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博士論文題目：

三五族磊晶材料整合於矽基板上做為高速電子元件跟光電元件應用的研究

## Journal

- [1]. Tsung-Hsi Yang, Guangli Luo, Edward Yi Chang, **Y.C. Hsieh** and Chun-Yen Chang, "Interface-blocking Mechanism for Reduction of Threading Dislocations in SiGe and Ge Epitaxial Layers on Si(100) Substrate, **J. Vac. Sci.&Techn. B.**, Vol. 22, No. 5, pp. L17-19, Oct., 2004.
- [2]. Cheng-Shih Lee, Yi-Chung Lien, Edward Yi Chang, Huang-Choung Chang, Szu-Houng Chen, Ching-Ting Lee, Li-Hsin Chu, Shang-Wen Chang, and **Yen-Chang Hsieh**, "Copper Airbridged Low-Noise GaAs PHEMT with Ti/WN<sub>x</sub>/Ti Diffusion Barrier for High Frequency Applications", **IEEE Transactions on Electron Devices**, Vol.53, No.8, Aug., pp. 1753-1758, 2006.
- [3]. **Y.C. Hsieh**, E.Y. Chang, S.S. Yeh, C.W. Chang, G.L. Luo, C.Y. Chang and Ching-Ting Lee, "Optimization of the growth of the InGaP etch-stop layer by MOVPE for InGaP/GaAs HBT device application", **Journal of Crystal Growth**, Vol. 289, No. 1, pp. 96-101, January 2006
- [4]. **Y.C. Hsieh**, E. Y. Chang, G. L. Luo, S. H. Chen, Dhruves Biswas, S. Y. Wang, and C. Y. Chang, "Self-assembled In<sub>0.22</sub>Ga<sub>0.78</sub>As Quantum Dots Grown on Metamorphic GaAs/Ge/Si<sub>x</sub>Ge<sub>1-x</sub>/Si Substrate", **J. Appl. Phys. Vol. 100, 064502, 2006**.
- [5]. **Y.C. Hsieh**, E. Y. Chang, G. L. Luo, S. H. Chen, Dhruves Biswas, S. Y. Wang, and C. Y. Chang, "Self-assembled In<sub>0.22</sub>Ga<sub>0.78</sub>As Quantum Dots Grown on Metamorphic GaAs/Ge/Si<sub>x</sub>Ge<sub>1-x</sub>/Si Substrate", **have been selected for the October 2, 2006 issue of Virtual journal of Nanoscale Science & Technology**.
- [6]. Yi-Chung Lien, Edward Yi Chang, Szu-Hung Chen, Li-Hsin Chu, Po-Chou Chen, and **Yen-Chang Hsieh**, "Thermal stability of Ti/Pt/Cu Schottky contact on InAlAs layer," **Applied Physics Lett.**, vol. 89, 083517, Aug. 2006.
- [7]. Y.C. Lin, H.Yamaguchi, E. Y. Chang, **Y. C. Hsieh**, M. Ueki, Y. Hirayama, C. Y. Chang, "Growth of very high mobility AlGaSb/InAs High-Electron-Mobility transistor structure on Si substrate for high-speed electronic applications", **Applied Physics Lett.**, **Jan. 2007**
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- [9]. **Yen-Chang Hsieh**, Edward Yi Chang, *Senior Member, IEEE*, Guang-Li Luo, M. H. Pilkuhn, Chia-Yuan Chang, Chien-I Kuo, Yi-Chung Lien, Chun-Yen Chang *Fellow*, " An AlGaAs/InGaAs HEMT grown on Si substrate with Ge/Ge<sub>x</sub>Si<sub>1-x</sub> metamorphic buffer layers" **submitted to IEEE Electron Dev. Lett. 2007**

## Conference

- [1]. **Y.C. Hsieh**, E. Y. Chang, G.L. Luo, Dhrubes BISWAS, S.Y. Wang, "Self-assembled  $\text{In}_{0.22}\text{Ga}_{0.78}\text{As}$  quantum dots grown on Metamorphic GaAs/Ge/ $\text{Si}_x\text{Ge}_{1-x}$ /Si substrate" in *IEEE Nanotech*, Nagoya, Japan, July 10-13, 2005.
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