PUBLICATION LIST

JEN-INN CHYI（綦振瀛）

(A). REFERRED PAPER

1. T. Won, G. Munns, M. Unlu, J.-I. Chyi, and H. Morkoc, "Characteristics of P-GaAs/n-Si Heterojunctions Grown by MBE", J.Appl. Phys., 62, 3860, 1987.
2. D. Huang, J.-I. Chyi, J. Klem, and H. Morkoc, "Optical Properties of Molecular Beam Epitaxially Grown GaAsSb on GaAs and InP Substrates", J. Appl. Phys., 63, 5859, 1988.
3. T. Won, C.K. Peng, J.-I. Chyi, and H. Morkoc, "InAlAs/InGaAs Double-heterojunction P-n-p Bipolar Transistors Grown by Molecular Beam Epitaxy", IEEE Electron Device Lett., EDL-9, 344-346, 1988.
4. S. Kalem, J.-I. Chyi, C. Litton, H. Morkoc, S. Kan, and A. Yariv, "Electrical Properties of InAs Epilayers Grown by Molecular Bean Epitaxy on Si Substrates", Appl. Phys. Lett., 53, 562-564, 1988.
5. C.K. Peng, J. Chen, J.-I. Chyi, and H. Morkoc, "Extremely Low Nonalloyed and Alloyed Contact Resistance Using an InAs Cap Layer on InGaAs by MBE", J. Appl. Phys., 64, 429, 1988.
6. G. Ji, S. Agarwala, D. Huang, J.-I. Chyi, and H. Morkoc, "Band Lineup in GaAsSb/GaAs Strained-layer Multiple Quantum Wells Grown by Molecular Beam Epitaxy", Phys. Rev. B., 38, 10571, 1988.
7. J.-I. Chyi, S. Kalem, N. Kumar, C. litton, and H. Morkoc, "Growth of InSb and InAsSb on GaAs by Molecular Beam Epitaxy", Appl. Phys. Lett., 53, 1092-1094, 1988.
8. S. Kalem, J.-I. Chyi, H. Morkoc, R. Bean, and K. Zanio, "Growth and Transport Properties of InAs Epilayers on GaAs", Appl. Phys. Lett., 53, 1647-1649, 1988.
9. C. Kiely, J.-I. Chyi, A. Rockett, and H. Morkoc, "On the Microstructure and interfacial Structure of InSb Layers Grown on GaAs by Molecular Beam Epitaxy", Phil. Mag. A, 60, 321, 1989.
10. J.-I. Chyi, D. Biswas, S. Iyer, N. Kumar, H. Morkoc, R. Bean, K. Zanio, R. Grober, and D. Drew, "MBE Growth and Characterization of InSb on Si", J. Vac. Sci. and Tech. B, 7, 345, 1989.
11. J.-I. Chyi, D. Biswas, S. Iyer, N. Kumar, H. Morkoc, R. Bean, K. Zanio, H. Lee, and Haydn Chen, "Molecular Beam Epitaxial Growth and Characterization of InSb on Si", Appl. Phys. Lett., 54, 1016-1018, 1989.
12. R. Grober, H. Drew, J.-I. Chyi, S. Kalem, and H. Morkoc, "Infrared Photoluminescence of InAs Epilayers Grown on GaAs and Si Substrates", J. Appl. Phys., 65, 4079, 1989.
13. J. Chen, G.B. Gao, D. Huang, J.-I. Chyi, M.S. Unlu, and H. Morkoc, "Photon Emission from Avalanche Breakdown in the Collector Junction of AlGaAs/GaAs HBTs", Appl. Phys. Lett., 55, 374-376, 1989.
14. H.-J. Ou, S.-C. Tsen, K.T. Tsen, J.M. Cowley, J.-I. Chyi, A. Salvador, and H. Morkoc, "Determination of the Local Al Concentration in AlGaAs-GaAs Quantum Well Structures Using the (200) Diffraction Intensity Obtained with a 10 A Electron Beam", Appl. Phys. Lett., 54, 1454-1456, 1989.
15. J.-I. Chyi, J. Chen, N. Kumar, C. Kiely, C.K. Peng, A. Rockett, and H. Morkoc, "Low Resistance Nonalloyed Ohmic Contacts on P-type GaAs Using GaSb/GaAs Strained-layer Superlattices", Appl. Phys. Lett., 55, 570-572, 1989.
16. N.S. Kumar, J.-I. Chyi, C.K. Peng, and H. Morkoc, "A GaAs MESEET with Extremely Low Resistance Nonalloyed Ohmic Contacts Using InAs/GaAs SLS by MBE", Appl. Phys. Lett., 55, 775-777, 1989.
17. J. Chen, G.B. Gao, J.-I. Chyi, and H. Morkoc, "Breakdown Behavior of GaAs/AlGaAs HBTs", IEEE Trans. Electron Devices, ED-36, 2165, 1989.
18. S.N. Mohammad, M.B. Patil, J. Chen, J.-I. Chyi, M.S. Unlu, G.B. Gao, and H. Morkoc, "Analytical Model for I-V Characteristics of Ion-implanted MESEETs with Heavily Doped Channel", IEEE Trans. Electron Devices, ED-37, 11, 1990.
19. G.B. Gao, D. Huang, J.-I. Chyi, J. Chen, and H. Morkoc, "Current Induced Breakdown in P-type Collector AlGaAs/GaAs HBTs", IEEE Trans. Electron Devices, ED-37, 807, 1990.
20. S.N. Mohammad, J. Chen, J.-I. Chyi, and H. Morkoc, "Suppression of Emitter Size Effect on the I-V Characteristics of GaAs/AlGaAs HBTs", Appl. Phys. Lett., 56, 937-939, 1990.
21. S.N. Mohammad, J. Chen, J.-I. Chyi, and H. Morkoc, "Effect of Base Doping Gradients on the Electrical Performance of AlGaAs/GaAs Heterojunction Bipolar Transistors", Appl. Phys. Lett., 57, 463-465, 1990.
22. S.N. Mohammad, J. Chen, J.-I. Chyi, and H. Morkoc, "Effect of Junction and Bandgap Grading on the Electrical Performance of MBE Grown AlGaAs/GaAs/AlGaAs Double Heterojunction Bipolar Transistors", J. Appl. Phys., 69, 1067, 1990.
23. G.B. Gao, J.-I Chyi, J. Chen, and H. Morkoc, "Emitter Region Delay Time of AlGaAs/ GaAs HBTs", Solid State Electronics, 33, 389, 1990.
24. H.-J. Ou, J.M. Cowley, J.-I. Chyi, A. Salvador, and H. Morkoc, "Microanalysis on the (200) Diffraction Intensity to Determine the Al Concentrations for AlGaAs-GaAs MQW Structures", J. Appl. Phys., 67, 698, 1990.
25. M.S. Unlu, K. Kishino, J.-I. Chyi, J. Reed, L. Arsenault, and H. Morkoc, "Wavelength Demultiplexing Heterojunction Phototransistors", Electron. Lett., 26, 1857, 1990.
26. M.S. Unlu, K. Kishino, J.-I. Chyi, L. Arsenault, J. Reed, S.N. Mohammad, and H. Morkoc, "Resonant

Cavity Enhanced AlGaAs/GaAs Heterojunction Phototransistors with an Intermediate InGaAs Layer in the Collector", Appl. Phys. Lett., 57, 750-752, 1990.

27. D. Huang, J.-I. Chyi, and H. Morkoc, "Carrier Effects on the Excitonic Absorption in GaAs Quantum Well Structure: Phase-Space Filling", Phys. Rev. B, 42, 5149, 1990.
28. M. Dobeli, P.C. Haubert, T.A. Tombrello, J.-I. Chyi, D. Huang, and H. Morkoc, "Indium Profiles in InGaAs with Heave Ion RBS", Nuclear Instruments and Methods in Physics Research B, 52, 72, 1990.
29. J.-I. Chyi, D. Mui, J. Chen, and H. Morkoc, "Electrical Characteristics of InSb-GaAs heterojunctions", Solid State Electronics, 34, 747, 1991.
30. K. Kishion, M.S. Unlu, J.-I. Chyi, L. Arsenault, J. Reed, and H. Morkoc, "Resonant Cavity Enhanced Photodetectors", IEEE J. Quan. Electron. 27, 2025, 1991.
31. R.K. Ahrenkiel, B.M. Keyes, T.C. Shen, J.-I. Chyi, and H. Morkoc, "Minority-carrier Lifetime in AlGaAs Grown by Molecular beam Epitaxy", J. Appl. Phys. 69, 3094, 1991.
32. K. Adomi, J.-I. Chyi, S.F. Fang, T.C. Shen, S. Strite, and H. Morkoc, "MBE Growht of GaAs and Other Compound Semiconductors", Thin Solid Films, 205, 182, 1991.
33. Y. J. Chan, M. Y. Yang, J.-I. Chyi, J.-L. Shieh, R.-M. Lin, "AlGaAs/GaAs Heterostructure Field-Effect Transistors (HFET's) Grown by Molecular Beam Epitaxy", Proceedings of the NSC-part A:Physical Science and Engineering 17, 428-432, 1993.
34. J.-I. Chyi, J.-L. Shieh, R.-M. Lin, T.-E. Nee, and J.-W. Pan, "Molecular Beam Epitaxial Growth of InAlAs on GaAs", Appl. Phys. Lett. 65, 699-701, 1994.
35. J.-I. Chyi, T.-S. Wei, J. W. Hong, W. Lin, and Y. K. Tu, "Low Dark Current and High Linearity InGaAs MSM Photodetectors", Electron. Lett. 30, 355-357, 1994.
36. C. S. Wu, Y. J. Chan, C. D. Chen, T. M. Chuang, F. Y. Juang, C. C. Chang, and J.-I. Chyi, "DC and Microwave Characteristics of Pseudomorphic AlGaAs/$In_{0.25}Ga_{0.75}As$ HEMTs Fabricated by Deep-UV Sources", J. Chinese Inst. Electrical Engineer 1, 45-50, 1994.
37. Y. J. Chan, M. T. Yang, T. J. Yeh, and J.-I. Chyi, "High Uniformity of AlGaAs/$In_{0.15}Ga_{0.85}As$ Doped-channel Structures Grown by Molecular Beam Epitaxy on 3"-GaAs Wafers, J. Electronic Materials 23, 675-679, 1994.
38. H.-P. Hwang, J.-L. Shieh, R.-M. Lin, J.-I. Chyi, S. L. Tu, C. K. Peng, and S. J. Yang, "Unstrained $In_{0.3}Ga_{0.7}As/In_{0.29}Al_{0.71}As$ As Resonant Tunneling Diodes Grown on GaAs", Electron. Lett. 30, 826-828, 1994.
39. M. T. Yang, Y. J. Chan, C. H. Chen, J.-I. Chyi, R.-M. Lin, and J.-L. Shieh, "Characteristics of Pseudomorphic AlGaAs/$In_xGa_{1-x}As$ ($0<x<0.25$) Doped-Channel Field-Effect Transistors", J. Appl. Phys. 76, 2494-2498, 1994.
40. J.-L. Shieh, J.-I. Chyi, R.-J. Lin, R.-M. Lin, and J.-W. Pan, "Band Offsets of $In_{0.3}Ga_{0.7}As/In_{0.29}Al_{0.71}As$ Heterojunction Grown on GaAs Substrate", Electron. Lett. 30, 2172-2173, 1994.
41. J.-I. Chyi, J.-L. Shieh, C. S. Wu, R.-M. Lin, J.-W. Pan, and Y. J. Chan, "Characteristics of $In_{0.3}Ga_{0.7}As/In_{0.29}Al_{0.71}As$ Heterostructures Grown on GaAs Using InAlAs Buffers", Jpn. J. Appl. Phys. 33, L1574-1576, 1994.
42. J.-I. Chyi, J.-L. Shieh, R.-J. Lin, J.-W. Pan, and R.-M. Lin, "Schottky Barrier Heights of $In_xAl_{1-x}As$ ($0<x<0.35$) Epilayers on GaAs", J. Appl. Phys. 77, 1813-1815, 1995.
43. R.-H. Yuang, J.-L. Shieh, R.-M. Lin, and J.-I. Chyi, "GaAs Metal-Semiconductor-Metal Photodetectors with AlGaAs Cap and Buffer Layers", J. Chinese Inst. Engineers 18, 445-449, 1995.
44. C. S. Wu, Y. J. Chan, C. D. Chen, T. M. Chung, F. Y. Jung, C. C. Chang, and J.-I. Chyi, "Double Heterostructure Pseudomorphic AlGaAs/$In_{0.15}Ga_{0.85}As$ High Electron Mobility Transistor and Its Short-channel Effects", Solid State Electron. 38, 377-381, 1995.
45. J.-I. Chyi, J.-H. Gau, J.-L. Shieh, J.-W. Pan, Y.-J. Chan, J.-W. Hong, and M.-F. Huang, "Low Threshold InAlGaAs/AlGaAs Strained Quantum Well Lasers Grown by Molecular Beam Epitaxy", Solid State Electron. 38, 1105-1106, 1995.
46. Y. D. Juang, Y. L. Chan, G. C. Jiang, J.-L. Shieh, J.-W. Pan, J.-I. Chyi, W. S. Tse, and, T. C. Chow, "Photoreflectance and Raman Analysis of Composition in InAlAs Layer on InP Substrate by MBE", Chinese J. Phys. 33, 57-63, 1995.
47. T. M. Hsu, W. C. Lee, J. R. Wu, and J.-I. Chyi, "The Fermi-level of Low Temperature Grown GaAs on the Si Delta-doped GaAs", Phys. Rev. 51, 17215-17218, 1995.
48. M. T. Yang, Y. J. Chan, C. S. Wu, and J.-I. Chyi, "Novel $In_{0.29}A_{l0.71}/In_{0.3}G_{a0.7}As$ Heterostructure Field-Effect Transistors Fabricated on GaAs Substrates", J. Chinese Inst. Electrical Engineering 2, 29-36, 1995.
49. J.-W. Pan, J.-L. Shieh, J.-H. Gau, J.-I. Chyi, J. C. Lee, and K. J. Ling, "The Study of the Optical Properties of $In(Al_XGa_{1-X})As$ by Variable Angle Spectroscopic Ellipsometry", J. Appl. Phys. 78, 442-445, 1995.
50. Y. J. Chan, C. S. Wu, J.-L. Shieh, and J.-I. Chyi, "$In(Al_{0.9}Ga_{0.1})As$/ InGaAs HEMT for the Improvement of Device Reliability", Electron. Lett. 31, 1105-1106, 1995.
51. R.-H. Yuang, H.-C. Shieh, Y.-J. Chien, Y. J. Chan, J.-I. Chyi, W. Lin, and Y. K. Tu, "High-Performance Large-Area InGaAs MSM Photodetectors with a Pseudomorphic InGaP Cap Layer", IEEE Photon. Technol. Lett. 7, 914-916, 1995.
52. G. C. Jiang, Y. D. Juang, Y. L. Chan, J.-I. Chyi, S. Lu, and L. B. Chang, "Raman and Photoluminescence

Analysis of the Crystalline InAlAs Layer Grown on InP Substrate", Crystal Research and Technology 30, 275-280, 1995.

53. C. S. Wu, Y. J. Chan, J.-L. Shieh, T. H. Gan, and J.-I. Chyi, "InAlAs/ In$_x$Ga$_{1-x}$As (x=0.53, 0.6) Lattice-Matched and Pseudomorphic HEMTs on InP Substrates", J. Chinese Inst. Engineers 18, 707-712, 1995.
54. R.-H. Yuang, J.-I. Chyi, Y.-J. Chan, W. Lin, and Y.-K. Tu, "High-Responsivity InGaAs MSM Photodetectors with Semi-Transparent Schottky Contacts", IEEE Photon. Technol. Lett. 7, 1333-1335, 1995.
55. C. C. Chu, Y. J. Chan, R.-H. Yuang, J.-I. Chyi, and C.-T. Lee, "Performance Enhancement by Using WSi$_x$/ITO Electrodes in InGaAs/InAlAs MSM Photodetectors", Electron. Lett. 31, 1692-1694, 1995.
56. W. C. Lee, T. M. Hsu, J.-I. Chyi, G. S. Lee, W. H. Li, and K. C. Lee, "Characterization of Low Temperature GaAs Grown by Molecular Beam Epitaxy", Appl. Surf. Sci. 96, 66-69, 1996.
57. Y. J. Chan, C. S. Wu, J.-I. Chyi, J.-L. Shieh, and R.-J. Lin, "GaAs-Based In$_{0.29}$Al$_{0.71}$As/In$_{0.3}$Ga$_{0.7}$As Heterostructure and Its Application on HEMTs", Microwave and Optical Technol. Lett. 11, 148-150, 1996.
58. R.-H. Yuang and J.-I. Chyi "The Effects of Finger Width on Large-Area InGaAs MSM Photodetectors", Electron. Lett. 32, 131-132, 1996.
59. J.-I. Chyi, S.-K. Wang, J.-H. Gau, J.-L. Shieh, and J.-W. Pan, "Characteristics of Multi-Quantum Barrier and Its Application to Graded-Index Separate Confinement Hetero-structure Lasers", IEEE J. Quantum Electronics 32, 442-447, 1996.
60. C. R. Hua, T. Y. Chiang, W. C. Chou, J.-L. Shieh, J.-W. Pan, and J.-I. Chyi, "Optical Studies in the GaAs/GaAlAs Quantum Well with a Skinny Barrier", Chinese J. of Physics 34, 68-76, 1996.
61. J.-I. Chyi, J.-L. Shieh, J.-W. Pan, and R.-M. Lin, "Material Properties of Compositional Graded In$_x$Ga$_{1-x}$As and In$_x$Al$_{1-x}$As ($0<x<0.3$) Epilayers Grown on GaAs Substrates", J. Appl. Phys. 79, 8367-8370, 1996.
62. J.-W. Pan, and J.-I. Chyi, "Theoretical Study of the Temperature Dependence of 1.3 μm InAlGaAs/InP Multiple Quantum Well Lasers", IEEE J. Quantum Electronics 32, 2133-2138. 1996.
63. J.-I. Chyi, Y.-J. Chien, R.-H. Yuang, J.-L. Shieh, J.-W. Pan, and J. S. Chen, "Reduction of Hole Transit Time in GaAs Metal-Semiconductor-Metal Photodetectors by p-type δ-doping", IEEE Photon. Technol. Lett. 8, 1525-1527, 1996.
64. R.-H. Yuang, J.-I. Chyi, W. Lin, and Y. K. Tu, "High-Speed InGaAs MSM Photodetectors with Improved Responsivity and Process Yield", Optical and Quantum Electronics 28, 1327-1334, 1996.
65. R.-H. Yuang, Y.-J. Chien, J.-L. Shieh, and J.-I. Chyi, "High-Speed GaAs Metal-Semiconductor-Metal Photodetectors with Recessed Metal Electrodes", Appl. Phys. Lett. 69, 245-247, 1996.
66. M.-T. Yang, Y.-J. Chan, J.-L. Shieh, and J.-I. Chyi, "Enhanced Device Performance by Unstrained InGaAs/InAlAs Doped-Channel FET on GaAs Substrates", IEEE Electron Device Lett. 17, 410-412, 1996.
67. R.-H. Yuang, J.-L. Shieh, J.-I. Chyi, and J. S. Chen, "Overall Performance Improvement in Recessed-Cathode GaAs Metal-Semiconductor-Metal Photo-detectors", IEEE Photon. Technol. Lett. 9, 226-228, 1997.
68. J.-I. Chyi, T.-E. Nee, C. T. Lee, J.-L. Shieh, and J.-W. Pan, "Formation of Self-Organized Quantum Dots on GaAs by Molecular Beam Epitaxy", J. Crystal Growth 175/176, 777-781, 1997.
69. Y. J. Chan, C. S. Wu, C. H. Chen, J.-L. Shieh, and J.-I. Chyi, "Characteristics of In$_{0.52}$(Al$_x$Ga$_{1-x}$)As/In$_{0.53}$Ga$_{0.47}$As ($0<x<1$) Heterojunction and Its Application on HEMTs", IEEE Trans. Electron Devices ED-44, 708-714, 1997.
70. J.-L. Shieh, M.-N. Chang, Y.-S. Cheng, and J.-I. Chyi, "Investigation of the Defects in Metamorphic In$_x$Al$_{1-x}$As ($x<0.4$) Epilayers Grown on GaAs Substrates", J. Appl. Phys. 82, 210-213, 1997.
71. H.-P. Hwang, Ming Tseng, and J.-I. Chyi, "Design and Implementation of a 2.4 GHz One-Stage Amplifier Using Multi-Emitter Heterojunction Bipolar Transistors", J. Chinese Inst. Electrical Engineering 4, 193-198, 1997.
72. Y. A. Chen, B. F. Chen, W. C. Tsay, L. H. Laih, M.-N, Chang, J.-I. Chyi, J. W. Hong, and C. Y. Chang, "Porous Silicon Light-Emitting Diode with Tunable Color", Solid-State Electronics 41, 757-759, 1997.
73. W. C. Lee, T. M. Hsu, and J.-I. Chyi, "Photoreflectance of Low-Temperature-Grown GaAs on Si-d-doped GaAs", Appl. Surf. Sci. 113/114, 515-518, 1997.
74. W. C. Lee, T. M. Hsu, S. C. Wang, M.-N. Chang, and J.-I. Chyi, "Fermi Level of Annealed Low-Temperature GaAs on Si-d-doped GaAs Grown by Molecular Beam Epitaxy", J. Appl. Phys. 83, 486-490, 1998.
75. T.-E. Nee, N.-T. Yeh, J.-I. Chyi, and C. T. Lee, "Matrix-Dependent Structural and Photoluminescence Properties of In$_{0.5}$Ga$_{0.5}$As Quantum Dots Grown by Molecular Beam Epitaxy", Solid-State Electronics 42, 1331-1334, 1998.
76. M.-N. Chang, J.-W. Pan, J.-I. Chyi, K. C. Hsieh, and T.-E. Nee, "Effect of Column III Vacancy on Arsenic Precipitation in Low-Temperature Grown III-V Arsenides", Appl. Phys. Lett. 72, 587-589, 1998.
77. R.-H. Yuang and J.-I. Chyi, "GaAs MSM Photodetectors with Recessed Anode and/or Cathode", IEEE J. Quantum Electronics 34, 811-816, 1998.
78. L. S. Lai, Y. J. Chan, J-W. Pan, and J.-I. Chyi, "Characteristics of Fully Quaternary In(Al$_{0.8}$Ga$_{0.2}$)As/ In(Al$_{0.2}$Ga$_{0.8}$)As Heterostructures Doped-Channel FETs", Electron. Lett 34, 308-309, 1998.
79. J.-W. Pan, K.-G. Chau, J.-I. Chyi, Y. K. Tu, and J. W. Liaw, "Suppression of Electron and Hole Leakage Currents in 1.3 μm AlGaInAs/InP Quantum Well Lasers Using Two-Stack Multiquantum Barrier", Appl.

Phys. Lett. 72, 2090-2092, 1998.

80. J.-W. Pan, M.-H. Chen, J.-I. Chyi, and T. T. Shih, "Temperature-Dependent Characteristics of 1.3 μm AlGaInAs/InP Lasers with Multiquantum Barriers at the Guiding Layers", IEEE Photon. Tech. Lett. 10, 1700-1702, 1998.
81. J.-W. Pan, M.-H. Chen, J.-I. Chyi, and T. T. Shih, “Strain-Compensated 1.3 μm AlGaInAs Quantum Well Lasers with Multiquantum Barriers at the Cladding Layers”, IEEE Photon. Tech. Lett. 11, 9-11, 1999.
82. N.-T. Yeh, T.-E. Nee, P.-W. Shiao, M.-N. Chang, J.-I. Chyi, and C. T. Lee, "Photoluminescence Characteristics of Self-Assembled In$_{0.5}$Ga$_{0.5}$As Quantum Dots on Vicinal GaAs Substrates", Jpn. J. Appl. Phys. 38, 550-553, 1999.
83. T.-E. Nee, N.-T. Yeh, P.-W. Shiao, J.-I. Chyi, and C. T. Lee, "Room-Temperature Operation of In$_{0.5}$Ga$_{0.5}$As Quantum Dot Lasers Grown on Misoriented GaAs Substrates by Molecular Beam Epitaxy", Jpn. J. Appl. Phys. 38, 605-607, 1999.
84. W. H. Chang, T. M. Hsu, K. F. Tsai, T.-E. Nee, J.-I. Chyi, and N.-T. Yeh, ,Excitation Density and Temperature Dependent Photoluminescence of InGaAs Self-Organized Quantum Dots”, Jpn. J. Appl. Phys. 38, 554-557, 1999.
85. T.-E. Nee, N.-T. Yeh, J.-M. Lee, J.-I. Chyi, and C. T. Lee, "High Characteristic Temperature Be-doped In$_{0.5}$Ga$_{0.5}$As Quantum Dot Lasers Grown on GaAs Substrates by Molecular Beam Epitaxy", J. Cryst. Growth 201/201, 905-908, 1999.
86. J.-W. Pan, M.-H. Chen, and J.-I. Chyi, "High Performance Phosphorus-Free 1.3 μm AlGaInAs/InP MQW Lasers", J. Cryst. Growth 201/202, 923-926, 1999.
87. N.-T. Yeh, T.-E. Nee, and J.-I. Chyi,, "Characterization of In$_{0.5}$Ga$_{0.5}$As Quantum Dot p-i-n Structures with Different Matrices", J. Cryst. Growth 201/202, 1168-1171, 1999.
88. M. N. Chang, K. C. Hsieh, T.-E. Nee, C. C. Chuo, and J.-I. Chyi, "Behavior of Arsenic Precipitation in Low-Temperature Grown III-V Arsenides”, J. Cryst. Growth 201/202, 212-216, 1999.
89. M. N. Chang, K. C. Hsieh, J.-I. Chyi, and T.-E. Nee, "Effects of Point Defect Distribution on Arsenic Precipitation in Low-Temperature Grown III-V Arsenides”, J. Appl. Phys. 86, 2442-2447, 1999.
90. H.-P. Hwang, J.-L. Shieh, and J.-I. Chyi, "DC and Microwave Characteristics of In$_{0.32}$Al$_{0.68}$As/ In$_{0.33}$Ga$_{0.67}$As Heterojunction Bipolar Transistors Grown on GaAs", Solid-State Electronics 43, 463-468, 1999.
91. J.-I. Chyi, M.-H. Chen, J.-W. Pan, and T. T. Shih, “Improved Temperature Characteristics of 1.55 μm AlGaInAs Phosphorus-Free Lasers with Multiquantum Barrier at p-Cladding Layer”, Electron. Lett. 35, 1255-1257, 1999.
92. T. M. Hsu, W.-H. Chang, K. F. Tsai, J.-I. Chyi, N.-T. Yeh, and T.-E. Nee, “Electron-Filling Modulation Reflectance in Charged Self-Assembled InGaAs Quantum Dots”, Phys. Rev. B 60, R2189-2192, 1999.
93. M. N. Chang, N.-T. Yeh, C.-M. Lu, K. C. Hsieh, and J.-I. Chyi, "Selective Distribution of Arsenic Precipitates in Low-Temperature Grown III-V Heterostructures", Appl. Phys. Lett. 75, 52-54, 1999.
94. J. S. Hwang, W. C. Hwang, Z. P. Yang, G. S. Chang, J.-I. Chyi, and N.-T. Yeh, “Energy Spectrum of Surface States of Lattice-Matched InAlAs Surface Intrinsic-n$^+$ Structure”, Appl. Lett. Phys. 75, 2467-2469, 1999.
95. M. N. Chang, C.-C. Chuo, C.-M. Lu, K. C. Hsieh, N.-T. Yeh, and J.-I. Chyi, "Role of Excess As in Low-Temperature Grown GaAs Subjected to BCl$_3$ Reactive Ion Etching", Appl. Phys. Lett. 75, 3032-3034, 1999.
96. J.-I. Chyi, C.-M. Lee, C.-C. Chuo, G. C. Chi, G. T. Dang, A. P. Zhang, F. Ren, X. A. Cao, S. J. Pearton, S. N. G. Chu, and R. G. Wilson, “Growth and Device Performance of GaN Schottky Rectifiers”, MRS Internet J. Nitride Semicon. Res. 4, 8, 1999.
97. W.-H. Chang, T. M. Hsu, N.-T. Yeh, and J.-I. Chyi, “Electron distribution and level occupation in an ensemble of InGaAs/GaAs self-assembled quantum dots”, Phys. Rev. B 62, 13040-13047, 2000.
98. J.-I. Chyi, “MBE Growth and Characterization of InGaAs Quantum Dot Lasers”, Materials Sci. and Tech. B 75, 121-125, 2000.
99. J.-I. Chyi, C.-M. Lee, C.-C. Chuo, X. A. Cao, G. T. Dang, A. P. Zhang, F. Ren, S. J. Pearton, S. N. G. Chu, and R. G. Wilson, “Temperature Dependence of GaN High Breakdown Voltage Diode Rectifiers”, Solid-State Electron. 44, 613-617, 2000.
100. F. Ren, A. P. Zhang, G. T. Dang, X. A. Cao, H. Cho, S. J. Pearton, J.-I. Chyi, C.-M. Lee, and C.-C. Chuo, “Surface and Bulk Leakage Currents in High Breakdown GaN Rectifiers”, Solid-State Electron. 44, 619-622, 2000.
101. C. C. Liao, S. W. Feng, C. C. Yang, Y. S. Lin, K. J. Ma, C.-C. Chuo, C.-M. Lee, and J.-I. Chyi, “Stimulated Emission Study of InGaN/GaN Multiple Quantum Well Structures”, Appl. Phys. Lett. 76, 318-320, 2000.
102. T. M. Hsu, Y. S. Lan, W.-H. Chang. N.-T. Yeh, and J.-I. Chyi, “Tuning the Energy Levels of Self-Assembled InAs Quantum Dots by Rapid Thermal Annealing”, Appl. Phys. Lett. 76, 691-693, 2000.
103. N.-T. Yeh, T.-E. Nee, J.-I. Chyi, C. C. Huang, and T. M. Hsu "Matrix Dependence of Strain Induced Wavelength Shift in Self-Assembled InAs Quantum Dot Heterostructures”, Appl. Phys. Lett. 76, 1567-1569, 2000.
104. G. T. Dang, A. P. Zhang, F. Ren, X. A. Cao, S. J. Pearton, H. Cho, J.-I. Chyi, C.-M. Lee, C.-C. Chuo, S. N.

G. Chu, and R. G. Wilson, “High Voltage GaN Schottky Rectifiers”, IEEE Trans. Electron Devices 47, 692-696, 2000.

105. C.-C. Chuo, C.-M. Lee, T.-E. Nee, and J.-I. Chyi, “Effects of Thermal Annealing on the Luminescence and Structural Properties of High Indium Content InGaN/GaN Quantum Wells”, Appl. Phys. Lett. 76, 3902-3904, 2000.
106. N.-T. Yeh, J.-M. Lee, T.-E. Nee, and J.-I. Chyi, "Self-Assembled In$_{0.5}$Ga$_{0.5}$As Quantum Dot Lasers with Doped Active Region", IEEE Photon. Tech. Lett. 12, 1123-1125, 2000.
107. A. P. Zhang, G. Dang, F. Ren, J. Han, H. Cho, S. J. Pearton, J.-I. Chyi, T.-E. Nee, C.-M. Lee, C.-C. Chuo, and S. N. G. Chu, “Forward Turn-on and Reverse Blocking Characteristics of GaN Schottky and p-i-n Rectifiers”, Solid-State Electron. 44, 1157-1161, 2000.
108. C.-C. Yang, M.-C. Wu, C.-C. Chuo, J.-I. Chyi, C.-F. Lin and G.-C. Chi, “Electrical and optical characteristics of the GaN light-emitting diodes with multiple-pair buffer layer”, Solid-State Electron. 44, 1483-1486, 2000.
109. H. C. Yang, P. F. Kuo, T. Y. Lin, Y. F. Chen, K. H. Chen, L. C. Chen, and J.-I. Chyi, “Mechanism of Luminescence in InGaN/GaN Multiple Quantum Wells”, Appl. Phys. Lett. 76, 3712-3714, 2000.
110. A. Y. Polyakov, N. B. Smirnov, A. V. Govorkov, A. P. Zhang, F. Ren, S. J. Pearton, J.-I. Chyi, T.-E. Nee, C.-C. Chuo, and C.-M. Lee, “Unusual Behavior of the Electrical Properties of GaN p-I-n Rectifiers Caused by the Presence of Deep Centers and by Migration of Shallow Donors”, Solid-State Electron. 44, 1549-1555, 2000.
111. A. Y. Polyakov, N. B. Smirnov, A. V. Govorkov, A. P. Zhang, F. Ren, S. J. Pearton, J.-I. Chyi, T.-E. Nee, C.-M. Lee and C.-C. Chuo, “Spatial Distribution of Electrical Properties in GaN p-I-n Rectifiers”, Solid-State Electron. 44, 1591-1595, 2000.
112. M. Hong, K. A. Anselm, J. P. Mannaerts, J. Kwo, A. Y. Cho, A. R. Kortan, C.-M. Lee, J.-I. Chyi,, and T. S. Lay, “Properties of $Ga_2O_3(Gd_2O_3)$/GaN MIS Diodes”, J. Vac. Sci. Technol. 18, 1453-1456, 2000.
113. C. C. Chen, H. W. Chuang, G. C. Chi, C.-C. Chuo, and J.-I. Chyi, "Stimulated Emission Study of High Indium Content InGaN/GaN Multiple Quantum Well Structures", Appl. Phys. Lett. 77, 3758-3760, 2000.
114. Y. S. Lin, K. J. Ma, Z. Shi, C. C. Liao, S. W. Feng, C. C. Yang, C.-C. Chuo, C.-M. Lee, and J.-I. Chyi, “Dependence of Composition Fluctuation on Indium Content in InGaN/GaN Multiple Quantum Wells”, Appl. Phys. Lett. 2988-2990, 2000.
115. J. W. Johnson, B. Luo, F. Ren, B. P. Gila, W. Krishnamoorthy, C. R. Abernathy, S. J. Pearton, J.-I. Chyi, T.-E. Nee, C.-M. Lee, and C.-C. Chuo, “Gd_2O_3/GaN Metal-Oxide-Semiconductor Field-Effect Transistor”, Appl. Phys. Lett. 77, 3230-3232, 2000.
116. S. J. Pearton, H. Cho, F. Ren. J.-I. Chyi, J. Han, R. G. Wilson, “Properties and Effects of Hydrogen in GaN”, MRS Internet J. Nitride Semicond. Res. 5S1, W10.6, 2000.
117. A. P. Zhang, G. T. Dang, X. A. Cao, H. Cho, F. Ren, J. Han, J.-I. Chyi, C.-M. Lee, T.-E. Nee, G.-C. Chi, C.-C. Chuo, R. G. Wilson, and S. J. Pearton, “Processing and Devices Performance of GaN Power Rectifiers”, MRS Internet J. Nitride Semicond. Res. 5S1, W11.67, 2000.
118. W.-H. Chang, T. M. Hsu, C. C. Huang, S. L. Hsu, C. Y. Lai, N. T. Yeh and J.-I Chyi, “Photocurrent Studies of the Carrier Escape Process from InAs Self-Assembled Quantum Dots”, Phys. Rev. B 62, 6959, 2000.
119. N.-T. Yeh, T.-E. Nee, J.-I. Chyi, C. T. Chia, T. M. Hsu, and C. C. Huang, “Improved Electroluminescence of InAs Quantum Dots with Strain Reducing Layer” J. Crystal Growth 227-228, 1044-1048, 2001.
120. C.-C. Chuo, C.-M. Lee, and J.-I. Chyi, “Interdiffusion of In and Ga in InGaN/GaN Multiple Quantum Wells”, Appl. Phys. Lett. 78, 314-316, 2001.
121. H.-P. Hwang, Y.-S. Cheng, J.-L. Shieh, and J.-I. Chyi, "A Comparative Study of the Passivation Films on AlGaAs/GaAs Heterojunction Diodes and Bipolar Transistors", IEEE Trans. Electron Devices ED-48, 185-189, 2001.
122. A. P. Zhang, G. T. Dang, F. Ren, H. Cho, K. P. Lee, S. J. Pearton, J.-I. Chyi, T.-E. Nee, C.-M. Lee, and C.-C. Chuo, “Comparison of GaN P-I-N and Schottky Rectifier Performance”, IEEE Trans. Electron Devices ED-48, 407-411, 2001.
123. C.-M. Lee, C.-C. Chuo, J.-F. Dai, X.-F. Zheng, and J.-I. Chyi, “Temperature Dependence of the Radiative Recombination zone in GaN/InGaN Multiple-Quantum-Well Light Emitting Diodes”, J. Appl. Phys. 89, 6554-6556, 2001.
124. J. W. Johnson, F. Ren, B. P. Gila, M. E. Overberg, C. A. Abernathy, J.-I. Chyi, C.-C. Chuo, C.-M. Lee, K. P. Lee, S. S. Park, Y. J. Park, and S. J. Pearton, “Schottky Rectifiers Fabricated on Free-Standing GaN Substrates”, Solid-State Electron. 45, 405-410, 2001.
125. J. W. Johnson, B. P. Gila, B. Luo, K. P. Lee, C. R. Abernathy, S. J. Pearton, J.-I. Chyi, T. E. Nee, C. M. Lee, C. C. Chuo, and F. Ren, “SiO2/Gd2O3/GaN Metal Oxide Semiconductor Field Effect Transistors”, J. of the Electrochemical Society 148, G303-G306, 2001.
126. T. M. Hsu, W.-H. Chang, C. C. Huang, N. T. Yeh and J.-I. Chyi, “Quantum-confined Stark Shift in Electroreflectance of InAs/In_xGa_{1-x}As Self-Assembled Quantum Dots”, Appl. Phys. Lett. 78 1760, 2001.
127. W.-H. Chang, T. M. Hsu, C. C. Huang, N. T. Yeh and J.-I. Chyi, “Effects of Electric Field and Coulomb Interaction on The Interband Transitions of InAs Self-Assembled Quantum Dots Study by Modulation Reflectance Spectroscopy”, Phys. Stat. Sol. (b), 224, No. 1, 89-92, 2001.

128. W.-H. Chang, T. M. Hsu, C. C. Huang, S. L. Hsu, C. Y. Lai, N. T. Yeh, T. E. Nee and J.-I. Chyi, "A Carrier Escape Study form InAs Self-Assembled Quantum Dots by Photocurrent Measurement", Phy. Stat. Sol. (b), 224, 85-88, 2001.
129. C. C. Chen, K. L. Hsieh, G. C. Chi, C. C. Chuo, J.-I. Chyi and C. A. Chang, "Effect of Thermal Annealing on High Indium Content InGaN/GaN Single Quantum Well Structures", J. Appl. Phys. 89, 5465-5468, 2001.
130. A. Y. Polyakov, N. B. Smirnov, A. V. Govorkov, A. P. Zhang, F. Ren, S. J. Pearton, J.-I. Chyi, T.-E. Nee, C.-C. Chuo, and C.-M. Lee, "Electrical Properties and Spectra of Deep Centers in GaN p-I-n Rectifier Structures", J. Electronic Materials 30, 147-155, 2001.
131. S. J. Pearton, F. Ren, A. P. Zhang, G. Dang, A. X. Cao, K. P. Lee, H. Cho, B. P. Gila, J. W. Johnson, C. Monier, C. R. Abernathy, J. Han, A. G. Baca, J..-I. Chyi, C.-M. Lee, T.-E. Nee, C.-C. Chuo, and S. N. G. Chu, "GaN Electronics for High Power, High Temperature Application", Materials Sci. and Eng. B82, 227-231, 2001.
132. W.-H. Chang, W. Y. Chen, M. C. Cheng, C. Y. Lai T. M. Hsu, N.-T. Yeh and J.-I Chyi, "Charging of Embedded InAs Self-Assembled Quantum Dots by Space-Charge Techniques", Phys. Rev. B 64, 125315, 2001.
133. C. Y. Lai, T. M. Hsu, W. H. Chang, K. U. Tseng, C.-M. Lee, C.-C. Chuo, and J.-I. Chyi, "Piezoelectric Field Induced Quantum-Confined Stark Effect in InGaN/GaN Multiple Quantum Wells", Phys. Stat. Sol. (b), 228, No. 1, 77-80, 2001.
134. Y.-C. Cheng, C.-C. Liao, S.-W. Feng, C. C. Yang, Y.-S. Lin, K.-J. Ma, C.-C. Chuo, C.-M. Lee, and J.-I. Chyi, "Laser-Induced Activation of P-Type GaN", J. Jpn. Appl. Phys. 40, part 1, 2143-2145, 2001.
135. A. P. Zhang, J. W. Johnson, B. Luo, F. Ren, S. J. Pearton, S. S. Park, Y. J. Park, and J.-I. Chyi, "Vertical and Lateral GaN Rectifiers on Free-Standing GaN Substrates", Appl. Phys. Lett. 79, 1555-1557, 2001.
136. Y.-M. Hsin, H.-T. Hsu, C.-C. Chuo, and J.-I. Chyi, "Device Characteristics of the GaN/InGaN Doped Channel Heterojunction Field Effect Transistors", IEEE Electron Device Lett. 22, 501-503, 2001.
137. J. W. Johnson, A. P. Zhang, B. Luo, F. Ren, S. J. Pearton, S. S. Park, Y. J. Park, and J.-I. Chyi, "Breakdown Voltage and Reverse Recovery Characteristics of Free-Standing GaN Schottky Rectifiers", IEEE Trans. Electron Device 49, 32-36, 2002.
138. C.-C. Chuo, M. N. Chang, F. M. Pan, C.-M. Lee, and J.-I. Chyi, "Effect of Composition Inhomogeneity on the Photoluminescence of InGaN/GaN Multiple Quantum Wells upon Thermal Annealing", Appl. Phys. Lett. 80, 1138-1140, 2002.
139. N.-T. Yeh, W.-S. Liu, S.-H. Chen and J.-I. Chyi, "InAs/GaAs Quantum Dot Lasers with InGaP Cladding Layer Grown by Solid-Source Molecular Beam Epitaxy", Appl. Phys. Lett. 80, 535-537, 2002.
140. C. Y. Lai, T. M. Hsu, W. H. Chang, K. U. Tseng, C.-M. Lee, C.-C. Chuo, and J.-I. Chyi, "Direct Measurement of Piezoelectric Field in InGaN/GaN Multiple Quantum Wells by Electrotransmission Spectroscopy", J. Appl. Phys. 91, 531-533, 2002.
141. J. W. Johnson, B. Luo, F. Ren, D. Palmer, S. J. Pearton, S. S. Park, Y. J. Park, and J.-I. Chyi, "1.6 A GaN Schottky Rectifiers on Bulk GaN Substrates", Solid-State Electronics 46, 911-913, 2002.
142. C. C. Chen, K. L. Hsieh, G. C. Chi, C.-C. Chuo, J.-I. Chyi, and C. A. Chang, "Thermal Annealing Effects on Stimulated Emission of High-Indium-Content InGaN/GaN Single Quantum Well Structure", Solid-State Electronics, 46, 1123-1126, 2002.
143. M. Hong, J. Kwo, S. N. G. Chu, J. P. Manaerts, A. R. Kortan, H. M. Ng, A. Y. Cho, K. A. Anselm, C.-M. Lee, and J.-I. Chyi, "Single-Crystal GaN/Gd_2O_3/GaN Heterostructure", J. Vac. Sci. and Tech. B 20, 1274-1277, 2002.
144. S.-W. Feng, Y.-Y. Chung, C.-W. Liu, Y.-C. Cheng, C. C. Yang, M.-H. Mao, Y.-S. Lin, K.-J. Ma, and J.-I. Chyi, "Multiple-Component Phtoluminescence Decay Caused by Carrier Transport in InGaN/GaN Quantum Wells with Indium Aggregation Structures", Appl. Phys. Lett. 80, 4375-4377, 2002.
145. A. Kikuchi, R. Bannai, K. Kishino, C.-M. Lee, and J.-I. Chyi, "AlN/GaN Double-Barrier Resonant Tunneling Diodes Grown by RF-Plasma-Assisted Molecular-Beam Epitaxy", Appl. Phys. Lett. 81, 1729-1731, 2002.
146. T. M. Hsu, W.-H. Chang, C. Y. Lai, N. T. Yeh and J.-I. Chyi, "Scanning Electron-Filling Modulation Reflectance of Charged InGaAs Self-Assembled Quantum Dots", J. Appl. Phys. 91, 4399-4402, 2002.
147. C.-C. Chuo, G.-T. Chen, M.-I. Lin, and J.-I. Chyi, "Localized and Quantum-Well State Excitons in AlInGaN Laser-Diode Structure", Phys. Rev. B 66, 161301, 2002.
148. L. Jiang, S. S. Li, N.-T. Yeh, J.-I. Chyi, and M. Z.Tidrow, "Investigation of an InAs/GaAs Quantum-Dot Infrared Photodetector with $In_{0.5}Ga_{0.5}P$ Dark Current Blocking Layer", Electron. Lett. 38, 1374-1375, 2002.
149. W.-H. Chang, W. Y. Chen, T. M. Hsu, N. T. Yeh and J.-I Chyi, "Hole Emission Processes in InAs/GaAs Self-Assembled Quantum Dots", Phys. Rev. B 66, 195337, 2002.
150. S. W. Feng, Y. C. Cheng, Y. Y. Chung, C. C. Yang, Y. S. Lin, C. Hsu, K. J. Ma, and J.-I. Chyi, "Impact of Localized States on the Recombination Dynamics in InGaN/GaN Quantum Well Structures", J. of Appl. Phy. 92 (8), 4441-4448, 2002.
151. S. W. Feng, C. Y. Tsai, Y. C. Cheng, C. C. Liao, C. C. Yang, Y. S. Lin, K. J. Ma, and J.-I. Chyi, "Phonon-Replica Transitions in InGaN/GaN Quantum Well Structures", Optical and Quantum Electronics 34 (12), 1213-1218, 2002.

152. C.-M. Lee, C.-C. Chuo, I.-L. Chen, J.-C. Chang, and J.-I. Chyi, “High-Brightness Inverted InGaN/GaN Multiple-Quantum-Well Light-Emitting Diodes without Transparent Conductive Layer”, IEEE Electron Dev. Lett. 24, 156-158, 2003.
153. L. Jiang, S. S. Li, N.-T. Yeh, J.-I. Chyi, C. Ross and J. Kevin, “An $In_{0.6}Ga_{0.4}As/GaAs$ Quantum Dot Infrared Photodetector with Operating Temperature up to 260K”, Appl. Phys. Lett. 82, 1986-1988, 2003.
154. L.-H. Peng, C.-W. Shih, C.-M. Lai, C.-C. Chuo, and J.-I. Chyi, “Surface Band-Bending Effects on the Optical Properties of InGaN Multiple Quantum Wells”, Appl. Phys. Lett. 82, 4268-4270, 2003.
155. C. S. Yang, C. C. Cheng, M. C. Kuo, P. Y. Tseng, J. L. Shen, J. Lee, W. C. Chou, S. Jeng, C. Y. Lai, T. M. Hsu, and J.-I. Chyi, “Type II ZnMnSe/ZnSeTe Quantum Wells”, Thin Solid Films 429, 243-247, 2003.
156. C.-C. Chen, Y.-S. Ting, C.-C. Lee, G.-C. Chi, P. Chakraborty, T. Chini, H.-W. Chuang, J.-S. Tsang, C.-T. Kuo, W.-C. Tsai, S.-H. Chen, J.-I. Chyi, “Er Diffusion into Gallium Nitride”, Solid-State Electronics 47, 529–531, 2003.
157. Y.-C. Cheng, C.-H. Tseng, C. Hsu, K.-J. Ma, S.-W. Feng, E.-C. Lin, C. C. Yang, and J.-I. Chyi, “Mechanisms for Photon Emission Enhancement with Silicon Doping in InGaN/GaN Quantum Well Structure”, J. Electronic Materials 32, 375-381, 2003.
158. Y.-C. Cheng, E.-C. Lin, S.-W. Feng, H.-C. Wang, , C. C. Yang, K.-J. Ma, C.-C. Pan, and J.-I. Chyi, “Characteristics of Amplified Spontaneous Emission of High Indium Content InGaN/GaN Quantum Wells with Various Silicon Doping Conditions”, Phys. Stat. Sol. (c) 0, 2670-2673, 2003.
159. L.-H. Peng, C.-M. Lai, C.-W. Shih, C.-C. Chuo, and J.-I. Chyi, “Boundary Effects on the Optical Properties of InGaN Multiple Quantum Wells”, IEEE J. Select. Topics Quantum Electron. 9, 708-715, 2003.
160. C.-H. Hsu, H.-Y. Lee, Y.-W. Hsieh, Y. P. Stetsko, M.-T. Tang, K. S. Liang, N. T. Yeh, J.-I. Chyi, and D. Y. Noh, “X-ray Scattering Studies on InGaAs Quantum Dots”, Physica B 336, 98-102, 2003.
161. J. R. Juang, T.-Y. Huang, T.-M. Chen, M.-G. Lin, G.-H. Kim, C.-T. Liang, D. R. Hang, Y. F. Chen and J.-I. Chyi, “Transport in a gated AlGaN/GaN electron system”, J. Appl. Phys. 94, 3181-3184, 2003.
162. Y.-S. Ting, C.-C. Chen, C.-C. Lee, G.-C. Chi, T. K. Chini, P. Chakraborty, H.-W. Chuang, J.-S. Tsang, C.-T. Kuo, W.C. Tsai, S.-H. Chen, and J.-I. Chyi, “Diffusion Mechanism and Photoluminescence of Erbium in GaN”, Optical Materials 24, 515–518, 2003.
163. Y. Irokawa, B. Luo, J. Kim, J. R. LaRoche, F. Ren, K. H. Baik S. J. Pearton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, S. S. Park and Y. J. Park, “Current-Voltage and Reverse Recovery Characteristics of Bulk GaN p-i-n Rectifiers”, Appl. Phys. Lett. 83, 2271-2273, 2003.
164. B. S. Kang, S. Kim, J. Kim, F. Ren, K. Baik, S. J. Pearton, B. P.Gila, C. R. Abernathy, C.-C. Pan, G.-T. Chen, J.-I. Chyi, V. Chandrasekaran, M. Sheplak, T. Nishida, and S. N. G. Chu, “Effect of External Strain on the Conductivity of AlGaN/GaN High Electron Mobility Transistors”, Appl. Phys. Lett. 83, 4845-4847, 2003.
165. Y. Irokawa, J. Kim, F. Ren, K. H. Baik, B. P. Gila, C. R. Abernathy, S. J. Pearton, C.-C. Pan, G.-T. Chen, and J.-I. Chyi, “Activation Kinetics of Implanted Si+ in GaN and Application to Fabricating Lateral Schottky Diodes”, Appl. Phys. Lett. 83, 4987-4989, 2003.
166. H. R. Wu, K. W. Lee, T. B. Nian, D. W. Chou, J. J. H. Wu, Y. H. Wang, M. P. Houng, P. W. Sze, Y. K. Su, S. J. Chang, C. H. Ho, C. I. Chiang, Y. T. Chern, F. S. Juang, T. C. Wen, W. I. Lee, and J.-I. Chyi, “Liquid Phase Deposited SiO_2 on GaN”, Materials Chemistry and Physics 80 (1), 329-333, 2003.
167. A. Y. Polyakov, N. B. Smirnov, A. V. Govorkov, J. Kim, F. Ren, M. E. Overberg, G. T. Thaler, C. R. Abernathy, S. J. Pearton, C. M. Lee, J.-I. Chyi, R. G. Wilson, and J. M. Zavada, “Electrical and Electroluminescent Properties of GaN Light Emitting Diodes with the Contact Layer Implanted with Mn”, Solid-state Electronics 47 (6), 963-968, 2003.
168. A. Y. Polyakov, N. B. Smirnov, A. V. Govorkov, J. Kim, F. Ren, G. T. Thaler, M. E. Overberg, R. Frazier, C. R. Abernathy, S. J. Pearton, C. M. Lee, J.-I. Chyi, R. G. Wilson, J M Zavada, “Comparison of the Electrical and Luminescent Properties of p-layer-up and n-layer-up GaN/InGaN Light Emitting Diodes and the Effects of Mn Doping of the Upper n-layer”, Solid-State Electronics 47 (6), 981-987, 2003.
169. Y. Irokawa, J. Kim, F. Ren, K. H. Baik, B. P. Gila, C. R. Abernathy, S. J. Pearton, C.-C. Pan, G.-T. Chen, and J.-I. Chyi, “Lateral Schottky GaN Rectifiers Formed by Si^+ Ion Implantation”, J. Electronic Materials 33, 426-430, 2004.
170. Y. Irokawa, B. Luo, F. Ren, C.-C. Pan, G.-T. Chen, J.-I. Chyi, S. S. Park, Y. J. Park, and S. J. Pearton, “DC Characteristics of AlGaN/GaN Heterostructure Field-Effect Transistors on Free-Standing GaN Substrates”, Electrochemical Solid-State Lett. 7, G8-G10, 2004.
171. H.-C. Chiu, S.-C. Yang, Y.-J. Chan, S.-H. Chen, W.-S. Liu, and J.-I. Chyi, “The Microwave Power Performance Comparisons of $Al_xGa_{1-x}As/In_{0.15}Ga_{0.85}As$ (x=0.3, 0.5, 0.7, 1.0) Doped-Channel HFETs”, IEEE Trans. Electron Device, 2004
172. J.R. LaRoche, B. Luo, F. Ren, K. H. Baik, D. Stodilka, B. Gila, C. R. Abernathy, S. J. Pearton, A. Usikov, D. Tsvetkov, V. Soukhoveev, G. Gainer, A. Rechnikov, V.Dimitriev, G.-T.Chen, C.-C.Pan, and J.-I. Chyi, “GaN/AlGaN HEMTs Grown by Hydride Vapor Phase Epitaxy on AlN/SiC Substrates”, Solid-State Electronics 48, 193-196, 2004.
173. Y. Irokawa, B. Luo, B. S. Kang, J. Kim, J. R. LaRoche, F. Ren, K. H. Baik, S. J. Pearton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, S. S. Park, and Y. J. Park, “2.6 A, 0.69 MW cm-2 Single-Chip Bulk GaN P-I-N Rectifier”,

Solid-State Electronics 48, 359-361, 2004.

174. R. Mehandru, B. Luo, B. S. Kang, J. Kim, F. Ren, S. J. Pearton, C.-C. Pan, G.-T. Chen, and J.-I. Chyi, “AlGaN/GaN HEMT Based Liquid Sensors”, Solid-State Electronics 48, 351-353, 2004.
175. W.-K. Wang, Y.-J. Li, C.-K. Lin, Y.-J. Chan, G.-T. Chen, and J.-I. Chyi, “Low Damage, Cl_2-based Gate Recess Etching for 0.3 µm Gate-length AlGaN/GaN HEMT Fabrication”, IEEE Electron Dev. Lett. 25, 52-54, 2004.
176. B. S. Kang, F. Ren, Y. Irokawa, K. W. Baik, S. J. Peartona, C.-C. Pan, G.-T. Chen, J.-I. Chyi, H.-J. Ko, and H.-Y. Lee, “Temperature Dependent Characteristics of Bulk GaN Schottky Rectifiers on Free-Standing GaN Substrates”, J. Vac. Sci. Technol. B 22, 710-714, 2004.
177. I. A. Buyanova, M. Izadifard, W. M. Chen, J. Kim, F. Ren, G. Thaler, C. R. Abernathy, S. J. Pearton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, and J. M. Zavada, “On the Origin of Spin Loss in GaMnN/InGaN Light-Emitting Diodes”, Appl. Phys. Lett. 84, 2599-2601, 2004.
178. Y. Irokawa, Y. Nakano, M. Ishiko, T. Kachi, J. Kim, F. Ren, B. P. Gila, A. H. Onstine, C. R. Abernathy, S. J. Pearton, C.-C. Pan, G.-T. Chen, and J.-I. Chyi, “MgO/P-GaN Enhancement Mode Metal-Oxide Semiconductor Field-Effect Transistors”, Appl. Phys. Lett. 84, 2919-2921, 2004.
179. M.-C. Tien, H.-H. Chang, J.-Y. Lu, L.-J. Chen, S.-Y. Chen, R.-B. Wu, W.-S. Liu, J.-I. Chyi, and C.-K. Sun, “Device Saturation Behavior of Submillimeter-Wave Membrane Photonic Transmitters”, IEEE Photonics Tech. Lett. 16, 873-875, 2004.
180. Y. Irokawa, J. Kim, F. Ren, K. H. Baik, B. P. Gila, C. R. Abernathy, S. J. Pearton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, and S. S. Park, “Si+ Ion Implanted MPS Bulk GaN Diodes”, Solid-State Electron. 48, 827-830, 2004.
181. A. Y. Polyakov, N. B. Smirnov, A. V. Govorkov, J. Kim, F. Ren, G. T. Thaler, R. M. Frazier, B. P. Gila, C. R. Abernathy, S. J. Pearton, L. A. Buyanova, G. Y. Rudko, W. M. Chen, C.-C. Pan, G.-T. Chen, J.-I. Chyi, and J. M. Zavada, “Electrical and Luminescent Properties and the Spectra of Deep Centers in GaMnN/InGaN Light-Emitting Diodes”, J. Electronic Materials 33, 241-247, 2004.
182. I. A. Buyanova, M. Izadifard, L. Storasta, W. M. Chen J. Kim, F. Ren, G. Thaler, C. Abernathy, S.J. Pearton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, and J.M. Zavada, “Optical and Electrical Characterization of (Ga,Mn)N/InGaN Multiquantum Well Light-Emitting Diodes”, J. Electron. Mater. 33, 467-471, 2004.
183. Y.-C. Cheng, E.-C. Lin, C.-M. Wu, C. C. Yang, J.-R. Yang, A. Rosenauer, K.-J. Ma, S.-C. Shi, L. C. Chen, C.-C. Pan, and J.-I. Chyi, “Nanostructures and Carrier Localization Behaviors of Green-Luminescence InGaN/GaN Quantum Well Structures of Various Silicon Doping Conditions”, Appl. Phys. Lett. 84, 5422-5424, 2004
184. Y. Irokawa, B. Luo, F. Ren, B. P. Gila, C. R. Abernathy, S. J. Pearton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, S. S. Park, and Y. J. Park, “Reduction of Surface-Induced Current Collapse in AlGaN’GaN HFETs on Freestanding GaN Substrates”, Electrochemical and Solid-State Letters 7, G188-G191, 2004.
185. Y.-C. Cheng, E.-C. Lin, C.-M. Wu, C. C. Yang, J.-R. Yang, A. Rosenauer, K.-J. Ma, S.-C. Shi, L. C. Chen, C.-C. Pan, and J.-I. Chyi, “Nanostructures and Carrier Localization Behaviors of Green-Luminescence InGaN/GaN Quantum Well Structures of Various Silicon Doping Conditions”, Appl. Phys. Lett. 84, 2506-2508, 2004.
186. C.-C. Pan, C.-M. Lee, W.-J. Hsu, G.-T. Chen, and J.-I. Chyi, “Luminescence Efficiency of InGaN Multiple Quantum Well UV-LEDS”, Appl. Phys. Lett. 84, 5249-5251, 2004.
187. C.-M. Lee, C.-C. Chuo, Y.-C. Liu, I.-L. Chen, and J.-I. Chyi, “InGaN/GaN Multiple-Quantum-Well Light-Emitting Diodes with Current Blocking Layer Formed by Selective Activation”, IEEE Electron Dev. Lett. 25, 384-386, 2004.
188. G.-T. Chen, C.-S. Fang, C.-C. Pan, T.-C. Huang, J.-I. Chyi, M.-N. Chang, S.-B. Huang, and J.-T. Hsu “High-Reflectivity Pd/Ni/Al/Ti/Au Ohmic Contacts to P-type GaN for UV LEDs”, Appl. Phys. Lett. 85, 2797-2799, 2004.
189. I. A. Buyanova, J. P. Bergman, W. M. Chen, G. Thaler, R. Frazier, C.R. Abernathy, S. J. Pearton, Jihyun Kim, F. Ren, F. V. Kyrychenko, C. J. Stanton, C.-C. Pan, G.-T. Chen, J.-I. Chyi, and J. M. Zavada, “Optical Study of Spin Injection Dynamics in InGaN/GaN Quantum Wells with GaMnN Injection Layers”, J. Vac. Sci. Tech. B 22, 2668-2672, 2004.
190. C.-L. Hsieh, K.-H. Lin, S.-B. Wu, C.-C. Pan, J.-I. Chyi, and C.-K. Sun, “The Reflection Properties of THz Nano-Acoustic Waves at Air-GaN Interface”, Appl. Phys. Lett. 85, 4735-4737, 2004.
191. W.-K. Wang, C.-H. Lin, P.-C. Lin, C.-K. Lin, F.-H. Huang, Y.-J. Chan, G.-T. Chen, and J.-I. Chyi, “Low-k BCB Passivation on AlGaN-GaN HEMT Fabrication”, IEEE EDL 25, 763-765, 2004.
192. T.-M. Hsu, C.-Y. Lai, W.-H. Chang, C.-C. Pan, C.-C. Chuo, and J.-I. Chyi, “Electroreflectance study on the polarization field in InGaN/AlInGaN multiple quantum wells”, Appl. Phys. Lett. 84, 1114-1116, 2004.
193. L. Jiang, S. S. Li, W.-S. Liu, N.-T. Yeh, and J.-I. Chyi, “A Two-Stack, Multi-Color $In_{0.5}Ga_{0.5}As$/GaAs and InAs/GaAs Quantum Dot Infrared Photodetector for Long Wavelength Infrared Detection”, J. of Infrared Physics and Technology 46, 249-256, 2005.
194. T.-P. Hsieh, P.-C. Chiu, Y.-C. Liu, N.-T. Yeh, W.-C. Ho, and J.-I. Chyi, “Selective Growth of InAs Quantum Dots on Patterned GaAs Substrate by Metal-Organic Chemical Vapor Deposition”, J. Vac. Sci. Tech. B 23, 262-266, 2005.

195. W.-S. Liu and J.-I. Chyi, “Optical Properties of InAs Quantum Dots with InAlAs/InGaAs Composite Matrix”, J. Appl. Phys. 97, 024312, 2005.
196. H.-C. Wang, Y.-C. Lu, C.-C. Teng, Y.-C. Cheng, C. C. Yang, K.-J. Ma, C.-C. Pan, and J.-I. Chyi, “Ultrafast Carrier Dynamics in an InGaN Thin Film”, J. Appl. Phys. 97, 033704, 2005
197. W.-K. Wang, P.-C. Lin, C.-H. Lin, C.-K. Lin, Y.-J. Chan, G.-T. Chen, and J.-I. Chyi, “Performance Enhancement by Using the n+-GaN Cap Layer and Gate Recess Technology on the AlGaN/GaN HEMTs Fabrication”, IEEE EDL 26, 5-7, 2005.
198. H.-F. Lin, C.-T. Wu, W.-C. Chien, S.-W. Chen, H.-L. Kao, J.-I. Chyi, and J.-S. Chen, “Investigation of Layered Structure SAW Devices Fabricated Using Low Temperature Grown AlN Thin Film on GaN/Sapphire,” IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control. 52, 923-926, 2005.
199. K.-H. Lin, G.-W. Chern, C.-T. Yu, T.-M. Liu, C.-C. Pan, G.-T. Chen, J.-I. Chyi, S.-W. Huang, P.-C. Li, and C.-K. Sun, “Optical Piezoelectric Transducer for Nano-Ultrasonics,” IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 52, 1404-1414, 2005.
200. B. S. Kang, S. Kim, J. Kim, R. Mehandru, F. Ren, K. Baik, S. J. Pearton, B. P.Gila, C. R. Abernathy, C.-C. Pan, G.-T. Chen, J.-I. Chyi, V. Chandrasekaran, M. Sheplak, T. Nishida, and S. N. G. Chu, AlGaN/GaN High Electron Mobility Transistor Structures for Pressure and pH Sensing”, Phys. Stat. Sol., 2005.
201. W.-H. Chang, H.-Y. Chen, H.-S. Chang, W.-Y. Chen, T. M. Hsu, T.-P. Hsieh, J.-I Chyi, and N.-T. Yeh, “Electroreflectance Studies of InAs Quantum Dots with $In_xGa_{1-x}As$ Capping Layer Grown by Metal-Organic Chemical Vapor Deposition”, Appl. Phys. Lett. 86, 131917, 2005.
202. J.-W. Shi, H.-C. Hsu, F.-H. Huang, W.-S. Liu, J.-I. Chyi, J.-Y. Lu, C.-K. Sun, and C.-L. Pan, “Separated-Transport-Recombination p-i-n Photodiode for High-Speed and High Saturation Power Performance”, IEEE Photon. Tech. Lett. 17, 1722-1724, 2005.
203. C.-C. Pan, M.-S. Chen, G.-T. Chen, C.-M. Lee, and J.-I. Chyi, “Low-Resistance WSi_x-Based Ohmic Contacts on N-type GaN”, J. Appl. Phys. 98, 013712, 2005.
204. M. Chen, J. Huang, Q. Yang, C. L. Pan, and J.-I. Chyi, "Freezing Phase Scheme for Fast Adaptive Control and Its Application to Characterization of Femtosecond Coherent Optical Pulses Reflected from Semiconductor Saturable Absorber Mirrors," J. Opt. Soc. Am. B 22, 1134-1142, 2005
205. W.-H. Chang, W.-Y. Chen, H.-S. Chang, T. M. Hsu, T.-P. Hsieh, and J.-I. Chyi, “Optical Emission from Individual InGaAs Quantum Dots in Single-Defect Photonic Crystal Nanocavity”, J. Appl. Phys. 98, 034306, 2005.
206. W.-Y. Chen, W.-H. Chang, H.-S. Chang, T. M. Hsu, C.-C, Lee, C.-C. Chen, P.G. Luan, J.-Y. Chang, T.-P. Hsieh and J.-I. Chyi, “Enhanced Light Emission from InAs Quantum Dots in Single-Defect Photonic Crystal Microcavities at Room Temperature”, Appl. Phys. Lett. 87, 071111, 2005.
207. T.-P. Hsieh, N.-T. Yeh, P.-C. Chiu, W.-H. Chang, T.-M. Hsu, W.-J. Ho, and J.-I. Chyi, “1.55 μm Emission from InAs Quantum Dots Grown on GaAs”, Appl. Phys. Lett. 87, 151903, 2005.
208. W. M. Chen, I. A. Buyanova, K. Nishibayashi, K. Kayanuma, K. Seo, A. Murayama, Y. Oka, G. Thaler, R. Frazier, C. R. Abernathy, F. Ren, S. J. Pearton, C.-C. Pan, G.-T. Chen, and J.-I. Chyi, “Efficient Spin Relaxation in InGaN/GaN and InGaN/GaMnN Quantum Wells: An Obstacle to Spin Detection”, Appl. Phys. Lett. 87, 192107, 2005.
209. J.-W. Shi, C.-A. Hsieh, A.-C. Shiao, Y.-S. Wu, F.-H. Huang, S.-H. Chen, Y.-T. Tsai, and J.-I. Chyi, “Demonstration of a Dual-Depletion-Region Electro-Absorption Modulator at 1.55μm Wavelength for High-Speed and Low-Driving-Voltage Performance”, IEEE Photon. Tech. Lett. 17, 2068-2070, 2005.
210. P.-C. Chiu, N.-T. Yeh, Y.-T. Tsai, C.-C. Hong, T.-P. Hsieh, W.-J. Ho, and J.-I. Chyi, “InGaAsN/GaAs Quantum Well Lasers Using Two-Step and Nitride Passivation Growth”, Appl. Phys. Lett. 87, 091115, Aug, 2005.
211. C.-T. Yu, K.-H. Lin, C.-L. Hsieh, C.-C. Pan, J.-I. Chyi, and C.-K. Sun, “Generation of Frequency-Tunable Nanoacoustic Waves by Optical Coherent Control”, Appl. Phys. Lett. 87, 093114, 2005.
212. W.-H. Chang, H.-S. Chang, W.-Y. Chen, T. M. Hsu, T.-P. Hsieh, J.-I. Chyi, and N.-T. Yeh, “Optical Control of Exciton Charge States of Single Quantum Dots via Impurity Levels” Phys. Rev. B 72, 233302, Aug. 2005.
213. SNG Chu, F. Ren, S. J. Pearton, B. S. Kang, S. Kim, B. P. Gila, C. R. Abernathy, J.-I. Chyi, W. J. Johnson, and J. Lin, “Piezoelectric polarization-induced two dimensional electron gases in AlGaN/GaN heteroepitaxial structures: Application for micro-pressure sensors”, Materials Sci. and Eng. A, 409, 340, 2005.
214. T.-P. Hsieh, H.-S. Chang, W.-Y. Chen, W.-H. Chang, T. M. Hsu, N.-T. Yeh, W.-J. Ho, P.-C. Chiu, and J.-I. Chyi, “Growth of Low-Density InGaAs Quantum Dot for Single Photon Source by Metal-Organic Chemical Vapor Deposition”, Nanotechnology 17, 512-515, 2006.
215. C.-C. Pan, G.-T. Chen, W.-J. Hsu, C.-W. Lin, and J.-I. Chyi, “Thermal Stability Improvement by Using Pd/NiO/Al/Ti/Au Reflective Ohmic Contacts to p-GaN for Flip-Chip Ultraviolet Light-Emitting Diodes”, Appl. Phys. Lett., 88, 062113, Feb. 2006.
216. T.-F. Kao, H.-H. Chang, L.-J. Chen, J.-Y. Lu, A.-S. Liu, Y.-C. Yu, R.-B. Wu, W.-S. Liu. J.-I. Chyi, C.-K. Sun, “Frequency Tunability of Terahertz Photonic Transmitters”, Appl. Pys. Lett. 88, 093501, 2006.

217. W.-H. Chang, W.-Y. Chen, H.-S. Chang, T.-P. Hsieh, J.-I. Chyi, and T. M. Hsu, “Efficient Single Photon Sources Based on Low Density Quantum Dots in Photonic Crystal Nanocavities”, Phys. Rev. Lett. 96. 117401, Mar. 2006.
218. C. K. Chao, J.-I. Chyi, C. N. Hsiao, C. C. Kei, S. Y. Guo, and K. N. Lee, “Catalyst-Free Growth of InN Nanorods by Chemical Beam Epitaxy”, Appl. Phys. Lett. 88, 233111, 2006.
219. W.-S. Liu, H. Chang, Y.-S. Liu, and J.-I. Chyi, “Pinhole-Like Defects in Multi-Stack 1.3 μm InAs Quantum Dot Laser”, J. Appl. Phys. 99, 114514, Jun. 2006.
220. K.-H. Lin, C.-T. Yu, S.-Z. Sun, H.-P. Chen, C.-C. Pan, J.-I. Chyi, S.-W. Huang, P.-C. Li, and C.-K. Sun, “Two-Dimensional Nanoultrasonic Imaging by Using Acoustic Nanowaves,” Appl. Phys. Lett. 89, 043106 2006.
221. J.-W. Shi, Y.-T. Li, M.-L. Lin, Y.-S. Wu, W.-S. Liu, J.-I. Chyi, and C.-L. Pan, “Bandwidth Enhancement Phenomenon of a High-Speed GaAs-AlGaAs Based Unitraveling Carrier Photodiode with an Optimally Designed Absorption-Layer at an 830 nm Wavelength”, Appl. Phys. Lett. 89, 053512, 2006.
222. T.-P. Hsieh, P.-C. Chiu, J.-I. Chyi, H.-S. Chang, W.-Y. Chen, T. M. Hsu, and W.-H. Chang, “Enhancing Luminescence Efficiency of InAs Quantum Dots at 1.5 μm Using a Carrier Blocking Layer”, Appl. Phys. Lett. 89, 053110, 2006.
223. L.-M. Chang, C.-H. Hou, Y.-C. Ting, C.-C. Chen, C.-L. Hsu, J.-Y. Chang, C.-C. Lee, G.-T. Chen, and J.-I. Chyi, “Laser Emission from GaN Photonic Crystals”, Appl. Phys. Lett. 89, 071116, 2006.
224. C.-K. Chao, H.-S. Chang, T. M. Hsu, C.-N. Hsiao, C.-C. Kei, S.-Y. Kuo, and J.-I. Chyi, “Optical Properties of Indium Nitride Nanorods Prepared by Chemical-Beam Epitaxy”, Nanotechnology, 17, 15, 3930, 2006.
225. W.-S. Liu, David M. T. Kuo, J.-I. Chyi, W.-Y. Chen, H.-S. Chang, and T.-M. Hsu, “Enhanced Thermal Stability and Emission Intensity of InAs Quantum Dots Covered by an InGaAsSb Strain-Reducing Layer”, Appl. Phys. Lett., 89, 243103, 2006.
226. J.-Y. Lu, L.-J. Chen, T.-F. Kao, H.-H. Chang, H.-W. Chen, A.-S. Liu, Y.-C. Chen, R.-B. Wu, W.-S. Liu, J.-I. Chyi, and C.-K. Sun, “Terahertz Microchip for Illicit Drug Detection, IEEE Photon. Tech, Lett. 18, 2254-2256, 2006.
227. J.-W. Shi, H.-Y. Huang, C.-K. Wang, J.-K. Sheu, W.-C. Lai, Y.-S. Wu, C.-H. Chen, J.-T. Chu, H.-C. Kuo, W.-P. Lin, T.-H. Yang, and J.-I. Chyi, “Phosphor-Free GaN-Based Transverse Junction Light Emitting Diodes for the Generation of White Light”, IEEE Photon. Tech, Lett. 18, 2593-2255, 2006
228. K.-H. Lin, C.-F. Chang, C.-C. Pan, J.-I. Chyi, S. Keller, U. Mishra, S. P. DenBaars, and C.-K. Sun, “Characterizing the nanoacoustic superlattice in a phonon cavity using a piezoelectric single quantum well”, Appl. Phys. Lett., 89, 143103, 2006.
229. T.-P. Hsieh, H.-S. Chang, W.-Y. Chen, T.-M. Hsu, W.-H. Chang, and J.-I. Chyi, “Single Photon Emission from an InGaAs Quantum Dot Precisely Positioned on a Nano-Plane”, Appl. Phys. Lett. 90, 073105, 2007.
230. T.-M. Liu, S.-Z. Sun, C.-F. Chang, C.-C. Pan, G.-T. Chen, J.-I. Chyi, V. Gusev, and C.-K. Sun, “Anharmonic Decay of Sub-Thermal Coherent Acoustic Phonons in the Sub-THz regime”, Appl. Phys. Lett. 90, 041902, 2007.
231. Y.-T. Li, J.-W. Shi, C.-L. Pan, C.-H. Chiu, W.- S. Liu, N.-W. Chen, C.-K. Sun, and J.-I. Chyi, “Sub-THz Photonic-Transmitters Based on Separated-Transport-Recombination Photodiodes and a Micromachined Slot Antenna”, IEEE Photon. Tech, Lett. 19, 840-842, 2007.
232. J.-S. Hwang, H.-C. Lin, C.-K. Chang, T.-S. Wang, L.-S. Chang, J.-I. Chyi, W.-S. Liu, S.-H. Chen, H.-H. Lin, and P.-W. Liu, “The Dependence of Terahertz Radiation on the Built-in Electric Field in Semiconductor Microstructures” Optics Express 15, 5120-5125, 2007.
233. K. Remashan, W.-P. Huang, J.-I. Chyi, “Simulation and Fabrication of High Voltage AlGaN/GaN Based Schottky Diodes with Field Plate Edge Termination”, Microelectronic Engineering 84, 2907-2915, 2007.
234. W.-Y. Chen, H.-S. Chang, T. M. Hsu, T.-P. Hsieh, and J.-I. Chyi, “Temperature Stability of Single Photon Emission from InGaAs Quantum Dots in Photonic Crystal Nanocavities”, Appl. Phys. Lett. 90, 211114, 2007.
235. S.-H. Chen, S.-Y. Wang, R.-J. Hsieh, and J.-I. Chyi, “InGaAsSb/InP Double Heterojunction Bipolar Transistors Grown by Solid-Source Molecular Beam Epitaxy”, IEEE Electron Device Lett. 28, 679-681, 2007.
236. J.-W. Shi, J.-K. Sheu, C.-K. Wang, C.-C. Chen, C.-H. Hsieh, J.-I. Chyi, and W.-C. Lai, “Linear Cascade Arrays of GaN Based Green Light Emitting Diodes for High-Speed and High-Power Performance”, IEEE Photon. Tech, Lett. 19, 1368-1370, 2007.
237. C.-Y. Chen, Y.-C. Wen, H.-P. Chen, T.-M. Liu, C.-C. Pan, J.-I. Chyi, and C.-K. Sun, “Narrow-Band Detection of Propagating Coherent Acoustic Phonons in Piezoelectric InGaN/GaN Multiple-Quantum Wells”, Appl. Phys. Lett. 91, 133101, 2007.
238. K.-H. Lin, C.-M. Lai, C.-C. Pan, J.-I. Chyi, J.-W. Shi, S.-Z. Sun, C.-F. Chang, and C.-K. Sun, “Spatial Manipulation of Nanoacoustic Waves with Nanoscale Spot Sizes”, Nature Nanotechnology 2, 704-708, 2007.
239. C.-C. Pan, C.-H. Hsieh, C.-W. Lin, and J.-I. Chyi, “Light Output Improvement of InGaN Ultraviolet Light-Emitting Diodes Using Wet-Etched Stripe-Patterned Sapphire Substrates”, J. Appl. Phys. 102, 084503, 2007.
240. P.-C. Chiu, W.-S. Liu, M.-J. Hsiou, J.-I. Chyi, W.-Y. Chen, H.-S. Chang, and T.-M. Hsu, “Enhancing the

Optical Properties of InAs Quantum Dots by an InAlAsSb Strain-Reducing Layer", Appl. Phys. Lett. 91, 153106, 2007.

241. G.-T. Chen, J.-I. Chyi, C.-H. Chan, C.-H. Huo, C.-C. Chen, and M.-N. Chang, "Crack-free GaN grown on AlGaN/(111)Si Micropillar Array Fabricated by Polystyrene Microsphere Lithography", Appl. Phys. Lett. 91, 261910, 2007.
242. H.-S. Chang, C.-H. Hsu, W.-Y. Chen, T.-P. Hsieh, J.-I. Chyi, and T. M. Hsu, "High Extractive Single-Photon Emissions from InGaAs Quantum Dots on a GaAs Pyramid-Like Multifaceted Structure", Nanotechnology 19, 045714, 2008.
243. W. Y. Chiu, T. W. Huang, Y. H. Wu, F. H. Huang, Y. J. Chan, C. H. Hou, H. T. Chien, C. C. Chen, S. H. Chen, and J.-I. Chyi, "Directional Coupler Formed by Photonic Crystal InAlGaAs Nanorods", J. Lightwave Technology 26, 488-491, 2008.
244. H. L. Kao, W. C. Chen, W.-C. Chien, H.-F. Lin, T. C. Chen, C. Y. Lin, Y. T. Lin, J.-I. Chyi, C.-H. Hsu, "Epitaxial AlN Thin Film Surface Acoustic Wave Devices Prepared on GaN/Sapphire Using Low-Temperature Helicon Sputtering System," Jpn. J. Appl. Phys. 47, 124-129, 2008.
245. T. C. Chen, Y. T. Lin, C. Y. Lin, W. C. Chen, M. R. Chen, H.-L. Kao, J.-I. Chyi, C.-H. Hsu, "Suitability of Surface Acoustic Wave Oscillators Fabricated Using Low Temperature-Grown AIN Films on GaN/Sapphire as UV Sensors," IEEE Trans. Ultrasonics Ferroelectrics and Frequency Control 55, 489-493, 2008.
246. J.-W. Shi, C.-C. Chen, C.-K. Wang, C.-S. Lin, J.-K. Sheu, W.-C. Lai, C.-H. Kuo, C.-J. Tun, T.-H. Yang, F.-C. Tsao, and J.-I. Chyi, "Phosphor-Free GaN-Based Transverse Junction White Light-Emitting Diodes with Re-grown n-Type Regions", IEEE Photon. Tech, Lett. 20, 449-451, 2008.
247. G.-T. Chen, S.-P. Chang, J.-I. Chyi, and M.-N. Chang, "Growth and Characterization of Crack-Free Semipolar {1-101} InGaN/GaN Multiple-Quantum-Well on V-Grooved (001)Si Substrates", Appl. Phys. Lett. 92, 241904, 2008.
248. H.-C. Lin, R.-S. Lin, and J.-I. Chyi, "Enhancing the Quantum Efficiency of InGaN Green Light-Emitting Diodes by Trimethylindium Treatment", Appl. Phys. Lett. 92, 161113, 2008.
249. H.-S. Chang, C.-M. Hsu, M.-H. Yang, T.-P. Hsieh, J.-I. Chyi, and T.-M. Hsu, "Site-Controlled InGaAs Quantum Dots Grown on a GaAs Multi-Faceted Microstructure for Single Photon Emissions", Phys. Stat. Sol. (c) 5, 2713–2715, 2008.
250. S.-H. Chen, K.-H. Teng, H.-Y. Chen, S.-Y. Wang, and J.-I. Chyi, "Low Turn-on Voltage and High Current InP/In$_{0.37}$Ga$_{0.63}$As$_{0.89}$Sb$_{0.11}$/In$_{0.53}$Ga$_{0.47}$As Double Heterojunction Bipolar Transistors", IEEE Electron Device Lett. 29, 655-657, 2008.
251. Y.-R. Huang, C.-C. Kuo, C.-M. Chiu, H.-P. Chen, T.-F. Kao, Y.-C. Chen, A.-S. Liu, R.-B. Wu, P.-C. Chiu, J.-I. Chyi, and C.-K. Sun, "Highly Directed Radiation Pattern from a THz Photonic Transmitter with a Two-Dimensional Rampart Slot Array Antenna", IEEE Photon. Tech, Lett. 20, 1042-1044, 2008.
252. C.-C. Tseng, S.-T. Chou, Y.-H. Chen, C.-N. Chen, W.-H. Lin, T.-H. Chung, S.-Y. Lin, P.-C. Chiu, J.-I. Chyi, M.-C. Wu, "Enhanced Normal-Incident Absorption of Quantum-Dot Infrared Photodetectors with Smaller Quantum Dots," IEEE Photon. Tech, Lett. 20, 1240-1242, 2008.
253. Y.-T. Li, J.-W. Shi, C.-Y. Huang, N.-W. Chen, S.-H. Chen, J.-I. Chyi, and C.-L. Pan, "Characterization of Sub-THz Photonic-Transmitters Based on GaAs/AlGaAs Uni-Traveling Carrier Photodiodes and Substrate-Removed Broadband Antennas for Impulse-Radio Communication", IEEE Photon. Tech, Lett. 20, 1342-1344, 2008.
254. W.-H. Chang, H. Lin, S.-Y. Wang, C.-H. Lin, S.-J. Cheng, M.-C. Lee, W.-Y. Chen, T.-M. Hsu, T.-P. Hsieh, and J.-I. Chyi, "Nonresonant Carrier Transfer in Single InGaAs/GaAs Quantum Dot Molecules", Phys. Rev. B 77, 245314, 2008.
255. W.-H. Chang, Y.-A. Liao, W.-T. Hsu, M.-C. Lee, P.-C. Chiu, and J.-I. Chyi, "Carrier Dynamics of Type-II InAs/GaAs Quantum Dots Covered by a Thin GaAs$_{1-x}$Sb$_x$ Layer", Appl. Phys. Lett. 93, 033107, 2008.
256. H.-C. Lin, R.-S. Lin, J.-I. Chyi, and C.-M. Lee, "Light Output Enhancement of InGaN Light-Emitting Diodes Grown on Masklessly Etched Sapphire Substrates", IEEE Photon. Tech, Lett. 20, 1621-1623, 2008.
257. S.-W. Feng, L.-W. Tu, J.-I. Chyi, H.-C. Wang, "Luminescence Mechanism and Carrier Dynamic Studies of InGaN-Based Dichromatic Light Emitting Diodes with Ultraviolet and Blue emissions", Thin Solid Films 517, 509-515, 2008.
258. Y.-A. Liao, W.-T. Hsu, P.-C. Chiu, J.-I. Chyi, and W.-H. Chang, "Effects of Thermal Annealing on the Emission Properties of Type-II InAs/GaAsSb Quantum Dots," Appl. Phys. Lett. 94, 053101, 2009.
259. J.-W. Shi, S.-H. Guo, C.-S. Lin, J.-K. Sheu, K. H. Chang, W.-C. Lai, C.-H. Kuo, C.-J. Tun, and J.-I. Chyi, "The Structure of GaN-Based Transverse Junction Blue Light-Emitting Diode Array for Uniform Distribution of Injected Current/Carriers," IEEE J. Select. Topics Quant. Electron. 15, 1292-1297, 2009.
260. H.-S. Chang, W.-Y. Chen, T.-M. Hsu, T.-P. Hsieh, J.-I. Chyi, and W.-H. Chang, "Origins of Nonzero Multiple Photon Emission Probability from Single Quantum Dots Embedded in Photonic Crystal Nanocavities", Appl. Phys. Lett. 94, 163111, 2009.
261. J.-W. Shi, F.-M. Kuo, T.-C. Hsu, Y.-J. Yang, A. Joel, M. Mattingley, and J.-I. Chyi, "The Monolithic Integration of GaAs/AlGaAs Based Uni-Traveling-Carrier Photodiodes with Zn-Diffusion Vertical-Cavity Surface-Emitting Lasers for Bi-directional Optical Interconnects with Extremely High Data-Rate/Power-Consumption Ratios," IEEE Photon. Tech, Lett. 21, 1444-1446, 2009.

262. Y.-L. Lan, H.-C. Lin, H.-H. Liu, G.-Y. Lee, F. Ren, S. J. Pearton, M.-N. Chang, and J.-I. Chyi, “Low-Resistance Smooth Surface N-Type Ohmic Contacts to AlGaN/GaN Heterostructures,” Appl. Phys. Lett. 94, 243502, 2009.
263. M.-N. Chang, R.-S. Lin, H.-H. Liu, H.-M. Lin, H.-C. Lin, and J.-I. Chyi, “Investigations of Photo-Assisted Conductive Atomic Force Microscopy on III-nitrides,” Microelectronics Journal, 40, 353-356, 2009.
264. C. F. Lo, H.-Y. Kim, J. Kim, S.-H. Chen, S.-Y. Wang, J.-I. Chyi, B. Y. Chou, K. H. Chen, Y. L. Wang, C. Y. Chang, S. J. Pearton, L. I. Kravchenko, S. Jang, and F. Ren, “Proton Irradiation Effects on Sb-Based Heterojunction Bipolar Transistors,” J. Vac. Sci. Technol. B 27, L33-L37, 2009.
265. Y.-C. Wen, T.-S. Ko, T.-C. Lu, H.-C. Kuo, J.-I. Chyi, and C.-K. Sun, “Photogeneration of Coherent Shear Phonons in Orientated Wurtzite Semiconductors by Piezoelectric Coupling,” Phys. Rev. B 80, 195201, 2009.
266. C.-Y. Chen and J.-I. Chyi, “Optical Properties of $ZnSe_{1-x}O_x$ Epilayers,” Electron. Lett. 45, 1267, 2009.
267. K. I. Lin, H. C. Lin, J. T. Tsai, C. S. Cheng, Y. T. Lu, J. S. Hwang,P. C. Chiu, S. H. Chen, J.-I. Chyi, and T. S. Wang, “Strong Surface Fermi Level Pinning and Surface State Density in $GaAs_{0.65}Sb_{0.35}$ Surface Intrinsic-n+ Structure,” Appl. Phys. Lett. 95, 141914, 2009.
268. P.-H. Wang, Y.-C. Wen, S.-H. Guo, C.-M. Lai, H.-C. Lin, P.-R. Chen, J.-W. Shi, J.-I. Chyi, and C.-K. Sun, “Electrically Manipulating the Optical Sensitivity Function in Quantum Wells for Nanoacoustic Wave Detection,” Appl. Phys. Lett. 95, 143108, 2009.
269. Y. T. Li, J.-W. Shi, C.-Y. Huang, N.-W. Chen, S.-H. Chen, J.-I. Chyi, Y.-C. Wang, C.-S. Yang, and C.-L. Pan, “Characterization and Comparison of GaAs/AlGaAs Uni-Traveling Carrier and Separated-Transport-Recombination Photodiode Based High-Power Sub-THz Photonic-Transmitters,” IEEE J. Quant. Electron. 46, 19-27, 2010.
270. J.-W. Shi, F.-M. Kuo, C.-J. Wu, C. L. Chang, C. Y. Liu, C.-Y. Chen, and J.-I. Chyi, “Extremely High Saturation Current-Bandwidth Product Performance of a Near-Ballistic Uni-Traveling-Carrier Photodiode with a Flip-Chip Bonding Structure,” IEEE J. Quant. Electron. 46, 80-86, 2010.
271. W.-Y. Chen, H.-S. Chang, C.-H. Lin, P.-C. Chiu, C.-J. Wang, Y.-C. Tseng, J.-I. Chyi, and Tzu Min Hsu, “Photoluminescence for Self-Assembled InAs Quantum Dots Embedded in Photonic Crystal Nanocavities with Shifted Air Holes”, Nanotechnology 21, 055201, 2010.
272. H.-C. Lin, H.-H. Liu, G.-Y. Lee, J.-I Chyi, C.-M. Lu, K.-L. Fang, C.-W Chao, T.-C. Wang, and Solomon W. S. Chi, “Effects of Lens Shape on GaN Grown on Micro-Lens Patterned Sapphire Substrates by Metal-Organic Chemical Vapor Deposition,” J. Electrochem. Soc. 157, H304-H307, 2010.
273. K.-P. Hsueh, C.-T. Pan, C.-T. Li, H. C. Lin, Y.-M. Hsin, and J.-I. Chyi, “Temperature-Dependent Characteristics of a GaN/InGaN/ZnO Heterojunction Bipolar Transistor," J. Electrochem. Soc. 157, H381-H383, 2010.
274. M. R. Chen, S. H. Chang, T. C. Chen, C. H. Hsu, H. L. Kao, and J.-I. Chyi, “Fabrication Study of AlN Solar-Blind (< 280 nm) MSM Photodetectors Grown by Low-Temperature Deposition,” M. R. Chen, S. H. Chang, T. C. Chen, C. H. Hsu, H. L. Kao, and J.-I. Chyi, “Fabrication Study of AlN Solar-Blind (< 280 nm) MSM Photodetectors Grown by Low-Temperature Deposition,” Phys. Status Solidi A, 207, 224-228, 2010.
275. H.-K. Lin, Y.-C. Lin, F.-H. Huang, T.-W. Fan, P.-C. Chiu, J.-I. Chyi, C.-H. Ko, T.-M. Kuan, M.-K. Hsieh, W.-C. Lee, C.H. Wann, “Gate Leakage Lowering and Kink Current Suppression for Antimonide-Based Field-Effect Transistors,” Solid-State Electronics 54, 475-478, 2010.
276. H.-K. Lin, D.-W. Fan, Y.-C. Lin, P.-C. Chiu, C.-Y. Chien, P.-W. Li, J.-I. Chyi, C.-H. Ko, T.-M. Kuan, M.-K. Hsieh, W.-C. Lee, C.H. Wann, “E-Beam-Evaporated Al_2O_3 for InAs/AlSb Metal-Oxide-Semiconductor HEMT Development,” Solid-State Electronics 54, 505-508, 2010.
277. S.-Y. Lin,C.-C. Tseng, W.-H. Lin, S.-C. Mai, S.-Y. Wu, S.-H. Chen, and J.-I. Chyi, “Room-Temperature Operation Type-II GaSb/GaAs Quantum-Dot Infrared Light-Emitting Diode,” Appl. Phys. Lett. 96, 123503, 2010.
278. S.-Y. Lin, C.-C. Tseng, T.-H. Chung, W.-H. Liao, S.-H. Chen, and J.-I. Chyi, “Site-Controlled Self-Assembled InAs Quantum Dots Grown on GaAs Substrates,” Nanotechnology 21, 295304, 2010.
279. W.-Y. Chen, F.-S. Yang, H.-S. Chang, C.-C. Cheng, C.-J. Wang, P.-C. Chiu, J.-I. Chyi, and T.M. Hsu, “Coherence Properties of InAs Quantum Dot Emissions from Ouasi-L2 Photonic Crystal Nanocavities,” Solid State Communications, 150, 1798-1801, 2010.
280. W. T. Hsu, Y. A. Liao, S. K. Lu, S. J. Cheng, P. C. Chiu, J. I. Chyi, W. H. Chang, “Tailoring of the Wave Function Overlaps in $InAs/GaAs_{1-x}Sb_x$ Type-II Quantum Dots”, Physica E-Low-Dimensional Systems & Nanostructures, 42**,** 2524-2528, 2010.
281. Y. C. Lin, H. L. Chung, W. C. Chou, W. K. Chen, W. H. Chang, C. Y. Chen, and J.-I. Chyi, “Carrier Dynamics in Isoelectronic $ZnSe_{1-x}O_x$ Semiconductors,” Appl. Phys. Lett., 97, 041909, 2010.
282. U. Mahesh, C. Y. Chen, and J.-I. Chyi, "Spectroscopic Ellipsometric Analysis of $ZnSe_{1-x}O_x$ Layers with Different O Compositions," J. Appl. Phys., 108, 103113, 2010.
283. S.-H. Chen, C.-M. Chang, P.-Y. Chiang, S.-Y. Wang, W.-H. Chang, and J.-I. Chyi, “DC Characteristics of InAlAs/InGaAsSb/InGaAs Double Heterojunction Bipolar Transistors,” IEEE Trans. Electron Device, 57, 3327-3332, 2010.
284. S.-Y. Wang, P.-Y. Chiang, C.-M. Chang, S.-H. Chen, and J.-I. Chyi, “Low Surface Recombination in InAlAs/InGaAsSb/InGaAs Double Heterojunction Bipolar Transistors,” IEEE Electron Device Lett., 31,

1401-1403, 2010.

285. H.-H. Liu, P.-R. Chen, G.-Y. Lee, and J.-I. Chyi, "Efficiency Enhancement for InGaN LEDs with an N-Type AlGaN/GaN/InGaN Current Spreading Layer," IEEE Electron Device Lett. 32, 1409-1411, 2011.
286. W.-Y. Chen, M.-Z. Chen, C.-C. Cheng, C.-J. Wang, J.-I. Chyi, and T.-M. Hsu, "Imaging Resonant Modes in Photonic Crystal Nanocavity by Atomic Force Microscope Nano-Oxidation," Appl. Phys. Lett., 98, 191110, 2011.
287. Y. C. Lin, H. L. Chung, J. T. Ku, C. Y. Chen, K. F. Chien, W. C. Fan, L. Lee, J.-I. Chyi, W. C. Chou, W. H. Chang, and W. K. Chen, "Optical Characterization of Isoelectronic $ZnSe_{1-x}O_x$ Semiconductors," J. Crystal Growth, 323, 122-126, 2011.
288. C.-F. Lo, F. Ren, C.-Y. Chang, S. J. Pearton, S.-H. Chen, C.-M. Chang, S.-Y. Wang, J.-I. Chyi, and I. I. Kravchenko, "Fabrication of InAlAs/InGaAsSb/InGaAs Double Heterojunction Bipolar Transistors," J. Vacuum Science & Technology B, 29, 031205, 2011.
289. W.-S. Liu, H.-M. Wu, Y.-A. Liao, J.-I. Chyi, W.-Y. Chen, and T.-M. Hsu, "High Optical Property Vertically Aligned InAs Quantum Dot Structures with GaAsSb Overgrown Layers," J. Crystal Growth, 323, 164-166, 2011.
290. S.-W. Feng, C.-Y. Tsai, H.-C. Wang, H.-C. Lin, and J.-I. Chyi, "Optical Properties of InGaN/GaN Multiple Quantum Wells with Trimethylindium Treatment During Growth Interruption," J. Crystal Growth, 325, 41-45, 2011.
291. S.-W. Feng, H.-C. Lin, J.-I. Chyi, C.-Y. Tsai,C.-J. Huang, H.-C. Wang, F.-W. Yang, and Y.-S. Lin, "The Impact of Trimethylindium Treatment Time During Growth Interruption on the Carrier Dynamics of InGaN/GaN Multiple Quantum Wells," Thin Solid Films, 519, 6092-6096, 2011.
292. T. M. Liu, S. Z. Sun, C. F. Chang, G. T. Chen, C. C. Pan, J. I. Chyi, and C. K. Sun, "Roles of Dislocation Density to the Scattering of Nano-acoustic Waves in GaN", Chinese J. of Physics, 49, 171-175, 2011.
293. W.-T. Hsu, Y.-A. Liao, F.-C. Hsu, P.-C. Chiu, J.-I. Chyi, and W.-H. Chang, "Effects of GaAsSb Capping Layer Thickness on the Optical Properties of InAs Quantum Dots," Appl. Phys. Lett., 99, 073108, 2011.
294. G.-Y. Lee, H.-H. Liu, and J.-I. Chyi, "High Performance AlGaN/GaN Schottky Diodes with an AlGaN/AlN Buffer Layer," IEEE Electron Device Lett. 32, 1519-1521, 2011.
295. A. A. Maznev, K. J. Manke, K.-H Lin, K. A. Nelson, C.-K. Sun, and J.-I. Chyi, "Broadband Terahertz Ultrasonic Transducer Based on a Laser-Driven Piezoelectric Semiconductor Superlattice," Ultrasonics, 52, 1-4, 2012.
296. C.-A. Lin, P.-C. Chiu, M.-L. Huang, H.-K. Lin, T.-H. Chiang, W.-C. Lee, Y.-C. Chang, Y.-H. Chang, J.-I. Chyi, G. J. Brown, J. Kwo, and M. Hong, "InAs MOS Devices with MBE-Grown Gd_2O_3 Passivation," J. Vac. Sci. Tech. B, 30, 02B118, 2012.
297. S.-W. Feng and J.-I. Chyi, "Carrier Transport Study of TMIn-Treated InGaN LEDs by Using Quantum Efficiency and Time-Resolved Electro-Luminescence Measurements," J. Electrochem. Soc. 159 (3), H225-H229, 2012.
298. W.-Y. Chen, C.-W. Lai, C.-C. Cheng, C.-Y. Chen, J.-I. Chyi, and T.-M. Hsu, "Photomodulation reflectance study of temperature dependence of the band gap of $ZnSe_{1-x}O_x$", Physica Status Solidi (c) 9, 187-189, 2012.
299. Y.-C. Lin, W.-S. Jiang, W.-C. Chou, W.-K. Chen, W.-H. Chang, C.-H. Chia, C.-Y. Chen, and J.-I. Chyi, "Temperature-Dependent Decay Dynamics in Highly Mismatched $ZnSe_{1-x}Te_x$ Alloy," Appl. Phys. Lett. 100, 071912, 2012.
300. Y.-M. Hsin, T.-Y. Ke, G.-Y. Lee, J.-I. Chyi, and H.-C. Chiu, "A 600 V AlGaN/GaN Schottky Barrier Diode on Silicon Substrate with Fast Reverse Recovery Time," Phys. Status Solidi (c) 9, 949–952, 2012.
301. H.-C. Ho, Z.-Y. Gao, H.-K. Lin, P.-C. Chiu, Y.-M. Hsin, and J.-I. Chyi, "Device Characteristics of InGaSb/AlSb High Hole Mobility FETs," IEEE Electron Device Lett., 33, 964-966, 2012.
302. J. S. Hwang, J. T. Tsai, I. C. Su, H. C. Lin, P. C. Chiu, and J.-I. Chyi, "GaAsSb Bandgap, Surface Fermi level and Surface State Density Studied by Photoreflectance Modulation Spectroscopy," Appl. Phys. Lett., 100, 222104, 2012.
303. Y.-R. Huang, H.-P. Chen, P.-C. Chiu, J.-I. Chyi, B.-H. Wang, S.-Y. Chen, C.-K. Sun, "Propagation, Resonance, and Radiation on Terahertz Optoelectronic Integrated Circuits," IEEE Photonics J., 4, 699-706, Jun 2012.
304. C.-I. Kuo, H.-T. Hsu, C.-Y. Hsu, C.-H. Yu, H.-C. Ho, E.-Y. E. Y. Chang, J.-I. Chyi, "Effect of Gate Length on Device Performances of AlSb/InAs High Electron Mobility Transistors Fabricated Using BCl_3 Dry Etching," Japanese J. of Appl. Phys., 51, 060202, 2012.
305. W.-S. Liu, H.-M. Wu, F.-H. Tsao, T.-L. Hsu, and J.-I. Chyi, "Improving the Characteristics of Intermediate-Band Solar Cell Devices Using a Vertically Aligned InAs/GaAsSb Quantum Dot Structure," Solar Energy Materials and Solar Cells, 105, 237-241, 2012.
306. S. Y. Wang, C. A. Chang, C. M. Chang, S. H. Chen, F. Ren, S. J. Pearton, and J.-I. Chyi, "Investigation of Emitter Size Effect in InP/InGaAsSb/InGaAs Double Heterojunction Bipolar Transistors," Appl. Phys. Lett., 101, 073507, 2012.
307. H.-C. Chiu, C.-W. Lin, H.-L. Kao, G.-Y. Lee, J.-I. Chyi, H.-W. Chuang, K.-J. Chang,and Y.-T. Gau, "A gold-free fully copper metalized AlGaN/GaN power HEMTs on Si substrate," Microelectronics Reliability, 52, 11, 2556-2560, Nov. 2012.

308. C.-C. Huang, G.-Y. Lee, J.-I. Chyi, H.-T. Cheng, C.-P. Hsu, Y.-R. Hsu, C.-H. Hsu, Y.-F. Huang, Y.-C. Sun, C.-C. Chen, S.-S. Li, J.-A. Yeh, D.-J. Yao, F. Ren, and Y.-L. Wang, “AlGaN/GaN high electron mobility transistors for protein-peptide binding affinity study,” Biosensors & Bioelectronics, 41, 717-722, 2013.
309. H.-H. Liu, H.-Y. Lin, C.-Z. Liao, and J.-I. Chyi, “Growth and Characterization of Crack-Free Semi-Polar (1-101) GaN on 7°-off (001) Si Substrates by Metal-Organic Chemical Vapor Deposition," ECS J. Solid State Sci. Tech., 2013. (accepted)
310. H.-C. Ho, Z.-Y. Gao, H.-K. Lin, P.-C. Chiu, Y.-M. Hsin, and J.-I. Chyi, “InGaSb/AlSb p-Channel HFETs with Hydrogen Plasma Treatment,” Electron Lett., 49, 7, 499-500, 2013.
311. Y.-A. Liao, W.-T. Hsu, S.-H. Huang, P.-C. Chiu, J.-I. Chyi, and W.-H. Chang, “Band Alignment Tuning of InAs Quantum Dots with a Thin AlGaAsSb Capping Layer,” Appl. Phys. Lett., 102, 17, 173104, 2013.
312. C. Y. Liu, C. C. Lai, J. H. Liao, L. C. Cheng, H. H. Liu, C. C. Chang, G. Y. Lee, J.-I. Chyi, L. K. Yeh, J. H. He, T. Y. Chung, L. C. Huang, and K. Y. Lai, “Nitride-Based Concentrator Solar Cells Grown on Si Substrates, Solar Energy Materials & Solar Cells, 117, 54–58, 2013.
313. Y.-W. Kang, G.-Y. Lee, J.-I. Chyi, C.-P. Hsu, Y.-R. Hsu, C.-H. Hsu, Y.-F. Huang, Y.-C. Sun, C.-C. Chen, S. C. Hung, F. Ren, J. Andrew Yeh, and Y.-L. Wang, “Human Immunodeficiency Virus Drug Development Assisted with AlGaN/GaN High Electron Mobility Transistors and Binding-Site Models,” Appl. Phys. Lett., 102, 173704, 2013.
314. Y.-A. Liao, W.-H. Lin, Y.-K. Chao, W.-H. Chang, J.-I. Chyi, and S.-Y. Lin, “In-Plane Gate Transistors for Photodetector Applications,” IEEE Electron Device Lett., 34, 6, 780-782, 2013.
315. N.-T. Yeh, P.-C. Chiu, J.-I. Chyi, F. Ren, and S. J. Pearton, “Sb-Based Semiconductors for Low Power Electronics,” J. Materials Chemistry C, 2013. (accepted)
316. P.-Y. Chen, Z.-Y. Gao, H.-C. Ho, H.-K. Lin, Y.-M. Hsin, and J.-I. Chyi, “Device Characteristics of InAlSb/InAs and InAlSb/InAsSb HFETs,” Electron Lett., 2013. (accepted)