

Effect of Mn Doping on Electrical and Optical Behavior of Chemically Synthesized ZnTe Thin Film

Ujjwal Prasad ^a, Pushp Raj Harsh ^a, S.R. Kumar ^b, Kamal Prasad ^{a,*}

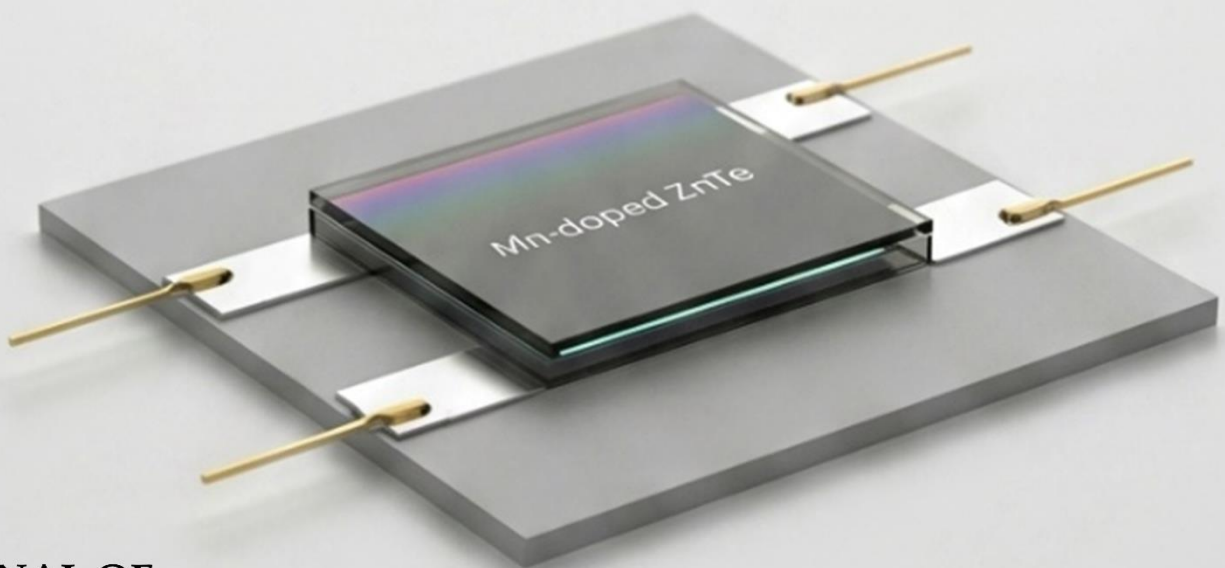
^a University Department of Physics, T.M. Bhagalpur University, Bhagalpur - 812007, India

^b Department of Applied Science and Humanities, NIAMT, Hatia, Ranchi - 834003, India

Editor's note: Zinc Telluride (ZnTe) is a II-VI semiconductor with a 2.26 eV band gap, ideal for optoelectronic devices like LEDs, solar cells, and laser diodes. Prasad et al. investigated the effects of manganese (Mn) doping on the properties of ZnTe thin films for optoelectronic applications. ZnTe and Mn-doped ZnTe films were deposited on FTO via chemical bath deposition. Structural analysis was conducted using X-ray diffraction (XRD), while optical properties were assessed through UV-Visible spectroscopy, and electrical behavior was evaluated with current-voltage measurements. Their results demonstrate that Mn doping enhances the properties of ZnTe thin films for use in photodetectors and photovoltaics.

doi: 10.22034/jams.2026.260203

How to cite: U. Prasad et al., *Journal of Applied Material Science*, **2026**, 2, 260203.



JOURNAL OF
**APPLIED
MATERIAL
SCIENCE**

jams.hsu.ac.ir