Abstract Submitted
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Electrical characterization of thin films[1] SEBASTIAN REQUENA, DAVID BIXLER, TONI SAUNCY, Angelo State University - Department of Physics — A low level electrical characterization system has been constructed and software developed which allows the system to make high precision Van der Pauw measurements of bulk and thin film materials, with focus on materials with relevance for nano and microelectronic device application. The Van der Pauw technique, which is the standard used for the measurement of the resistivity of bulk material samples of arbitrary shapes has been used to examine crystalline doped silicon. For the bulk semiconductors used as a calibration test, (resistivity $< .001$ Ohm-cm), the system reliably reports surface resistivities within 4% of the accepted values. For bulk semiconductors (Resistivities $>10^9$ Ohm-cm), the system can produce measurements to within $\pm$ .0001 Ohm-cm.

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