

2016年 発表文献リスト

<著書・論文発表>

- (1) J. T. Asubar, S. Yoshida, H. Tokuda, and M. Kuzuhara, “Highly reduced current collapse in AlGaIn/GaN high-electron-mobility transistors by combined application of oxygen plasma treatment and field plate structures”, *Jpn. J. Appl. Phys.*, **55**, 04EG07, 2016. (2016/4)
- (2) A. Yamamoto, K. Kodama, N. Shigekawa, T. Matsuoka, and M. Kuzuhara, “Low-temperature growth of InN by metalorganic vapor phase epitaxy using an NH₃ decomposition catalyst”, *Jpn. J. Appl. Phys.* **55**, 05FD04, 2016. (2016/5)
- (3) M. Kuzuhara, J. T. Asubar, and H. Tokuda, “AlGaIn/GaN high-electron-mobility transistor technology for high-voltage and low-on-resistance operation (invited review)”, *Jpn. J. Appl. Phys.*, **55**, 070101, 2016. (2016/7)
- (4) H. Tokuda, J. T. Asubar, and M. Kuzuhara, “AlGaIn/GaN metal–insulator–semiconductor high-electron mobility transistors with high on/off current ratio of over 5×10^{10} achieved by ozone pre treatment and using ozone oxidant for Al₂O₃ gate insulator”, *Jpn. J. Appl. Phys.* **55**, 120305, 2016. (2016/12)

<学会発表>

- (5) J. H. Ng, J. T. Asubar, H. Tokuda, and M. Kuzuhara, “AlGaIn/GaN HEMTs on Free-standing GaN substrate with Breakdown Voltage of 5 kV and Effective Lateral Critical Field of 1 MV/cm”, 2016 International Conf. on Compound Semiconductor Manufacturing Technology, Dig., pp. 215-218, Miami, USA, (2016/5).
- (6) S. Makino, T. Yamazaki, S. Ohi, H. Tokuda, J. T. Asubar, and M. Kuzuhara, “Effect of Metal Electrode Shape Irregularities on AlGaIn/GaN HEMTs Breakdown Voltage Revealed by Electroluminescence”, 40 th Workshop on Compound Semiconductor Devices and Integrated Circuits held in Europe, Dig., pp.W7-W8, Portugal, (2016/6).
- (7) T. Yamazaki, Y. Suzuki, S. Ohi, J. T. Asubar, H. Tokuda, and M. Kuzuhara, “Breakdown degradation of AlGaIn/GaN HEMTs with multi-finger gate patterns”, IMFEDK2016 (International Meeting for Future of Electron Devices, Kansai), pp.96-97, Kyoto, (2016/6).
- (8) S. Makino, S. Ohi, J. T. Asubar, H. Tokuda, and M. Kuzuhara, “Effect of Metal Electrode Edge Irregularities on Breakdown Voltages of AlGaIn/GaN HEMTs”, IMFEDK2016 (International Meeting for Future of Electron Devices, Kansai), pp.94-95, Kyoto, (2016/6).
- (9) S. Ohi, S. Makino, T. Yamazaki, H. Tokuda, J. T. Asubar, and M. Kuzuhara, “Impact of Drain Electrode Shape Irregularities on Breakdown Voltage of AlGaIn/GaN HEMTs”, 43 rd International Symp. on Compound Semiconductors, TuB1-5, Toyama, (2016/6).
- (10) H. Tokuda, J. T. Asubar, and M. Kuzuhara, “High on/off current ratio AlGaIn/GaN MIS-HEMTs with ALD deposited Al₂O₃ gate dielectric using ozone as oxidant,” 2016 Asia-Pacific Workshop on Fundamentals and

Applications of Advanced Semiconductor Devices (AWAD 2016), A1-5, Hakodate, (2016/7).

- (11) M. Kuzuhara, J. T. Asubar, and H. Tokuda, "Effect of Passivation on breakdown voltage and dynamic on-resistance in AlGa_N/Ga_N HEMTs (invited)," E-MRS, Dig., p.149, Poland, (2016/9).
- (12) A. Sasakura, N. Takashima, H. Tokuda, M. Edo, K. Ueno, and M. Kuzuhara, "Characterization of Ga_N-Based Trench-Gate MOSFET with Implanted Source Region," International Workshop on Nitride Semiconductors, C0.5.05, Orlando, USA, (2016/10).
- (13) M. Kuzuhara, "Reduced current collapse in AlGa_N/Ga_N HEMTs for low-loss power switching operation (invited)", 3rd Intensive Discussion on Growth of Nitride Semiconductors, Sendai, Dig., pp.1-2, (2017/1).
- (14) J. H. Ng, J. T. Asubar, H. Tokuda, M. Kuzuhara, "AlGa_N/Ga_N HEMTs on Free-standing Ga_N Substrates with Critical Electric Field of 1.2 MV/cm", 第 77 回応用物理学会秋季学術講演会、朱鷺メッセ、16a-B1-1、(2016/9).
- (15) 山崎泰誠、鈴木雄大、J. Asubar、徳田博邦、葛原正明、“ドレイン電極形状が AlGa_N/Ga_N HEMTs の耐圧に与える影響”、77 回応用物理学会秋季学術講演会、朱鷺メッセ、16a-B1-2、(2016/9).
- (16) 鈴木敦也、J. Asubar、徳田博邦、葛原正明、“三次元 FP 構造 AlGa_N/Ga_N HEMT の電流コラプスに与える溝エッチング深さの効果”、77 回応用物理学会秋季学術講演会、朱鷺メッセ、16a-B1-3、(2016/9).
- (17) 牧野伸哉、大井慎太郎、山崎泰誠、J. Asubar、徳田博邦、葛原正明、“電極プロセスが AlGa_N/Ga_N HEMT の耐圧に与える影響” 77 回応用物理学会秋季学術講演会、朱鷺メッセ、16a-B1-12、(2016/9).
- (18) 葛原正明、“窒化物デバイスの新展開 (招待講演)”、77 回応用物理学会秋季学術講演会、朱鷺メッセ、14p-A21-2、(2016/9).
- (19) 鈴木雄大、山崎泰誠、牧野伸哉、Joel. T. Asubar、徳田博邦、葛原正明、“AlGa_N/Ga_N HEMT の高耐圧・大電流化に関する検討”、電子情報通信学会電子デバイス研究会、京都、(2016/12)
- (20) 鈴木敦也、Joel T. Asubar、徳田博邦、葛原正明、“三次元フィールドプレートを用いた AlGa_N/Ga_N HEMT の電流コラプス抑制”、電子情報通信学会電子デバイス研究会、京都、(2016/12)
- (21) 葛原正明、“窒化物半導体パワーデバイス開発の現状 (招待講演)”、電子情報通信学会電子デバイス研究会、広島、(2017/1)