

Abstract Submitted  
for the TSF16 Meeting of  
The American Physical Society

**Degradation of perovskite samples over time** NAZIA SHARMIN, JORGE LOPEZ, DEIDRA HODGES, SAIMUM SHAHRIAR, VENESSA CASTANEDA, MISHRA ADITYA, University of Texas El Paso — In this work 24 perovskite samples prepared in four different process, named 1st step, 2nd step, 3rd step method and hot cast to observe the degradation of the samples over time by XRF gun.. Six out of 18 were prepared under 1st step method in which the PbI<sub>2</sub> and MAI solutions are mixed together (creating CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> ). Other six (2nd step) in two steps process the PbI<sub>2</sub> and MAI solutions were separated..Six samples were prepared in third step process which was a solvent to solvent extraction method (SSE).. Afterwards These 18 samples annealed in 90, 100,130,160,200 temperature. In hot cast process Perovskite precursor solution was made by dissolving PbI<sub>2</sub> (0.462g) and MAI (0.1589 g) in DMF solvent (2ml). Six samples were prepared under the hot cast process annealed in 155C, 165C, 175C, 185C 195 C. The samples were subjected to XRF studies for 5 minutes. These 24 files were analyzed with a software called PyMca,format .Each of these files contains peak plots, fit parameters and a table with concentration measurement. Composition of 1st step process and hot cast degraded very slowly compared to other two processes which turned into PbI<sub>2</sub> within two week of the preparation

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Date submitted: 26 Sep 2016

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