

Comprehensive Structural Analysis of ZnTe and Mn-Doped ZnTe Thin Films

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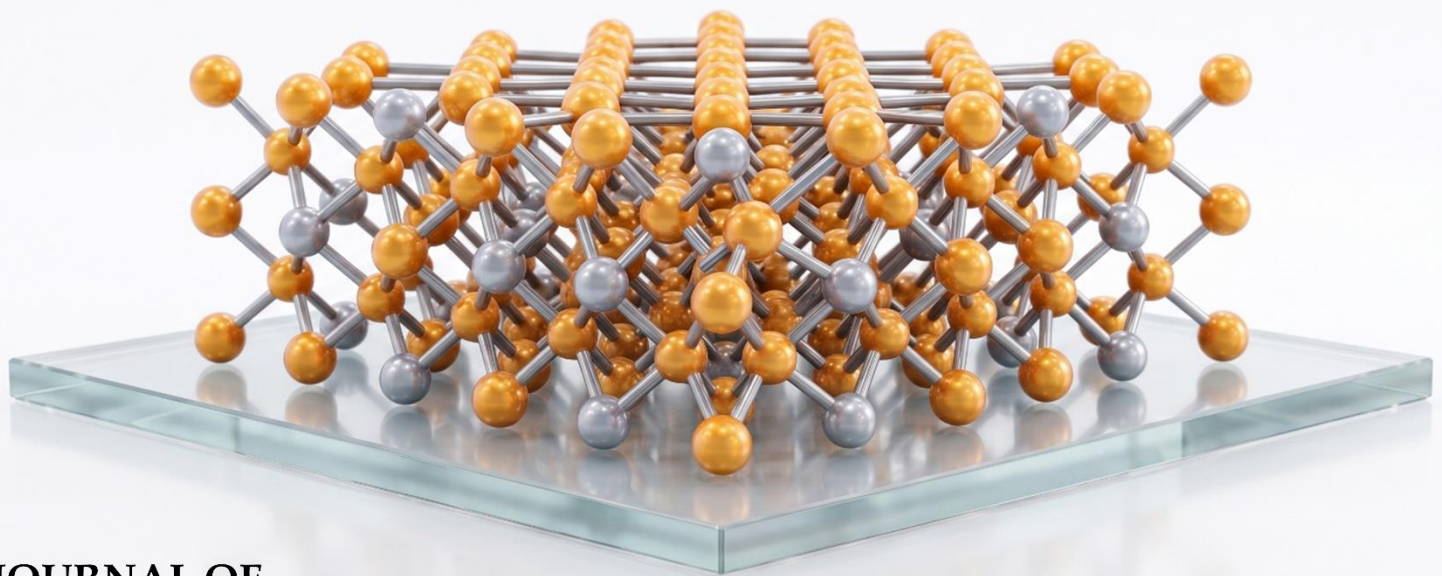
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Editor's note: Modifying structural properties of II–VI semiconductors such as zinc telluride (ZnTe) with transition metal dopants like manganese (Mn) is key for advanced applications in spintronics and magnetic semiconductors. Prasad et al. analyzed ZnTe and Mn-doped ZnTe thin films using X-ray diffraction, confirming a cubic phase and revealing lattice distortion due to Mn doping. Techniques showed that Mn increases microstrain and internal stress while reducing crystallite size. These changes are crucial for enhancing the optical, electronic, and magnetic properties of ZnTe, making it suitable for optoelectronic and spintronic applications.

doi: 10.22034/jams.2026.260303

How to cite: U. Prasad et al., *Journal of Applied Material Science*, **2026**, 2, 260303.



JOURNAL OF
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MATERIAL
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jams.hsu.ac.ir