



Structural and optical properties of ZnO thin films deposited onto ITO/glass substrates

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Résumé en anglais	<p>ZnO films were prepared by post deposition thermal oxidation in the ambient atmosphere of metallic Zn films ($d = 100-170$ nm) vacuum evaporated onto unheated indium tin oxide (ITO)-coated glass substrates. To study the effect of the substrate position during the Zn film deposition on the microstructure and optical properties (transmittance, reflectance and absorbance) of as obtained ZnO films, two set of Zn samples simultaneously deposited onto horizontally and obliquely arranged substrates were prepared. The as obtained ZnO films had a polycrystalline wurtzite structure, those obtained from normally deposited Zn films having a higher c-axis preferred orientation and a lower optical transmittance in the visible wavelength range. The optical band-gap was found to be of 3.14 eV for oxidized normally deposited virgin Zn films and of 3.16 eV for those obliquely deposited.</p>
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