

Table of Contents

Preface

Analysis of Thermal Conductivity of LaFeAsO at Low Temperature	
N. Kaurav and K.K. Choudhary	1
Phonon Anomalies in Zirconium Nitride (ZrN)	
P. Mishra, M. Aynyas and S.P. Sanyal	5
<i>Ab Initio</i> Study of Pressure Induced Structural, Magnetic and Electronic Properties in Plutonium Pnictides	
C. Makode, J. Pataiya, M. Aynyas and S.P. Sanyal	11
Pressure Induced Phase Transition and Elastic Properties of Alkaline Earth Mono-Sulphide	
B.S. Arya, M. Aynyas, A.K. Ahirwar and S.P. Sanyal	19
Structural, Electronic, Elastic and Mechanical Properties of ScNi, ScPd and ScPt: A FP-LAPW Study	
B. Fatima, S.S. Chouhan, N. Acharya and S.P. Sanyal	27
First Principle Calculations of Pressure Induced Structural and Electronic Properties in Americium Monochalcogenides	
J. Pataiya, M. Aynyas, C. Makode, A. Singh and S.P. Sanyal	35
Structural Stability and Chemical Bonding of TiN: <i>Ab Initio</i> Study	
M. Chauhan, D.C. Gupta and I.H. Bhat	41
First Principles Study of Electronic and Elastic Properties of AlY	
M. Shugani, M. Aynyas and S.P. Sanyal	45
Structural Properties of CaS_{1-x}Se_x Mixed Crystal under High Pressure	
A. Singh, E. Sharma and U.K. Sakalle	51
Study of Structural, Electronic and Elastic Properties of LuPd₃ Compound	
V. Thakur, G. Pagare, S.S. Chouhan and S.P. Sanyal	61
Temperature Dependence of Second and Higher Order Elastic Constants of Orientationally Disordered (NH₄I)_x(KI)_{1-x} Mixed Crystals	
A. Tiwari	65
First Principles Study on Structural, Electronic, Elastic and Thermal Properties of OsAl and OsSi	
N. Acharya, B. Fatima, S.S. Chouhan and S.P. Sanyal	71
Investigation of Dielectric Behaviour of Chemically Treated Coir Fiber Reinforced Epoxy Composites	
A. Khan and S. Joshi	79
Pressure Effect on Structural and Phonon Properties of Mixed Alloys Compounds	
A.K. Ahirwar, M. Aynyas and S.P. Sanyal	85
Structural Stability and Chemical Bonding of TiN: <i>Ab Initio</i> Study	
Synthesis & Study of Properties of Doped ZnO Pellets for Gas Sensing Application	
S.S. Patil and P.K. Jha	99
Nanorod Formation of Copper Indium (di) Selenide Nanorod Synthesize by Solvothermal Route	
P.R. Jakhmola, G. Agarwal, P.K. Jha and S.P. Bhatnagar	107
Study of ITO/Mo/CIGS/CdS/ZnO/Al Heterojunction Thin Solar Cell by Theoretical Simulations	
P.R. Jakhmola, S.D. Gupta, P.K. Jha and S.P. Bhatnagar	113
Investigation of Structural, Electrical and Magnetic Properties of Mixed Ferrite System	
N.M. Astik and G.J. Baldha	119
Influence of Mn Site Substitution on Electrical Resistivity and Magnetoresistance Properties of Rare Earth Manganite	
T.M. Tank, D. Bhargava, V. Sridharan, S.S. Samatham, V. Ganesan and S.P. Sanyal	123
Structural Transition in Thickness Dependent CSD Grown Nanostructure Manganite Thin Films	
T.M. Tank, C.M. Thaker and J.A. Bhalodia	131
Theoretical Calculations on Molar Heat Capacities of MgRE Intermetallics Using First-Principles Calculations	
A.A. Khan, V. Srivastava, M. Rajagopalan and S.P. Sanyal	141

Pressure Induced Structural and Electronic Properties of Thulium Nitride	
Y.S. Panwar, M. Aynyas, M.K. Tejraj and S.P. Sanyal	147
Transport Properties of Hexagonal $\text{YMn}_{0.9}\text{Ru}_{0.1}\text{O}_3$ Compound	
R.K. Thakur, R. Thakur, N. Kaurav, A. Modi, G.S. Okram and N.K. Gaur	151
<i>Ab Initio</i> Study of Pressure-Induced Structural Properties of Uranium Chalcogenides	
A. Singh, M. Aynyas and S.P. Sanyal	155
High Pressure Structural Phase Transition and Elastic Properties of Europium Chalcogenides	
A.K. Sahu, M. Aynyas, R. Bhardwaj and S.P. Sanyal	163