

## 2008 年度業績 — 藤原 康文

### 学術論文・解説記事

1. Y. Fujiwara, S. Takemoto, T. Tokuno, K. Hidaka, H. Ichida, M. Suzuki, Y. Terai, Mechanism of excitation and relaxation in Er,O-codoped GaAs for 1.5mm light-emitting devices with extremely stable wavelength, *Physica Status Solidi (a)*, 205(1), 64-67, 2008
2. K. Shimada, Y. Terai, S. Takemoto, K. Hidaka, Y. Fujiwara, M. Suzuki and M. Tonouchi, Terahertz radiation from Er,O-codoped GaAs surface grown by organometallic vapor phase epitaxy, *Applied Physics Letters*, 92(11), 111115 1-3, 2008
3. Y. Terai, K. Hidaka, T. Hiramatsu and Y. Fujiwara, Organometallic vapor phase epitaxy of Er,O-codoped GaAs using trisdipivaloylmethanatoerbium, *Journal of Physics: Conference Series*, 106, 012007 1-4, 2008
4. K. Yamaoka, Y. Yoshizako, Y. Terai and Y. Fujiwara, Room-temperature deposition of highly-insulating SiOCH films by plasma-enhanced chemical vapor deposition using tetraethoxysilane, *Thin Solid Films*, 517(2), 479-482, 2008
5. K. Fujii, K. Hidaka, D. Yamamoto, Y. Terai and Y. Fujiwara, GaAs emission from GaInP/Er,O-Co doped GaAs/GaInP laser diodes grown by organometallic vapor phase epitaxy, *Physica Status Solidi*, 5(9), 2716-2718, 2008
6. K. Shimada, S. Takemoto, K. Hidaka, Y. Terai, M. Tonouchi and Y. Fujiwara, Ultrafast photoexcited carrier dynamics in GaAs:Er,O by pump and probe transmission spectroscopy, *Physica Status Solidi*, 5(9), 2861-2863, 2008
7. A. Fujita, T. Tokuno, K. Hidaka, K. Fujii, K. Tachibana, H. Ichida, Y. Terai, Y. Kanematsu and Y. Fujiwara, Nonradiative processes at low temperature in Er,O-codoped GaAs grown by organometallic vapor phase epitaxy, *Physica Status Solidi*, 5(9), 2864-2866, 2008
8. K. Yamaoka, Y. Terai, T. Yamaguchi and Y. Fujiwara, Growth of transition-metal-doped ZnO films by plasma-enhanced CVD combined with RF sputtering, *Physica Status Solidi*, 5(9), 3125-3127, 2008
9. S. Hashimoto, Y. Terai and Y. Fujiwara, Improved initial epitaxial growth of b-FeSi<sub>2</sub> on Si(111) substrate by Al-doping, *Physica Status Solidi*, 5(9), 3159-3161, 2008
10. K. Ono, M. Takemi and Y. Fujiwara, MOVPE growth parameter dependence of phase separation in miscibility gap of InGaAsP, *Japanese Journal of Applied Physics*, 47 (2), 896-898, 2008
11. Y. Terai, K. Hidaka, K. Fujii, S. Takemoto, M. Tonouchi and Y. Fujiwara, Ultrafast carrier-capturing in GaInP/Er,O-codoped GaAs/GaInP laser diodes grown by organometallic vapor phase epitaxy, *Applied Physics Letters*, 93(23), 231117 1-3, 2008
12. 藤原康文, 希土類添加 GaAs 結晶の原子レベル制御成長と新規発光デバイスへの応用,

オプトロニクス, 315, 157-163, 2008

13. Y. Terai, T. Tokuno and Y. Fujiwara, Electroluminescence properties of GaInP/GaAs:Er,O/GaInP double heterostructure light-emitting diodes at low temperature, *Optical Materials*, in press
14. Y. Terai, S. Hashimoto, K. Noda, and Y. Fujiwara, Epitaxial growth of Al-doped  $\beta$ -FeSi<sub>2</sub> on Si(111) substrate by reactive deposition epitaxy, *Physica Status Solidi*, in press
15. K. Yamaoka, Y. Terai, T. Yamaguchi and Y. Fujiwara, Structural and luminescent properties of Er-doped ZnO films grown by metalorganic chemical vapor deposition, *Vacuum Science and Technology*, in press
16. Y. Fujiwara, Y. Terai and A. Nishikawa, Development of new-type 1.5 mm light-emitting devices based on Er, O-codoped GaAs, *Journal of Physics: Conference Series*, in press
17. Y. Terai, K. Noda, S. Hashimoto, and Y. Fujiwara, Photorefectance study of  $\beta$ -FeSi<sub>2</sub> epitaxial films grown by molecular beam epitaxy, *Journal of Physics: Conference Series*, in press
18. K. Yamaoka, Y. Terai, T. Yamaguchi, H. N. Ngo, T. Gregorkiewicz, and Y. Fujiwara, Metalorganic chemical vapor deposition of Er-doped ZnO thin films with 1.54 mm photoluminescence, *Journal of Physics: Conference Series*, in press
19. H. Kasai, A. Nishikawa, Y. Terai and Y. Fujiwara, Luminescence Properties of Eu-implanted GaN-based Semiconductors, *Journal of Physics: Conference Series*, in press
20. H. Sakaguchi, T. Mishima, T. Meguro, Y. Otoki and Y. Fujiwara, Low-temperature growth of GaAs with high quality by metalorganic vapor phase epitaxy, *Journal of Physics: Conference Series*, in press
21. Y. Fujiwara, K. Fujii, A. Fujita, Y. Ota, Y. Ito, T. Kawasaki, K. Noguchi, T. Tsuji, A. Nishikawa and Y. Terai, Luminescence properties in Er,O-codoped GaAs light-emitting devices with double excitation mechanism, *Materials Research Society*, in press
22. Y. Ota, K. Fujii, Y. Ito, T. Kawasaki, K. Noguchi, T. Tsuji, Y. Terai, and Y. Fujiwara, Optical properties of GaInP/GaAs:Er,O/GaInP laser diodes grown on p-type GaAs substrates by organometallic vapor phase epitaxy, *IOP Conference Series: Materials Science and Engineering*, 1, 012022/1-4, 2009

#### 受賞

1. Y. Ota, K. Fujii, Y. Ito, T. Kawasaki, K. Noguchi, T. Tsuji, Y. Terai and Y. Fujiwara, IUMRS-ICA2008 and MRS-J Encouraging Prize, 2008年12月13日