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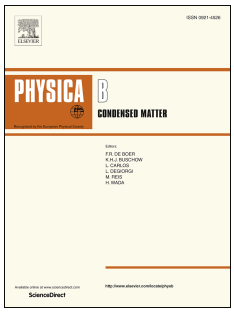

SILAR derived CdO films: Effect of triethanolamine on the surface morphology and optical bandgap energy

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SILAR derived CdO films: Effect of triethanolamine on the surface morphology and optical bandgap energy

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Abstract

Nanostructured CdO films have been successfully synthesized with different ratios of surfactant triethanolamine (TEA) under SILAR condition. The influence of addition of TEA on the physical properties of CdO nanoparticles was studied. The surface morphology of the films was studied by metallurgical microscope and SEM analysis. Surface topography of the film was studied by AFM. The structural properties of the samples were studied by X-ray diffraction (XRD). The XRD studies confirm that the deposited CdO films has cubic structure (111) preferred orientation with well-crystallinity and purity. The optical bandgap energy was estimated based on the UV-vis spectroscopies which were obtained in the range of 2.16 eV to 2.46 eV. Our study is encouraging to get enhanced surface topography by surfactant TEA.

Keywords: Surface topography, Surfactant, CdO, Bandgap

1. Introduction

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