



# Influence of Bi doping on the electrical and optical properties of ZnO thin films Superlattices and Microstructures

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Résumé en anglais	Transparent conducting ZnO doped Bi thin films were prepared on glass substrates by ultrasonic spray method. The influence of Bi doping concentration on the structural, optical and nonlinear optical properties of ZnO thin films was studied. The X-ray diffraction (XRD) analysis show that all studied films have a hexagonal wurtzite structure and are preferentially oriented along the c-axis from substrate surface. Optical transmittance measurements show that all samples have average 80% transparency in the visible light. Optical band gap values range between 3.14 and 3.28 eV. ZnO film with 3 wt% of Bi showed the highest electrical conductivity. In addition, the second and third order nonlinear susceptibilities were determined and their values have been calculated.
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## Liens

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