

Full list of publications by Kevin J. Chen

Book Chapters

- **K. J. Chen** and S. Yang, "Recent Progress in GaN-on-Si HEMT," in HANDBOOK OF GaN SEMICONDUCTOR MATERIALS AND DEVICES, *CRC Press*, Taylor & Francis Group, International Standard Book Number-13: 978-1-4987-4713-4 (Hardback). Chapter 11, 2018.
- **K. J. Chen**, "Fluorine-Implanted Enhancement-Mode Transistors" in *Power GaN Devices*, Springer International Publishing, ISBN: 978-3-319-43197-0, Chapter 12, pp. 273-293, 2016.
- **K. J. Chen** and L. L. W. Leung, "CMOS-compatible micromachined edge-suspended planar inductors and coplanar waveguides" in *Si-Based Semiconductor Components for RF Integrated Circuits*, Transworld Research Network, Ed. Will Z. Cai, ISBN: 81-7895-196-7, Chapter 8, pp. 217-242, 2006.

Refereed journal papers

1. **(Invited Paper)** H. Amano, et al., "The 2018 GaN power electronics roadmap, " *J. Phys. D: Appl. Phys.* 51 (2018) 163001.
2. Q. Qian, Z. Zhang, and **K. J. Chen**, "In Situ Resonant Raman Spectroscopy to Monitor the Surface Functionalization of MoS₂ and WSe₂ for High-k Integration: A First-Principles Study," *Langmuir*, 34, pp. 2882-2889, 2018. DOI: 10.1021/acs.langmuir.7b03840.
3. M. Hua, Q. Qian, J. Wei, Z. Zhang, G. Tang, and **K. J. Chen**, "Bias Temperature Instability of Normally-Off GaN MIS-FET with Low-Pressure Chemical Vapor Deposition SiN_x Gate Dielectric, " *Phys. Status Solidi A*, 2018, 1700641, DOI: 10.1002/pssa.201700641.
4. J. Lei, J. Wei, G. Tang, Z. Zhang, Q. Qian, Z. Zheng, Mengyuan, and **K. J. Chen**, "650-V Double-Channel Lateral Schottky Barrier Diode with Dual-Recess Gated Anode," *IEEE Electron Device Lett.*, *IEEE Electron Device Lett.*, vol. 39, no. 2, pp. 260-263, Feb. 2018.
5. M. Hua, J. Wei, Q. Bao, Z. Zhang, Z. Zheng, and **K. J. Chen**, "Dependence of V_{TH} Stability on Gate-Bias under Reverse-Bias Stress in E-mode GaN MIS-FET," *IEEE Electron Device Lett.*, vol. 39, No. 3, pp. 413-416, 2018, DOI: 10.1109/LED.2018.2791664.
6. S. Huang, X. Liu, X. Wang, X. Kang, J. Zhang, J. Fan, J. Shi, K. Wei, Y. Zheng, H. Gao, Q. Sun, M. Wang, B. Shen, and **K. J. Chen**, "Ultrathin-Barrier AlGaIn/GaN Heterostructure: A Recess-Free Technology for Manufacturing High-Performance GaN-on-Si Power Devices," *IEEE Trans. Electron Devices*, vol. 65, no. 1, pp. 207-214, 2018.

7. J. Wei, J. Lei, X. Tang, B. Li, S. Liu, and **K. J. Chen**, "Channel-to-Channel Coupling in Normally-Off GaN Double-Channel MOS-HEMT," *IEEE Electron Device Lett.*, vol. 39, no. 1, pp. 59-62, 2018.
8. K. Kim, M. Hua, D. Liu, J. Kim, **K. J. Chen**, and Z. Ma, "Efficiency enhancement of InGaN/GaN blue light-emitting diodes with top surface deposition of AlN/Al₂O₃," *Nano Energy*, 43 (2018) 259-269.
9. S. Yang, C. Zhou, S. Han, J. Wei, K. Sheng, and K. J. Chen, "Impact of Substrate Bias Polarity on Buffer-Related Current Collapse in AlGaIn/GaN-on-Si Power Devices," *IEEE Trans. Electron Devices*, vol. 64, no. 12, pp. 5048-5056, 2017.
10. Q. Qian, Z. Zhang, M. Hua, J. Wei, J. Lei, and K. J. Chen, "Remote N₂ Plasma Treatment to Deposit Ultrathin High-k Dielectric As Tunneling Contact Layer for Single-layer MoS₂ MOSFET," *Appl. Phys. Express*, vol. 10, p. 125201, 2017.
11. Z. Zhang, B. Li, Member, Q. Qian, X. Tang, M. Hua, B. Huang, and K. J. Chen, "Revealing the Nitridation Effects on GaN Surface by First-Principles Calculation and X-Ray/Ultraviolet Photoemission Spectroscopy," *IEEE Trans. Electron Devices*, vol. 64, No. 10, p. 4036-4036, 2017.
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95. K. J. Chen and C. Zhou (invited) "GaN Smart Discrete Power Devices," *The 10th Int. Conf. on Solid-State and Integrated-Circuit Technology (ICSICT08)*, Shanghai, China, Nov. 1-4, 2010.
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