

Indian Journal of Pure and Applied Physics

<http://www.niscair.res.in>; <http://nopr.niscair.res.in>

VOLUME 48

NUMBER 8

AUGUST 2010

CODEN: IJOPAU 48(8) 535-606

ISSN: 0019-5596 (Print); 0975-1041 (Online)

CONTENTS

Electromagnetism, Optics, Acoustics, Heat Transfer, Classical Mechanics and Fluid Dynamics

- Ultrasonic and viscometric study of soya protein in aqueous solution 539
Sarat K Swain* & Pragnya P Priyadarshini

Condensed Matter: Structural, Mechanical and Thermal Properties

- Pressure induced phonon stiffening and softening in III-V phosphides 543
Satyam Shinde*, Ankur Pandya & Prafulla K Jha

- Temperature dependence of soft mode frequency, dielectric constant and loss tangent in PbHPO₄ crystal in presence of electric field 550
Trilok Chandra Upadhyay & Mayank Joshi*

- Study of physical properties of mixed liquid crystal at phase transition 556
Niket Shastri*, Pratmesh R Vyas & Sureshchandra J Gupta

- Dielectric properties of Ti_xLi_{1-x}La_{0.1}Fe_{1.9}O₄ ferrite thin films 562
H M Abdelmoneim

- Model for calculating the refractive index of different materials 571
V Kumar* & J K Singh

- Effect of grain boundaries on photovoltaic properties of PX-GaAs films 575
M K Sharma & D P Joshi*

Condensed Matter: Electronic Structure, Electrical, Magnetic and Optical Properties

- Effect of preparative conditions on magnetic properties of CoFe₂O₄ nanoparticles 581
Kinnari Parekh

- Constructal minimization of emitter grid resistance of solar cell with variable cross-section collectors 586
Lingen Chen*, Shengbing Zhou & Fengrui Sun

- Multiferroic Pb_{1-x}Sr_x(Fe_{0.012}Ti_{0.988})O₃ nanoparticles: Room temperature dielectric relaxation, ferroelectricity and ferromagnetism 593
Kuldeep Chand Verma*, Mast Ram, R K Kotnala, S S Bhatt & N S Negi

Interdisciplinary Physics and Related Areas of Science and Technology

- Realization of variable *Q* bandpass filter using low-voltage CCII 600
Susheel Sharma*, Seema Rana & K Pal

Keyword Index

<i>ac</i> Conductivity	562	Lattice dynamics	543
Acoustic impedance	539	Liquid crystal	556
Adiabatic compressibility	539	Loss factor	562
Anharmonic interactions	550	Low voltage circuits	600
Bandpass filter	600	Magnetic nanoparticles	581
CBH model	562	Magnetic properties	593
Chemical synthesis	593	Mesomorphism	556
Co ferrite	581	Nanostructures	593
Constructal theory	586	Optimal design	586
Current conveyor	600	Oxides	571
Dielectric constant	550, 562	Phase transition	556
Electrical properties	593	Photovoltaic properties	575
Electron microscopy	593	PX-GaAs films	575
Energy gap	571	Refractive index	571
Ferroelectric	550	Relaxation time	539
GaAs solar cells	575	Semiconductors	571
Green's function	550	Series electrical resistance	586
Grüneisen parameter	543	Solar cell	586
Halides	571	Superparamagnetic	581
Insulators	571	Thermodynamic optimization	586
		Transverse acoustic phonon	543