



TRANSPARENT CONDUCTIVE OXIDE THICK FILMS FOR PHOTOVOLTAIC CELL

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ABSTRACT:

Transparent conductive oxides (TCO) have been the potential contender for the creation of minimal effort straightforward conductors having applications in vitality change gadgets, for example, thin-film sunlight based cells and light-transmitting diodes. In this part we have talk about the significance of above material, their applications and part of thin/thick movies for photovoltaic gadgets.

KEYWORDS: TCO, LED, Solar cell and TFT.

INTRODUCTION:

Semiconductors are the materials whose electrical resistivity lies between 10^{-2} to 10^9 ohm-cm at room temperature. The band gap of these materials falls between 0 to 4eV and this group of materials show many commonality in their physical properties. Semiconductors have pulled in extensive consideration especially after the revelation of transistors in 1947 and are the most imperative materials for creation of electronic and optoelectronic gadgets today. In spite of the fact that there is countless demonstrating semiconducting conduct, silicon rules in its generation and use over every single other semiconductor. Silicon is an essential semiconductor and is available in bunch IV of the intermittent table. Gathering IV components are remarkable as in external orbital of an individual molecule is precisely half filled. So every iota can finish its external shell by offering electrons to four different particles of a similar kind through covalent bonds. Thus bunch IV components can just solidify in precious stone structure in the entire occasional table. The precious stone structure can be comprehended as two interpenetrating face-focused cubic (fcc) Bravais grids in which one fcc Brava is cross sections is uprooted along the body askew of the other one by a quarter of its length. In this way, the precious stone structure has a place with the cubic gem framework where the primitive unit cell