

STRUCTURAL AND OPTICAL PROPERTIES OF ZnO THIN FILMS PREPARED BY SOL-GEL PROCESS

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Abstract : Undoped zinc oxide (ZnO) thin films have been Spin-Coated on glass substrates by sol-gel process. The structural and optical properties of ZnO thin films have been investigated using X-ray diffraction (XRD), scanning electron microscopy (SEM) and spectroscopy UV-visible. The obtained films are composed of nano-crystalline grains with diameter range between 14 to 29 nm. ZnO films have a transmittance over 85% in visible range and band gap of 3.14 eV.

Keywords : thin film, ZnO, XRD, Spin-Coating.