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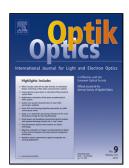
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Double doping (Mn+Cl) effects on the structural, morphological, photoluminescence,

optoelectronic properties antibacterial activity CdO thin and of films

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Abstract

The effects of (Mn+Cl) double doping on some physical properties and antibacterial

activity of CdO thin films deposited by spray technique using perfume atomizer is reported in

this paper. XRD studies confirm the polycrystalline nature of the films. CdO:Mn and

(Mn+Cl) doubly doped CdO thin films exhibit face-centered cubic structure similar to that of

the undoped CdO film. Decreased transparency is observed for the Mn-doped CdO film

which got enhanced for the (Mn+Cl) doubly doped films. Optical band gap exhibit a red shift

for the CdO:Mn thin film and with (Mn+Cl) double doping it exhibit a blue shift which may

be attributed to Moss-Burstein (MB) effect. Increased resistivity is observed for the Mn-

doped CdO film and for the (Mn+Cl) doubly doped films it decreases. From the obtained

results it is observed that CdO thin films doubly doped with Mn and Cl precursor ions exhibit

better physical properties which make them suitable for future optoelectronic device

applications. Antibacterial activity of the as deposited films were carried out against E.coli a

gram negative bacteria and from the zone of inhibition it is confirmed that the (Mn+Cl)

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