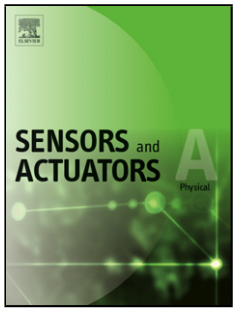

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Authors: M.A. Olgar, Y. Atasoy, E. Bacaksız, Şakir Aydoğan

PII: S0924-4247(16)30594-5
DOI: http://dx.doi.org/doi:10.1016/j.sna.2017.04.053
Reference: SNA 10113

To appear in: *Sensors and Actuators A*

Received date: 30-9-2016
Revised date: 27-4-2017
Accepted date: 28-4-2017

Please cite this article as: M.A.Olgar, Y.Atasoy, E.Bacaksız, Şakir Aydoğan, Synthesis and characterization of ZnO micro-rods and temperature-dependent characterizations of heterojunction of ZnO microrods/CdTe and ZnO microrods/ZnTe structures, Sensors and Actuators: A Physicalhttp://dx.doi.org/10.1016/j.sna.2017.04.053

Synthesis and characterization of ZnO micro-rods and temperature-dependent characterizations of heterojunction of ZnO microrods/CdTe and ZnO microrods/ZnTe structures

M.A. Olgar [a], Y. Atasoy[a], E. Bacaksız[a] and Şakir Aydoğan[bc1]

[a] Department of Physics, Faculty of Sciences, Karadeniz Technical University, 61080 Trabzon, Turkey

[b]Department of Physics, Faculty of Sciences, Atatürk University, 25240 Erzurum, Turkey

[c]Department of Environmental Engineering, Faculty of Engineering, Ardahan University, Ardahan, Turkey

HIGHLIGHTS

- ZnO microrods were synthesized by spray pyrolysis method at 550°C.
- ZnO microrods/CdTe and ZnO microrods/ZnTe core-shell structures were fabricated.
- ZnO/CdTe and ZnO/ZnTe heterojunctions showed a good rectifying at all temperatures.

Abstract

ZnO microrods were fabricated on ZnO-coated SnO_2 glass substrates by spray pyrolysis method. To obtain p-n heterojunction, p type CdTe and ZnTe layers were deposited on ZnO microrods. The structural characterizations demonstrated that ZnO microrods have a hexagonal wurtzite structure with vertically aligned rod morphology. Additionally, hexagonal rod geometry was compressed by coating CdTe layer on micro-sized ZnO rods.

[1] Correspondance to: Ş. AYDOGAN

E-mail addresses:saydogan@atauni.edu.tr

Fax:90 442 2314109, Tel: 0442 231 4110