

Abstract Submitted
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Exploring two-dimensional electron gases with 2DFT spectroscopy J. PAUL, P. DEY, D. KARAIKKAJ, University of South Florida, T. TOKUMOTO, D. HILTON, University of Alabama at Birmingham, J. RENO, CINT, Sandia National Laboratories — The dephasing of excitons in a modulation doped single quantum well was carefully measured using time integrated four-wave mixing (FWM) and two-dimensional Fourier transform (2DFT) spectroscopy. The excitonic linewidths were obtained from the diagonal and cross diagonal profiles of the 2DFT spectra. The laser excitation density and temperature were varied and 2DFT spectra were collected. This work was performed, in part, at the Center for Integrated Nanotechnologies, a U.S. Department of Energy, Office of Basic Energy Sciences user facility. Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

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