

Yearly plan July 2009 to 30th June 2010

1. Admission process

S.No	Courses	Date of Test	Intake
1	M.Tech (Laser Science & App)	4 th July	15
2	M.Sc (Physics)	2 nd July	30
3	M.Sc (Physics) (Materials Science)	2 nd July	15
4	M.Phil (Physics)	6 th July	20
5	M.Sc by Research	8 th July	05

Our efforts would be to publicize our program more effectively and spread awareness about the scopes for Physics. Efforts will be made to fill up all the seats in the various courses.

- Syllabus & Classes:** The class will start from July 10 for M.Tech (Sem –I) M.Sc(Physics) Sem-I, M.Phil (Sem-I) & M.Sc (Physics) Materials Science. Classes for M.Sc (Physics) III- Sem , will start from July 1 2009 . Every student will be given a copy of syllabus.
- Test and exam schedule :** Test and exam schedules will be displayed on the notice board . by July 15'2009, which will be followed strictly by the faculty. Semester – I result will be declared before 30th Dec'2009 & Semester II result by 30th June 2009.
- Attendance** of the students will be monitored by the faculty and after every 15 days it will be intimated to the HOD.
- To improve the academic activity**, on every Saturday students of M.Sc , M.Tech & M.Phil will be asked to give seminar. Faculty will also give seminars on Saturdays.
- Invited Lectures:** Following invited lectures are being planned.
 - Dr.Ajay Ghatak , Emeritus professor July 17 -19' 2009
 - Dr. D.D.Bhawalkar ,Ex Director Nov 16-21 ' 2009
 - Dr. P.K.Gupta, RRCAT Feb' 2010
 - Mr.B.T.Rao, RRCAT Feb' 2010

5. Mr.P.Bhatnagar
6. Dr.P.D.Gupta

Feb' 2010
March,2010

7. **All the existing laboratories** of M.Tech , M.Sc & M.Phil will be further strengthened . X-Ray laboratory will be equipped with laue camera ,so that M.Sc students can perform the various experiments to analyze the crystal structure.
8. **Research grants & Research:** Faculty is actively engaged in research . In the last five years they have brought research grants of worth Rs. 180 lakhs & they have published more than 200 research papers in various National & International journals. Total Ph.D produced is 20 . Like previous years in this period also they will write to various agencies for research grants and generate more funds for the department.
9. **Conference / Workshop:** Departments actively engaged in the holding conference of Shanti Swaroop Bhatnagar Awardees from July 17 -19 '2009.

Name & Signature of the Coordinator IQAC : Dr. A.K.Dutta

Name of Signature of the HEAD,UTD : Dr. Brijesh Kumar

Annexure -1
Research Projects during last five years

S. No	Project Description	Names of the Faculty Involved in the project	Name of the funding Agency and project Duration	Total Amount Sanctioned	Project Status
1.	Spin dynamics and coherent control in semiconductor Quantum dots	Dr. P. Sen	DST Delhi (2008- 2010)	Rs. 15.59 Lakhs	Ongoing
2.	Non-Invasive detection of blood glucose/urea using optical low coherence reflectometry	Dr. P. Sen	UGC Delhi (2008- 2010)	Rs. 11.94 Lakhs	Ongoing
3.	Nonadiabatic channels in the superconducting pairing of Alkali metal doped Fullerenes	Dr. Dinesh Varshney	DRDO Delhi (2002-2005)	Rs. 15.30 Lakhs	Completed
4.	Transport properties of Colossal magnetoresistive materials	Dr. Dinesh Varshney	MPCST Bhopal (2003-2006)	Rs. 2.00 Lakhs	Completed
5.	Physical Properties and superconductivity of metallic diborides.	Dr. Dinesh Varshney	UGC Delhi (2006-2009)	Rs. 2.87 Lakhs	Ongoing
6.	Structural phase transition and lattice mechanical property of rare earth semi conducting chalcogens	Dr. Dinesh Varshney	DRDO Delhi (2007-2010)	Rs.14.99 Lakhs	Ongoing
7.	Investigation of Polymer Structure & Nano composite	Dr. M. Banerjee	DRDO Delhi (2006- 2008)	Rs.13.77 Lakhs	Ongoing
8.	Giant Magneto-impedance in amorphous and nanocrystalline soft magnetic thin films for sensor applications	Dr. S. N. Kane	DST Delhi (2005-2007)	Rs.1.73 Lakhs	Completed
9.	Undulator characteristics and High gain free electron laser amplifier	Dr. G. Mishra	BRNS-DAE (2006-2009)	Rs. 20.00 Lakhs	Ongoing
10.	Gain studies in wave guide FEL	Dr. G. Mishra	DST (2002-2006)	Rs. 12.00 Lakhs	Completed
11.	Experimental and Analytical study of Cyclotron effects in high power backward wave oscillator.	Dr. Y. Choyal	DRDO New Delhi (2008-2010)	Rs. 30.66 Lakhs	Ongoing
12.	Experimental and numerical studies of high power Cherenkov and cyclotron masers.	Dr. K. P. Maheshwari and Dr. Y. Choyal	DRDO New Delhi (2004-2006)	Rs. 24.78 Lakhs	Completed
13.	High power microwave generation from BWO device using relativistic electron beam	Dr. K. P. Maheshwari and Dr. Y. Choyal	DRDO New Delhi (2001-2003)	Rs. 24.29 Lakhs	Completed
<p>Any other (Specify):</p> <ul style="list-style-type: none"> ☼ FIST Program of DST New Delhi Amount: 55 Lakhs ☼ Innovative programme of UGC, Delhi, Amount: 23.5 Lakhs ☼ Total = 189.92 Lakhs + 55.00 Lakhs + 23.5 Lakhs <p style="text-align: right;">Grant Total = 268. 42 Lakhs</p>					

Annexure - 2

International Collaborations

Universite de Montreal, Montreal, Canada.:	Nuclear mass formula.
University of Bruxelles, Brussels, Belgium	Nuclear Physics of Neutron stars
University of Loughborough:	Metal Insulator transition
National Dong Hwa University, Taiwan	Intermetallic materials
IAFM CNR, Italy	Laser Plasma Interaction.
ENEA, Frascati.	Free Electron Lasers
Bessy, Albert Einstein strasse, Germany	Free Electron Lasers
University Madrid, Madrid, Spain	Magnetic thin films
Institut für Anorganische and Analytische Chemie, Johannes: Gutenberg- Universität Mainz (Germany)	Miniaturised Mössbauer spectrometer
Ecole Normale Supérieure, Paris, France.	Magnetic materials
Niigata University, Japan	HPM generation from BWO
National Institute for Fusion Science, Nagoya	HPM generation from BWO
Humboldt University Berlin University Germany	

Collaborations with national institutes

Department of Atomic Energy organizations:

RRCAT-Indore, BARC- Mumbai, UGC-DAE CSR- Indore, IGCAR-Kalpakkam, IPR- Gandhinagar.

Defence Institutions:

MTRDC-Bangalore, DRDO – Kanpur, IAT- Pune.

CSIR laboratories:

Regional research laboratory- Bhopal

Central Universities:

Panjab, Jamia Milia, Anna University.

State Universities of Madhya Pradesh and affiliated Colleges.

Others:

IIT- New Delhi, Madras, BIT - Mesra Ranchi

Collaborations

Memorandum of understanding have been signed with Institute for Plasma Research, Gandhinagar, UGC-DAE-CSR, Indore, Physical Research Laboratory, Ahmedabad, and IUAC, New Delhi.

Faculty members avail the expertise of these apex institutions.

Students are provided opportunity to do summer project.

Research scholars working in these institutions can register themselves for Ph.D. in Devi Ahilya University.

These collaborations are promoted through

Curriculum development

Faculty exchange and development

Research

Student placement

Annexure -3

Dr. A. K. Dutta [Professor]

1. Proton Shell effects in neutron-star matter
A. K. Dutta, M. Onsi and J. M. Pearson Phys. Rev. C, 69, 052801, 2004. IF: 3.302

Dr. Ashutosh Mishra [Professor]

2. X-ray absorption fine structure studies of some copper (II) mixed-ligand complexes with glutamic acid as primary ligand.
R. K. Katare, S. K. Joshi, B. D. Shrivastava, R. N. Patel, K. B. Pandeya and **Ashutosh Mishra**
X-ray Spectrometry, 31, 4 (2002) 327 (IF = 1.117)
3. XANES and EXAFS studies of some copper (II) mixed-ligand complexes
R K Katare, S K Joshi, B D Shrivastava, R N Patel and **Ashutosh Mishra**
Indian J. Pure & applied Physics, 40, (2002), 908 (IF = 0.271)
4. X-ray, K-absorption near edge structural study of some copper (II) complexes with amino acids as ligands.
Ashutosh Mishra, M. Mahajan and K. K. Joher
Indian J. Pure & applied Physics, 41, (2003), 232 (IF = 0.271)
5. XANES studies of monosubstituted benzyldrazide complexes of copper.
S K Joshi, B D Shrivastava, Bhakta Darshan Shrivastava and **Ashutosh Mishra**
X-ray Spectrometry, 33, 6 (2004) 466 (IF = 1.117)
6. *X-ray K-absorption spectral studies of copper (II) with 3-arylazq-7-hydroxy-4-methyl Coumarin ligand
Pooja Sharma, Pratibha Sharma and **Ashutosh Mishra**
DAE Solid State Physics (India), 49, (2004), p610
7. K-NEXAFS investigations on some copper (II) complexes.
Pooja Sharma and **Ashutosh Mishra**
Indian J. Chemistry, 44A, (2005), 307 (IF = 0.504)
8. Correlation for XANES studies of some copper (II) complexes using randic index.
Maneesh Dave and **Ashutosh Mishra**
Ultra Science 17 (1) A, 17, (2005)
9. Correlation of Wiener index with X-ray K-absorption parameters of mixed ligand complexes.
Dilip Pandey, Maneesh Dave and **Ashutosh Mishra**
Ultra Science 17 (1) A, 9, (2005)
10. X-ray absorption fine structure studies of some Cobalt (II) complexes.
Maneesh Dave and **Ashutosh Mishra**
Ultra Science 17 (3) 413 (2005)
11. Cu K-absorption near edge studies on diethylenetriamine mixed ligand copper(II) complexes in solid state and in aqueous solution.
S K Joshi, P K Sharma, B D Shrivastava, **Ashutosh Mishra** and K B Pandeya,
Indian J. Chemistry, 45A, (2006), 1994
12. *X-ray near K-absorption spectral studies of Co (II) complexes (isoxezol series)
Ashutosh Mishra, Namrata Soni and N. Dagaonkar
DAE Solid State Physics, (India), 51, (2006), 239
13. *X-ray K-absorption spectroscopic studies of some copper (II) complexes with isoxezol series.
Ashutosh Mishra, Ruchita Awate and Nagesh Dagaonkar
DAE Solid State Physics, (India), 51, (2006), 197
14. *Synthesis and structural Characterization of new Cu (II) Complex of 6-Methyl-5-arylhydrazono-2thio-4oxo-Pyrimidine.
Ashutosh Mishra, Ruchita Awate, Namrata Soni, Pratibha Sharma and D. M. Phase
DAE Solid State Physics, (India), 52, (2007), 185
15. *Structural and morphological studies of thiourea transition metal complexes by XRD and SEM.
Ashutosh Mishra, Namrata Soni, Ruchita Awate, Pratibha Sharma and D. M. Phase
DAE Solid State Physics, (India), 52, (2007), 183

16. A comparative study of topological indices with X-ray K- absorption parameters of transition metal copper complexes
Ashutosh Mishra, Ruchita Awate, Namrata Soni, K. K. Johar and B. D. Shrivastava
Ultra Science, 2008 (In Press)
17. A novel Synthesis and characterization of metal complexes of 3-(N- phenyl) thiourea-pentenone-2 ligand. **Ashutosh Mishra, P. Sharma, Namrata Soni and Ruchita Awate**
J. Coordination chemistry, 2008 (In Press). (IF = 0.817)

* **Published in the Conference proceeding**

Dr. Pratima Sen [Professor]

18. P. K. Dutta, Pragya Jain, **P. Sen**, Rashmi Trivedi, P. K. Sen and Joydeep Dutta (2003) Synthesis and characterization of a novel polyazomethine ether for NLO application, **European Polymer Journal, 39**, pp 1007-1011 (IF = 2.248)
19. H. K. Gahir, **P. Sen** and P. K. Sen (2003), Significance of field and medium asymmetry on squeezed light generation, **J. Opt. Soc. Am. B, 20**, pp 871-877. (IF = 2.119)
20. **P. Sen**, P. K. Sen, R. Bhatt, S. Kar, V. Shukla, and K. S. Bartwal (2004), The effect of MgO doping on optical properties of LiNbO₃ single crystals, **Solid State Communication, 129**, pp 747-752 (IF = 1.535)
21. Rashmi Trivedi, **P. Sen** and Pranay K. Sen (2004), Synthesis and study of second harmonic generation in 4,4'-dinitrophenyl 1,1'-adipamide (DNPA), **Journal of Nonlinear Optical Physics and Materials, 13**, pp 17-23 (IF = 1.637)
22. Harneet Kaur Gahir and **P. Sen** (2004) Light squeezing in Fabry-Perot cavity, **Optical and Quantum Electronics, 36**, pp 615-626. (IF = 0.644)
23. V. Kumar, S. Kumbhaj, **P. Sen** and P. K. Sen (2004), Fiber optic temperature sensor based on surface plasma excitation, **Asian Journal of Physics, 14**, No.1.
24. Rashmi Trivedi, **P. Sen** and Pranay K Sen (2005) Dipolar contribution to the birefringence and Second-Order Susceptibility in organic material, **Phys. Stat. Sol. (b), 242**, pp. 3163 – 3169 (IF = 1.025)
25. R. Bhatt, S. Kar, V. Shukla, **P. Sen**, P. K. Sen, K. S. Bartwal and V. K. Wadhawan, (2005), Studies on nonlinear optical properties of ferroelectric MgO-LiNbO₃ single crystals, **Ferroelectrics, 323**, pp.165-169. (IF = 0.865)
26. **P. Sen** and Pranay K. Sen (2006), "Hyperfine splitting and quantum beats in CdSe quantum dots", **Indian Journal of Pure and Applied Physics**, (Special Issue), **44**, pp. 93-97. (IF = 0.271)
27. Manish K. Bafna, **P. Sen** and P. K. Sen (2006) "Effect of temperature dependence on nonlinear optical properties of InGaAs/GaAs single quantum dot", **Indian Journal of Pure and Applied Physics, 44**, pp. 977-979. (IF = 0.271)
28. N. Sisodia, R. Trivedi, R. K. Choubey, **P. Sen**, P. K. Sen, S. Kar, R. Bhatt, and K. S. Bartwal (2006), Influence of MgO doping on refractive index of LiNbO₃ crystal, **Appl. Phys. A., 84**, pp. 291-295 (IF = 2.316)
29. R. K. Choubey, **P. Sen**, P. K. Sen, R. Bhatt, S. Kar, V. Shukla and K. S. Bartwal (2006) Optical properties of MgO doped LiNbO₃ single crystals, **Optical Materials, 28**, pp. 467-472. (IF = 1.519)
30. S. Kar, R. Bhatt, V. Shukla, R. K. Choubey, **P. Sen** and K. S. Bartwal (2006), Optical behaviour of VTE treated near stoichiometric LiNbO₃ crystals, **Solid State Communication, 137**, pp. 283-287 (IF = 1.535)
31. Malyaj Das, R. Prasad and **P. Sen** (2006), Structural analysis and nonlinear optical activity of Urea hydrogen peroxide adduct, **Indian Journal of Pure & Applied Physics, 44**, pp. 554-558 (IF = 0.271)
32. **P. Sen**, Namita Sisodia and K. S. Bartwal (2006) Influence of MgO doping on spontaneous polarization and second-order susceptibility in LiNbO₃ crystals, **Optical Materials, 29**, 206-210. (IF= 1.519)

33. Manish Bafna, **P. Sen** and P. K. Sen (2006), Temperature dependence of the photoluminescence properties of self assembled InGaAs/GaAs single quantum dot, **Journal of Applied Physics**, **100**, pp. 103515 (IF = 2.316)
34. R. K. Choubey, **P. Sen**, S. Kar, G. Bhagavannarayana and K. S. Bartwal (2006) Effect of codoping on crystalline perfection of Mg:Cr:LiNbO₃ crystals, **Solid State Communication**, **140**, pp. 120-124 (IF = 1.535)
35. S. Kar, R. K. Choubey, **P. Sen**, G. Bhagavannarayana and K. S. Bartwal (2007) Studies on codoping behavior of Nd:Mg:LiNbO₃ crystals, **Physica B**, **393**, pp. 37-42. (IF = 0.751)
36. R. K. Choubey, B. Q. Khattak, S. Kar, P. Ramshankar, **P. Sen** and K. S. Bartwal (2007) "Influence of doping concentration on OH absorption band of LiNbO₃ crystals" **Crystal Research Technology**, **42**, pp. 718-722. (IF= 0.469)
37. **P. Sen**, M. S. Qureshi and P. K. Sen (2007), Coherent control in a single semiconductor quantum dot exhibiting excitonic and biexcitonic features, **Applied Physics B**, **88**, pp. 13-19. (IF = 3.849)
38. **P. Sen** and Harneet K. Gahir (2007), Effect of field and medium asymmetries on enhancement of signal-to-noise ratio, **Opt Quant Electron**, **39**, pp- 753-759. (IF = 0.644)
39. M. Das, R. Trivedi, B. Q. Khattak, P. Ram Shankar, R. Prasad P. K. Sen and P. Sen, (2008), Geometry Optimization and Second Harmonic Generation in Para-Nitroaniline-Dimethyl Formamide Adduct, **Journal of Nonlinear Optical Physics and Materials**, **17**, pp 1-12. (IF = 1.637)

Dr. Dinesh Varshney [Professor]

40. An intralayer pairing mechanism for the coexistence of charge and spin density waves induced superconductivity in La-Sr-CuO.
(**Dinesh Varshney**, G. S. Patel and R. K. Singh)
2002, Supercond. Sci. Technol. [I.O.P.–U. K.], **Vol. 15, No. 6 Pp.1617-1627 [I F: 2.257]**
41. Interpretation of resistivity of Nd_{1.85}Ce_{0.15}CuO₄: Electron phonon mechanism
(**Dinesh Varshney**, K. K. Choudhary and R. K. Singh)
2002, J. of Superconductivity [Plenum–U. S. A.], **Vol. 15, No.6 Pp.535-537 [I F: 0.794]**
42. Influence of electron phonon interaction on superconducting state parameters of MgB₂.
(**Dinesh Varshney**, K. K. Choudhary and R. K. Singh)
2002, J. of Superconductivity [Plenum–U. S. A.], **Vol. 15, No.6 Pp.603-605 [I F: 0.794]**
43. Explanation of temperature-dependent resistivity of Sm-doped cuprates by electron-phonon scattering.
(**Dinesh Varshney**, K. K. Choudhary and R. K. Singh)
2002, J. of Superconductivity [Plenum–U. S. A.], **Vol. 15, No.4 Pp.281-293 [I F: 0.794]**
44. Interpretation of Temperature-dependent resistivity of Electron doped Cuprates.
(**Dinesh Varshney**, K. K. Choudhary and R. K. Singh)
2002, Supercond. Sci. Technol. [I.O.P.–U. K.], **Vol. 15, No. 5 Pp.1119-1126 [I F: 2.257]**
45. Effect of plasmons on the superconducting transition temperature of Ba_{0.6}K_{0.4}BiO₃: A three Square Well approach.
(**Dinesh Varshney**, R. P. Kumhar, S. Shah and R. K. Singh)
2002, Ind. Jour. of Pure and Appl. Physics [C.S.I.R.–India], **Vol. 40 Pp. 879-886 (IF 0.271)**
46. Interpretation of Normal State in-plane resistivity of La-Sr-CuO superconductors.
(**Dinesh Varshney**, P. Vyas and R. K. Singh)
2002, Ind. J. of Phys. A [I.A.C.S.–India], **Vol. 76A, No.1 Pp.105-110 [I F: 0.265]**
47. Interpretation of anomalous normal state optical conductivity of La-Sr-CuO cuprates.
(**Dinesh Varshney**, K. K. Choudhary and R. K. Singh)
2003, J. Phys. Chem. Solids [Elsevier–U. S. A.], **Vol. 64, Pp. 2497-2506 (IF = 0.897)**

48. Analysis of in-plane thermal conductivity anomalies in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ cuprate superconductors.
(**Dinesh Varshney**, K. K. Choudhary and R. K. Singh)
2003, New Journal of Physics [I.O.P.–U. K.], Vol. 5, Pp.72.1-72.17 [I F: 3.27]
49. Charge density waves induced superconductivity in LaSrCuO with intra-layer interactions.
(**Dinesh Varshney**, G. S. Patel and R. K. Singh)
2003, Ind. Jour. of Pure and Appl. Phys. [C.S.I.R.–India], Vol. 41 Pp.542-555 (IF:0. 271)
50. Analysis of mid-infrared optical conductivity in electron doped cuprates.
(**Dinesh Varshney**, G. S. Patel and R. K. Singh)
2003, Supercond. Sci. Technol. [I.O.P.–U. K.], Vol. 16, No. 4 Pp.632-638. [I F: 2.257]
51. Electrical resistivity of Ba-K-BiO : Screened optical phonon approach.
(**Dinesh Varshney**, G. S. Patel, S. Shah and R. K. Singh)
2003, Ind. Jour. of Pure and Appl. Phys. [C.S.I.R.–India], Vol. 41 Pp. 565-578. (IF: 0.271)
52. Understanding of Superconductivity and Physical properties of cubic perovskite Bismuth Oxides: Screened Optical–phonon approach.
(**Dinesh Varshney** and R. K. Singh)
2003, Advances in Condensed Matter and Materials research, Ed. F. Gerard, Vol. 4, Pp. 27-72, Nova Science Publication, New York, U. S. A.
53. Electrical resistivity in the ferromagnetic metallic state of La-Ca-MnO_3 : Role of electron-phonon interaction.
(**Dinesh Varshney** and N. Kaurav)
2004, Euro. Phys. Journal B [Springer Verlag–France], Vol. 40, Pp. 129-136. [I. F. 1.457]
54. Interpretation of temperature dependent resistivity of K_3C_{60} fullerenes superconductors: electron-phonon mechanism.
(**Dinesh Varshney**, A. Dube, and R. K. Singh)
2004, Supercond. Sci. Technol. [I.O.P.–U. K.], Vol. 17, No. 7 Pp. 1231-1241. [I F: 2.257]
55. Analysis of low temperature specific heat in the ferromagnetic state of the Ca-doped manganites.
(**Dinesh Varshney** and N. Kaurav)
2004, Euro. Phys. Journal B [Springer Verlag–France], Vol. 37, Pp. 301-309. [I. F. 1.457]
56. High-pressure phase transition and variation of elastic constants of diluted magnetic semiconductors.
(**Dinesh Varshney**, P. Sharma, N. Kaurav, Sanjay Shah, and R. K. Singh)
2004, Phys. Status Solidi B [John Wiley–Germany], Vol. 241, Pp. 3374-3380. [I. F. 1.025]
57. Structural Phase transition and elastic properties of ZnSe at high pressure.
(**Dinesh Varshney**, N. Kaurav, P. Sharma, S. Shah and R. K. Singh)
2004, Phase Transition [Taylor & Francis –U. K.], Vol. 77, Pp. 1075-1091. [I. F. 0.581]
58. Structural phase transition in lanthanum monochalcogenides induced by hydrostatic pressure.
(**Dinesh Varshney**, N. Kaurav, P. Sharma, Sanjay Shah and R. K. Singh)
2004, Phys. Status Solidi B [John Wiley–Germany], Vol. 241, Pp. 3179-3184. [I. F. 1.024]
59. Superconducting transition temperature, isotope and pressure effect in MgB_2 : phonon and charge fluctuation-mediated pairing mechanism.
(**Dinesh Varshney**, M. S. Azad, and R. K. Singh)
2004, Supercond. Sci. Technol. [I.O.P.–U. K.], Vol. 17, No. 7 Pp.1446-1457. [I F: 2.257]

60. Interpretation of temperature dependent resistivity of La-Pb-MnO₃: Role of electron-phonon interaction.
(**Dinesh Varshney** and N. Kaurav)
2005, J. Low Temp. Phys. [Plenum–U. S. A.], Vol. 141, Nos. 3/4 Pp. 315-325. [I F: 0.978]
61. Electrical transport in the normal state of K₃C₆₀ fullerenes: Polaron conduction.
(**Dinesh Varshney**, N. Kaurav and K. K. Choudhary)
2005, Supercond. Sci. Technol. [I.O.P.–U. K.], Vol. 18, No. 9 Pp. 1259-1265. [I F: 2.257]
62. Study of Elastic properties and their pressure dependence of Lanthanum monochalcogenides.
(**Dinesh Varshney**, R. Kinge, N. Kaurav, S. Shah and R. K. Singh)
2005, Int. J. of High-Pressure research [Taylor & Francis –U. K.], Vol. 25, No.2 Pp. 145-157. [I F: 1.228]
63. Pressure dependence of elastic properties of ZnX (X = Se, S, Te): Role of Charge transfer.
(**Dinesh Varshney**, P. Sharma, N. Kaurav and R. K. Singh)
2005, Bull. of Mat. Science [M.R.S.I. & I. A. S.–India], Vol. 28, Pp. 651-661. [I. F. 0.777]
64. Low temperature heat capacity and Coulomb correlations of K₃C₆₀.
(**Dinesh Varshney**, A. Dube, N. Kaurav and R. K. Singh)
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65. High-pressure phase transformation and Elastic behavior of ZnX semiconducting compound.
(**Dinesh Varshney**, R. Kinge, P. Sharma, N. Kaurav and R. K. Singh)
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66. Study of elastic properties and their pressure dependence of semimagnetic semiconductors.
(**Dinesh Varshney**, P. Sharma, N. Kaurav, Sanjay Shah and R. K. Singh)
2005, J. Phys. Soc. Japan [JPSJ –Japan], Vol. 74, No. 1 Pp. 382-388. [I. F. 1.76]
67. Superconductivity and electrical resistivity in alkali doped fullerenes: Phonon mechanism.
(**Dinesh Varshney**, A. Dube, K. K. Choudhary and R. K. Singh)
2005, Bull. of Mat. Science [M.R.S.I. & I. A. S.–India], Vol. 28, Pp. 155-171. [I. F. 0.777]
68. Impurity, phonon and electron contribution to electrical resistivity in MgB₂ superconductors.
(**Dinesh Varshney**)
2006, Supercond. Sci. Technol. [I.O.P.–U. K.], Vol. 19, No.6 Pp. 685-694. [I F: 2.257]
69. Phonon scattering effects on thermal conductivity of MgB₂.
(**Dinesh Varshney**, K. K. Choudhary, M. S. Azad and R. K. Singh)
2006, Physica B [Elsevier–U. S. A], Vol. 385-386, pp.79-81. [I F: 0.872]
70. Superconductivity and normal state in –plane resistivity of MgB₂: screened optical phonon approach.
(**Dinesh Varshney**, M. S. Azad, K. K. Choudhary, and R. K. Singh)
2006, American Inst. Of Physics Publication [A. I. O. P.–U.S.A.] Vol. 850, Pp. 589-590.
71. High-pressure phase transition and variation of elastic constants of U-La-S solid solution.
(**Dinesh Varshney**, R. Kinge, N. Kaurav, K. K. Choudhary, and R. K. Singh)
2006, American Inst. Of Physics Publication [A. I. O. P.–U.S.A.] Vol. 850, Pp. 1301-1302.
72. Effect of impurity scatterers on phonon, electron and magnon thermal transport in electron doped cuprate superconductors
(**Dinesh Varshney**)
2006, Supercond. Sci. Technol. [I.O.P.–U. K.], Vol. 19, No.4 Pp. 433-444. [I F: 2.257]
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(**Dinesh Varshney**)
2006, Int. J. of Mod. Phys. B [World Scient.–Singapore] 20, Pp. 2909-2920 (IF = 0.647)

74. Analysis of low temperature resistivity in the ferromagnetic metallic state of Pb-doped manganites.
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