Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Properties of Fluorine-doped tin Oxide Thin Films grown at different Nozzle to Substrate Distance.[1] GBADEBO TAOFEEK YUSUF, Osun State Polytechnic, Iree, ABIODUN ISIAKA EGUNJOBI, Federal University of Agriculture, Abeokuta — Nanostructured FTO thin films were grown using the Streaming Process for Electrodeless Electrochemical Deposition (SPEED) method. The distance from nozzle to substrate (NSD) of the machine was maintained at 25cm, 27cm, 30cm and 35cm. The solution was nebulized into droplets and sprayed into aluminum oxide passivated glass substrate. The flow rate and other deposition conditions were kept constant during deposition. XRD analysis shows a polycrystalline structure which varies with increasing NSD while the SEM result reveals that the grain size of the films increases with NSD. The film grown at NSD of 30cm was homogeneous and more uniform than other thin films. FTO thin films grown in this research is suitable for application in dye-sensitized solar cells.

[1]The Financial support of TETFund is acknowledged

Gbadebo Yusuf
Osun State Polytechnic

Date submitted: 23 Jan 2020 Electronic form version 1.4