

**11th International Conference Nanomaterials: Applications &
Properties
IEEE NAP
5-11 Sept. 2021, Odessa, Ukraine**

Semiconducting Oxide - Based Micro- and Nano-Sensors for Environmental and Biomedical Monitoring

**Nicolae Magariu, Nicolai Ababii, Tudor Zadorojneac,
Helge Krüger, Mani Teja Bodduluri, Thierry Pauporté,
Rainer Adelung, Sandra Hansen, Oleg Lupan**

<https://doi.org/10.1109/NAP51885.2021.9568503>

Abstract

Nanosensors and microsensors are important for environmental and biomedical monitoring due to their extraordinary properties. In this work sensor devices are fabricated for the detection of H₂ gas and ethanol vapors. These devices are based on ZnO single nanowires, heterostructures composed of TiO₂/ZnO columns doped with Cd, as well as TiO₂/CuO:Ni, Ag and on a functionalization with Pd and other noble nanodots.