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**Structural and Electrical Characterization of Pulsed Laser Deposited CdS/CdTe Thin Films** MICHAEL NEWBY, M. ALPER SAHINER, SAMUEL EMERY, MICHELLE JAMER, JEFFREY SERFASS, Seton Hall University, MARK CROFT, Rutgers University — The thin films of CdS/CdTe were deposited on ITO coated glass substrates using pulsed laser deposition (PLD). The film growth conditions were systematically varied and the thin film structural properties were determined using a x-ray diffraction (XRD) x-ray absorption spectroscopy (XAS). The effect of the thicknesses of the CdS and CdTe layers, laser energy and the deposition temperature on the film quality and structure were investigated. The photovoltaic properties of the film were then tested using a Keithley sourcemeter and an accompanying Labview program. The results of variation of thickness and growth conditions on the photovoltaic output of the films will be presented.

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