



## Second and third order nonlinear optical properties of nanostructured ZnO thin films deposited on $\alpha$ -BBO and LiNbO<sub>3</sub>

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Auteur	Kulyk, B. [1], Essaidi, Zacaria [2], Kapustianyk, V. [3], Turko, B. [4], Rudyk, V. [5], Partyka, M. [6], Addou, Mohammed [7], Sahraoui, Bouchta [8]
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Mots-clés	Second harmonic generation [9], Third harmonic generation [10], Zinc oxide [11] The nanocrystalline ZnO films were deposited on $\alpha$ -BaB <sub>2</sub> O <sub>4</sub> (0 0 1 2) and LiNbO <sub>3</sub> (0 0 0 1) single crystals by RF-magnetron sputtering technique. Their structure was studied using X-ray diffractometry, scanning electron microscopy and atomic force microscopy. Besides, the optical absorption spectra were investigated. The second and third harmonic generation measurements were performed by means of the rotational Maker fringe technique using Nd:YAG laser at 1064 nm in picoseconds regime. Finally, the second and third order nonlinear susceptibilities were determined and their values have been found and compared.
Résumé en anglais	
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua2030">http://okina.univ-angers.fr/publications/ua2030</a> [12]
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