



ABSTRACT BOOK

International research
and practice conference:

**NANOTECHNOLOGY
AND NANOMATERIALS
(NANO-2017)**

23 - 26 August 2017
Chernivtsi
Ukraine

Preparation, structural and luminescent properties of nanocrystalline ZnO films doped Ag by close space sublimation method

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A simple way for silver doping of ZnO films is presented. Ag doping is carried out by sublimation of the Ag source located at a close space at atmospheric pressure in air. The effect of substrate temperature, substrate type, Ag doping and post-growth annealing of the films was studied by PL spectroscopy, XRD, AFM methods. The effect of Ag doping was obvious and identical for all the films (Fig. 1). The intensity of ultraviolet band increased 15 times as compared to their reference films on the sapphire substrate. The full width at half maximum (FWHM) for 380 nm band was 14 nm, which is comparable with that of epitaxial ZnO. Possible mechanisms to enhance UV emission are discussed.

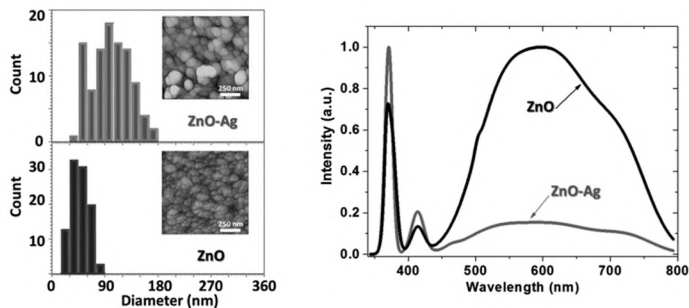


Figure 1. Grain diameter distributions and PL spectra of the reference ZnO and ZnO-Ag films.



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Наукове видання

**The International research and practice conference
"Nanotechnology and nanomaterials" (NANO-2017)**

**Book of abstracts is published in authors' edition without
modifying by the Organizing Committee**

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Design and layout: *Volodymyr Havlo*

Technical support in the course of the International conference (NANO-2017). Junior Researchers of the Institute of Physics of the NAS of Ukraine A.A. Yaremkevych (media assistance) and Y.S. Kifiuk (sound equipment and photo report), Leading Engineers of the Institute of Physics of the NAS of Ukraine H.R. Cheriopkina (registration support), V.V. Kavelin (informational and transportation support), O.P. Budnyk (registration of participants and excursions), S.V. Kovalchuk (registration of participants and transportation), Dr. Khalavka Yuriy (General questions), Mrs. O. Tynkevych (General questions).

Здано в набір 04.07.2017.

Підписано до друку 05.08.2017.

Формат 60x90/ 16. Папір офсетний.

Гарнітура Charis SIL.

Друк офсетний.

Умовн. друк. арк. 60,80.

Умовн. фарбовідб. 61,04. Зам. 12.

Publishing House - SME "Burlaka", Kiev, Ukraine