Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Simulation of polarization switching of Vertical-Cavity Surface-Emitting Lasers at constant current PEI-HOU CHIN, WANG-CHUANG KUO, SHAHAM QUADIR, YU-HENG WU, TSU-CHIANG YEN, Department of Physics National Sun Yat-sen University — The polarization switching (PS) in Vertical-Cavity Surface-Emitting Lasers (VCSELs) at constant bias current was investigated by numerical simulation in this research. The simulation was performed by Linear Current Gain model. The PS with a delay time at constant bias current was observed in the experiment which was performed by quasi-step current. The simulation results show that the PS delay time depends on the constant bias current and these results are matching well with experimental results. These results contribute to the understanding of the mechanism of VCSEL's polarization switching.

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Date submitted: 08 Nov 2012 Electronic form version 1.4