Structural Studies of Nano-crystalline metal oxide films

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | The present work deals with the investigation of Nanocrystalline semiconducting oxide thin films. We have particularly undertaken the investigation of undoped and Al, In and Co doped ZnO films. In the present work Zinc oxide films were fabricated by a homemade chemical spray pyrolysis system (CSPT) equipped with an optical set-up ensuring the in-situ control of the film growth. This CSPT has been found to be easy, inexpensive and well adapted for mass fabrication. A number of ZnO samples have been prepared by using different type of dopants having different dopant concentrations. The above prepared films have been characterized for their structural, morphological, electrical and optical properties as a function of doping concentrations and effect of change in dopants as well as doping concentrations on the physical and structural properties of ZnO films studied. In another piece of work, we have investigated the effect of ion implantation in Si particularly, the nature and concentration of defects by using positron annihilation techniques. The results and findings of the above studies have been reported in the respective chapters. | Format: Paperback | Language/Sprache: english | 244 pp.

Reviews

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