## Abstract Submitted for the MAR05 Meeting of The American Physical Society

Carrier Relaxation in Self-Assembled ZnTe/ZnSe Quantum Dots DER-JUN JANG, Y. C. YEH, S.K. LU, C.L. WU, Department of Physics, National Sun Yat-Sen University, Kaohsiung, Taiwan, R.O.C, C.-S. YANG, W.C. CHOU, Department of Electrophysics, National Chiao-Tung University, Hsinchu, 30056 Taiwan, R.O.C., M.E. LEE, Department of Physics, National Kaohsiung Normal University, Kaohsiung, Taiwan, R.O.C. — Carrier relaxation in the type II self-assembled ZnTe/ZnSe quantum dots have been studied using ultrafast photoluminescence upconversion technique. We found that PL exhibits fast decay for ZnTe/ZnSe QDs grown in Volmer-Weber mode than that in Stranski-Krastanow mode. The dependence of PL decay time on energy was found only for QDs grown in Stranski-Krastanow mode. We attribute the different behaviors of PL decay for these two modes to the wetting layers.

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