

Nanomaterials: Application & Properties, 9th International Conference on Nanomaterials: Applications & Properties '2019

## CuO/Cu<sub>2</sub>O Nanostructured Films for Gas Sensors

*Vasilii Gheorghevici Cretu, Nicolai Ababii, Alexandru Chistruga, Nicolae Magariu, Vasile Postica, Oleg Lupan*

### Abstract

The CuO/Cu<sub>2</sub>O nanostructured films were synthesized via a simple chemical solution based method (SCS). The morphological properties were investigated using a scanning electron microscope (SEM). The elaborated sensors based on nanocrystalline films of CuO/Cu<sub>2</sub>O were tested to hydrogen gas. It was observed that thermal treatment at different temperatures in air can induce changes in morphology of the films and also change the gas response to the tested gas. The gas sensing mechanism of non-planar CuO/Cu<sub>2</sub>O films to the hydrogen gas was proposed.