

Full list of publications by Kevin J. Chen

Refereed journal papers

1. S. Liu, Y. Cai, G. Gu, J. Wang, C. Zeng, W. Shi, Z. Feng, H. Qin, Z. Cheng, K. J. Chen, and B. Zhang, "Enhancement-mode operation of nano-channel Array (NCA) AlGaIn/GaN HEMTs," *IEEE Elec. Dev. Lett.*, 2012, in press.
2. Q. Zhou, H. Chen, C. Zhou, Z. H. Feng, S. J. Cai, and K. J. Chen, "Schottky source/drain InAlN/AlN/GaN MISHEMT with enhanced breakdown voltage," *IEEE Elec. Dev. Lett.*, vol. 33, No. 1, pp. 38-40, 2012.
3. X. Wang, S. Liu, N. Ma, L. Feng, G. Chen, F. Xu, N. Tang, S. Huang, K. J. Chen, S. Zhou, and B. Shen, "High-electron-mobility InN layers grown by boundary-temperature-controlled epitaxy," *Appl. Phys. Express*, 5, 015502, 2012.
4. S. Jha, H.E. Wang, O. Kutsay, E.V. Jelenkovic, K.J. Chen, I. Bello, V. Kremnican, J.A. Zapien, "Exploiting nanostructure-thin film interfaces in advanced sensor device configurations", *Vacuum*, in press.
5. C. Ma, H. Chen, C. Zhou, S. Huang, L. Yuan, J. Roberts, and K. J. Chen, "ON-state critical gate overdrive voltage for fluorine-implanted enhancement-mode AlGaIn/GaN high electron mobility transistors," *J. Appl. Phys.*, 110, 114514, 2011.
6. S. Huang, S. Yang, J. Roberts, and K. J. Chen, "Threshold voltage instability in Al₂O₃/GaIn/AlGaIn/GaN metal-insulator-semiconductor high electron mobility transistors," *Jpn. J. Appl. Phys.*, 50, 110202, 2011.
7. S. Yang, S. Huang, H. Chen, M. Schnee, Q.-T. Zhao, J. Schubert, and K. J. Chen, "Characterization of high-k LaLuO₃ thin film grown on AlGaIn/GaN heterostructure by molecular beam deposition," *Appl. Phys. Lett.*, 99, 182103, 2011.
8. L. Yuan, H. Chen, Q. Zhou, C. Zhou, and K. J. Chen, "Gate-induced Schottky barrier lowering effect in AlGaIn/GaN metal-2DEG tunnel junction field effect transistor," *IEEE Elec. Dev. Lett.*, vol. 32, No. 9, pp. 1221-1223, 2011.
9. B. K. Li, M. H. Wang, K. J. Chen, and J. N. Wang, "Enhanced electroluminescence from the fluorine-plasma implanted Ni/Au-AlGaIn/GaN Schottky diode," *Appl. Phys. Lett.*, 99, 062101, 2011.
10. H. Chen, M. J. Wang, and K. J. Chen, "Enhancement-mode AlGaIn/GaN HEMTs fabricated by standard fluorine ion implantation with a Si₃N₄ energy-absorbing layer," *Electrochem. Solid-State Lett.* Vol. 14, No. 6, pp. H229-231, 2011.
11. A. M. H. Kwan, K. -Y. Wong, Xiaosen Liu, and K. J. Chen, "High-gain and high-bandwidth AlGaIn/GaN high electron mobility transistor comparator with high-temperature operation," *Jpn. J. Appl. Phys.* Vol. 50, No. 4, 04DF02, 2011.
12. J. Fu and K. J. Chen, "Microspheres manipulation system by patterned AlGaIn/GaN 2DEG electrodes" *Phys. Sta. Sol. (c)*, **8**, No. 7-8, pp. 2479-2482, 2011.

13. S. Huang, H. Chen, and K. J. Chen, "Surface properties of AlGa_N/Ga_N heterostructures treated by fluorine plasma: an XPS study," *Phys. Status Solidi C*, **8**, No. 7–8, pp. 2200–2203, 2011.
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16. L. Yuan, H. Chen, and K. J. Chen, "Normally-off AlGa_N/Ga_N metal-2DEG tunnel-junction field-effect transistors," *IEEE Electron Device Letters*, vol. 32, No. 3, pp. 303-305, 2011.
17. K. J. Chen and Chunhua Zhou, (Invited) "Enhancement-mode AlGa_N/Ga_N HEMT and MIS-HEMT Technology," *Phys. Sta. Sol. (a)*, 208, No. 2, pp. 434-438. Feb. 2011.
18. M. J. Wang and K. J. Chen, "Improvement of the Off-State Breakdown Voltage with Fluorine Ion Implantation in AlGa_N/Ga_N HEMTs," *IEEE Trans. Electron Devices*, vol. 58, No. 2, pp. 460-465. Feb. 2011.
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Conference papers

1. (Invited) K. J. Chen, L. Yuan, M.J. Wang*, H. Chen, S. Huang*, C. Zhou, Q. Zhou, B.K. Li, J.N. Wang, "Physics of Fluorine Plasma Ion Implantation for GaN Normally-off HEMT Technology", *2011 Int. Electron Device Meeting (IEDM)*, Washington D. C., USA, Dec. 4-7, 2011.
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