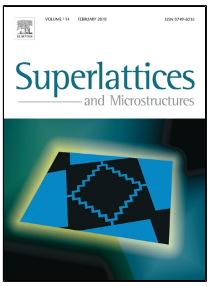
Accepted Manuscript



The critical mission of Glycine as a surfactant in the improvement of structural, morphological and optoelectronic features of CdO films

Raşit Aydin

PII:	S0749-6036(18)30291-X
DOI:	10.1016/j.spmi.2018.03.022
Reference:	YSPMI 5552
To appear in:	*Superlattices and Microstructures*
Received Date:	09 February 2018
Revised Date:	08 March 2018
Accepted Date:	08 March 2018

Please cite this article as: Raşit Aydin, The critical mission of Glycine as a surfactant in the improvement of structural, morphological and optoelectronic features of CdO films, *Superlattices and Microstructures* (2018), doi: 10.1016/j.spmi.2018.03.022

The critical mission of Glycine as a surfactant in the improvement of structural, morphological and optoelectronic features of CdO films

Raşit Aydin[1]

[1]Department of Physics, Faculty of Sciences, Selcuk University, Konya, Turkey

Abstract

The main aim of this study is to examine the effect of glycine as a surfactant agent on the physical properties of CdO films. For this purpose nanostructured CdO films with and without different glycine aggregations (0.5, 1.0 and 2.0 M %) were synthesized on glass bases by SILAR technique. The morphological, structural and optical characteristics of these films have been investigated using MM, SEM, XRD and UV-visible spectroscopy respectively. The MM results showed homogeneous and smooth all films. The SEM graphs showed that by using different glycine concentrations as surfactant, the particle thickness decreased from 366.25 nm to 241.10 nm. XRD results showed that the all CdO films with glycine display a (111) and (200) preferential orientations similar to that of the CdO film without glycine. The direct band gap energy of these films is found to increase from 2.05 to 2.35 eV with increasing the glycine concentration in the bath solution.

Keywords: Surfactant, Glycine, CdO, SILAR

[1] Corresponding author Tel: +903322232788
E-mail address: raydin@selcuk.edu.tr (R. Aydin)