

Indium phosphide (InP) is an attractive III-V compound semiconductor for high speed metal-semiconductor field effect transistors (MESFETS) and optical devices. Due to certain attractive features of InP over GaAs, such as high electron mobility, better thermal conductivity, higher breakdown field have become a material of considerable interest for microwave and photonic applications in recent years. The III-V compound semiconductors have been investigated extensively during the past decade because of both fundamental and technological importance. Among them, InP is known to have a higher drift velocity which makes it as a material of strong potential use in high-frequency transistors, solar and photovoltaic cells and integrated optoelectronic devices. The choice of InP as a substrate for these devices originates from the fact that it has an optimum band gap for photovoltaic energy conversion and a large mobility required for high speed devices. In the present work, the current-voltage (I-V) and capacitance-voltage (C-V) characteristics of Au/Pt/n-type InP Schottky barrier diodes have been investigated in the temperature range 210-420 K.



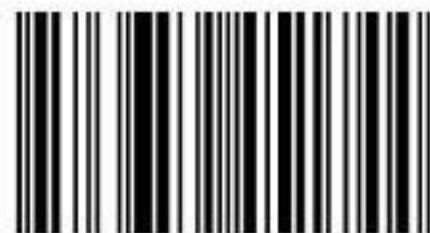
Nanda Kumar Reddy Nallabala

A Study on Platinum/Gold Schottky Contacts to n-type Indium Phosphide



Nanda Kumar Reddy Nallabala

Dr. N. Nanda Kumar Reddy presently working as an Assistant Professor of Physics at Madanapalle Institute of Technology and Science (MITS), Madanapalle, Andhra Pradesh, India. He received his B.Sc, M.Sc, M.Phil and Ph.D Degrees in Physics from S.V.University, Tirupati, Andhra Pradesh, India. He published eight refereed international journals.



978-3-659-45174-4

 **LAMBERT**
Academic Publishing