

STUDIES OF CONDUCTION
MECHANISMS IN A HEAVILY Co-DOPED
 n -TiNiSn INTERMETALLIC SEMICONDUCTOR

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S u m m a r y

Temperature dependences of the specific electroresistance, Seebeck coefficient, and structural characteristics of a heavily Co-doped ($N^{\text{Co}} = 9.5 \times 10^{19} \div 1.9 \times 10^{21} \text{ cm}^{-3}$) n -TiNiSn intermetallic semiconductor, $\text{TiNi}_{1-x}\text{Co}_x\text{Sn}$, have been studied in the temperature range $T = 80 \div 380$ K. The corresponding electron density of states (DOS) has been calculated. Co atoms, at concentrations $x < 0.03$, were found to occupy the crystallographic positions of Ti and Ni ones with different occupation numbers and act as defects of the donor or acceptor nature, respectively.