

Abstract Submitted
for the OSS13 Meeting of
The American Physical Society

Two Color micro-photoluminescence excitation studies of exciton states in Coupled Quantum Dots¹ RAMANA THOTA, ERIC STINAFF, Department of Physics and Astronomy, and Nanoscale and Quantum Phenomena Institute, Ohio University, Athens, Ohio 45701-2979, USA, ALLAN BRACKER, DAN GAMMON, Naval Research Labs, Washington DC 20375 — In this report we examined the charge states of various excitons found in the optical spectra of coupled $\text{In}_{1-x}\text{Ga}_x\text{As}$ quantum dots (QDs) grown by molecular beam epitaxy, under two color optical excitation. This experiment is performed by using micro-photoluminescence excitation technique, where we keep the excitation energy of one laser fixed at the energy of wetting layer (non-resonant excitation) and tuning the excitation energy of the other laser through the states of quantum dot (resonant excitation). This study may help identifying enhanced states of various charge excitons, which are possibly useful for generating on demand entangle photon pairs with QDs.

¹This work is funded by NSF under the grant number DMR - 1005525

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Date submitted: 04 Mar 2013

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