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所有發表期刊論文

1. R. D. Chang and C. H. Lin, "Deactivation of phosphorus in silicon due to implanted nitrogen", *Phys. Status Solidi C* Vol. 11, p. 24, 2014.
2. K. H. Lee, J. R. Tsai, R. D. Chang, H. C. Lin, and T. Y. Huang, "Low-voltage high-speed programming/erasing floating-gate memory device with gate-all-around polycrystalline silicon nanowire", *Appl. Phys. Lett.* Vol. 102, p. 153102, 2013.
3. C. M. Yang, J. C. Wang, W. P. Lee, C. C. Lee, C. H. Lin, C. Y. Lee, J. H. Lin, H. H. Chen, C. Y. Hsiao, R. D. Chang, and C. S. Lai, "Superior improvements in GIDL and retention by fluorine implantation in saddle-fin array devices for sub-40-nm DRAM technology", *IEEE Electron Device Lett.*, Vol. 34, p. 1124, 2013.
4. R. D. Chang and J. R. Tsai, "Effect of implantation damage on transient loss of phosphorus in silicon", *Nucl. Instrum. Meth. B*, Vol. 313, p. 1, 2013.
5. R. D. Chang*, C. H. Lin, C. C. Ma, and J. R. Tsai, "Modeling of phosphorus deactivation in polysilicon for simulation of memory process in nanometer era", *Solid State Electron.*, Vol. 75, p. 16, 2012.
6. Y. T. Ling, M. J. Huang, R. D. Chang*, and L. Pelaz, "Codiffusion of phosphorus and carbon in preamorphized ultrashallow junctions", *Electrochem. Solid-State Lett.* Vol. 15, p. H202, 2012.
7. C. C. Ma, F. H. Hsieh, Y. W. Wu, and R. D. Chang*, "Experimental and simulation studies of solid-phase crystallization of fluorine-implanted amorphous silicon on silicon dioxide", *Jpn. J. Appl. Phys.* Vol. 50, p. 091403, 2011.
8. S. J. Lin, C. S. Lai, S. T. Chen, Y. J. Chan, R. D. Chang, W. C. Wang, B. Huang, N. T. Shih, G. Chuang, C. Y. Lee, and P. -I. Lee, "Improvement in junction breakdown and GIDL using MFLA in DRAM product", *J. Electrochem. Soc.* Vol. 158, p. H363, 2011.
9. R. D. Chang*, C. C. Ma, and J. R. Tsai, "Dose loss of phosphorus due to interface segregation in silicon-on-insulator substrates", *J. Vac. Sci. Technol. B*. Vol. 26, p. 1158, 2010.
10. C. C. Cheng, C. H. Chien, G. L. Luo, Y. T. Ling, R. D. Chang, C. C. Kei, C. N. Hsiao, J. C. Liu, and C. Y. Chang, "Effects of minority-carrier response behavior on Ge MOS capacitor characteristics: Experimental measurements and theoretical simulations", *IEEE Trans. Electron Devices*, Vol. 56, p. 1118, 2009.
11. R. D. Chang*, Y. T. Ling, T. Liu, J. R. Tsai, and C. C. Ma, "Diffusion of indium implanted in silicon oxides", *Jpn. J. Appl. Phys.* Vol. 48, p. 056501, 2009.
12. R. D. Chang*, C. H. Lin, and L. W. Ho, "Diffusion of boron near projected ranges of B and BF₂ ions implanted in silicon", *Jpn. J. Appl. Phys.* Vol. 47, p. 8696, 2008.

13. R. D. Chang* and J. R. Tsai, "Loss of phosphorus due to segregation at Si/SiO₂ interfaces: Experiment and modeling", *J. Appl. Phys.* Vol. 103, p. 053517, 2008.
14. J. R. Tsai, L. W. Ho, and R. D. Chang*, "Transient dose loss of phosphorus during postimplantation annealing at 800°C", *Jpn. J. Appl. Phys.* Vol. 46, p. 4035, 2007.
15. R. D. Chang*, J. R. Tsai, and L. W. Ho, "Elucidating the mechanism of transient loss of phosphorus due to interface segregation", *Appl. Phys. Lett.* Vol. 88, p. 211914, 2006.
16. M. Chang, J. Lin, C. S. Lai, R. D. Chang, S. N. Shih, M. -Y. Wang and P. -I. Lee, "Si-H bond breaking induced retention degradation during packaging process of 256 Mbit DRAMs with negative wordline bias", *IEEE Trans. Electron Devices*, Vol. 52, p. 484, 2005.
17. R. D. Chang*, P. S. Choi, D. L. Kwong, M. Gardner and P. K. Chu "Time dependence of phosphorus diffusion and dose Loss during postimplantation annealing at low temperatures", *Jpn. J. Appl. Phys.* Vol. 41, p. 1220, 2002.
18. R. D. Chang*, H. P. Chiang, H. W. Liu, L. W. Ho, P. C. Chiang, J. R. Tsai, J. P. Lin, " Observation of Transient Enhanced Diffusion in B-Implanted Si by Buried Boron Isotopes," *Jpn. J. Appl. Phys.* Vol.39, p. 6136, 2000.
19. R. D. Chang*, P. S. Choi, D. L. Kwong, D. Wristers and P. K. Chu, "Boron segregation in As-implanted Si caused by electric field and transient enhanced diffusion", *Appl. Phys. Lett.* Vol. 72, p. 1709, 1998.
20. T. T. Sheng, C. Y. Lu, R. D. Chang and S. T. Chiang, "Transmission electron microscopy analysis of "black belt": the masking film of white ribbon of Kooi effect in the local oxidation of silicon process", *J. Appl. Phys.* Vol. 75, p. 3810, 1994.
21. T. T. Sheng, C. Y. Lu, R. D. Chang and S. T. Chiang, "From "white ribbon" to "black belt": a direct observation of the Kooi effect masking film by transmission electron microscopy", *J. Electrochem. Soc.* Vol. 140, p. L163, 1993.