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Zinc oxide nanostructure grown by chemical vapor transport BRADLEY GOLDER, MARIAN TZOLOV, Lock Haven University of PA — ZnO is a versatile platform thanks to the unique combination of optical, semiconducting, and piezoelectric properties of ZnO. We have grown zinc oxide nanostructures by chemical vapor transport. The formation of the nanoparticles was studied by Scanning Electron Microscopy and the incorporation of impurities by Energy Dispersive X-Ray Spectroscopy. The photoluminescence spectra were used to quantify the presence of electronic defects and this was related to the parameters of the deposition process. The electrical conductivity along the nanorods was investigated together with the sensitivity to different gas environment. This way the applicability of the synthesized nanostructures for gas detection was evaluated.

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