

# 目次

1. Research on improvement of GaN-based light emitting devices grown on silicon (111) substrate (シリコン(111)基板上窒化ガリウム系発光デバイスの特性改善に関する研究) .....	1
2. 本研究に関連した発表・論文 .....	105
[1] Breakdown enhancement of AlGaIn/GaN HEMTs on 4-in silicon by improving the GaN quality on thick buffer layers .....	105
[2] Influence of deep pits on the breakdown of metalorganic chemical vapor deposition grown AlGaIn/GaN high electron mobility transistors on silicon .....	108
[3] Influence of growth parameters and thickness of AlN spacer on electrical properties of AlGaIn/AlN/GaN high-electron-mobility transistors grown on 4-inch Si substrate .....	111
[4] 12.88 W/mm GaN high electron mobility transistor on silicon substrate for high voltage operation .....	117
[5] Effect of GaN buffer layer growth pressure on the device characteristics of AlGaIn/GaN high- electron-mobility transistors on Si .....	120
[6] Oxygen plasma treated aluminum as a gate dielectric for AlGaIn/GaN high electron mobility transistors .....	124
[7] Device characteristics of metalorganic chemical vapor deposition-grown InAlGaIn high- electron-mobility transistors on AlN/Sapphire template .....	128
[8] Low-temperature electroluminescence quenching of AlGaIn deep ultraviolet light-emitting diodes .....	132
[9] Demonstration of AlGaIn-based deep-ultraviolet light-emitting diodes on high-quality AlN templates .....	135
[10] Metal-organic chemical vapor deposition growth and characterization of InAlGaIn multiple quantum wells .....	139
[11] Improved performance of InAlN-based Schottky solar-blind photodiodes .....	142
[12] Effect of strain on quantum efficiency of InAlN-based solar-blind photodiodes .....	145
[13] Synthesis of carbon nanofibers from carbon particles by ultrasonic spray pyrolysis of ethanol ....	148
[14] Solar energy materials & solar cells .....	154
[15] 速度情報を必要としない劣駆動飛行船システムの大域的指数安定化と飛行実験 .....	159
[16] 劣駆動気球ロボットシステムのサンプル値制御によるオブザーバに基づいた速度計測不 要な大域的指数安定化 .....	168
[17] 不確かさをもつ劣駆動飛行船システムの大域的ロバスト安定化と飛行実験 .....	179
[18] ソーラー飛行船によるセンサーネットワークシステムの研究開発 .....	188
[19] 戦略的情報通信研究開発推進制度 平成 18 年度採択課題「ソーラー飛行船によるセンサー ネットワークシステムの研究開発」－平成 20 年度の研究成果の概要紹介－ .....	190
[20] Adaptive repetitive control with on-line estimation of multiple periods - Stabilization and rejection of periodic disturbances with unknown periods - .....	195

本研究関連の新聞記事 .....	203
教職員名簿 .....	204