

Abstract Submitted  
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**Photoluminescence Excitation studies of Coupled Quantum Dots under simultaneous Resonant and Non-Resonant Excitation**<sup>1</sup> RAMANA THOTA, ERIC STINAFF, Department of Physics and Astronomy, and Nanoscale and Quantum Phenomena Institute, Ohio University, Athens, Ohio 45701-2979, USA, ALLAN BRACKER, DANIEL GAMMON, Naval Research Laboratory, Washington, DC 20375, USA — In this report we used two photon optical excitation studies to investigate the charge states of various excitons found in the optical spectra of coupled  $\text{In}_{1-x}\text{Ga}_x\text{As}$  quantum dots (CQDs) grown by molecular beam epitaxy. 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 CQDs.

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