

Poster Presentations

[MS28-P12] Preparation and characterization of transparent conductor based doped In₂O₃ (Sn, F), El Moussafir El Miloudi

University of Hassan II Casablanca, Morocco

In this work, thin transparent conductive oxide-based layers of undoped and doped with tin and indium oxide with fluorine have been studied for their use as transparent conductive electrodes in components optoelectronics. The technique of reactive chemical liquid spray has been used for the development of these layers.

Different characterizations of layers, it is by ray diffraction X, scanning electron microscopy, microanalysis, and transmission was performed according to the formulation parameters. The optimization of deposition conditions and heat treatment has develop thin indium oxide films undoped and doped with tin and fluorine with very promising optical and electrical properties. Of ITO layers revealed high transmission in the visible area of greater than 90% accompanied by a strong reflection in the infrared range and low resistivity of the order of $3 \cdot 10^{-4}$ ohm.cm. The heat treatment of thin undoped indium oxide layer and doped fluoride has remarkably improved the electrical properties of these layers.

Keywords: Thin, Transparent Conductive Oxide, Indium Properties Optical and Electrical