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分機：

參考資料目錄:

- A. Referred International Journal Papers (國際期刊論文)
- B. International Conference Papers (國際研討會論文)
- C. 專利發明
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- G. 指導學生獲獎
- H. 榮譽與獎勵

A. Referred International Journal Papers (國際期刊論文)

- A1. C. K. Wang*, Y. Z. Chiou, and Y. L. Huang, "GaAs-Based p-i-n Narrow Bandpass 850 nm IR Photodetector With a p-AlGaAs Filter Layer", *IEEE Sens. J.*, Vol. 21, No. 21, pp. 23995-23999, November 2021.
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B. International Conference Papers (國際研討會論文)

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- B2. S. H. Wu, **C. K. Wang**, Y. Z. Chiou, and J. H. Huang, “ β -Ga₂O₃/Si p-n Heterojunction DUV Photodetectors on p-type Si Substrates by RF Magnetron Sputtering”, *2023 Optics & Photonics Taiwan, International Conference (OPTIC), 2023 Tainan Taiwan*.
- B3. Y. K. Peng, **C. K. Wang**, Y. Z. Chiou, and H. D. Liou, “MSM Ga₂O₃ Deep Ultraviolet Photodetectors on Sapphire Substrates with Different Annealing Temperatures by RF Sputtering”, *2023 International Symposium on Novel and Sustainable Technology (ISNST), 2023 Tainan Taiwan*.
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C. 專利發明

- C1. **王俊凱**, 邱裕中, “可攜式懸浮微粒成份偵測裝置”, *TW patent No. I691712* (2020)
- C2. 邱裕中, **王俊凱**, 傅顯智, “光學式氣體微量濃度偵測裝置”, *TW patent No. I668427* (2019)
- C3. 邱裕中, **王俊凱**, 傅顯智, “高精準度光學空氣微粒偵測裝置”, *TW patent No. I668424* (2019)
- C4. **王俊凱**, 邱裕中, “砷化鎵之帶通型紅光與紅外光檢測器”, *TW patent No. I661571* (2019)
- C5. **王俊凱**, 邱裕中, 林冠緯, 林義國, “氮化物發光二極體之電極結構”, *TW patent No. I603501* (2017)
- C6. 邱裕中, **王俊凱**, 林冠緯, “水平式氮化物發光二極體”, *TW patent No. I566428* (2017)
- C7. 邱裕中, **王俊凱**, 林冠緯, “垂直式氮化物發光二極體的製造方法”, *TW patent No. I517475* (2016)
- C8. **王俊凱**, 邱裕中, 蔣宗勳, 洪峻棋, 簡瑋辰, 向勁齊, “可防止電子溢流之 III-V 族發光二極體”, *TW patent No. I517438* (2016)
- C9. **王俊凱**, 邱裕中, 林冠緯, “III-V 族發光二極體之電極”, *TW patent No. I497767* (2015)
- C10. 彭韋智, 謝明勳, 許明祺, 顏偉昱, **王俊凱**, 陳彥志, 洪詳竣, “光電元件及其製造方法”, *CN patent No. 102623580* (2015)
- C11. 柯丁嘉, 沈建賦, 顏偉昱, 郭得山, 林予堯, **王俊凱**, “光電元件”, *TW patent No. I483424* (2015)
- C12. **王俊凱**, 洪詳竣, 許育賓, 朱瑞溢, 吳欣顯, 顏偉昱, “發光元件”, *CN patent No. 101740668* (2014)
- C13. 彭韋智, 謝明勳, 許明祺, 顏偉昱, **王俊凱**, 陳彥志, 洪詳竣, “光電元件及其製造方法”, *TW patent No. I451597* (2014)
- C14. **王俊凱**, 洪詳竣, 許育賓, 朱瑞溢, 吳欣顯, 顏偉昱, “發光元件”, *TW patent No. I446572* (2014)
- C15. J. H. Yeh, **C. K. Wang**, W. Y. Yen, Y. Y. Lin, C. F. Shen, D. S. Kuo, T. C. Ko, “Light-emitting Element and The Manufacturing Method Thereof”, *US patent No. 8754439 B2* (2014)
- C16. J. Y. Chu, C. T. Kuo, Y. P. Hsu, **C. K. Wang**, H. H. Wu, Y. C. Lin, “Opto-Electronic Device”, *US patent No. 8729525 B2* (2014)

- C17. C. K. Wang, S. J. Hon, Y. P. Hsu, J. Y. Chu, H. H. Wu, W. Y. Yen, "Light Emitting Device", *US patent No.8704252 B2* (2014)
- C18. 郭政達, 許育賓, 王俊凱, 朱瑞溢, 陳宗光, "發光二極管的結構", *CN patent No. 1298746* (2013)
- C19. W. C. Peng, M. H. Hsieh, M. C. Hsu, W. Y. Yen, C. K. Wang, Y. C. Chen, S. J. Hon, H. Y. Wang, C. K. Chung, "Optoelectronic Device and Method for Manufacturing The Same", *US patent No. 8519430 B2* (2013)
- C20. 朱瑞溢, 郭政達, 許育賓, 王俊凱, 吳欣顯, 林義傑, "光電元件", *TW patent No. I389344* (2013)
- C21. 郭政達, 許育賓, 王俊凱, 朱瑞溢, 陳宗光, "發光二極體元件及其製造方法", *TW patent No. I364119* (2012)
- C22. 林義傑, 郭政達, 許育賓, 朱瑞溢, 王俊凱, "半導體元件", *TW patent No. I362124* (2012)
- C23. 朱瑞溢, 郭政達, 許育賓, 王俊凱, 吳欣顯, 林義傑, "光電元件", *CN patent No. 857830* (2011)
- C24. 林義傑, 郭政達, 許育賓, 朱瑞溢, 王俊凱, "半導體元件", *CN patent No. 799291* (2011)
- C25. C. T. Kuo, Y. P. Hsu, C. K. Wang, J. Y. Chu, T. K. Chen, "Light Emitting Diode Device That Includes a Three Dimensional Cloud Structure and Manufacturing Method Thereof", *US patent No. 7902562 B2* (2011)
- C26. 王俊凱, 洪詳竣, 許育賓, 朱瑞溢, 顏偉昱, 吳欣顯, "一具有高發光效率的發光元件", *TW patent No. M394576* (2010)
- C27. 許育賓, 郭政達, 朱瑞溢, 王俊凱, "發光元件及其製造方法", *TW patent No. I313076* (2009)
- C28. 郭政達, 許育賓, 王俊凱, 朱瑞溢, 陳宗光, "基板結構及其製造方法與應用", *TW patent No. I310249* (2009)
- C29. 蘇炎坤, 張守進, 邱裕中, 王俊凱, 林天坤, "光檢測器及其製造方法", *TW patent No. I281267* (2007)

D. 國科會計畫

- D1. 專題研究計畫(一般研究計畫), 計畫主持人, 【藉由高功函數過渡金屬及插入一層濺鍍氧化鎵薄膜來提升蕭特基能障並應用於具有特殊場板結構之高崩潰電壓垂直式氧化鎵蕭特基二極體之研製】, NSTC 113-2221-E-218-013, 113/08/01~114/07/31 (915,000 元)
- D2. 專題研究計畫(一般研究計畫), 計畫主持人, 【以射頻磁控濺鍍法在不同基板上研製出高品質之氧化鎵深紫外光檢測器並研發氧化鎵薄膜之鎵空缺及氧空缺修補技術】, MOST 111-2221-E-218-005, 111/08/01~112/07/31 (1,000,000 元)
- D3. 專題研究計畫(一般策略專案計畫), 共同主持人, 【智慧光學式二氧化氮氣體感測系統(1/4)】, MOST 110-2218-E-218-002-MBK, 110/11/01~111/05/31 (2,602,000 元)
- D4. 專題研究計畫(一般研究計畫), 計畫主持人, 【利用原子層沉積系統成長高品質之氧化鎵薄膜並製作具有場板結構之第四代高功率氧化鎵增強型金氧半場效電晶體】, MOST 110-2221-E-218-013, 110/08/01~111/07/31 (756,000 元)
- D5. 專題研究計畫(產學技術聯盟合作計畫), 共同主持人, 【AIoT 智慧聯網應用技術研發聯盟(3/3)】, MOST 110-2622-8-218-002-TE2, 110/02/01~111/01/31 (2,100,000 元)
- D6. 專題研究計畫(產學技術聯盟合作計畫), 共同主持人, 【AIoT 智慧聯網應用技術研發聯盟(2/3)】, MOST 109-2622-8-218-003-TE2, 109/02/01~110/01/31 (2,300,000 元)
- D7. 專題研究計畫(一般研究計畫), 計畫主持人, 【利用氧化鎳薄膜及奈米柱結構研製高性能之酸鹼值感測器】, MOST 118-2221-E-218-022, 108/08/01~109/07/31 (906,000 元)
- D8. 專題研究計畫(產學技術聯盟合作計畫), 共同主持人, 【AIoT 智慧聯網應用技術研發聯盟(1/3)】, MOST 108-2622-8-218-004-TE2, 108/02/01~109/01/31 (2,310,000 元)
- D9. 專題研究計畫(一般研究計畫), 計畫主持人, 【利用射頻磁控濺鍍系統研製高品質氧化鎂鋅 3D 鰭式薄膜電晶體及雙波段光檢測器】, MOST 107-2221-E-218-011, 107/08/01~108/07/31 (900,000 元)

- D10. 專題研究計畫(一般研究計畫), 計畫主持人, 【利用有機金屬化學氣相沉積法及離子束濺鍍法製作高品質氧化鎂鋅之3D 鰭式薄膜電晶體】, MOST 106-2221-E-218-027, 106/08/01~107/07/31 (915,000 元)
- D11. 專題研究計畫(一般研究計畫), 共同主持人, 【應用於駕駛行車安全之智慧眼鏡穿戴式裝置及其雲端管理平台研製】, MOST 106-2218-E-218-004, 106/08/01~107/07/31 (3,049,000 元)
- D12. 專題研究計畫(新進人員研究計畫), 計畫主持人, 【利用原子層沉積法成長出超高品質的氧化鋁與氧化鎵之氧化層薄膜並應用於氮化鎵系列金氧半異質接面場效電晶體之研製】, MOST 104-2221-E-218-020-MY2, 104/08/01~106/07/31 (1,813,000 元)
- D13. 專題研究計畫(新進人員研究計畫), 計畫主持人, 【利用物理氣相沉積法在不同基板上製作氮化鋁緩衝層薄膜之研製並應用於氮化鎵系列紫外光檢測器及發光二極體】, NSC 101-2221-E-218-023-MY2, 101/08/01~103/07/31 (1,753,000 元)
- D14. 專題研究計畫(提升私校研發能量專案計畫), 共同主持人, 【應用於低碳智慧電子系統之多功能能量採集器】, NSC 101-2632-E-218-001-MY3, 101/08/01~104/07/31 (12,840,000 元)
- D15. 專題研究計畫(新進人員研究計畫), 計畫主持人, 【氮化鎵系列發光二極體在超高電流密度操作下其發光效率驟減之研究與改善】, NSC 100-2218-E-218-002, 100/10/01~101/08/31 (771,000 元)

E. 其他政府部門計劃

- E1. 國家實驗研究院 AQI 氣體感測器服務平台專案計畫(3/3), 共同主持人, 【光學式二氧化氮氣體偵測以及 PM2.5 成分辨識系統】, NARL-AOI-109-003, 109/09/01~110/05/31 (1,800,000 元)
- E2. 國家實驗研究院 AQI 氣體感測器服務平台專案計畫(2/3), 共同主持人, 【光學式二氧化氮氣體偵測以及 PM2.5 成分辨識系統】, NARL-AOI-108-003, 108/09/01~109/08/31 (2,160,000 元)
- E3. 國家實驗研究院 AQI 氣體感測器服務平台專案計畫(1/3), 計畫主持人, 【光學式 PM2.5 濃度及成分辨識系統】, NARL-AOI-107-006, 107/11/01~108/08/31 (1,620,000 元)
- E4. 國家實驗研究院物聯網感測器服務平台專案, 共同主持人, 【乘載於無人飛行器之可攜式光學空氣品質監測系統】, NARL-IOT-106-014, 106/06/01~107/05/31 (1,400,000 元)

F. 產學計畫

- F1. 光鎂科技股份有限公司, 【2022 第三季光鎂科技良率提升開發計畫】, 計畫主持人, 12001110227, 111/07/01~112/06/30 (600,000 元)
- F2. 聯勝光電股份有限公司, 【聯勝光電發光及雷射二極體之晶粒開發計畫】, 計畫主持人, 12001100032, 110/01/01~110/12/31 (400,000 元)
- F3. 聯勝光電股份有限公司, 【聯勝光電發光二極體之元件故障分析計畫】, 計畫主持人, 12001091015, 109/06/01~110/05/31 (200,000 元)
- F4. 愛迪佳科技有限公司, 【不銹鋼電漿拋光樣品分析計畫】, 計畫主持人, 12001080317, 108/08/01~109/07/31 (300,000 元)
- F5. 立創光電股份有限公司, 【光學式懸浮微粒濃度及成分偵測技術】, 計畫主持人, 12001080162, 108/04/01~109/03/31 (600,000 元, 含技轉金額: 200,000 元)
- F6. 聯勝光電股份有限公司, 【聯勝光電發光二極體之可靠度提升計畫】, 計畫主持人, 12001080046, 108/02/01~108/12/31 (500,000 元)
- F7. 聯勝光電股份有限公司, 【聯勝光電發光二極體之晶粒分析計畫】, 計畫主持人, 12001070377, 107/10/01~108/12/31 (600,000 元)

- F8. 聯勝光電股份有限公司，【聯勝光電發光二極體之元素分析計畫】，計畫主持人，12001070376，107/10/01~107/12/31 (100,000 元)
- F9. 奇景光電股份有限公司，【2018 奇景光電積體電路良率提升計畫】，計畫主持人，12001070249，107/08/01~108/07/31 (500,000 元)
- F10. 聯勝光電股份有限公司，【聯勝光電發光二極體之元件分析計畫】，計畫主持人，12001070024，107/01/01~107/12/31 (200,000 元)
- F11. 聯勝光電股份有限公司，【聯勝光電發光二極體之故障分析計畫】，計畫主持人，12001070008，107/01/01~107/12/31 (500,000 元)
- F12. 奇景光電股份有限公司，【2017 奇景光電積體電路良率提升計畫】，計畫主持人，131060216，106/08/01~107/07/31 (500,000 元)
- F13. 聯勝光電股份有限公司，【聯勝光電發光二極體之可靠度分析計畫】，計畫主持人，131060113，106/05/01~107/04/30 (360,000 元)
- F14. 奇景光電股份有限公司，【2016 奇景光電積體電路良率提升計畫】，計畫主持人，131050127，105/04/01~106/03/31 (500,000 元)
- F15. 聯勝光電股份有限公司，【聯勝光電發光二極體可靠度分析計畫】，計畫主持人，131040227-EQ，104/06/01~105/05/31 (300,000 元)
- F16. 奇景光電股份有限公司，【2015 奇景光電積體電路良率提升計畫】，計畫主持人，131040061，104/01/01~104/12/31 (500,000 元)
- F17. 新世紀光電股份有限公司，【2014 新世紀光電發光二極體故障分析 B 計畫】，計畫主持人，131030161-EQ，103/07/01~104/06/30 (600,000 元)
- F18. 聯勝光電股份有限公司，【2014 聯勝光電 LED 良率提升計畫】，計畫主持人，131030108-EQ，103/04/01~104/03/31 (300,000 元)
- F19. 奇景光電股份有限公司，【2014 奇景光電良率提升計畫】，計畫主持人，131030004，103/01/01~103/12/31 (500,000 元)
- F20. 新世紀光電股份有限公司，【2013 新世紀光電發光二極體晶粒故障分析 B 計畫】，計畫主持人，131020164，102/09/01~103/08/31 (300,000 元)
- F21. 奇景光電股份有限公司，【2012 奇景光電晶片良率提升計畫】，計畫主持人，131010529，101/11/01~102/10/31 (500,000 元)

G. 指導學生獲獎

- G1. 2023 全國創意行銷實務專題暨低碳生活企劃競賽(低碳生活創意企劃類)，指導學生王義雄、謝惠琦、葉峻瑋，題目【**低碳人我的超人**】，佳作獎
- G2. 萬潤 2023 創新創意競賽(大專組電機資訊類)，指導學生王義雄、謝惠琦、葉峻瑋，題目【**智慧防毒面罩**】，佳作獎
- G3. 2022 車用電子創新發明競賽(創新理念組)，指導學生葉峻瑋、曾焯翔、謝惠琦、柯皓嚴，題目【**露營車用泡茶機**】，佳作獎
- G4. 2022 International Symposium on Novel and Sustainable Technology (ISNST)，指導學生黃佳宏，題目【**Study on β -Ga₂O₃ MSM Deep UV Photodetectors Deposited on Different Substrates by RF Magnetron Sputtering**】，海報學生優秀論文獎(Poster Presentation Student Excellent Paper Award)
- G5. 2021 車用電子創新發明競賽(系統實現組)，指導學生彭彥凱、吳崧豪、江榮權，題目【**基於環境檢測之高溫危害警報系統**】，佳作獎
- G6. 2021 車用電子創新發明競賽(創新理念組)，指導學生黃佳宏、陳立忻、劉弘德、蔡祐典，題目【**使用可撓式面板安裝於 A 柱改善行車視線**】，佳作獎
- G7. 2020 International Symposium on Novel and Sustainable Technology (ISNST)，指導學生黃正耀，題目【**The Study of Ga₂O₃/MgZnO Dual-Band Ultraviolet Photodetectors**】，海報學生優秀論文獎(Poster Presentation Student Excellent Paper Award)

- G8. 2019 高雄 KIDE 國際發明暨設計展(大專院校組), 指導學生傅顯智、林宗翰、劉俊佳, 題目【OPTICAL DETECTION DEVICE FOR GAS TRACE CONCENTRATION】, 金牌獎
- G9. 2019 車用電子創新發明競賽(系統實現組), 指導學生黃莉蓉、王偉帆、劉俊佳、詹禮泰, 題目【居家車庫即時光學空氣品質監測系統】, 優等獎
- G10.2019 車用電子創新發明競賽(創新理念組), 指導學生劉泓德、陳立忻, 題目【車載致冷水瓶】, 佳作獎
- G11.2018 車用電子創新發明競賽(創新理念組), 指導學生詹禮泰、王偉帆、黃莉蓉, 題目【安全駕車-紅外線觸碰式酒精偵測啟動器】, 佳作獎
- G12.2018 車用電子創新發明競賽(創新理念組), 指導學生黃正耀、林宗翰, 題目【頂叩叩-智慧安全帽】, 佳作獎
- G13.2018 車用電子創新發明競賽(創新理念組), 指導學生許詠勛、高証揚、黃啟偉, 題目【這個好-測好測滿】, 佳作獎
- G14.2018 台灣國際創新發明暨設計競賽(發明類社會組), 指導學生黃正耀、林宗翰, 題目【冬暖夏涼安全帽】, 銅牌獎
- G15.2018 台灣國際創新發明暨設計競賽(發明類社會組), 指導學生許詠勛、高証揚及黃啟偉, 題目【智慧型自動咖啡烘培機】, 銅牌獎
- G16.2018 Optics & Photonics Taiwan, International Conference (OPTIC), 指導學生李珮瑀, 題目【The Investigation of Optical Frequency Response of InGaN/GaN Blue LEDs with Electron Retarded Layer in Low Temperature Environment】, 學生論文獎 (student paper award)
- G17.2017 車用電子創新發明競賽(創新理念組), 指導學生許詠勛、高証揚、黃啟偉, 題目【車內氣體偵測器】, 佳作獎
- G18.2017 車用電子創新發明競賽(創新理念組), 指導學生許詠勛、高証揚、黃啟偉, 題目【行動咖啡烘培機】, 佳作獎
- G19.2017 車用電子創新發明競賽(創新理念組), 指導學生葉育廷、吳信篁、傅顯智, 題目【冬暖夏涼安全帽】, 佳作獎
- G20.2017 車用電子創新發明競賽(創新理念組), 指導學生陳皇名、黃翊洛, 題目【Life Fine Lock 隊】, 佳作獎
- G21.2017 International Symposium on Novel and Sustainable Technology (ISNST), 指導學生許智翔, 題目【Investigation of Nitride-Based Blue and Near Ultraviolet Flip Chip Light-Emitting Diodes】, 海報論文獎第一名(First Prize of Poster Competition Award)
- G22.2016 車用電子創新發明競賽(創新理念組), 指導學生廖偉旭、李珮瑀, 題目【進擊的車庫】, 佳作獎
- G23.2016 車用電子創新發明競賽(創新理念組), 指導學生陳昆賢、葉育廷、傅顯智、吳信篁, 題目【智慧馬桶-便便人生】, 佳作獎
- G24.2016 車用電子創新發明競賽(創新理念組), 指導學生陳皇名、劉其偉、黃翊洛, 題目【LI-FI 車鎖】, 佳作獎
- G25.2016 第十一屆教育部技專院校數位訊號處理創思設計競賽(綠能與控制應用組), 指導學生王勛緯、郭家名、陳冠宇, 題目【多功能獵取嬰兒車】, 佳作獎
- G26.2015 第十一屆全國電子設計創意競賽(大專組綜合類), 指導學生黃聖翔、陳世勳、孫培鈞、高書賢、楊鎮毓、許智翔, 題目【一扇門救你全家】, 佳作獎
- G27.2014 全國 LED 創意設計競賽(應用產品設計組), 指導學生洪國慶、陳詠揚及徐鈺翔, 題目【LED 浴廁濕滑警示器】, 優選獎
- G28.2013 International Conference on Solid State Devices and Materials (SSDM 2013), 指導學生洪峻棋, 題目【Performance Improvement of GaN Metal-Semiconductor-Metal Photodetectors with Sputtered AlN Nucleation Layer】, 海外學生獎助金補助
- G29.2012 Optics & Photonics Taiwan, International Conference (OPTIC), 指導學生璩青陽, 題目【Efficiency Improvement of Nitride-based LEDs with Different Last Barrier Thicknesses】, 學生論文獎(student paper award)

H. 榮譽與獎勵

- H1. 科技部 109 學年度補助大專校院研究獎勵計畫之特殊優秀人才獎勵，特優研究獎
- H2. 科技部 108 學年度補助大專校院研究獎勵計畫之特殊優秀人才獎勵，特優研究獎
- H3. 科技部 107 學年度補助大專校院研究獎勵計畫之特殊優秀人才獎勵，績優研究獎
- H4. 科技部 106 學年度補助大專校院研究獎勵計畫之特殊優秀人才獎勵，績優研究獎
- H5. 科技部 105 學年度補助大專校院研究獎勵計畫之特殊優秀人才獎勵，績優研究獎