On the properties of aluminium doped zinc oxide thin films deposited on plastic substrates from ceramic targets

Submitted by Mihaela Girtan on Fri, 11/28/2014 - 16:53

We report on the deposition of Al doped ZnO (AZO) thin films on unheated polyethylene terephthalate (PET) substrates by pulsed laser deposition technique using a UV excimer laser and Al2O3:ZnO ceramic targets (1.5 and 2 wt% Al2O3). The deposited AZO films have been investigated by atomic force microscopy, scanning electron microscopy, X-ray diffraction, and optical spectrophotometry. Films present excellent optical and electrical properties (transmission in the visible range T > 85%; resistivity at room temperature rho = 1.3 x 10(-3) Omega cm) as electrodes for plastic solar cells. A good correlation was found between deposition conditions (laser fluence) and structural, morphological, optical and electrical properties.

Résumé en anglais

URL de la notice
http://okina.univ-angers.fr/publications/ua5646 [10]

DOI

Lien vers le document
http://dx.doi.org/10.1016/j.apsusc.2013.03.046 [11]

Titre abrégé
Applied Surface Science

Liens