 李昫修、陳星燁、吳宗諺、李重義(2021年05月)。發光二極體晶粒大小對其光電特性之影響。2021微電子技術發展與應用研討會。
- B4. 鄭仲評、李昫修、洪嘉徽、李重義(2021年05月)。溫度和光變化對砷化鎵、矽及氧化銦錫薄膜導電率影響之研究。2021微電子技術發展與應用研討會。
- B5. 林志豪、林志堅、張勝博、李重義、張守進(2018年05月)。晶片尺寸層狀結構之二硫化鎢(WSe<sub>2</sub>)合成技術開發。微電子技術發展與應用研討會。
- B6. 林志豪、林志堅、張勝博、李重義、張守進(2017年05月)。利用雙氮化鋁鎵結構改善以有機金屬氣相沉積成長之氮化鎵系發光二極體抗靜電放電特性。微電子技術發展與應用研討會。
- B7. 林志豪、林志堅、張勝博、李重義、張守進, "晶片尺寸層狀結構之二硫化鎢(WSe<sub>2</sub>)合成技術開發", 2018微電子技術發展與應用研討會, 高雄, 台灣, 2018.05
- B8. 林志豪、林志堅、張勝博、李重義、張守進, "利用雙氮化鋁鎵結構改善以有機金屬氣相沉積成長之氮化鎵系發光二極體抗靜電放電特性", 2017微電子技術發展與應用研討會, 高雄, 台灣, 2017.05
- B9. 劉昱進、李重義、蘇住裕、羅明城, "具有銦預流量子井InGa<sub>N</sub>/Ga<sub>N</sub>發光二極體改善量子效率衰敗之研究", 2010電子工程技術研討會, 高雄, 台灣, 2010.06
- B10. 高瑋宏、李重義、蘇住裕、林松耀、蔡定疆, "具高成長率緩衝層之氮化銦鎵系發光二極體特性改善之研究", 2010電子工程技術研討會, 高雄, 台灣, 2010.06
- B11. 黃嘉宏、李重義、黃南議, "調制摻雜技術應用於磷化鋁鎵銦發光二極體側邊位障層之研究", 2009台灣電力電子研討會, pp.1129-1131, 桃園, 台灣, 2009.09
- B12. N. Y. Huang, C. Y. Lee, C. H. Yen, W. C. Liu, "Effect of a Carbon-Doped GaP Contact Layer on the Performance of AlGaInP Light-Emitting Diodes", 2009 *Electronic Technology Symposium*, Kaohsiung, Taiwan, 2009.06
- B13. 詹易修、李重義、蘇住裕, "具紋理結構化表面之磷化鋁鎵銦發光二極體發光特性改善之研究", 2009電子工程技術研討會, 高雄, 台灣, 2009.06
- B14. 林宸銘、李重義、蘇住裕、林志勝, "電極幾何形狀對藍光發光二極體光電特性影響之研究", 2009電子工程技術研討會, 高雄, 台灣, 2009.06
- B15. C. T. Ho, C. Y. Lee, J. Y. Su, "Enhanced Output Power in AlGaInP Light-Emitting Diodes by Carbon-Doped GaP Contact Layer", 2008 *Electronic Technology Symposium*, Kaohsiung, Taiwan, 2008.06
- B16. 王睦勛、李重義、蘇住裕, "利用不同製程技術改善磷化鋁鎵銦黃綠光發光二極體在低溫操作時的壽命特性", 2008電子工程技術研討會, 高雄, 台灣, 2008.06
- B17. C. C. Tseng, C. Y. Lee, and J. Y. Su, "High efficiency AlGaInP light emitting diodes with a GaP/ITO/Ag omni-directional reflector", 2007 *5th Conference on Microelectronics Technology and Applications*, pp.45, Kaohsiung, Taiwan, 2007.05

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- B19. 林獻文、李重義、蘇住裕，"以有機金屬化學氣相沉積法成長紅外線多量子井發光二極體之光電特性"，*2006 電子通訊與應用研討會暨產學論壇*，pp.604-606，高雄，台灣，2006.07
- B20. X. Z. Lee, C. Y. Lee, and J. Y. Su, "Investigation of growth rate of carbon-doped GaAs grown by MOCVD using CBr<sub>4</sub>", *MBE Taiwan 2006 and High-k Materials Workshop*, pp.C-17-C-18, Jhongli, Taiwan, 2006.06
- B21. C. M. Kuo, C. Y. Lee, and J. Y. Su, "Enhanced output power in an AlGaInP/AlInP multiple-quantum-well light-emitting diode with modulation-doped barrier layer", *2005 Electron Devices and Materials Symposia*, pp.54, Kaohsiung, Taiwan, 2005.11
- B22. 熊國賢、李重義、蘇住裕，"磷化鋁銦鎵雙異質結構發光二極體主動層晶格不匹配對光電特性及壽命的影響"，*第三屆微電子技術發展與應用研討會*，pp.11，高雄，台灣，2005.05
- B23. 林家弘、李重義、蘇水祥、蘇住裕，"藉由成長在 2 度和 15 度偏角度砷化鎵基板研究摻雜矽/碲之磷化鋁銦鎵晶層之材料特性"，*第三屆微電子技術發展與應用研討會*，pp.15，高雄，台灣，2005.05
- B24. C. Y. Lee, H. P. Shiao, W. H. Lin, H. Y. Wu, and K. C. Kuo, "Mobility and charge density tuning in double-doped enhancement-mode PHEMT grown by MOCVD", *The 3rd Asian Conference on Chemical Vapor Deposition*, pp.131, Taipei, Taiwan, 2004.11
- B25. C. Y. Lee, M. C. Wu, "Effect of InGaP barrier thickness on the performance of 1.3- $\mu\text{m}$  InAsP/InP/InGaP SC-MQW RWG laser diodes", *Proceedings of 2002 Applied Automatic Control Conference*, pp.63-66, Hsinchu, Taiwan, 2002.11
- B26. C. Y. Lee, "The influence of InGaP barrier layer on the characteristics of 1.3  $\mu\text{m}$  strain-compensated multiple quantum well InAsP/InP/InGaP laser diodes", *The 2001 Seminar and Symposium on Applied Power Electronics Technology*, pp.182-187, Hsinchu, Taiwan, 2001.11
- B27. W. H. Wang, C. Y. Lee, Y. D. Tian, and T. T. Shi, "The influence of rapid thermal annealing on InAsP/InP strained multiple quantum well laser diodes grown by metalorganic vapor phase epitaxy", *IEEE 27th International Symposium on Compound Semiconductors*, pp.150-151, Monterey, CA, 2000.08
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- B29. 李重義、吳孟奇、蕭宏彬、施天從，"以有機金屬化學氣相磊晶法成長波長 1.3 $\mu\text{m}$  InAsP/InP 應變多重量子井雷射結構之研究"，*第四屆海峽兩岸中華光電子學術研討會*，pp.28-34，新竹，台灣，1999.07

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#### C. Research project (研究計畫)

- C1. "高靜電放電破壞耐受力之氮化鎵系發光二極體之研製"，  
106AB002, 主持人, 2017/11~2018/7
- C2. "改善高亮度磷化鋁鎵銦發光二極體低溫壽命特性之研究"，  
ISU99-01-03, 主持人, 2010/01~2010/12
- C3. "新型雙平面摻雜披覆層磷化鋁鎵銦發光二極體之研究"，  
ISU98-01-08, 主持人, 2009/01~2009/12
- C4. "抗低溫發光二極體之研究與開發"，  
ISU97-01-06, 主持人, 2008/01~2008/12

- C5. “平面摻雜披覆層多量子井磷化鋁鎵銦發光二極體之研究”，  
ISU96-01-05, 主持人, 2007/01~2007/12
- C6. “多量子井磷化鋁鎵銦發光二極體接面溫度受工作電流影響之研究”，  
ISU95-01-06, 主持人, 2006/01~2006/12
- C7. “以 MOCVD 成長並研製調制摻雜磷化鋁鎵銦發光二極體”，  
NSC 93-2215-E-214-006, 主持人, 2004/08~2005/07
- C8. “以 MOCVD 成長並研製增強型 InGaAs 假晶高速電子遷移率電晶體”，  
NSC 92-2215-E-214-005, 主持人, 2003/08~2004/07

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D. Patent (專利)

- D1. 李重義、蘇住裕，“調制摻雜多量子井發光二極體”，(中華民國新型第 M 299925 號)，  
2006/10/21~2016/5/17

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E. International journal reviewer (國際期刊委員)

- E1. IEEE Photonics Technology Letters , 2010/3
- E2. IEEE Photonics Technology Letters , 2009/8
- E3. Superlattices and Microstructures , 2009/4
- E4. IEEE Photonics Technology Letters , 2009/2
- E5. Physica B , 2008/8
- E6. IEEE Photonics Technology Letters , 2007/10