Abstract Submitted
for the MAR15 Meeting of
The American Physical Society

Hybrid Perovskite Solar Cells with Copper Iodide as Hole Transportlayer ROSS HAROLDSON, ZANE OLDS, ALEXANDER B COOK, ANVAR ZAKHIDOV, Univ of Texas - Dallas — Hybrid organo-metallic solar cells based on perovskite-structured nanocrystals have had steadily improving power conversion efficiencies over the past several years, and within this short period of time are capable of achieving efficiencies over 19%. In our work we show that dopantsa thin layer of Copper Iodide (CuI) on top of a hole transport layer such as PEDOT:PSS increases the open circuit voltage, of the devices. CuI is a p-type hole conducting material with a large band gap that has been used before for hole transport layers by itself. We demonstrate that CuI as the working hole transport layer increases the Voc about 10% increase.

Ross Haroldson
Univ of Texas - Dallas

Date submitted: 14 Nov 2014 Electronic form version 1.4