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Conducting Polymer Contacts of Thin Film Solar Cells via Dip Coating JEFFREY LARSON, CHRISTOPHER CICCARINO, DARREN LESINSKI, ALPER SAHINER, Seton Hall University — ZnO photovoltaic solar cell is a commonly researched method for solar cells, but often yield a high resistance. Coating the ZnO in a conductive polymer such as PANI or Pedot will theoretically lower the Schotky Barrier between the anode and the cathode making the cell more efficient. By using a dip coating method, we will be lowering the experimental and production cost as compared to pulsed laser deposition (PLD). The ZnO will be deposited onto an indium tin oxide (ITO) coated glass with the PLD method. The Polymer coating experimental samples will be produced at different temperatures and at several rates of extraction to determine the practices. Ellipsometry will measure the thickness of the Zinc Oxide film and the thickness of the conducting polymer film. The structure of the films will be analyzed through X-Ray Diffraction. A Keithley Source Meter will be used to analyze the photovoltaic properties of the cells to be recorded. The photovoltaic properties of each trial will be discussed in regards to the structure, thickness, temperature and rate of extraction from the coating polymer bath.

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