

郭艷光論文著述（國立彰化師範大學物理學系教授）

(A) 期刊論文

1. Yen-Kuang Kuo*, Fang-Ming Chen, Jih-Yuan Chang, Man-Fang Huang, Bo-Ting Liou, and Ya-Hsuan Shih (2019, December). “Design and optimization of electron-blocking layer in deep ultraviolet light-emitting diodes,” *IEEE Journal of Quantum Electronics*, Published online 6 December 2019. (SCI) Digital Object Identifier: 10.1109/JQE.2019.2957575
2. Taofei Zhou, Cheng Zhang, Rami ElAfandy, Ge Yuan, Zhen Deng, Kanglin Xiong, Fang-Ming Chen, Yen-Kuang Kuo, Ke Xu, and Jung Han (2019, April). “Thermal transport of nanoporous gallium nitride for photonic applications,” *Journal of Applied Physics*, 125, 155106-1–155106-8. (SCI)
3. Jih-Yuan Chang, Bo-Ting Liou, Man-Fang Huang, Ya-Hsuan Shih, Fang-Ming Chen, and Yen-Kuang Kuo* (2019, February). “High-efficiency deep-ultraviolet light-emitting diodes with efficient carrier confinement and high light extraction,” *IEEE Transactions on Electron Devices*, 66 (2), 976-982. (SCI)
4. Jih-Yuan Chang, Ya-Hsuan Shih, Man-Fang Huang, Fang-Ming Chen, and Yen-Kuang Kuo* (2018, November). “Shockley-Read-Hall and Auger recombination in blue InGaN tunnel-junction light-emitting diodes,” *Physica Status Solidi (a)*, 215 (21), 1800271-1–1800271-5. (SCI)
5. Jih-Yuan Chang, Man-Fang Huang, Fang-Ming Chen, Bo-Ting Liou, Ya-Hsuan Shih, and Yen-Kuang Kuo* (2018, January). “Effects of quantum barriers and electron-blocking layer in deep-ultraviolet light-emitting diodes,” *Journal of Physics D: Applied Physics*, 51 (7), 075106-1–075106-10. (SCI)
6. Ya-Hsuan Shih, Jih-Yuan Chang, Yen-Kuang Kuo, Fang-Ming Chen, Man-Fang Huang, Ming-Lun Lee, and Jinn-Kong Sheu (2018, January). “Design of GaN-based multi-color tunnel-junction light-emitting diodes,” *IEEE Transactions on Electron Devices*, 65 (1), 165–171. (SCI)
7. Jih-Yuan Chang, Hui-Tzu Chang, Ya-Hsuan Shih, Fang-Ming Chen, Man-Fang Huang, and Yen-Kuang Kuo* (2017, December). “Efficient carrier confinement in deep-ultraviolet light-emitting diodes with composition-graded configuration,” *IEEE Transactions on Electron Devices*, 64 (12), 4980–4984. (SCI)
8. Yen-Kuang Kuo, Ya-Hsuan Shih, Jih-Yuan Chang, Wei-Chih Lai, Heng Liu, Fang-Ming Chen, Ming-Lun Lee, and Jinn-Kong Sheu (2017, August). “Monolithic stacked blue light-emitting diodes with polarization-enhanced tunnel junctions,” *Optics Express*, 25 (16), A777–A784. (SCI)
9. Yen-Kuang Kuo*, Jih-Yuan Chang, Hui-Tzu Chang, Fang-Ming Chen, Ya-Hsuan Shih, and Bo-Ting Liou (2017, January). “Polarization effect in AlGaIn-based deep-ultraviolet light-emitting diodes,” *IEEE Journal of Quantum Electronics*, 53 (1), 3300106-1–3300106-6. (SCI)
10. Yen-Kuang Kuo*, Ya-Hsuan Shih, Jih-Yuan Chang, Fang-Ming Chen, Ming-Lun Lee, and Jinn-Kong Sheu (2017, January). “Theoretical investigation of efficient green tunnel-junction light-emitting diodes,” *IEEE Electron Device Letters*, 38 (1), 75–78. (SCI)
11. Yen-Kuang Kuo*, Tsun-Hsin Wang, Yi-An Chang, Jih-Yuan Chang, Fang-Ming Chen, and Ya-Hsuan Shih (2016, November). “Auger recombination in monolithic dual-wavelength InGaIn light-emitting diodes,” *Journal of Display Technology*, 12 (11), 1398–1402. (SCI)
12. Yen-Kuang Kuo*, Fang-Ming Chen, Bing-Cheng Lin, Jih-Yuan Chang, Ya-Hsuan Shih,

- and Hao-Chung Kuo (2016, August). “Simulation and experimental study on barrier thickness of superlattice electron blocking layer in near-ultraviolet light-emitting diodes,” *IEEE Journal of Quantum Electronics*, 52 (8), 3300306-1–3300306-6. (SCI)
13. Yen-Kuang Kuo*, Fang-Ming Chen, Jih-Yuan Chang, Bing-Cheng Lin (2016, November). “Polarization-matched quaternary superlattice electron blocking layer in blue InGaN light-emitting diodes,” *Superlattices and Microstructures*, 93, 221–225. (SCI)
 14. Yen-Kuang Kuo*, Jih-Yuan Chang, Fang-Ming Chen, Ya-Hsuan Shih, and Hui-Tzu Chang (2016, April). “Numerical investigation on the carrier transport characteristics of AlGaIn deep-UV light-emitting diodes,” *IEEE Journal of Quantum Electronics*, 52 (4), 3300105-1–3300105-5. (SCI)
 15. Yen-Kuang Kuo*, Fang-Ming Chen, Jih-Yuan Chang, and Ya-Hsuan Shih (2016, March). “Structural design and optimization of near-ultraviolet light-emitting diodes with wide wells,” *Journal of Applied Physics*, 119 (9), 094503-1–094503-10. (SCI)
 16. Ya-Hsuan Shih, Jih-Yuan Chang, Jinn-Kong Sheu, Yen-Kuang Kuo, Fang-Ming Chen, Ming-Lun Lee, and Wei-Chih Lai (2016, March). “Design of hole blocking and electron blocking layers in $\text{Al}_x\text{Ga}_{1-x}\text{N}$ -based UV light-emitting diodes,” *IEEE Transactions on Electron Devices*, 63 (3), 1141–1147. (SCI)
 17. Yen-Kuang Kuo* and Jih-Yuan Chang (2016, January). “Effect of composition-graded interlayers in double-heterostructure blue InGaN light-emitting diodes,” *Physica Status Solidi (a)*, 213 (1), 154–157. (SCI)
 18. Fang-Ming Chen, Yen-Kuang Kuo*, and Jih-Yuan Chang (2015, December). “Well and polarization effects on carrier distribution and interband transitions in NUV light-emitting diodes,” *IEEE Journal of Quantum Electronics*, 51 (12), 3300705-1–3300705-5. (SCI)
 19. Shu-Hsuan Chang, Li-Chih Yu, Yen-Kuang Kuo, Yi-Ting Mai, Jen-De Chen (2015, June). “Applying online peer assessment with total quality management to elevate project-based learning performance,” *Journal of Baltic Science Education*, 14 (3), 379–390. (SSCI)
 20. Yen-Kuang Kuo* and Jih-Yuan Chang (2015, March). “Investigation of degraded efficiency in blue InGaN multiple-quantum well light-emitting diodes,” *Proceedings of SPIE*, 9357, 93571L. (EI)
 21. Fang-Ming Chen*, Jih-Yuan Chang, Yen-Kuang Kuo, Bing-Cheng Lin, and Hao-Chung Kuo (2015, March). “Numerical analysis on the effect of electron blocking layer in 365-nm ultraviolet light-emitting diodes,” *Proceedings of SPIE*, 9363, 93632B. (EI)
 22. Yi-An Chang, Fang-Ming Chen, Shan-Rong Li, and Yen-Kuang Kuo* (2014, September). “Electrical polarization effects on the optical polarization properties of AlGaIn ultraviolet light-emitting diodes,” *IEEE Transactions on Electron Devices*, 61 (9), 3233–3238. (SCI)
 23. Yi-An Chang, Fang-Ming Chen, Yu-Lin Tsai, Ching-Wen Chang, Kuo-Ju Chen, Shan-Rong Li, Tien-Chang Lu, Hao-Chung Kuo, Yen-Kuang Kuo, Peichen Yu, Chien-Chung Lin, and Li-Wei Tu (2014, August). “Fabrication and characterization of back-side illuminated InGaN/GaN solar cells with periodic via-holes etching and Bragg mirror processes,” *Optics Express*, 22 (S5), A1334–A1342. (SCI)
 24. Bing Cheng Lin, Yi-An Chang, Kuo-Ju Chen, Yu-Pin Lan, Chien-Chung Lin, Po-Tsung Lee, Yen-Kuang Kuo, Hao-Chung Kuo, Tien-Chang Lu, and Shing-Chung Wang (2014, June). “Design and fabrication of a InGaN vertical-cavity surface-emitting laser with a composition-graded electron-blocking layer,” *Laser Physics Letters*, 11 (8), 085002-1–085002-5. (SCI)
 25. Miao-Chan Tsai, Benjamin Leung, Ta-Cheng Hsu, and Yen-Kuang Kuo* (2014, May). “Tandem structure for efficiency improvement in GaN based light-emitting diodes,” *IEEE Journal of Lightwave Technology*, 32 (9), 1801–1806. (SCI)
 26. Jih-Yuan Chang, Yi-An Chang, Tsun-Hsin Wang, Fang-Ming Chen, Bo-Ting Liou, and

- Yen-Kuang Kuo* (2014, February). “Reduced efficiency droop in blue InGaN light-emitting diodes by thin AlGa_N barriers,” *Optics Letters*, 39 (3), 497–500. (SCI)
27. Bing-Cheng Lin, Kuo-Ju Chen, Chao-Hsun Wang, Ching-Hsueh Chiu, Yu-Pin Lan, Chien-Chung Lin, Po-Tsung Lee, Min-Hsiung Shih, Yen-Kuang Kuo, and Hao-Chung Kuo* (2014, January). “Hole injection and electron overflow improvement in InGa_N/Ga_N light-emitting diodes by a tapered AlGa_N electron blocking layer,” *Optics Express*, 22 (1), 463–469. (SCI)
 28. Jih-Yuan Chang, Shih-Hsun Yen, Yi-An Chang, Bo-Ting Liou, and Yen-Kuang Kuo* (2013, December). “Numerical investigation of high efficiency InGa_N-based multi-junction solar cell,” *IEEE Transactions on Electron Devices*, 60 (12), 4140–4145. (SCI)
 29. Miao-Chan Tsai, Benjamin Leung, Ta-Cheng Hsu, and Yen-Kuang Kuo* (2013, November). “Low resistivity Ga_N-based polarization-induced tunnel junctions,” *IEEE Journal of Lightwave Technology*, 31 (22), 3575–3581. (SCI)
 30. Jih-Yuan Chang, Fang-Ming Chen, Yen-Kuang Kuo*, Ya-Hsuan Shih, Jinn-Kong Sheu, Wei-Chih Lai, and Heng Liu (2013, August). “Numerical study of the suppressed efficiency droop in blue InGa_N LEDs with polarization-matched configuration,” *Optics Letters*, 38 (16), 3158–3161. (SCI)
 31. Yi-An Chang, Yu-Rui Lin, Jih-Yuan Chang, Tsun-Hsin Wang, and Yen-Kuang Kuo* (2013, June). “Design and characterization of polarization-reversed AlInGa_N based ultraviolet light-emitting diode,” *IEEE Journal of Quantum Electronics*, 49 (6), 553–559. (SCI)
 32. Tsun-Hsin Wang and Yen-Kuang Kuo* (2013, May). “Spectral competition of chirped dual-wavelength emission in monolithic InGa_N multiple-quantum well light-emitting diodes,” *Applied Physics Letters*, 102 (17), 171112-1–171112-3. (SCI)
 33. Jih-Yuan Chang and Yen-Kuang Kuo* (2013, February). “Advantages of blue InGa_N light-emitting diodes with composition-graded barriers and electron-blocking layer,” *Physica Status Solidi (a)*, 210 (6), 1103–1106. (SCI)
 34. Fang-Ming Chen, Yi-An Chang, Jih-Yuan Chang, Yih-Ting Kuo, and Yen-Kuang Kuo (2013, February). “Numerical analysis of using superlattice-AlGa_N/InGa_N as electron blocking layer in green InGa_N light-emitting diodes,” *Proceedings of SPIE*, 8625, 862526. (EI)
 35. Yen-Kuang Kuo*, Jih-Yuan Chang, and Shih-Hsun Yen (2013, February). “Numerical investigation on the structural characteristics of Ga_N/InGa_N solar cells,” *Proceedings of SPIE*, 8620, 862021. (EI)
 36. Yu-Rui Lin, Bo-Ting Liou, Jih-Yuan Chang, Yen-Kuang Kuo (2013, February). “Polarization engineering in III-nitride based ultraviolet light-emitting diodes,” *Proceedings of SPIE*, 8619, 86191V. (EI)
 37. Yen-Kuang Kuo*, Yi-An Chang, Han-Wei Lin, Jih-Yuan Chang, Shih-Hsun Yen, Fang-Ming Chen, and Yu-Han Chen (2013, January). “Advantages of InGa_N solar cells with p-doped and high-Al-content superlattice AlGa_N barriers,” *IEEE Photonics Technology Letters*, 25 (1), 85–87. (SCI)
 38. Jih-Yuan Chang, Yi-An Chang, Fang-Ming Chen, Yih-Ting Kuo, and Yen-Kuang Kuo* (2013, January). “Improved quantum efficiency in green InGa_N light-emitting diodes with InGa_N barriers,” *IEEE Photonics Technology Letters*, 25 (1), 55–58. (SCI)
 39. Jih-Yuan Chang, Shih-Hsun Yen, Yi-An Chang, and Yen-Kuang Kuo* (2013, January). “Simulation of high-efficiency Ga_N/InGa_N p-i-n solar cell with suppressed polarization and barrier effects,” *IEEE Journal of Quantum Electronics*, 49 (1), 17–23. (SCI)
 40. Tsun-Hsin Wang and Yen-Kuang Kuo* (2012, November). “Efficiency Enhancement of

- blue InGaN light-emitting diodes with shallow first well,” *IEEE Photonics Technology Letters*, 24 (22), 2084–2086. (SCI)
41. Shu-Hsuan Chang, Tsung-Chih Wu, Yen-Kuang Kuo, and Li-Chih You* (2012, October). “Project-based learning with an online peer assessment system in a photonics instruction for enhancing LED design skills,” *Turkish Online Journal of Educational Technology*, 11 (4), 236–246. (SSCI)
 42. Yen-Kuang Kuo*, Tsun-Hsin Wang, Jih-Yuan Chang, and Jen-De Chen (2012, September). “Slightly-doped step-like electron blocking layer in InGaN light-emitting diodes,” *IEEE Photonics Technology Letters*, 24 (17), 1506–1508. (SCI)
 43. Yen-Kuang Kuo*, Han-Wei Lin, Jih-Yuan Chang, Yu-Han Chen, and Yi-An Chang (2012, August). “Polarization effect on the photovoltaic characteristics of $\text{Al}_{0.14}\text{Ga}_{0.86}\text{N}/\text{In}_{0.21}\text{Ga}_{0.79}\text{N}$ superlattice solar cells,” *IEEE Electron Device Letters*, 33 (8), 1159–1161. (SCI)
 44. Jih-Yuan Chang and Yen-Kuang Kuo* (2012, August). “Simulation of N-face InGaN-based p-i-n solar cells,” *Journal of Applied Physics*, 112 (3), 033109-1–033109-5. (SCI)
 45. Yen-Kuang Kuo*, Tsun-Hsin Wang, and Jih-Yuan Chang (2012, July). “Blue InGaN light-emitting diodes with multiple GaN-InGaN barriers,” *IEEE Journal of Quantum Electronics*, 48 (7), 946–951. (SCI)
 46. Yen-Kuang Kuo*, Yu-Han Chen, Jih-Yuan Chang, and Miao-Chan Tsai (2012, June). “Advantages of near-ultraviolet light-emitting diodes with polarization-matched InGaN/AlGaInN multi-quantum wells,” *Physica Status Solidi (a)*, 209 (10), 2078–2081. (SCI)
 47. Yi-An Chang, Yih-Ting Kuo, Jih-Yuan Chang, and Yen-Kuang Kuo* (2012, June). “Investigation of InGaN green light-emitting diodes with chirped multiple quantum well structures,” *Optics Letters*, 37 (12), 2205–2207. (SCI)
 48. Yi-An Chang, Jih-Yuan Chang, Yih-Ting Kuo, and Yen-Kuang Kuo* (2012, June). “Investigation of green InGaN light-emitting diodes with asymmetric AlGaIn composition-graded barriers and without an electron blocking layer,” *Applied Physics Letters*, 100 (25), 251102-1–251102-4. (SCI)
 49. Jih-Yuan Chang and Yen-Kuang Kuo* (2012, May). “Influence of polarization-matched AlGaInN barriers in blue InGaN light-emitting diodes,” *Optics Letters*, 37 (9), 1574–1576. (SCI)
 50. Yen-Kuang Kuo*, Bing-Cheng Lin, Jih-Yuan Chang, Fang-Ming Chen, and Hao-Chung Kuo (2012, May). “Numerical study of (0001) face GaN/InGaN p-i-n solar cell with compositional grading configuration,” *IEEE Photonics Technology Letters*, 24 (12), 1039–1041. (SCI)
 51. Yen-Kuang Kuo*, Jih-Yuan Chang, and Ya-Hsuan Shih (2012, March). “Numerical study of the effects of hetero-interfaces, polarization charges, and step-graded interlayers on the photovoltaic properties of (0001) face GaN/InGaN p-i-n solar cell,” *IEEE Journal of Quantum Electronics*, 48 (3), 367–374. (SCI)
 52. Yen-Kuang Kuo*, Tsun-Hsin Wang, and Jih-Yuan Chang (2012, January). “Advantages of blue InGaN light-emitting diodes with InGaN-AlGaIn-InGaN barriers,” *Applied Physics Letters*, 100 (3), 031112-1–031112-3. (SCI) (This paper was one of the Best Papers in 2012 chosen by the Editor and one of APL's monthly top 20 most-downloaded articles in January and February 2012.)
 53. Bo-Ting Liou and Yen-Kuang Kuo (2012, January). “Effect of biaxial strain on the band gap of wurtzite $\text{Al}_x\text{Ga}_{1-x}\text{N}$,” *Applied Physics A: Materials Science & Processing*, 106 (4), 1013–1016. (SCI)

54. Yen-Kuang Kuo*, Yu-Han Chen, Jih-Yuan Chang, and Miao-Chan Tsai (2012, January). “Numerical analysis on the effects of bandgap energy and polarization of electron blocking layer in near-ultraviolet light-emitting diodes,” *Applied Physics Letters*, 100 (4), 043513-1–043513-3. (SCI)
55. Shu-Hsuan Chang, Mei-Ling Chen, Yen-Kuang Kuo, and Yung-Chi Shen (2011, November). “A simulation-based LED device design project in photonics instruction based on industry-university collaboration,” *IEEE Transactions on Education*, 54 (4), 582–589. (SCI)
56. Yen-Kuang Kuo*, Ya-Hsuan Shih, Miao-Chan Tsai, and Jih-Yuan Chang (2011, November). “Improvement in electron overflow of near-ultraviolet InGaN LEDs by specific design on last barrier,” *IEEE Photonics Technology Letters*, 23 (21), 1630–1632. (SCI)
57. Jih-Yuan Chang, Bo-Ting Liou, Han-Wei Lin, Ya-Hsuan Shih, Shu-Hsuan Chang, and Yen-Kuang Kuo* (2011, September). “Numerical investigation on the enhanced carrier collection efficiency of Ga-face GaN/InGaN p-i-n solar cells with polarization compensation interlayers,” *Optics Letters*, 36 (17), 3500–3502. (SCI)
58. Yen-Kuang Kuo*, Tsun-Hsin Wang, Jih-Yuan Chang, and Miao-Chan Tsai (2011, August). “Advantages of InGaN light-emitting diodes with GaN-InGaN-GaN barriers,” *Applied Physics Letters*, 99 (9), 091107-1–091107-3. (SCI) (This paper was one of APL's monthly top 20 most-downloaded articles in September 2011.)
59. Jih-Yuan Chang and Yen-Kuang Kuo* (2011, July). “Numerical study on the influence of piezoelectric polarization on the performance of p-on-n (0001)-face GaN/InGaN p-i-n solar cells,” *IEEE Electron Device Letters*, 32 (7), 937–939. (SCI)
60. Yen-Kuang Kuo*, Bing-Cheng Lin, Jih-Yuan Chang, and Yi-An Chang (2011, June). “Numerical simulation of single-junction $\text{In}_{0.5}\text{Ga}_{0.5}\text{P}$ solar cell with compositional grading configuration,” *IEEE Photonics Technology Letters*, 23 (12), 822–824. (SCI)
61. Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo* (2011, May). “Investigation of blue InGaN light-emitting diodes with step-like quantum well,” *Applied Physics A: Materials Science & Processing*, 104 (2), 621–626. (SCI)
62. Yi-Hsiang Huang, Bo-Ting Liou, Jen-De Chen, and Yen-Kuang Kuo* (2011, April). “Top-emitting organic light-emitting diodes with step-doped emission layers,” *IEEE Photonics Technology Letters*, 23 (8), 480–482. (SCI)
63. Jih-Yuan Chang, Yen-Kuang Kuo*, and Miao-Chan Tsai (2011, December). “Correlation of barrier material and quantum-well number for InGaN/(In)GaN blue light-emitting diodes,” *Physica Status Solidi (a)*, 208 (3), 729–734. (SCI)
64. Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo* (2011, March). “Deep-ultraviolet light-emitting diodes with gradually increased barrier thicknesses from n-layers to p-layers,” *Applied Physics Letters*, 98 (11), 111114-1–111114-3. (SCI) (This paper was reported by "Semiconductor Today" on 29 March 2011: http://www.semiconductor-today.com/news_items/2011/MAR/TNCU_290311.html)
65. Tsun-Hsin Wang, Jih-Yuan Chang, Miao-Chan Tsai, and Yen-Kuang Kuo (2011, February). “Efficiency enhancement of blue InGaN LEDs with indium composition graded InGaN barriers,” *Proceedings of SPIE*, 7954, 79541F. (EI)
66. Bo-Ting Liou, Miao-Chan Tsai, Yi-Hsiang Huang, Fang-Ming Chen, Yu-Rui Lin, and Yen-Kuang Kuo (2011, February). “Improvement in viewing angle properties of top-emitting organic light-emitting devices,” *Proceedings of SPIE*, 7935, 793515. (EI)
67. Yen-Kuang Kuo*, Jih-Yuan Chang, and Jen-De Chen (2011, February). “Numerical study on efficiency droop of blue InGaN light-emitting diodes,” *Proceedings of SPIE*, 7933, 793317. (EI)

68. Jih-Yuan Chang and Yen-Kuang Kuo* (2011, January). “Comment on “The impact of piezoelectric polarization and nonradiative recombination on the performance of (0001) face GaN-InGaN photovoltaic devices,”” *Applied Physics Letters*, 98 (3), 036101-1–036101-2. (SCI)
69. Miao-Chan Tsai, Sheng-Horng Yen, Ying-Chung Lu, and Yen-Kuang Kuo* (2011, January). “Numerical study of blue InGaN light-emitting diodes with varied barrier thicknesses,” *IEEE Photonics Technology Letters*, 23 (2), 76–78. (SCI)
70. Sheng-Horng Yen, Meng-Lun Tsai, Miao-Chan Tsai, Shu-Jeng Chang, and Yen-Kuang Kuo* (2010, December). “Investigation of optical performance of InGaN MQW LED with thin last barrier,” *IEEE Photonics Technology Letters*, 22 (24), 1787–1789. (SCI)
71. Yen-Kuang Kuo*, Syuan-Huei Horng, Miao-Chan Tsai, Sheng-Horng Yen, and Shu-Hsuan Chang (2010, October). “Effect of normal and reversed polarizations on optical characteristics of ultraviolet-violet InGaN laser diodes,” *Optics Communications*, 283 (19), 3698–3702. (SCI)
72. Yen-Kuang Kuo*, Jih-Yuan Chang, and Miao-Chan Tsai (2010, October). “Enhancement in hole injection efficiency of blue InGaN light-emitting diodes from reduced polarization by some specific designs on electron blocking layer,” *Optics Letters*, 35 (19), 3285–3287. (SCI)
73. Chih-Teng Liao, Miao-Chan Tsai, Bo-Ting Liou, Sheng-Horng Yen, and Yen-Kuang Kuo* (2010, September). “Improvement in output power of a 460-nm InGaN light-emitting diode using staggered quantum well,” *Journal of Applied Physics*, 108 (6), 063107-1–063107-6. (SCI)
74. Yen-Kuang Kuo*, Miao-Chan Tsai, Sheng-Horng Yen, Ta-Cheng Hsu, and Yu-Jiun Shen (2010, August). “Effect of p-type last barrier on efficiency droop of blue InGaN light-emitting diodes,” *IEEE Journal of Quantum Electronics*, 46 (8), 1214–1220. (SCI)
75. Jih-Yuan Chang, Miao-Chan Tsai, and Yen-Kuang Kuo* (2010, May). “Advantages of blue InGaN light-emitting diodes with AlGaIn barriers,” *Optics Letters*, 35 (9), 1368–1370. (SCI)
76. Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo* (2010, March). “Carrier transportation and internal quantum efficiency of blue InGaN light-emitting diodes with p-doped barriers,” *IEEE Photonics Technology Letters*, 22 (6), 374–376. (SCI)
77. Jun-Rong Chen, Yung-Chi Wu, Shih-Chun Ling, Tsung-Shine Ko, Tien-Chang Lu, Hao-Chung Kuo, Yen-Kuang Kuo, and Shing-Chung Wang (2010, March). “Investigation of wavelength-dependent efficiency droop in InGaN light-emitting diodes,” *Applied Physics B: Lasers and Optics*, 98 (4), 779–789. (SCI)
78. Shu-Hsuan Chang, Miao-Chan Tsai, Sheng-Horng Yen, Shu-Jeng Chang, and Yen-Kuang Kuo (2010, February). “Numerical simulation on high-efficiency GaInP/GaAs/InGaAs triple-junction solar cells,” *Proceedings of SPIE*, 7597, 759721. (EI)
79. Yen-Kuang Kuo*, Jih-Yuan Chang, and Mei-Ling Chen (2010, February). “Role of electron blocking layer in III-nitride laser diodes and light-emitting diodes,” *Proceedings of SPIE*, 7597, 759720. (EI)
80. Yen-Kuang Kuo*, Syuan-Huei Horng, Sheng-Horng Yen, Miao-Chan Tsai, and Man-Fang Huang (2010, January). “Effect of polarization state on optical properties of blue-violet InGaN light-emitting diodes,” *Applied Physics A: Materials Science & Processing*, 98 (3), 509–515 (SCI)
81. 陳俊榮、張誌原、郭艷光、盧廷昌、郭浩中、王興宗 (2010年6月)。“高亮度氮化鎵發光二極體：高驅動電流下的屏障,” *電子月刊*, 16 (6), 118–129.
82. Sheng-Horng Yen, Miao-Chan Tsai, Meng-Lun Tsai, Yu-Jiun Shen, Ta-Cheng Hsu, and Yen-Kuang Kuo* (2009, November). “Theoretical investigation of Auger recombination

- on internal quantum efficiency of blue light-emitting diodes,” *Applied Physics A: Materials Science & Processing*, 97 (3), 705–708. (SCI)
83. Yen-Kuang Kuo*, Miao-Chan Tsai, and Sheng-Horng Yen (2009, November). “Numerical simulation of blue InGaN light-emitting diodes with polarization-matched AlGaInN electron-blocking layer and barrier layer,” *Optics Communications*, 282 (21), 4252–4255. (SCI)
 84. Yen-Kuang Kuo*, Miao-Chan Tsai, Sheng-Horng Yen, Ta-Cheng Hsu, and Yu-Jiun Shen (2009, August). “Enhancement of light power for blue InGaN LEDs by using low-indium-content InGaN barriers,” *IEEE Journal of Selected Topics in Quantum Electronics*, 15 (4), 1115–1121. (SCI)
 85. Yen-Kuang Kuo*, Jih-Yuan Chang, Miao-Chan Tsai, Sheng-Horng Yen (2009, July). “Advantages of blue InGaN multiple-quantum well light-emitting diodes with InGaN barriers,” *Applied Physics Letters*, 95 (1), 011116-1–011116-3. (SCI) (This paper was one of APL's monthly top 20 most-downloaded articles in year 2010.)
 86. Sheng-Horng Yen, Miao-Chan Tsai, Meng-Lun Tsai, Yu-Jiun Shen, Ta-Cheng Hsu, and Yen-Kuang Kuo* (2009, July). “Effect of n-type AlGaIn layer on carrier transportation and efficiency droop of blue InGaN light-emitting diodes,” *IEEE Photonics Technology Letters*, 21 (14), 975–977. (SCI)
 87. Jun-Rong Chen, Yung-Chi Wu, Tien-Chang Lu, Hao-Chung Kuo, Yen-Kuang Kuo, and Shing-Chung Wang (2009, May). “Numerical study on lateral mode behavior of 660-nm InGaP/AlGaInP multiple-quantum-well laser diodes,” *Optical Review*, 16 (3), 375–382. (SCI)
 88. Miao-Chan Tsai, Sheng-Horng Yen, Shu-Hsuan Chang, and Yen-Kuang Kuo* (2009, April). “Effect of spontaneous and piezoelectric polarization on optical characteristics of ultraviolet AlGaInN light-emitting diodes,” *Optics Communications*, 282 (8), 1589–1592. (SCI)
 89. Jun-Rong Chen, Shih-Chun Ling, Huei-Min Huang, Po-Yuan Su, Tsung-Shine Ko, Tien-Chang Lu, Hao-Chung Kuo, Yen-Kuang Kuo, and Shing-Chung Wang (2009, April). “Numerical study of optical properties of InGaN multi-quantum-well laser diodes with polarization-matched AlInGaIn barrier layers,” *Applied Physics B: Lasers and Optics*, 95 (1), 145–153. (SCI)
 90. Yen-Kuang Kuo*, Ying-Chung Lu, Miao-Chan Tsai, and Sheng-Horng Yen (2009, January). “Numerical simulation of 405-nm InGaN laser diodes with polarization-matched AlGaInN electron-blocking layer and barrier layer,” *Proceedings of SPIE*, 7211, 72111B. (EI)
 91. Bo-Ting Liou, Miao-Chan Tsai, Chih-Teng Liao, Sheng-Horng Yen, and Yen-Kuang Kuo (2009, January). “Numerical investigation of blue InGaN light-emitting diodes with staggered quantum wells,” *Proceedings of SPIE*, 7211, 72111D. (EI)
 92. Shu-Hsuan Chang, Chien-Yang Wen, Yi-Hsiang Huang, and Yen-Kuang Kuo (2009, January). “Numerical simulation on white OLEDs with dotted-line doped emitting layers,” *Proceedings of SPIE*, 7213, 72131J. (EI)
 93. Yen-Kuang Kuo*, Sheng-Horng Yen, Ming-Wei Yao, Miao-Chan Tsai, Mei-Ling Chen, and Bo-Ting Liou (2008, November). “Numerical study on InGaAsN/GaAs multiple-quantum-well laser with GaAsP and GaAsN barriers,” *Applied Physics B: Lasers and Optics*, 93 (2), 497–506. (SCI)
 94. Jun-Rong Chen, Tsung-Shine Ko, Po-Yen Su, Tien-Chang Lu, Yen-Kuang Kuo, Hao-Chung Kuo, Shing-Chung Wang (2008, September). “Numerical study on optimization of active layer structures for GaN/AlGaIn multiple-quantum-well laser diodes,” *IEEE Journal of Lightwave Technology*, 26 (17), 3155–3165. (SCI)
 95. Sheng-Horng Yen and Yen-Kuang Kuo* (2008, September). “Improvement in

- piezoelectric effect of violet InGaN laser diodes,” *Optics Communications*, 281 (18), 4735–4740. (SCI)
96. Jun-Rong Chen, Tsung-Shine Ko, Tien-Chang Lu, Yi-An Chang, Hao-Chung Kuo, Yen-Kuang Kuo, Jui-Yen Tsai, Li-Wen Lai, and Shing-Chung Wang (2008, July). “Fabrication and characterization of temperature insensitive 660-nm resonant-cavity LEDs,” *IEEE Journal of Lightwave Technology*, 26 (13), 1891–1900. (SCI)
 97. Sheng-Horng Yen and Yen-Kuang Kuo* (2008, May). “Polarization-dependent optical characteristics of violet InGaN laser diodes,” *Journal of Applied Physics*, 103, 103115-1–103115-6. (SCI)
 98. Jun-Rong Chen, Chung-Hsien Lee, Tsung-Shine Ko, Yi-An Chang, Tien-Chang Lu, Hao-Chung Kuo, Yen-Kuang Kuo, and Shing-Chung Wang (2008, February). “Effects of built-in polarization and carrier overflow on InGaN quantum-well lasers with electronic blocking layers,” *IEEE Journal of Lightwave Technology*, 26 (3), 329–337. (SCI)
 99. 顏勝宏、洪暄惠、蔡妙嬋、郭艷光* (2008年3月). “雷射二極體技術發展與應用動態,” 新興光電技術發展與應用瞭望, 2008年第1季.
 100. Yen-Kuang Kuo*, Han-Yi Chu, Sheng-Horng Yen, Bo-Ting Liou, and Mei-Ling Chen (2007, December). “Bowing parameter of zincblende $\text{In}_x\text{Ga}_{1-x}\text{N}$,” *Optics Communications*, 280 (1), 153–156. (SCI)
 101. Sheng-Horng Yen, Yen-Kuang Kuo*, Meng-Lun Tsai, and Ta-Cheng Hsu (2007 November). “Investigation of violet InGaN laser diodes with normal and reversed polarizations,” *Applied Physics Letters*, 91 (20), 201118-1–201118-3. (SCI)
 102. Sheng-Horng Yen, Mei-Ling Chen, and Yen-Kuang Kuo* (2007, October). “Gain and threshold properties of InGaAsN/GaAsN material system for 1.3- μm semiconductor lasers,” *Optics and Laser Technology*, 39 (7), 1432–1436. (SCI)
 103. Yen-Kuang Kuo*, Sheng-Horng Yen, Miao-Chan Tsai, and Bo-Ting Liou (2007, August). “Effect of spontaneous and piezoelectric polarization on the optical characteristics of blue light-emitting diodes,” *Proceedings of SPIE*, 6669, 66691I. (EI)
 104. Yen-Kuang Kuo*, Sheng-Horng Yen, and Yu-Wen Wang (2007, August). “Simulation of deep ultraviolet light-emitting diodes,” *Proceedings of SPIE*, 6669, 66691J. (EI)
 105. Mei-Ling Chen, Cheng-Hong Yang, Chien-Yang Wen, Shu-Hsuan Chang, and Yen-Kuang Kuo* (2007, August). “Numerical simulation of bright white multilayer organic light-emitting diodes,” *Proceedings of SPIE*, 6655, 66551T. (EI)
 106. Bo-Ting Liou, Chieh-I Liu, and Yen-Kuang Kuo (2007, August). “Investigation of material properties for zincblende AlGaIn alloys applied in UV LEDs,” *Proceedings of SPIE*, 6669, 66691H. (EI)
 107. Yen-Kuang Kuo*, Sheng-Horng Yen, Ming-Wei Yao, Mei-Ling Chen, and Bo-Ting Liou (2007, July). “Numerical study on gain and optical properties of AlGaInAs, InGaInAs, and InGaAsP material systems for 1.3- μm semiconductor lasers,” *Optics Communications*, 275 (1), 156–164. (SCI)
 108. Yen-Kuang Kuo*, Jun-Rong Chen, Mei-Ling Chen, and Bo-Ting Liou (2007, February). “Numerical study on strained InGaAsP/InGaP quantum wells for 850-nm vertical-cavity surface-emitting lasers,” *Applied Physics B: Lasers and Optics*, 86 (4), 623–631. (SCI)
 109. Sheng-Horng Yen, Bo-Jean Chen, and Yen-Kuang Kuo* (2006, December). “Simulation of InGaN violet and ultraviolet multiple-quantum-well laser diodes,” *Optical and Quantum Electronics* (NUSOD-06 Special Issue), 28, 1029–1037. (SCI)
 110. Bao-Jen Pong, Chi-Hsing Chen, Sheng-Horng Yen, Jin-Fu Hsu, Chun-Ju Tun, Yen-Kuang Kuo, Cheng-Huang Kuo, and Gou-Chung Chi (2006, October). “Abnormal blue shift of InGaN micro-size light emitting diodes,” *Solid-State Electronics*, 50, 1588–1594. (SCI)
 111. Yen-Kuang Kuo*, Sheng-Horng Yen, and Jun-Rong Chen (2006, October). “Numerical

- simulation of InAlGa_N ultraviolet light-emitting diodes,” *Proceedings of SPIE*, 6368, 636812. (EI)
112. Bo-Ting Liou, Sheng-Horng Yen, Ming-Wei Yao, Mei-Ling Chen, Yen-Kuang Kuo, and Shu-Hsuan Chang (2006, October). “Numerical study for 1.55- μ m AlGaInAs/InP semiconductor lasers,” *Proceedings of SPIE*, 6368, 636814. (EI)
 113. Yi-An Chang, Tsung-Hsine Ko, Fang-I Lai, Jun-Rong Chen, Chun-Lung Yu, I-Tsung Wu, Hao-Chung Kuo, Yen-Kuang Kuo, Li-Wen Lai, Li-Horng Lai, Tin-Chang Lu, and Shing-Chung Wang (2006, September). “The carrier blocking effect on 850 nm InAlGaAs/AlGaAs vertical-cavity surface-emitting lasers,” *Semiconductor Science and Technology*, 21, 1488–1494. (SCI)
 114. Jun-Rong Chen and Yen-Kuang Kuo* (2006, August). “Optical gain and threshold properties of strained InGaAlAs/AlGaAs quantum wells for 850-nm vertical-cavity surface-emitting lasers,” *Optics Communications*, 264, 213–218. (SCI)
 115. Yi-An Chang, Sheng-Horng Yen, De-Chung Wang, Hao-Chung Kuo, Yen-Kuang Kuo, and Shing-Chung Wang (2006, March). “Experimental and theoretical analysis on ultraviolet 370-nm AlGaInN light-emitting diode,” *Semiconductor Science and Technology*, 21, 598–603. (SCI)
 116. Yen-Kuang Kuo*, Shang-Wei Hsieh, and Hsiu-Fen Chen (2006, March). “Numerical study on optimization of active regions for 1.3- μ m AlGaInAs and InGaAsN material systems,” *Japanese Journal of Applied Physics*, 45 (3A), 1588–1590. (SCI)
 117. Shang-Wei Hsieh and Yen-Kuang Kuo* (2006, February). “A numerical study on characteristic temperature of short-cavity 1.3- μ m AlGaInAs/InP MQW lasers,” *Applied Physics A: Materials Science & Processing*, 82 (2), 287–292. (SCI)
 118. Yen-Kuang Kuo*, Jun-Rong Chen, Ming-Yung Jow, Cheng-Zu Wu, Bao-Jen Pong, and Chii-Chang Chen (2006, February). “Optimization of oxide-confinement and active layers for high-speed 850-nm VCSELs,” *Proceedings of SPIE*, 6132, 175–185. (EI)
 119. Yen-Kuang Kuo*, Sheng-Horng Yen, and Ming-Wei Yao (2006, February). “Optimization study on active layers and optical performance for 1.3- μ m AlGaInAs and InGaAsN semiconductor lasers,” *Proceedings of SPIE*, 6115, 395–403. (EI)
 120. Bo-Ting Liou, Sheng-Horng Yen, and Yen-Kuang Kuo (2006, February). “Investigation of band gaps and bowing parameters for zincblende III-nitride ternary alloys,” *Proceedings of SPIE*, 6121, 189–197. (EI)
 121. Shu-Hsuan Chang, Yung-Cheng Chang, Cheng-Hong Yang, Jun-Rong Chen, and Yen-Kuang Kuo (2006, February). “Numerical simulation of optical and electronic properties for multilayer organic light-emitting diodes and its application in engineering education,” *Proceedings of SPIE*, 6134, 187–196. (EI)
 122. Sheng-Horng Yen, Bo-Jean Chen, Mei-Ling Chen, Yen-Kuang Kuo, Yi-An Chang, and Hao-Chung Kuo (2006, February). “Fabrication and simulation of ultraviolet AlGaInN light-emitting diodes,” *Proceedings of SPIE*, 6134, 148–155. (EI)
 123. Yi-An Chang, Jun-Rong Chen, Hao-Chung Kuo, Yen-Kuang Kuo, and Shing-Chung Wang (2006, January). “Theoretical and experimental analysis on InAlGaAs/AlGaAs active region of 850-nm vertical-cavity surface-emitting lasers,” *IEEE Journal of Lightwave Technology*, 24 (1), 536–543. (SCI)
 124. Bo-Ting Liou, Sheng-Horng Yen, Cheng-Yang Lin, Yen-Kuang Kuo (2006, June). “Effect of band-offset ratio on characteristics of blue InGaN quantum-well lasers,” *Hsiuping Journal*, 12, 297–310.
 125. 陳美玲、姚銘偉、郭艷光* (2006 年 11 月). “半導體發光元件發展近況與模擬分析技術簡介,” 光連雙月刊, 第 66 期.
 126. 陳秀芬、謝尚衛、郭艷光* (2006 年 9 月). “載子阻礙層對氮砷化銦鎵雷射之影響,” 光

學工程, 第 95 期.

127. Man-Fang Huang, Meng-Lun Tsai, Jen-Yuan Shin, Yu-Lung Sun, Ray-Min Yang, and Yen-Kuang Kuo (2005, November). "Optimization of active layer structures to minimize leakage current for AlGaInP laser diode," *Applied Physics A: Materials Science & Processing*, 81 (7), 1369–1373. (SCI)
128. Bo-Ting Liou, Sheng-Horng Yen, and Yen-Kuang Kuo* (2005, November). "First-principles calculation for bowing parameter of wurtzite $\text{Al}_x\text{Ga}_{1-x}\text{N}$," *Applied Physics A: Materials Science & Processing*, 81 (7), 1459–1463. (SCI)
129. Yi-An Chang, Chuan-Yu Luo, Hao-Chung Kuo, Yen-Kuang Kuo, Chia-Feng Lin, and Shing-Chung Wang (2005, November). "Simulation of InGaN quantum well laser performance using quaternary InAlGaIn alloy as electronic blocking layer," *Japanese Journal of Applied Physics*, 44 (11), 7916–7918, 15. (SCI)
130. Yuni Chang and Yen-Kuang Kuo* (2005, September). "A numerical study of DC characteristics of HEMT with p-type δ -doped barrier," *Applied Physics A: Materials Science & Processing*, 81 (4), 877–879. (SCI)
131. Bo-Ting Liou, Sheng-Horng Yen, and Yen-Kuang Kuo* (2005, August). "Vegard's law deviation in band gap and bowing parameter of $\text{Al}_x\text{In}_{1-x}\text{N}$," *Applied Physics A: Materials Science & Processing*, 81 (3), 651–655. (SCI)
132. Bo-Ting Liou, Cheng-Yang Lin, Sheng-Horng Yen, and Yen-Kuang Kuo* (2005, May). "First-principles calculation for bowing parameter of wurtzite $\text{In}_x\text{Ga}_{1-x}\text{N}$," *Optics Communications*, 249 (1-3), 217–223. (SCI)
133. Yi-An Chang, Hao-Chung Kuo, Chun-Yi Lu, Yen-Kuang Kuo, and Shing-Chung Wang (2005, April). "Improving high temperature performance in continuous-wave mode InGaAsN/GaAsN ridge waveguide lasers," *Semiconductor Science and Technology*, 20, 601–605, 27. (SCI)
134. Man-Fang Huang, Meng-Lun Tsai, and Yen-Kuang Kuo (2005, January). "Improvement of characteristic temperature for AlGaInP laser diodes," *Proceedings of SPIE*, 5628, 127–134. (EI)
135. Sheng-Horng Yen, Bo-Ting Liou, Mei-Ling Chen, and Yen-Kuang Kuo (2005, January). "Piezoelectric and thermal effects on optical properties of violet-blue InGaIn lasers," *Proceedings of SPIE*, 5628, 156–163. (EI)
136. Bo-Ting Liou, Sheng-Horng Yen, and Yen-Kuang Kuo (2005, January). "Vegard's law deviation in band gaps and bowing parameters of the wurtzite III-nitride ternary alloys," *Proceedings of SPIE*, 5628, 296–305. (EI)
137. Shang-Wei Hsieh, Hsiu-Fen Chen, Ming-Wei Yao, and Yen-Kuang Kuo* (2005, January). "Simulation of 1.3- μm AlGaInAs/InP strained MQW lasers," *Proceedings of SPIE*, 5628, 318–326. (EI)
138. Hsiu-Fen Chen, Shang-Wei Hsieh, and Yen-Kuang Kuo* (2005, January). "Simulation of tunable Cr:YSO Q-switched Cr:LiSAF laser," *Proceedings of SPIE*, 5627, 488–498. (EI)
139. Yen-Kuang Kuo*, Bo-Ting Liou, Sheng-Horng Yen, and Han-Yi Chu (2004, July). "Vegard's law deviation in lattice constant and band gap bowing parameter of zincblende $\text{In}_x\text{Ga}_{1-x}\text{N}$," *Optics Communications*, 237 (4-6), 363–369. (SCI)
140. Yen-Kuang Kuo*, Hsiu-Fen Chen, and Yi-An Chang (2004, June). "Simulation of Ho:CaF₂ Q-switched Tm:YAG laser," *Japanese Journal of Applied Physics*, 43 (6A), 3448–3449. (SCI)
141. Yen-Kuang Kuo* and Yi-An Chang (2004, May). "Effects of electronic current overflow and inhomogeneous carrier distribution on InGaIn quantum-well laser performance," *IEEE Journal of Quantum Electronics*, 40 (5), 437–444. (SCI)
142. Yen-Kuang Kuo*, Bo-Ting Liou, Mei-Ling Chen, Sheng-Horng Yen, and Cheng-Yang Lin

- (2004, February). “Effect of band-offset ratio on analysis of violet-blue InGaN laser characteristics,” *Optics Communications*, 231 (1-6), 395–402, 15. (SCI)
143. Wen-Wei Lin, Yen-Kuang Kuo*, and Bo-Ting Liou (2004, January). “Band-gap bowing parameters of the zincblende ternary III-nitrides derived from theoretical simulation,” *Japanese Journal of Applied Physics*, 43 (1), 113–114. (SCI)
144. Bo-Ting Liou, Yen-Kuang Kuo, Sheng-Horng Yen, and Cheng-Yang Lin (2004, September). “Effect of band-offset ratio on characteristics of 405-nm InGaN quantum-well lasers,” *Hsiuping Journal*, 9, 53–68.
145. 張詒安、郭艷光、郭浩中、王興宗 (2004 年 3 月). “紫藍光氮化銦鎵量子井雷射之模擬與分析,” *光學工程*, 85, 47–58. (本論文榮獲 2003 年「中華民國光學工程學會碩士班學生論文獎」)
146. 陳秀芬、謝尚衛、劉柏挺、郭艷光* (2003 年 12 月). “導電帶與價電帶井深比例對藍光氮化銦鎵量子井雷射載子分佈與光學特性的影響,” *光學工程*, 84, 70–80.
147. Jih-Yuan Chang and Yen-Kuang Kuo* (2003, May). “Simulation of blue InGaN quantum-well lasers,” *Journal of Applied Physics*, 93 (9), 4992–4998. (SCI)
148. Yen-Kuang Kuo* and Yi-An Chang (2003, March). “Numerical study of passive Q switching of a Tm:YAG laser with a Ho:YLF solid-state saturable absorber,” *Applied Optics*, 42 (9), 1685–1691. (SCI)
149. 顏勝宏、林正洋、陳美玲、劉柏挺、郭艷光* (2003 年 10 月). “Band-offset ratio 對分析藍紫光氮化銦鎵量子井雷射特性之影響,” *物理雙月刊*, 25 (5), 740–752.
150. 林文偉、郭艷光*、劉柏挺 (2003 年 8 月). “Zincblende 結構三元氮化物的能帶模擬與分析,” *物理雙月刊*, 25 (4), 582–591.
151. 陳秀芬、蔡孟倫、屠嫻琳、陳俊榮、郭艷光*、劉柏挺 (2003 年 8 月). “短程光纖通信用紅光面射型雷射的設計與分析,” *台灣光通訊產業聯盟 2003 年光通訊特刊*, 66–76.
152. 劉柏挺、顏勝宏、郭艷光 (2003 年 6 月). “Wurtzite 結構之 $\text{Al}_x\text{Ga}_{1-x}\text{N}$ 的結構特性及能帶性質的模擬分析,” *光學工程*, 82, 150–158.
153. Yen-Kuang Kuo* and Wen-Wei Lin (2002, September). “Band-gap bowing parameter of the $\text{Al}_x\text{In}_{1-x}\text{N}$ derived from theoretical simulation,” *Japanese Journal of Applied Physics*, 41 (9), 5557–5558. (SCI)
154. Yuni Chang, Yen-Kuang Kuo*, and Man-Fang Huang (2002, September). “Characteristics of 850-nm InGaAs/AlGaAs vertical-cavity surface-emitting lasers,” *Proceedings of SPIE*, 4913, 31–40. (EI)
155. Jih-Yuan Chang and Yen-Kuang Kuo* (2002, September). “Electronic current overflow and inhomogeneous hole distribution of the InGaN quantum well structures,” *Proceedings of SPIE*, 4913, 115–125. (EI)
156. Wen-Wei Lin and Yen-Kuang Kuo* (2002, September). “Band structures and bandgap bowing parameters of wurtzite and zincblende III-nitrides,” *Proceedings of SPIE*, 4913, 236–247. (EI)
157. Chih-Kang Chang, Jih-Yuan Chang, and Yen-Kuang Kuo* (2002, September). “Optical performance of Cr:YSO Q-switched Cr:LiCAF and Cr:LiSAF lasers,” *Proceedings of SPIE*, 4914, 498–509. (EI)
158. Yi-An Chang and Yen-Kuang Kuo* (2002, September). “Optical performance of Ho:YLF Q-switched Tm:YAG laser system,” *Proceedings of SPIE*, 4914, 510–521. (EI)
159. Yen-Kuang Kuo* and Wen-Wei Lin (2002, January). “Band-gap bowing parameter of the $\text{Al}_x\text{Ga}_{1-x}\text{N}$ derived from theoretical simulation,” *Japanese Journal of Applied Physics*, 41 (1), 73–74. (SCI)
160. 張誌原、郭艷光* (2002 年 12 月). “藍光氮化銦鎵量子井雷射之電子溢流現象與電洞不

- 均勻性探討,” *物理雙月刊*, 24 (6), 789–800.
161. 黃雅蓮、郭艷光* (2002 年 9 月). “黃綠光磷化鋁鎵銻面射型半導體雷射光學特性之模擬分析,” *光學工程*, 79, 87–100.
 162. 林文偉、郭艷光* (2002 年 6 月). “三元氮化物能帶結構之模擬與分析,” *物理雙月刊*, 24 (3), 471–479.
 163. Yen-Kuang Kuo* and Jih-Yuan Chang (2001, October). “Numerical study on passive Q-switching of tunable Cr:LiCAF laser with Cr:YSO solid state saturable absorber,” *Japanese Journal of Applied Physics*, 40 (10), 5949–5950. (SCI)
 164. Yen-Kuang Kuo*, Wen-Wei Lin, and Jiann Lin (2001, May). “Band-gap bowing parameter of the $\text{In}_x\text{Ga}_{1-x}\text{N}$ derived from theoretical simulation,” *Japanese Journal of Applied Physics*, 40 (5A), 3157–3158. (SCI)
 165. Yen-Kuang Kuo*, Horng-Min Chen, and Jih-Yuan Chang (2001, May). “Numerical study of the Cr:YSO Q-switched ruby laser,” *Optical Engineering*, 40 (9), 2031–2035. (SCI)
 166. Yen-Kuang Kuo*, Horng-Min Chen, and Yuni Chang (2001, March). “Numerical study of passive Q switching of a tunable alexandrite laser with a Cr:Y₂SiO₅ solid-state saturable absorber,” *Applied Optics*, 40 (9), 1362–1368. (SCI)
 167. 洪國凱、張誌原、黃旭晴、郭艷光* (2001 年 6 月). “紫外光氮化鎵面射型半導體雷射之設計與分析,” *光學工程*, 74, 48–52.
 168. 張郁妮、黃旭晴、郭艷光*、蘇永司 (2001 年 4 月). “摻氮磷化鎵之光學特性分析,” *物理雙月刊*, 23 (2), 352–359.
 169. 張誌原、郭艷光* (2001 年 3 月). “電子溢流對氮化銻鎵多量子井元件光學特性之影響,” *光學工程*, 73, 45–50.
 170. Yen-Kuang Kuo* and Horng-Min Chen (2000, December). “Cr:YSO saturable absorber for the three-level Cr:BeAl₂O₄ laser at 680.4 nm,” *Japanese Journal of Applied Physics*, 39 (12A), 6574–6575. (SCI)
 171. Yen-Kuang Kuo*, Jih-Yuan Chang, Chia-Ching Lin, and Horng-Min Chen (2000, July). “Tunable Cr:YSO Q-switched Cr:BeAl₂O₄ laser: numerical study on laser performance along three principal axes of the Q switch,” *Japanese Journal of Applied Physics*, 39 (7A), 4002–4005. (SCI)
 172. Yen-Kuang Kuo*, Kuo-Kai Horng, Ya-Lien Huang, Jih-Yuan Chang, Yuni Chang, and Hsu-Ching Huang (2000, July). “Temperature dependent optical properties of the InGa_N semiconductor materials: experimental and numerical studies,” *Proceedings of SPIE*, 4078, 579–586. (EI)
 173. Yen-Kuang Kuo*, Jih-Yuan Chang, Horng-Min Chen, and Chia-Ching Lin (2000, July). “Broadband Cr:YSO solid-state saturable absorber for ruby, alexandrite, and Cr:LiCAF lasers: numerical study on passive Q-switching performance,” *Proceedings of SPIE*, 4078, 587–594. (EI)
 174. Man-Fang Huang, Pin-Hui Liu, J. S. Liu, Yen-Kuang Kuo, Ya-Lien Huang, Kuo-Kai Horng, Jih-Yuan Chang, Yuni Chang, and Hsu-Ching Huang (2000, July). “Experimental and numerical study on the optical properties of yellow-green AlGaInP light emitting diodes,” *Proceedings of SPIE*, 4078, 595–602. (EI)
 175. Yen-Kuang Kuo*, Horng-Min Chen, and Chia-Ching Lin (2000, June). “A theoretical study of the Cr:BeAl₂O₄ laser passively Q-switched with Cr:YSO solid state saturable absorber,” *Chinese Journal of Physics*, 38 (3-I), 443–460. (SCI)
 176. Man-Fang Huang, Elsa Garmire, and Yen-Kuang Kuo (2000, April). “Absorption anisotropy for lattice matched GaAs/AlGaAs multiple quantum well structures under external anisotropic biaxial strain: compression along [110] and tension along [-110],” *Japanese Journal of Applied Physics*, 39 (4A), 1776–1781. (SCI)

177. 洪國凱、郭艷光* (2000 年 12 月). “氮化銦鎳單一量子井雷射元件的理論模擬,” *光學工程*, 72, 66–71.
178. Man-Fang Huang, How-Chiang Lee, Jin-Kuo Ho, Hung-Cheng Lin, Wei-Hong Kuo, Chenn-Shi Cheng, and Yen-Kuang Kuo (1998, June). “Laser diode for DVD pickup head,” *Proceedings of SPIE*, 3419, 110–118. (EI)
179. 郭艷光* (1998 年 2 月). “電子躍遷與雷射效應,” *科學月刊* (Science Monthly), 29 (2), 133–138.
180. Yen-Kuang Kuo*, Sanggeon Lee, Ferruh Unlu, Man-Fang Huang, Milton Birnbaum, Peter D. Fuqua, and Bruce Dunn (1996, September). “Solid state polymer dye Q-switch for Cr:LiCAF, alexandrite and ruby lasers,” *Electronics Letters*, 32 (23), 2146–2148. (SCI)
181. Yen-Kuang Kuo*, Milton Birnbaum, Ferruh Unlu, and Man-Fang Huang (1996, May). “Ho:CaF₂ solid-state saturable absorber Q-switch for the 2- μ m Tm,Cr:Y₃Al₅O₁₂ laser,” *Applied Optics*, 35 (15), 2576–2579. (SCI)
182. Yen-Kuang Kuo* and Milton Birnbaum (1996, February). “Ho:YVO₄ solid-state saturable absorber Q switch for 2- μ m Tm,Cr:Y₃Al₅O₁₂ laser,” *Applied Optics*, 35 (6), 881–884. (SCI)
183. Yen-Kuang Kuo* and Milton Birnbaum (1995, October). “Characteristics of ruby passive Q switching with a Dy²⁺:CaF₂ solid-state saturable absorber,” *Applied Optics*, 34 (30), 6829–6833. (SCI)
184. Yen-Kuang Kuo* and Milton Birnbaum (1995, July). “Passive Q-switching of the alexandrite laser with a Cr⁴⁺:Y₂SiO₅ solid-state saturable absorber,” *Applied Physics Letters*, 67 (2), 173–175. (SCI)
185. Yen-Kuang Kuo*, Man-Fang Huang, and Milton Birnbaum (1995, April). “Tunable Cr⁴⁺:YSO Q-switched Cr:LiCAF laser,” *IEEE Journal of Quantum Electronics*, 31 (4), 657–663. (SCI)
186. Yen-Kuang Kuo*, Milton Birnbaum, Wei Chen, Kintak Yue, and Man-Fang Huang (1995, January). “Passive Q-switching of the Tm, Cr:YAG 2- μ m laser with a Ho:YLF solid-state saturable absorber,” *OSA Proceedings on Advanced Solid-State Lasers*, 24, 445–448.
187. Yen-Kuang Kuo*, Milton Birnbaum, and Wei Chen (1994, December). “Ho:YLiF₄ saturable absorber Q-switch for the 2- μ m Tm,Cr:Y₃Al₅O₁₂ laser,” *Applied Physics Letters*, 65 (24), 3060–3062. (SCI)
188. Yen-Kuang Kuo*, Wei Chen, Robert D. Stultz, and Milton Birnbaum (1994, September). “Dy²⁺:CaF₂ saturable-absorber Q switch for the ruby laser,” *Applied Optics*, 33 (27), 33 (27), 6348–6351. (SCI)
189. Yen-Kuang Kuo*, Yang Yang, and Milton Birnbaum (1994, May). “Cr⁴⁺:Gd₃Sc₂Ga₃O₁₂ passive Q-switch for the Cr³⁺:LiCaAlF₆ laser,” *Applied Physics Letters*, 64 (18), 2329–2331. (SCI)
190. H. Liu, Yang Yang, G. Zhang, Yen-Kuang Kuo, Man-Fang Huang, and Milton Birnbaum (1994, February). “Novel folded-cavity design for a Ti:Al₂O₃ laser,” *OSA Proceedings on Advanced Solid-State Lasers*, 20, 207–208.
191. Wei Chen, Kalin Spariosu, Robert D. Stultz, Yen-Kuang Kuo, Milton Birnbaum, and A. V. Shestakov (1993, May). “Cr⁴⁺:GSGG saturable absorber Q-switch for the ruby laser,” *Optics Communications*, 104, 71–74. (SCI)

(B) 研討會論文

192. Yen-Kuang Kuo, Jih-Yuan Chang, and Ya-Hsuan Shih (2020, February), “Phosphor-free white-light emitter consisting of monolithic-stacked dual-color InGaN tunnel-junction light-emitting diode with high-color-rendering index and tunable color temperature,” Accepted for publication in Photonics West 2020, Moscone Center, San Francisco, Paper Number 11302-26.
193. Yen-Kuang Kuo, Fang-Ming Chen and Jih-Yuan Chang (2019, April), “Investigation of Shockley-Read-Hall recombination in deep-ultraviolet light-emitting diodes,” OPAL' 2019, Amsterdam, The Netherlands, Paper Number 6.
194. Yen-Kuang Kuo and Jih-Yuan Chang (2019, April), “Band-engineered structural design and characterization of deep-ultraviolet light-Emitting diodes,” ICNNFC'19, Rome, Italy, Paper Number 111.
195. Yen-Kuang Kuo, Jih-Yuan Chang, and Ya-Hsuan Shih (2018, April), “Broad-band light emission in monolithic InGaN tunnel-junction light-emitting diodes,” Photonics Europe 2018, Strasbourg, France, Paper Number 10672-105.
196. Yen-Kuang Kuo, Jih-Yuan Chang, and Fang-Ming Chen (2018, January), “Impacts of polarization effect and SRH recombination on the output performance of AlGaIn-based deep ultraviolet light-emitting diodes ,” Photonics West 2018, Moscone Center, San Francisco, Paper Number 10554-55.
197. Jih-Yuan Chang, Yung-Cheng Chang, Fang-Ming Chen, and Yen-Kuang Kuo (2018, January), “Numerical investigation on the optical and electrical polarization, and carrier injection and confinement of AlGaIn-based deep-ultraviolet light-emitting diodes ,” Photonics West 2018, Moscone Center, San Francisco, Paper Number 10526-72.
198. Yen-Kuang Kuo, Fang-Ming Chen, Jih-Yuan Chang, Hui-Tzu Chang, and Man-Fang Huang (2017, April). “Investigation on the characteristics and performance enhancement of AlGaIn-based deep ultraviolet light-emitting diodes,” The 5th International Conference on Light-Emitting Devices and Their Industrial Applications (LEDIA 2017), Pacifico-Yokohama, Japan, Paper Number LEDp2-27.
199. Jih-Yuan Chang, Ya-Hsuan Shih, Fang-Ming Chen, and Yen-Kuang Kuo (2017, April). “Structural design and characterization of GaN-based tunnel-junction light-emitting diodes,” The 5th International Conference on Light-Emitting Devices and Their Industrial Applications (LEDIA 2017), Pacifico-Yokohama, Japan, Paper Number LEDp3-3.
200. Fang-Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Bo-Ting Liou, and Yen-Kuang Kuo (2017, April). “Advantages of 365-nm near ultraviolet light-emitting diodes with N-doped wide well,” The 5th International Conference on Light-Emitting Devices and Their Industrial Applications (LEDIA 2017), Pacifico-Yokohama, Japan, Paper Number LEDp2-19.
201. Hui-Tzu Chang, Fang-Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Bo-Ting Liou, Man-Fang Huang, and Yen-Kuang Kuo (2017, April). “Improved optical characteristics in AlGaIn-based deep-ultraviolet light-emitting diodes by specific design on last barrier,” The 5th International Conference on Light-Emitting Devices and Their Industrial Applications (LEDIA 2017), Pacifico-Yokohama, Japan, Paper Number LEDp2-28.
202. Hui-Tzu Chang, Fang-Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Man-Fang Huang, and Yen-Kuang Kuo (2017, January). “Improvement of efficiency with specific design on multiple quantum barrier in deep-ultraviolet light-emitting diodes,” 2017 年中華民國物理年會(PSROC 2017).
203. Hui-Tzu Chang, Fang-Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Man-Fang Huang, and Yen-Kuang Kuo (2016, December). “Enhanced carrier confinement by

- composition-varied barriers in deep-ultraviolet light-emitting diodes,” OPTIC2016 (Optics & Photonics Taiwan, International Conference 2016).
204. Yen-Kuang Kuo, Fang-Ming Chen, Jih-Yuan Chang, and Bo-Ting Liou (2016, September) “Influence of barrier structure on polarization effect in near ultraviolet light-emitting diodes,” The 25th International Semiconductor Laser Conference (ISLC2016), Kobe Meriken Park Oriental Hotel, Japan, Paper Number WE57, 14.
 205. Yen-Kuang Kuo, Fang-Ming Chen, and Jih-Yuan Chang (2016, February). “Numerical analysis on the influence of quantum barriers in UV-A AlGa_N light-emitting diodes,” Photonics West 2016, Moscone Center, San Francisco, Paper Number 9742-4.
 206. Jih-Yuan Chang, Ya-Hsuan Shih, Fang-Ming Chen, and Yen-Kuang Kuo (2016, February) “Theoretical simulations of GaN-based tunnel-junction light-emitting diodes,” Photonics West 2016, Moscone Center, San Francisco, Paper Number 9768-56.
 207. Ya-Hsuan Shih, Jih-Yuan Chang, Jinn-Kong, Yen-Kuang Kuo, Fang-Ming Chen, and Ming-Lun Lee (2016, February). “Performance enhancement in 365-nm ultraviolet light-emitting diodes by specific-designed composition-graded multiple quantum barrier electron-blocking layer,” Photonics West 2016, Moscone Center, San Francisco, Paper Number 9742-3.
 208. Fang-Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Hui-Tzu Chang, and Yen-Kuang Kuo (2016, February) “Numerical analysis on the carrier characteristics of active region in deepultraviolet AlGa_N-based light-emitting diodes,” Photonics West 2016, Moscone Center, San Francisco, Paper Number 9748-74.
 209. Hui-Tzu Chang, Fang-Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Yen-Kuang Kuo, and Man-Fang Huang (2016, January). “Numerical study with polarization effect of deep ultraviolet light-emitting diodes,” 2016 年中華民國物理年會(PSROC 2016).
 210. Ming Chen, Jih-Yuan Chang, Ya-Hsuan Shih, Yen-Kuang Kuo, and Man-Fang Huang (2015, December). “Influence of polarization effect on the performance of AlGa_N-based deep ultraviolet light-emitting diodes,” 2015 年台灣光電科技研討會(OPTIC 2015).
 211. Yen-Kuang Kuo, Jih-Yuan Chang, Miao-Chan Tsai, Tsun-Hsin Wang, Yi-An Chang, Fang-Ming Chen, and Shan-Rong Li (2013, December). “Simulation of light-emitting diodes and solar cells,” 2013 年台灣光電科技研討會(OPTIC 2013). (Invited Talk)
 212. Fang-Ming Chen, Shan-Rong Li, Yi-An Chang, Jih-Yuan Chang, and Yen-Kuang Kuo (2013, December). “Improved performance of green light-emitting diodes by AlGa_N and InGa_N quantum barriers,” OPTIC2013 (Optics & Photonics Taiwan, International Conference 2013). (本論文入圍「IPC2013 Student Paper Awards」)
 213. Fang-Ming Chen, Shan-Rong Li, Yang-Da Shih, Miao-Chan Tsai, Yi-An Chang, Jih-Yuan Chang, Tsun-Hsin Wang, Bo-Ting Liou, and Yen-Kuang Kuo (2013, January). “Reduction of efficiency droop by increasing p-type doping and decreasing polarization of p-layers in nitride-based light-emitting diodes,” 2013 年中華民國物理年會(PSROC 2013).
 214. Yu-Rui Lin, Miao-Chan Tsai, Yi-An Chang, Jih-Yuan Chang, Tsun-Hsin Wang, Bo-Ting Liou, and Yen-Kuang Kuo (2013, January). “Numerical investigation of crystal orientation effect on the band structures of ultraviolet III-nitride-based light-emitting diodes,” 2013 年中華民國物理年會(PSROC 2013).
 215. Tsun-Hsin Wang and Yen-Kuang Kuo (2012, December). “Advantages of blue InGa_N light-emitting diodes with slightly-doped step-like electron blocking layer,” 台灣光電科技研討會(OPTIC 2012).
 216. Shih-Hsun Yen, Jih-Yuan Chang, Yi-An Chang, and Yen-Kuang Kuo (2012, December). “Numerical study of GaN/InGa_N multi-quantum well concentrator solar cells,” 台灣光電科技研討會(OPTIC 2012).

217. Yang-Da Shih, Yi-An Chang, Fang-Ming Chen, Jih-Yuan Chang, Tsun-Shin Wang and Yen-Kuang Kuo (2012, December). “Advantages of green light-emitting diodes with lattice-matched step-AlInGaN electron-blocking layer,” 台灣光電科技研討會(OPTIC 2012).
218. Yu-Rui Lin, Yi-An Chang, Shan-Rong Li, Bo-Ting Liou, and Yen-Kuang Kuo (2012, December). “Effect of polarization reduction on the output performance of ultraviolet light-emitting diodes,” 台灣光電科技研討會(OPTIC 2012).
219. Fang-Ming Chen, Tsun-Hsin Wang, Yang-Da Shih, Bo-Ting Liou, and Yen-Kuang Kuo (2012, December). “Advantages of polarization-suppressed AlGaIn/GaN superlattice as electron blocking layer,” 台灣光電科技研討會(OPTIC 2012).
220. Miao-Chan Tsai, Benjamin Leung, Jung Han, and Yen-Kuang Kuo (2012, October). “Accelerating radiative recombination by reducing Auger losses: a numerical study”, International Workshop on Nitride Semiconductors 2012, Sapporo, Japan, Paper Number ThP-OD-11.
221. Miao-Chan Tsai, Benjamin Leung, Jung Han, Michael E. Coltrin, and Yen-Kuang Kuo (2012, June). “Possibilities of combating Auger losses through radiative recombination engineering: a numerical study,” 54th Electronic Materials Conference, Pennsylvania State University, USA, paper B2.
222. Yen-Kuang Kuo and Jih-Yuan Chang (2012, January). “Effect of reversed polarization on characteristics of N-face InGaIn/GaN p-i-n solar cells,” Photonics West 2012, Moscone Center, San Francisco, Paper Number 8255-70.
223. Yih-Ting Kuo, Tsun-Hsin Wang, Jih-Yuan Chang, Yi-An Chang, and Yen-Kuang Kuo (2012, January). “Numerical analysis of green InGaIn light-emitting diodes with AlGaIn barriers,” 2012 年中華民國物理年會.
224. Shih-Hsun Yen, Jih-Yuan Chang, Bing-Cheng Lin, Fang-Ming Chen, and Yen-Kuang Kuo (2012, January). “氮化銦鎵本質層厚度對 P-I-N 氮化銦鎵同質界面太陽能電池性能之影響,” 2012 年中華民國物理年會.
225. Fang-Ming Chen, Jih-Yuan Chang, and Yen-Kuang Kuo (2012, January). “Effect of slight p-type doping in the InGaIn absorption layer in Ga-face GaIn/InGaIn p-i-n solar cell,” 2012 年中華民國物理年會.
226. Yu-Rui Lin and Yen-Kuang Kuo (2012, January). “Efficiency improvement of quaternary AlInGaIn multiple-quantum well ultraviolet light-emitting diodes with an n-doped quantum well near n-side,” 2012 年中華民國物理年會.
227. Yu-Rui Lin, Tsun-Hsin Wang, Jih-Yuan Chang, Miao-Chan Tsai, and Yen-Kuang Kuo (2011, December). “Investigation on optical performance of quaternary AlInGaIn-based ultraviolet light-emitting diode,” IPC2011 國際光電科技研討會(International Photonics Conference). (本論文榮獲「IPC2011 國際光電科技研討會學生論文獎(Student Paper Award)」)
228. Fang-Ming Chen, Jih-Yuan Chang, Bing-Cheng Lin, and Yen-Kuang Kuo (2011, December). “Numerical study of (0001) face GaIn/InGaIn p-i-n solar cells with compositional grading configuration,” IPC2011 國際光電科技研討會(International Photonics Conference).
229. Yu-Han Chen, Miao-Chan Tsai, Sheng-Horng Yen, Tsun-Hsin Wang, and Yen-Kuang Kuo (2011, December). “Enhancement in hole injection efficiency of InGaIn light-emitting diodes with superlattices as electron-blocking layer,” IPC2011 國際光電科技研討會 (International Photonics Conference)
230. Yih-Ting Kuo, Tsun-Hsin Wang, Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo (2011, December). “Effect of InGaIn light-emitting diodes without electron blocking

- layer,” IPC2011 國際光電科技研討會(International Photonics Conference).
231. Han-Wei Lin, Jih-Yuan Chang, Bing-Cheng Lin, and Yen-Kuang Kuo (2011, December). “Investigation of nitride-based p-i-n photovoltaics with interlayers in the intrinsic region,” IPC2011 國際光電科技研討會(International Photonics Conference).
 232. Tsun-Hsin Wang, Jih-Yuan Chang, Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo (2011, December). “InGaN multiple-quantum well light-emitting diodes with thin last barrier and p-doped last barrier,” IPC2011 國際光電科技研討會(International Photonics Conference).
 233. Yen-Kuang Kuo (2011, October). “Simulation of light-emitting diodes,” First International Conference of Graduate Students with Sisterhood Universities (ICGS2011), National Changhua University of Education.
 234. Jih-Yuan Chang and Yen-Kuang Kuo (2011, October). “Numerical investigation on the influence of piezoelectric polarization of GaN/InGaN p-i-n solar cells,” First International Conference of Graduate Students with Sisterhood Universities (ICGS2011), National Changhua University of Education.
 235. Tsun-Hsin Wang and Yen-Kuang Kuo (2011, October). “Numerical investigation of InGaN light-emitting diodes with GaN-InGaN-GaN barriers,” First International Conference of Graduate Students with Sisterhood Universities (ICGS2011), National Changhua University of Education.
 236. Yen-Kuang Kuo (2011, August). “Numerical investigation on the efficiency droop of blue InGaN multiple quantum-well light-emitting diodes,” International Congress on Natural Sciences 2011 (ICNS2011), Pukyong National University, Busan, Korea. **(Invited Talk)**
 237. Jih-Yuan Chang and Yen-Kuang Kuo (2011, August). “Numerical investigation on the influence of piezoelectric polarization of (0001) face GaN/InGaN p-i-n solar cells,” International Congress on Natural Sciences 2011 (ICNS2011), Pukyong National University, Busan, Korea. **(Invited Talk)**
 238. Jih-Yuan Chang and Yen-Kuang Kuo (2011, January). “Effect of polarization state on characteristics of InGaN/GaN multiple quantum well solar cells,” Photonics West 2011, Moscone Center, San Francisco, Paper Number 7933-81.
 239. Miao-Chan Tsai, Sheng-Horng Yen, Yu-Tong Chen, Shu-Hsuan Chang, and Yen-Kuang Kuo (2011, January). “Numerical study on AlGaIn-based ultraviolet light-emitting diodes,” Photonics West 2011, Moscone Center, San Francisco, Paper Number 7939-76.
 240. 林炳成、張誌原、郭艷光 (2011, January). “Simulation of In_{0.10}Ga_{0.90}N concentrator solar cells,” 2011 年中華民國物理年會.
 241. 施雅萱、蔡妙嬋、張誌原、郭艷光 (2011, January). “Improvement in output power of ultraviolet InGaIn LED by specific design for last barrier,” 2011 年中華民國物理年會.
 242. Shu-Hsuan Chang, Mei-Ling Chen, Yen-Kuang Kuo, and Yung-Chi Shen (2010, September). “Project-based course development for enhancing the skills of photonics device design,” Joint International IGIP-SEFI Annual Conference 2010, Trnava, Slovakia.
 243. Miao-Chan Tsai, Shu-Jeng Chang, Sheng-Horng Yen, and Yen-Kuang Kuo (2010). “Improvement of carrier distribution in active region of blue InGaIn light-emitting diodes,” The 8th International Symposium on Semiconductor Light Emitting Devices, P57.
 244. Man-Fang Huang, Miao-Chan Tsai, Pei-Wen Tsai, and Yen-Kuang Kuo (2010). “Investigation of ultraviolet AlGaIn light-emitting diodes with Ga- and N-polarity,” The 8th International Symposium on Semiconductor Light Emitting Devices, P47.
 245. Tsun-Hsin Wang and Yen-Kuang Kuo (2010, December). “Solution of debate on efficiency droop with electron blocking layer removal in blue and violet InGaIn light-emitting diodes,” 2010 年台灣光電科技研討會.

246. Tsun-Hsin Wang, Yu-Tong Chen, Yan-Ting Lin, and Yen-Kuang Kuo (2010, January). "Efficiency enhancement of blue InGaN LEDs with various barriers," 2010 年中華民國物理年會.
247. Miao-Chan Tsai, Sheng-Horng Yen, Yu-Tong Chen, and Yen-Kuang Kuo (2010, January). "Performance enhancement of blue InGaN light-emitting diodes with p-GaN layers and p-AlGaIn electron-blocking layer," 2010 年中華民國物理年會.
248. Jih-Yuan Chang (張誌原) and Yen-Kuang Kuo (郭艷光) (2010, January). "Enhancement of hole injection efficiency of blue InGaN light-emitting diodes by some specific designs on electron blocking layer," 2010 年中華民國物理年會.
249. Chien-Ming Wu (吳健銘), Jih-Yuan Chang (張誌原), Bing-Cheng Lin (林炳成), and Yen-Kuang Kuo (郭艷光) (2010, January). "Numerical Studies on InGaP/GaAs/InGaAs Triple-Junction Solar Cells," 2010 年中華民國物理年會.
250. Shu-Jeng Chang (張淑貞), Miao-Chan Tsai (蔡妙嬋), and Yen-Kuang Kuo (郭艷光) (2010, January). "Effect of last barrier on the optical performance of violet light-emitting diodes," 2010 年中華民國物理年會.
251. Tsun-Hsin Wang, Jih-Yuan Chang, Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo (2009, December). "Reduction of efficiency droop in InGaN LEDs with InGaIn barriers," 2009 年台灣光電科技研討會.
252. 張淑貞、蔡妙嬋、顏勝宏、郭艷光 (2009, December). "探討最後一個量子井障厚度對氮化鎵藍光發光二極體發光性能之影響," 2009 年台灣光電科技研討會.
253. 陳俊杰、蔡妙嬋、顏勝宏、廖志騰、郭艷光 (2009, December). "405-nm 雷射二極體使用步階函數狀氮化鎵量子井之元件模擬與分析," 2009 年台灣光電科技研討會.
254. 吳健銘、張誌原、王尊信、蔡妙嬋、郭艷光 (2009, December). "GaInP/GaAs/InGaAs 聚光型反向串疊式太陽能電池之熱效應探討," 2009 年台灣光電科技研討會.
255. Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo (2009, December). "Carrier transportation and efficiency droop of blue InGaN light-emitting diodes with p-doped barriers," 2009 年台灣光電科技研討會.
256. Yen-Kuang Kuo (郭艷光) and Miao-Chan Tsai (蔡妙嬋) (2009, January). "Simulation and analysis of laser diodes, VCSELs, LEDs, OLEDs, and solar cells," 2009 年中華民國物理年會, paper dE1-01, 國立彰化師範大學, 彰化市. (Invited Talk)
257. Yi-Hsiang Huang (黃奕翔), Shu-Hsuan Chang (張菽萱), and Yen-Kuang Kuo (郭艷光) (2009, January). "Improvement in blueshift of viewing angles of top-emitting organic light-emitting diodes by a specific design on the radiative recombination area," 2009 年中華民國物理年會, PE-53, 國立彰化師範大學, 彰化市. (本論文榮獲 2009 年「中華民國物理年會壁報論文佳作獎」)
258. Miao-Chan Tsai (蔡妙嬋), Sheng-Horng Yen (顏勝宏), and Yen-Kuang Kuo (郭艷光) (2009, January). "Effect of leakage current on the efficiency droop of the blue light-emitting diodes," 2009 年中華民國物理年會, paper dE1-03.
259. Wu-Liang Bi (畢無量), Man-Fang Huang (黃滿芳), and Yen-Kuang Kuo (郭艷光) (2009, January). "Effect of the temperature on an In_{0.49}Ga_{0.51}P/GaAs tandem solar cell," 2009 年中華民國物理年會, PE-52.
260. Chih-Teng Liao (廖志騰), Miao-Chan Tsai (蔡妙嬋), and Yen-Kuang Kuo (郭艷光) (2009, January). "Numerical simulation of green InGaIn light-emitting diodes with a step-like quantum well," 2009 年中華民國物理年會, PE-54.
261. Ying-Chung Lu (盧盈充), Miao-Chan Tsai (蔡妙嬋), Mei-Ling Chen (陳美玲), and

- Yen-Kuang Kuo (郭艷光) (2009, January). "Effect of polarization-matched AlInGaN barrier layer on 405-nm InGaN laser diodes," 2009 年中華民國物理年會, PE-55.
262. Tsun-Hsin Wang (王尊信), Bo-Ting Liou (劉柏挺), and Yen-Kuang Kuo (郭艷光) (2009, January). "Investigation of polarization property on InGaN multi-quantum-well laser diodes," 2009 年中華民國物理年會, PE-56.
263. Wu-Liang Bi, Man-Fang Huang, and Yen-Kuang Kuo (2008, December). "Investigation of current matching for In_{0.49}Ga_{0.51}P/GaAs/Ge triple-junction tandem solar cell," 2008 年台灣光電科技研討會, paper Fri-P1-042.
264. Yi-Fang Sheng, Miao-Chan Tsai, and Yen-Kuang Kuo (2008, December). "Numerical study on efficiency droop of GaN-based blue light-emitting diodes with different well widths," 2008 年台灣光電科技研討會, paper Fri-P1-211.
265. Ying-Chung Lu, Miao-Chan Tsai, Mei-Ling Chen, and Yen-Kuang Kuo (2008, December). "Utilization of polar-matched AlInGaN electron-blocking layer in 405-nm InGaN-based laser diodes," 2008 年台灣光電科技研討會, paper Sat-P2-184.
266. Chih-Teng Liao, Miao-Chan Tsai, Shu-Hsuan Chang, and Yen-Kuang Kuo (2008, December). "Simulation of blue InGaN light-emitting diodes with staggered quantum well," 2008 年台灣光電科技研討會, paper Sat-P2-185.
267. Yi-Hsiang Huang, Bo-Ting Liou, Shu-Hsuan Chang, and Yen-Kuang Kuo (2008, December). "Reducing blueshift of viewing angle for top-emitting organic light-emitting diodes," 2008 年台灣光電科技研討會, paper Sat-P2-264.
268. Sheng-Horng Yen (顏勝宏) and Yen-Kuang Kuo (郭艷光) (2008, January). "Simulation of violet InGaN laser diodes with staggered quantum wells", 2008 年中華民國物理年會, paper CE-07.
269. Chien-Yang Wen (溫健揚), Yi-Shiang Huang (黃奕翔), Yen-Kuang Kuo (郭艷光), and Shu-Hsuan Chang (張菽萱) (2008, January). "Electroluminescence of white organic light emitting diodes with dotted-line doped layers," 2008 年中華民國物理年會, paper PE-18.
270. Syuan-Huei Horng (洪暄惠), Sheng-Horng Yen (顏勝宏), Mei-Ling Chen (陳美玲), and Yen-Kuang Kuo (郭艷光) (2008, January). "Numerical study on 460-nm InGaN/GaN light-emitting diodes with normal and reversed polarizations," 2008 年中華民國物理年會, paper PE-20.
271. Miao-Chan Tsai, Sheng-Horng Yen, Hsueh-Jung Huang, Yen-Kuang Kuo, and Bo-Ting Liou (2008, January). "Investigation of the polarization-related effect on ultraviolet AlGaInN light-emitting diodes," 2008 年中華民國物理年會, paper PE-33.
272. 洪暄惠、顏勝宏、郭艷光 (2007, December). "探討極化方向對紫光雷射性能之影響," 2007 年台灣光電科技研討會, paper AO-039.
273. Miao-Chan Tsai, Sheng-Horng Yen, and Yen-Kuang Kuo (2007, December). "Effect of polarization on optical performance of 460-nm light-emitting diodes," 2007 年台灣光電科技研討會, paper AP-118.
274. Ming-Wei Yao (姚銘偉), Chien-Fang Chiu (邱千芳), Bo-Ting Liou (劉柏挺), and Yen-Kuang Kuo (郭艷光) (2007, January). "Numerical simulation of InGaAsN semiconductor lasers with GaAsN and GaAsP barriers," 2007 年中華民國物理年會, paper PE-76. (本論文榮獲 2007 年「中華民國物理年會最佳壁報論文獎」)
275. Sheng-Horng Yen (顏勝宏), Mei-Ling Chen (陳美玲), and Yen-Kuang Kuo (郭艷光) (2007, January). "Simulation of violet InGaN/InGaN laser diodes with multiquantum barriers," 2007 年中華民國物理年會, paper PE-50.

276. Chien-Yang Wen (溫健揚), Cheng-Hong Yang (楊政鴻), Shu-Hsuan Chang (張菽萱), and Yen-Kuang Kuo (郭艷光) (2007, January). “Efficient inverted top-emitting organic light-emitting diodes with a double cathode,” 2007 年中華民國物理年會, paper PE-83.
277. Syuan-Huei Horng (洪暄惠), Chung-Hsien Lee (李忠憲), and Yen-Kuang Kuo (郭艷光) (2007, January). “Numerical study on 400-nm InGa_N/Ga_N LED with an electron tunneling barrier,” 2007 年中華民國物理年會, paper PE-85.
278. Sheng-Horng Yen, Bo-Jean Chen, and Yen-Kuang Kuo (2006). “Simulation of InGa_N violet and ultraviolet multiple-quantum-well laser diodes,” in 6th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD’06, Nanyang Technological University, Singapore), paper MC1.
279. Yi-An Chang, Sheng-Horng Yen, Tsung-Hsine Ko, Te-Chung Wang, Chun-Yi Lu, Hao-Chung Kuo, Yen-Kuang Kuo, Tien-Chang Lu, and Shing-Chung Wang (2006). “Experimental and theoretical analysis on ultraviolet 370-nm AlGaIn_N light-emitting diodes,” Conference on Lasers and Electro-Optics (CLEO’06, Long Beach, California), paper JWB 77.
280. Ming-Wei Yao, Syuan-Huei Horng, Mei-Ling Chen, and Yen-Kuang Kuo (2006, December). “Numerical study on 1.3- μ m InGa_NAs/GaAs quantum well lasers with GaAs and Ga_N_xAs_{1-x} barriers,” 2006 年台灣光電科技研討會, paper 119, OPT’2006 Proceedings.
281. Bo-Jean Chen, Sheng-Horng Yen, Mei-Ling Chen, and Yen-Kuang Kuo (2006, December). “Numerical analysis of violet-ultraviolet InGa_N/InGa_N laser diodes,” 2006 年台灣光電科技研討會, paper 122, OPT’2006 Proceedings.
282. 楊政鴻、張菽萱、劉柏挺、郭艷光 (2006, December). “多層異質結構電洞注入層有機發光二極體之模擬與特性探討,” 2006 年台灣光電科技研討會, paper 124, OPT’2006 Proceedings.
283. Chung-Hsien Lee, Jun-Rong Chen, Yen-Kuang Kuo, Shu-Hsuan Chang, and Bo-Ting Liou (2006, December). “Influence of built-in polarization on electronic blocking layers for InGa_N quantum-well lasers,” 2006 年台灣光電科技研討會, paper 129, OPT’2006 Proceedings.
284. Li-De Horng (洪立德), Cheng-Hong Yang (楊政鴻), Yung-Cheng Chang (張永政), Yen-Kuang Kuo (郭艷光), and Yu-Wen Wang (王禹文) (2006, January). “Numerical simulation of carrier balance in multilayer organic light-emitting diodes,” 2006 年中華民國物理年會, paper PF-45.
285. 顏勝宏(Sheng-Horng Yen), 顏榮家(Rong-Chia Yen), 陳柏君(Bo-Jean Chen), 陳美玲(Mei-Ling Chen), 郭艷光(Yen-Kuang Kuo), 彭保仁(Bao-Jen Pong) (2005, December). “Simulation and analysis of optical characteristics of Ga_N micro-LEDs,” 2005 年台灣光電科技研討會, paper PA-FR1-065, OPT’2005 Proceedings.
286. 張永政(Yung-Cheng Chang), 楊政鴻(Cheng-Hong Yang), 洪立德(Li-De Horng), 郭艷光(Yen-Kuang Kuo), 張菽萱(Shu-Hsuan Chang), 劉柏挺(Bo-Ting Liou) (2005, December). “Effect of hole blocking layer on the characteristics of organic light-emitting diodes,” 2005 年台灣光電科技研討會, paper PA-FR1-066, OPT’2005 Proceedings.
287. 顏勝宏(Sheng-Horng Yen), 姚銘偉(Ming-Wei Yao), 洪暄惠(Syuan-Huei Horng), 陳美玲(Mei-Ling Chen), 郭艷光(Yen-Kuang Kuo) (2005, December). “Design and analysis of 1.3- μ m AlGaInAs/InP MQW layers,” 2005 年台灣光電科技研討會, paper PA-FR1-070, OPT’2005 Proceedings.
288. 陳俊榮(Jun-Rong Chen), 李忠憲(Chung-Hsien Lee), 邱千芳(Chien-Fang Chiu), 郭艷光

- (Yen-Kuang Kuo), 劉柏挺(Bo-Ting Liou) (2005, December). “Starined InGaAlAs/AlGaAs active layers for 850-nm VCSELs,” 2005 年台灣光電科技研討會, paper PA-FR1-073, OPT’2005 Proceedings.
289. Jun-Rong Chen, Jyh-Lih Wu, and Yen-Kuang Kuo (2005, January). “Effect of doped GaN barrier layer on the optical and transport properties of InGaN/GaN multiple quantum-well light-emitting diodes,” 2005 年中華民國物理年會, paper PD-15.
290. Shang-Wei Hsieh, Ming-Wei Yao, Hsiu-Fen Chen, and Yen-Kuang Kuo (2005, January). “Analysis of strain-compensated structures for 1.55- μm AlGaInAs quantum-well lasers,” 2005 年中華民國物理年會, paper PD-29.
291. Man-Lin Tu and Yen-Kuang Kuo (2005, January). “Numerical study on 570-nm strain-compensated AlGaInP VCSEL for PMMA-d5 optical fiber communication,” 2005 年中華民國物理年會, paper PD-30.
292. Cheng-Hong Yang, Yung-Cheng Chang, Bo-Ting Liou, and Yen-Kuang Kuo (2005, January). “Numerical simulation of ITO/TPD/Alq₃/Mg:Ag organic light-emitting diodes,” 2005 年中華民國物理年會, paper PE-72.
293. 吳志力、陳俊榮、郭艷光、劉柏挺 (2004, December). “自動脈衝式 780-nm 砷化鋁鎵雷射特性之模擬與分析,” 2004 年台灣光電科技研討會, paper A-SA-II 2–5, OPT’04 Proceedings.
294. 張永政、楊政鴻、陳俊榮、郭艷光、劉柏挺、王禹文 (2004, December). “ITO/TPD/Alq₃/Al 有機發光二極體之模擬與特性探討,” 2004 年台灣光電科技研討會, paper A-SU-II 8–4, OPT’04 Proceedings.
295. 羅傳煜、張詒安、郭浩中、郭艷光、王興宗 (2004, December). “InGaN 量子井雷射使用四元材料 AlInGaIn 為阻擋層的特性分析,” 2004 年台灣光電科技研討會, paper A-SU-I 9–2, OPT’04 Proceedings.
296. 謝尚衛、姚銘偉、郭艷光 (2004, December). “電子阻礙層對 1.55- μm AlGaInAs-InP 量子井雷射性能之影響,” 2004 年台灣光電科技研討會, paper PA-SA1–17, OPT’04 Proceedings.
297. 黃清白、顏勝宏、郭艷光 (2004, December). “紫外光發光二極體之模擬與分析,” 2004 年台灣光電科技研討會, paper PA-SA1–34, OPT’04 Proceedings.
298. 陳秀芬、傅少甫、郭艷光 (2004). “InGaAsN 量子井雷射之模擬與分析,” 2004 應用科技研討會(國立高雄應用科技大學), paper QD02.
299. 陳柏君、顏勝宏、郭艷光 (2004). “極短波長紫外光發光二極體之模擬與分析,” 2004 應用科技研討會(國立高雄應用科技大學), paper PD01.
300. Cheng-Yang Lin, Sheng-Horng Yen, Bo-Ting Liou, and Yen-Kuang Kuo (2004, January). “Effect of band-offset ratio on analysis of 405-nm InGaN laser characteristics,” 2004 年中華民國物理年會, paper PD-27.
301. Hsiu-Fen Chen, Shang-Wei Hsieh, Bo-Ting Liou, and Yen-Kuang Kuo (2004, January). “Effect of band-offset ratio on carrier distribution and optical properties of blue InGaN quantum-well lasers,” 2004 年中華民國物理年會, paper PD-28.
302. Meng-Lun Tsai, Man-Fang Huang, and Yen-Kuang Kuo (2004, January). “Theoretical analysis of carrier overflow for red AlGaInP laser diodes with various graded-index separate confinement heterostructures,” 2004 年中華民國物理年會, paper PD-50.
303. Yung-Cheng Chang, Yu-Hua Wu, and Yen-Kuang Kuo (2004, January). “Numerical simulation of dye-doped sol-gel Q switch for ruby laser,” 2004 年中華民國物理年會, paper PE-10.

304. 顏勝宏、林正洋、何依萍、陳美玲、郭艷光、劉柏挺 (2003, December). “藍紫光氮化銦鎵量子井雷射特性之模擬與分析,” 2003 年台灣光電科技研討會, paper FA3-6, OPT'03 Proceedings II, 60–62.
305. 劉柏挺、林正洋、顏勝宏、張永政、郭艷光 (2003, December). “Vegard's law 的偏異對 Wurtzite $\text{In}_x\text{Ga}_{1-x}\text{N}$ 能隙與彎曲係數的影響,” 2003 年台灣光電科技研討會, paper FA3-8, OPT'03 Proceedings II, 66–68.
306. 陳俊榮、屠嫻琳、朱漢義、郭艷光、劉柏挺 (2003, December). “應力與氧化層結構對磷化鋁鎵銦 650 nm 面射型雷射的影響,” 2003 年台灣光電科技研討會, paper PA2-17, OPT'03 Proceedings III, 110–112.
307. Yi-An Chang, Yen-Kuang Kuo, Hao-Chung Kuo, and Shing-Chung Wang (2003, December). “Effect of inhomogeneous hole distribution in violet-blue InGaN quantum-well lasers,” 2003 年台灣光電科技研討會, paper FB3-7, OPT'03 Proceedings III, 155–157.
308. Man-Fang Huang (黃滿芳), Meng-Lun Tsai (蔡孟倫), Yen-Kuang Kuo (郭艷光), Jen-Yu Chu (朱仁佑), and Chau-Yang Lin (林朝陽) (2003, December). “Improvement of characteristic temperature for AlGaInP laser diodes,” 2003 年台灣光電科技研討會, paper FB2-8, OPT'03 Proceedings II, 134–136.
309. Bo-Ting Liou, Sheng-Horng Yen, and Yen-Kuang Kuo (2003, January). “Vegard's law deviation in band gaps and bowing parameters of the III-nitride ternary compound semiconductors,” 2003 年中華民國物理年會, paper Dd4.
310. Hsiu-Fen Chen, Shang-Wei Hsieh, Yi-An Chang, Yen-Kuang Kuo, Man-Fang Huang, Hwei-Heng Wang, and Pin-Hwei Liu (2003, January). “Experimental and numerical investigation of 590-nm AlGaInP light emitting diodes and vertical-cavity surface-emitting lasers,” 2003 年中華民國物理年會, paper PD1.
311. Man-Lin Tu, Sheng-Horng Yen, Cheng-Yang Lin, Han-Yi Chu, and Yen-Kuang Kuo (2003, January). “Numerical study on the optical properties of a 655-nm AlGaInP vertical-cavity surface-emitting laser for PMMA-d8 optical fiber communication,” 2003 年中華民國物理年會, paper PD28.
312. Sheng-Horng Yen, Wen-Wei Lin, Sheng-Joue Young, Rong-Quan Lee, Jiann Lin, and Yen-Kuang Kuo (2003, January). “Numerical study on band structures and bandgap bowing parameters of the zincblende BAlN, BGaN, and BInN ternary semiconductors,” 2003 年中華民國物理年會, paper PD35.
313. Meng-Lun Tsai, Sheng-Joue Young, Yi-An Chang, Sheng-Horng Yen, Shih-Wei Huang, and Yen-Kuang Kuo (2003, January). “Numerical study of a violet InGaIn vertical-cavity surface-emitting laser,” 2003 年中華民國物理年會, paper PD36.
314. Shang-Wei Hsieh, Hsiu-Fen Chen, Yi-An Chang, and Yen-Kuang Kuo (2003, January). “Numerical study of Cr:LiSAF passive Q-switching with a Cr:YSO solid-state saturable absorber,” 2003 年中華民國物理年會, paper PE62.
315. Pei-Hsuan Wu, Yi-An Chang, and Yen-Kuang Kuo (2003, January). “Optical performance of Cr:YSO and Dy:CaF₂ Q-switched ruby laser systems,” 2003 年中華民國物理年會, paper PE63.
316. 張詒安、陳秀芬、謝尚衛、吳佩璇、蔡孟倫、張誌原、郭艷光、劉柏挺 (2002, December). “415 nm 紫光氮化銦鎵量子井雷射電子溢流特性之探討,” 2002 年台灣光電科技研討會, paper TA1-3, OPT'02 Proceedings I, 7–9.
317. 張詒安、吳佩璇、吳育驊、屠嫻琳、郭艷光、劉柏挺 (2002, December). “使用 Dy:CaF₂ 被動 Q 開關於紅寶石雷射之模擬分析,” 2002 年台灣光電科技研討會, paper TG2-6,

- OPT'02 Proceedings I, 337–339.
318. 謝尚衛、張志康、屠嫻琳、郭艷光 (2002, December). “固態可飽和吸收體 Cr:YSO 在 Cr:LiSAF 雷射之效用,” 2002 年台灣光電科技研討會, paper TG2-7, OPT'02 Proceedings I, 340–342.
 319. 張詒安、張志康、郭艷光 (2002, December). “使用可飽和吸收體 Ho:YVO₄ 於 2- μ m Tm:Y₃Al₅O₁₂ 雷射系統的性能分析,” 2002 年台灣光電科技研討會, paper TG2-8, OPT'02 Proceedings I, 343–345.
 320. 顏勝宏、林文偉、楊勝州、李榮銓、林踐、郭艷光、劉柏挺 (2002, December). “應力對 wurtzite 氮化鋁銻 bowing parameter 的影響,” 2002 年台灣光電科技研討會, paper PA-30, OPT'02 Proceedings III, 88–90. (註：本論文榮獲 2002 年「台灣光電科技研討會最佳壁報論文獎」)
 321. 顏勝宏、林文偉、林正洋、朱漢義、郭艷光、劉柏挺 (2002, December). “應力對 zinc-blende 氮化鋁銻 bowing parameter 的影響,” 2002 年台灣光電科技研討會, paper PA-31, OPT'02 Proceedings III, 91–93.
 322. 屠嫻琳、張志康、謝尚衛、郭艷光、劉柏挺 (2002, December). “PMMA-d8 光纖通信用紅光面射型半導體雷射的設計與分析,” 2002 年台灣光電科技研討會, paper PA-32, OPT'02 Proceedings III, 94–96.
 323. 楊勝州、張詒安、顏勝宏、黃詩瑋、蔡孟倫、劉冠良、陳俊榮、林漢威、何依萍、郭艷光 (2002, December). “紫光氮化銻銻面射型半導體雷射之設計與分析,” 2002 年台灣光電科技研討會, paper PA-33, OPT'02 Proceedings III, 97–99.
 324. 顏勝宏、林文偉、謝尚衛、陳秀芬、吳育驊、郭艷光、劉柏挺 (2002, December). “Zinc-blende 氮化硼銻 bowing parameter 的研究,” 2002 年台灣光電科技研討會, paper PA-34, OPT'02 Proceedings III, 100–102.
 325. Wen-Wei Lin and Yen-Kuang Kuo (2002, January). “Band gaps and bowing parameters of the strained III-nitride semiconductor materials,” 2002 年中華民國物理年會, paper D-081.
 326. Yi-An Chang and Yen-Kuang Kuo (2002, January). “Design and characterization of a 1.55- μ m In_{0.76}Ga_{0.24}As_{0.82}P_{0.18}/In_{0.48}Ga_{0.52}As_{0.82}P_{0.18} vertical-cavity surface-emitting laser,” 2002 年中華民國物理年會, paper E-069.
 327. Jih-Yuan Chang and Yen-Kuang Kuo (2002, January). “Optical performance of the Cr:YSO Q-switched Cr:LiCAF laser system,” 2002 年中華民國物理年會, paper E-070.
 328. Jiann Lin, Shiu-Yu Chiu, Yen-Kuang Kuo, and Wen-Wei Lin (2001). “Simulations of electronic structure for GaN devices,” in the 4th Asian Workshop on First-Principles Electronic Structure Calculations, Taipei.
 329. 張詒安、黃雅蓮、郭艷光 (2001, December). “黃綠光磷化鋁銻銻面射型半導體雷射之模擬分析,” 2001 年台灣光電科技研討會, paper FA2-8, OPT'01 Proceedings, 398–400.
 330. 陳鴻銘、郭艷光 (2001, December). “Nd:YAG-Cr:YAG 共振腔中 Cr:YAG 被動 Q 開關與雷射效應雙象性之探討,” 2001 年台灣光電科技研討會, paper FD2-7, OPT'01 Proceedings, 701–703.
 331. 林文偉、郭艷光 (2001, December). “III-V 族氮化鋁銻之能帶結構探討,” 2001 年台灣光電科技研討會, paper P2, OPT'01 Proceedings, 868–871.
 332. 張誌原、郭艷光 (2001, December). “氮化銻銻多量子井結構之電洞不均勻性探討,” 2001 年台灣光電科技研討會, paper P3, OPT'01 Proceedings, 872–875.
 333. 張郁妮、郭艷光 (2001, December). “以砷化銻銻做活性層對 850 nm 面射型半導體雷

- 射性能的影響,” 2001 年台灣光電科技研討會, paper P28, OPT’01 Proceedings, 956–958.
334. 張志康、張詒安、郭艷光 (2001, December). “光纖通訊用 1.3- μm 面射型半導體雷射之模擬分析,” 2001 年台灣光電科技研討會, paper P28, OPT’01 Proceedings, 959–961.
 335. Hsu-Ching Huang, Yuni Chang, and Yen-Kuang Kuo (2001, January). “670-nm AlGaInP based VCSEL with different materials of distributed Bragg reflectors,” 2001 年中華民國物理年會, paper PE7.
 336. Horng-Min Chen and Yen-Kuang Kuo (2001, January). “Dual Q-switching and laser action in a Nd:YAG - Cr:YAG oscillator,” 2001 年中華民國物理年會, paper PE8.
 337. Wen-Wei Lin, Yen-Kuang Kuo, and Jiann Lin (2001, January). “III-V InGaN and AlGaN bandgap bowing and optical properties derived from theoretical simulation,” 2001 年中華民國物理年會, paper PE10.
 338. Hsu-Ching Huang, Yuni Chang, and Yen-Kuang Kuo (2001, January). “Numerical analysis on InGaN multi-quantum well VCSEL fabricated with GaN/AlGaN distributed Bragg reflectors,” 2001 年中華民國物理年會, paper PE12.
 339. Jih-Yuan Chang and Yen-Kuang Kuo (2001, January). “Numerical study of the Cr:LiCAF/Cr:YSO Q-switching system,” 2001 年中華民國物理年會, paper PE13.
 340. Yi-An Chang, Jih-Yuan Chang, Yen-Kuang Kuo, Jiann Lin, and Chung-I Chiang (2001, January). “Optical properties of InGaN multi-quantum well structures - experimental measurement and numerical simulation,” 2001 年中華民國物理年會, paper PE14.
 341. Jiann Lin, Shiu-Yu Chiu, Yen-Kuang Kuo, and Wen-Wei Lin (2001, January). “Simulations of electronic structure for strained GaN,” 2001 年中華民國物理年會, paper PE15.
 342. Ya-Lien Huang, Yen-Kuang Kuo, and Man-Fang Huang (2001, January). “Study of distributed Bragg reflector on the optical properties of the 570-nm AlGaInP light emitting diodes,” 2001 年中華民國物理年會, paper PE16.
 343. Yuni Chang, Hsu-Ching Huang, and Yen-Kuang Kuo (2001, January). “The effect of spacer band gap on 850-nm AlGaAs VCSEL,” 2001 年中華民國物理年會, paper PE17.
 344. Chia-Ching Lin and Yen-Kuang Kuo (2001, January). “Theoretical study of the Nd:YAG laser passively Q-switched with Cr:YAG solid state saturable absorber,” 2001 年中華民國物理年會, paper PE18.
 345. Yen-Kuang Kuo, Hsu-Ching Huang, Jih-Yuan Chang, Yuni Chang, Kuo-Kai Horng, Ya-Lien Huang, Wen-Wei Lin, and Man-Fan Huang (2000). “A study of the optical properties of the yellow-green AlGaInP and the blue-UV InGaN semiconductor materials,” in the 13th Annual Lasers and Electro Optics Society Meeting (IEEE/LEOS 2000, Puerto Rico), paper ThL 4 (Conference Proceedings 790–791).
 346. Yen-Kuang Kuo, Kuo-Kai Horng, Hsu-Ching Huang, Ya-Lien Huang, Jih-Yuan Chang, Yuni Chang, Wen-Wei Lin, Yi-An Chang, and Chih-Kang Chang (2000). “Numerical study on III-N and III-P semiconductor materials with LASTIP, PICS3D, and CASTEP,” in the 2nd International Photonics Conference (IPC2000, National Chiao Tung University, Hsinchu, Taiwan), paper W-S1-A003, Proc. IPC 2000, 17–19.
 347. Jih-Yuan Chang and Yen-Kuang Kuo (2000). “Temperature-dependent current overflow of InGaN quantum well structure - a numerical study,” in the 2nd International Photonics Conference, paper W-S1-A004, Proc. IPC 2000, 20–22.
 348. Wen-Wei Lin, Yen-Kuang Kuo, Jiann Lin, and Ming-Hsien Lee (2000). “Bandgap bowing of $\text{In}_x\text{Ga}_{1-x}\text{N}$ derived from theoretical simulation by using LDA theory,” in the 2nd International Photonics Conference, paper W-S1-B005, Proc. IPC 2000, 39–41.

349. Hsu-Ching Huang, Yuni Chang, and Yen-Kuang Kuo (2000). “A numerical study on 570-nm AlGaInP quantum well structure with tensile-strained barrier,” in the 2nd International Photonics Conference, paper Th-T1-B002, Proc. IPC 2000, 340–342.
350. Jih-Yuan Chang, Yen-Kuang Kuo, Jiann Lin, and Chung-I Chiang (2000). “Optical property of an In_xGa_{1-x}N/GaN quantum well structure,” in the 2nd International Photonics Conference, paper TH-S1-P002, Proc. IPC 2000, 491–493.
351. Yuni Chang, Hsu-Ching Huang, and Yen-Kuang Kuo (2000). “Optical characteristics of yellowish green InGaAlP quantum well structure with an n-type well,” in the 2nd International Photonics Conference, paper TH-S1-P003, Proc. IPC 2000, 494–496.
352. Kuo-Kai Horng, Hsu-Ching Huang, and Yen-Kuang Kuo (2000). “Numerical study on an ultraviolet GaN/Al_{0.2}Ga_{0.8}N vertical-cavity surface-emitting laser,” in the 2nd International Photonics Conference, paper TH-S1-P004, Proc. IPC 2000, 497–499.
353. Yuni Chang, Hsu-Ching Huang, Yen-Kuang Kuo, and Yeung-Sy Su (2000). “Experimental study on optical property of lightly nitrogen-doped GaP semiconductor material,” in the 2nd International Photonics Conference, paper TH-T1-P014, Proc. IPC 2000, 577–579.
354. Jiann Lin, Jih-Yuan Chang, Wen-Wei Lin, and Yen-Kuang Kuo (2000). “Dimension effect simulations of InGaN active layer in GaN LED,” in the 8th Asia Pacific Physics Conference, Taipei.
355. Yen-Kuang Kuo, Jih-Yuan Chang, and Horng-Min Chen (2000, January). “Numerical study on passive Q-switching of ruby and tunable Cr:LiCAF lasers with Cr:YSO solid-state saturable absorber,” 2000 年中華民國物理年會, paper FC2.
356. Yen-Kuang Kuo, Jiann Lin, Kuo-Kai Horng, Ya-Lien Huang, Jih-Yuan Chang, Yuni Chang, Hsu-Ching Huang, Jen-Inn Chyi, Chang-Cheng Chuo, and Man-Fang Huang (2000, January). “Experimental and numerical studies on the optical properties of InGaN and AlGaInP short-wavelength semiconductor materials,” 2000 年中華民國物理年會, paper PF12.
357. Yen-Kuang Kuo, Horng-Min Chen, Chia-Ching Lin, Jih-Yuan Chang, Yuni Chang, and Kuo-Kai Horng (1999, December). “Performance of alexandrite laser with Cr:YSO solid-state saturable absorber: a numerical study,” 1999 年台灣光電科技研討會, paper TH-III 2-C-8, OPT’99 Proceedings, 793–796.
358. Yen-Kuang Kuo, Milton Birnbaum, and Man-Fang Huang (1997). “Cr-doped YSO and HITCI-doped ORMOSIL broad-band solid-state saturable absorbers,” 台灣光電產業技術發展研討會論文集 (會議地點：工業技術研究院), 8–13.
359. Yen-Kuang Kuo, Ferruh Unlu, Sanggeon Lee, Man-Fang Huang, Milton Birnbaum, Peter D. Fuqua, and Bruce Dunn (1996). “Saturable absorber Q-switches for tunable near IR solid state lasers,” in Conference on Lasers and Electro-Optics (CLEO’96, Anaheim, California), paper CTuL29.
360. Yen-Kuang Kuo and Milton Birnbaum (1995). “Passive Q-switching of the solid-state lasers with Ho:YLF, Cr⁴⁺:YSO and Dy²⁺:CaF₂ solid-state saturable absorbers,” in Conference on Lasers and Electro-Optics (CLEO’95, Baltimore, Maryland), paper CTuI66.
361. Yen-Kuang Kuo, Milton Birnbaum, and Robert D. Stultz (1995). “Ho:YVO₄ and Ho:YLiF₄ solid-state saturable absorber Q-switches for 2- μ m Tm,Cr:Y₃Al₅O₁₂ laser,” in the 8th Annual Lasers and Electro Optics Society Meeting (IEEE/LEOS 1995, San Francisco, California), paper SSL 3.5.
362. Yen-Kuang Kuo, Man-Fang Huang and Milton Birnbaum (1994). “Tunable passive Q-switching of the Cr:LiCaAlF₆ laser with a broad-band Cr⁴⁺:Y₂SiO₅ solid-state saturable absorber,” in the 7th Annual Lasers and Electro Optics Society Meeting (IEEE/LEOS 1994, Boston, Massachusetts), paper SS5.2.

363. Yen-Kuang Kuo, Wei Chen, Robert D. Stultz, and Milton Birnbaum (1994). “Cr⁴⁺:GSGG and Dy²⁺:CaF₂ passive Q-switches for the ruby laser,” in Conference on Lasers and Electro-Optics (CLEO'94, Anaheim, California) paper CTuK73.

(C) 英文書籍 (章節)

364. Yen-Kuang Kuo, Jih-Yuan Chang, Ya-Hsuan Shih, Fang-Ming Chen, and Miao-Chan Tsai (2017). *Tunnel-Junction Light-Emitting Diodes*, in *Handbook of Optoelectronic Device Modeling & Simulation* (Chapter 16, 523–540). Joachim Piprek (Ed.), CRC Press, Taylor & Francis Group, New York. ISBN: 978-1-4987-4946-6.
365. Bao-Jen Pong, Yen-Kuang Kuo, and Sheng-Horng Yen (2008). *Micro-Size Light Emitting Diode (μ -LED)*, in *Progress in Solid State Electronics Research* (Chapter 6, 141–165). James P. Martingale (Ed.), Nova Science Publishers, Inc., New York. ISBN: 1-60021-852-0.
366. Yen-Kuang Kuo, Sheng-Horng Yen, and Jun-Rong Chen (2007). *Ultraviolet Light-Emitting Diodes*, in *Nitride Semiconductor Devices: Principles and Simulation* (Chapter 13, 279–301). Joachim Piprek (Ed.), WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim. ISBN: 978-3-527-40667-8.

(D) 研究成果獎項及其他榮譽

1. 2019 年，榮獲「行政院科技部補助大專校院獎勵特殊優秀人才措施（2019 年 8 月至 2020 年 7 月）」獎勵。
2. 2018 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
3. 2018 年，榮獲「行政院科技部補助大專校院獎勵特殊優秀人才措施（2018 年 8 月至 2019 年 7 月）」獎勵。
4. 2017 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
5. 2017 年，榮獲「行政院科技部補助大專校院獎勵特殊優秀人才措施（2017 年 8 月至 2018 年 7 月）」獎勵。
6. 2016 年，指導光電科技研究所博士生陳芳名，榮獲「行政院科技部 106 年度補助博士生赴國外研究計畫（千里馬計畫）」，赴美國耶魯大學（Yale University）電機工程學系進修，獎學金 60 萬元。
7. 2016 年，榮獲「行政院科技部補助大專校院獎勵特殊優秀人才措施（2016 年 8 月至 2017 年 7 月）」獎勵。
8. 2015 年，榮獲「行政院科技部補助大專校院獎勵特殊優秀人才措施（2015 年 8 月至 2016 年 7 月）」獎勵。
9. 2015 年，指導光電科技研究所博士生蔡妙嬋，榮獲「中華民國物理學會研究生論文表現優良獎」。
10. 2014 年，榮獲「行政院科技部補助大專校院獎勵特殊優秀人才措施（2014 年 8 月至 2015 年 7 月）」獎勵。
11. 2014 年，指導光電科技研究所博士生蔡妙嬋，榮獲「中華民國光電學會博士班學生論文獎」。
12. 2014 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
13. 2013 年，榮獲「行政院國家科學委員會補助大專校院獎勵特殊優秀人才措施（2013 年 8 月至 2014 年 7 月）」獎勵。
14. 2013 年，榮獲「財團法人白沙文教基金會學術研究金質獎章」。

15. 2013 年，榮獲「國立彰化師範大學教師研究成果精實獎」。
16. 2013 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
17. 2012 年，榮獲「行政院國家科學委員會補助大專校院獎勵特殊優秀人才措施（2012 年 8 月至 2013 年 7 月）」獎勵。
18. 2012 年，榮獲「國立彰化師範大學教師研究成果精實獎」。
19. 2012 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
20. 2011 年，榮獲「行政院國家科學委員會補助大專校院獎勵特殊優秀人才措施（2011 年 8 月至 2012 年 7 月）」獎勵。
21. 2011 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
22. 2011 年，獲選為 2012 年「Who's Who in the World」成員。
23. 2011 年，指導物理系大專生（光電科技研究所碩士班預研究生）林育瑞，榮獲「IPC2011 國際光電科技研討會學生論文獎」。
24. 2010 年，榮獲「行政院國家科學委員會補助大專校院獎勵特殊優秀人才措施（2010 年 10 月至 2011 年 7 月）」獎勵。
25. 2010 年，榮獲「98 年度國立彰化師範大學傑出研究教師」。
26. 2010 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
27. 2010 年，指導光電科技研究所博士生蔡妙嬋，榮獲「行政院國家科學委員會 100 年度補助博士生赴國外研究計畫（千里馬計畫）」，赴美國耶魯大學（Yale University）電機工程學系進修，獎學金 45 萬元。
28. 2009 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
29. 2009 年，指導光電科技研究所碩士生黃奕翔，榮獲「中華民國物理年會壁報論文佳作獎」。
30. 2008 年，指導光電科技研究所碩士生蔡妙嬋，榮獲「中華民國物理學會研究生優良論文佳作獎」。
31. 2007 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
32. 2007 年，榮獲「財團法人國立彰化師範大學文教基金會學術研究獎助」。
33. 2007 年，指導光電科技研究所碩士生姚銘偉，榮獲「中華民國物理年會最佳壁報論文獎」。
34. 2006 年，榮獲「國立彰化師範大學教師研究成果頂級獎勵」。
35. 2005 年，榮獲「財團法人國立彰化師範大學文教基金會學術研究獎助」。
36. 2004 年，榮獲「財團法人國立彰化師範大學文教基金會學術研究獎助」。
37. 2003 年，指導物理研究所碩士生張詒安，榮獲「中華民國光學工程學會碩士班學生論文獎」。
38. 2002 年，指導物理研究所碩士生顏勝宏，榮獲「台灣光電科技研討會最佳壁報論文獎」。