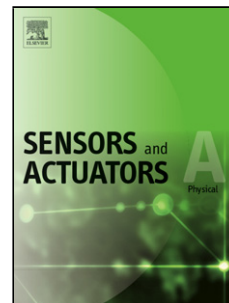


## Accepted Manuscript

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

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## 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<sub>2</sub> 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.

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