

INVESTIGATION OF THE MECHANISMS  
OF LOCAL AMORPHIZATION IN A HEAVILY  
DOPED CRYSTALLINE SEMICONDUCTOR  
*n*-TiNiSn

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S u m m a r y

The calculations of the electronic density of states (DOS) and structural parameters for *n*-TiNiSn intermetallic semiconductor heavily doped with an In acceptor impurity ( $N_A^{\text{In}} \approx 9.5 \times 10^{19} \div 1.9 \times 10^{21} \text{ cm}^{-3}$ ) are performed. The temperature and concentration dependences of resistivity, thermoelectric coefficient, magnetic susceptibility, and X-ray structural characteristics are experimentally studied. The structurally disordered local regions and the presence of fluctuations of the continuous energy bands in  $\text{TiNiSn}_{1-x}\text{In}_x$  are revealed.