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Local electrophysical properties of conductive ZnO films

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Abstract

Zinc oxide nanostructures are promising candidates for the development of novel electronic devices due to their unique electrical and optical properties. Zinc oxide films were obtained by two methods (spray-pyrolysis and low pressure chemical vapor deposition) and were investigated by scanning electron microscopy and atomic-force microscopy. Obtained results show that polycrystalline layers consist of grains 100-550 in length, and the main conductivity occurs at grain boundaries.