

## **Experimental and theoretical investigations of structural properties of nanostructured Co-doped ZnO films grown by pulsed laser deposition**

### Abstract

The nanostructured Co-doped ZnO films on glass substrates prepared by pulsed laser deposition are fabricated. The effect of doping on the structural properties of ZnO:Co films have been investigated using X-ray diffraction and scanning electron microscopy (SEM). The lattice constants are measured and the bulk moduli are calculated using our model. The grain sizes using SEM, strain, stress and texture coefficient are investigated. The smallest grain size is obtained by SEM. The calculated results show good agreement with the available experimental and theoretical ones.