M. Khan *et al*., "Stoichiometric effects in polycrystalline CdTe," *2014 IEEE 40th Photovoltaic Specialist Conference (PVSC)*, Denver, CO, USA, 2014, pp. 2343-2347, doi: 10.1109/PVSC.2014.6925397.

The effect of the vapor phase Cadmium (Cd) to Tellurium (Te) ratio on the electronic properties of CdTe films is being studied. The stoichiometry of CdTe films is being altered by varying the gas phase Cd/Te ratio during the Elemental Vapor Transport (EVT) deposition process. Resistivity-temperature measurements and solar cells made with polycrystalline EVT-CdTe suggest changes in the native cadmium vacancy (V_{Cd}) concentration and carrier lifetime. The findings are in good agreement with the recently updated defect levels using the HSE approximation. Photoluminescence (PL) analysis has also demonstrated variation in the formation of defect complexes with the Cd/Te ratio. 2-Photon TRPL lifetime measurements showed improved minority-carrier lifetime for $CdCl_2$ treated samples deposited at low Cd/Te ratios.