

CURRICULUM VITAE OF DR. NAWAL KISHORE

(A) Name : Prof. Nawal Kishore
(B) Date of Birth : 13.10.1954
(C) Institution : Department of Physics
Central University of Haryana
Mahendergarh – 123031 (Haryana) INDIA
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Mob. 094160-51041

(D) (i) Academic Qualifications :

Sr.No.	Degree	Year	Division	University/Institution
1.	Hr. Sec-I	1970	Ist	Board of School Education, Haryana
2.	Hr. Sec-II	1971	Ist	-do-
3.	B.Sc.	1974	Ist	Panjab University
4.	M.Sc.	1976	Ist	K.U.Kurukshetra
5.	Ph.D.	1983		Indian Institute of Technology, New Delhi-110016

(ii) Professional Career:

Sr.No.	Position held	year	University/Institution
1.	Lecturer	1980-81	Govt. College, Narnaul (Haryana)
2.	Lecturer	1981-82	Govt. College, Mahendragarh
3.	Lecturer	1982-86	Govt. College, Narnaul
4.	Lecturer	1986-90	M.D.University, Rohtak
5.	Reader	1990-2001	M.D.University, Rohtak
6.	Professor	2001-2014	G.J.University of Science & Technology, Hisar
7.	Professor	Nov. 2014-May 2015	CBLU, Bhiwani (After retirement from GJUS&T)
8.	Professor	14 July 2015-till date	CUH, Mahendergarh

(E) Topic of Ph.D. Thesis:

MOSSBAUER SPECTROSCOPIC AND OTHER PHYSICAL STUDIES IN SODIUM AND BARIUM BORATE GLASSES CONTAINING IRON

(F) Award/Prize/Certificate etc. won:

Won Merit Certificates for getting third rank in order of merit in M.Sc. in the University and first in B.Sc. in college.

(G) Foreign Assignments:

- (1) Provided guidance to Ph.D. students of Yangon University, Myanmar during my visit to that University for the period March 15 to April 11, 2005 and Nov. 11 to Dec. 11, 2005 sponsored by Govt. of India through Ed CIL under Indian Assistance to Ph.D. programme
- (2) Visited USA for presenting a paper entitled Comparison between Stimulated Raman and Brillouin Scattering Processes in Magnetized Doped III – V Semiconductors during International Symposium on Lasers and Applications in Science & Engineering held at San Jose Convention Center (USA) from January 20- 25, 2007.
- (3) Visited Muscat (Oman) to represent GJUS&T, Hisar in India Education Fair- 2009 held at Muscat Holiday Hotel during Oct. 24-26, 2009.
- (4) Visited Bangkok and Pattaya (Thailand) for participation in international study tour/academic networking event on ‘Capacity Building for excellence in Higher Education’ held on June 22nd to 26th, 2014 under TEQIP-II.

(H) Administrative Experiences

Besides Teaching and research activities, I have managed many key posts of Administration in the university since 2001.

- **Convenor**, Purchase Committee, CUH, Mahendergarh. Year 2015-16
- **Convenor**, Rate Contract Committee, CUH, Mahendergarh. Year 2015-16
- **Convenor**, Centre for Innovation, Skill, Employment and Entrepreneurship Development cell (CISED), CUH, Mahendergarh. Year 2015-16
- **Convenor**, Ethical Committee, CUH, Mahendergarh. Year 2016-17

- **Convenor**, Rashtriya Avishkar Abhiyan Club, CUH, Mahendergarh. Year 2015-16
- **Advisory Board Member**, Journal of Central University of Haryana (JCUH), CUH, Mahendergarh. Year 2014-16
- **Teacher-in Charge**, Department of Physics, CUH, Mahendergarh. July 2015-September 2015.
- **Member Secretary** to conduct State Level Eligibility Test (SLET) for Lectureship in 2004 for Haryana State.
- **Director Distance Education** (2005)
- **Dean Students Welfare**, G.J.U.S.& T., Hisar. Year 2005-07 and 2009-2011.
- **Chief Warden**, GJUS&T., Hisar. Year 2002-04
- **Dean, Faculty of Science & Technology Interface**, GJUS&T., Hisar. Year 2004-07.
- **Dean, Faculty of Engineering & Technology**, GJUS&T., Hisar. Year 2005-08.
- **Chairman, High Power Standing Purchase Committee**, GJUS&T., Hisar. Year 2009- 2011
- **Head/Chairman, Department of Applied Physics**, GJUS&T., Hisar. Year 2001-04, 2006-08, 2009-2012.
- **Head/Chairman, Department of Printing Technology**, GJUS&T., Hisar. Year 2005-09.
- **Head/Chairman, Department of Biomedical Engineering**, GJUS&T., Hisar. Year 2005-09.
- **Head/Chairman, Department of Electronics & Communication Engineering**, GJUS&T., Hisar. Year 2004.
- **Chairman, Committee to deal Unfairmeans Cases**, GJUS&T., Hisar. Year 2002-05.
- **Chairman**, Space Allotment Committee, GJUS&T., Hisar (2013-2014)
- **Member**, House Allotment Committee, GJUS&T., Hisar (2003)
- **Coordinator, TEQIP-II** (World Bank Project), GJUS&T., Hisar Year 2010- 2014.

(I) Other Responsibilities

1. Member Executive Council, GJUS&T Hisar (2004-2006)
2. Member of delegation for meeting H.E. the President of India (2003)
3. Member Proctorial Board, GJUS&T Hisar (2002-07)
4. Member Admission Committee, GJUS&T Hisar
5. Member University Court, GJUS&T Hisar (2004-2006, 2011-13)
6. Member, Finance Committee, CDLU Sirsa (2008-2010)
7. Member Academic Council, GJUS&T, Hisar (2002-2006, 2012-14) and CDLU, Sirsa (2005-2009, 2011-13)
8. Member Selection Committee (GJUS&T Hisar, KU Kurukshetra and CDLU Sirsa, DCRUST Murthal, TITS Bhiwani, Jammu University Jammu, MDU Rohtak, Central University of Haryana, Mahendergarh)
9. Chairman, UG & PGBOS GJUS&T Hisar (2001-04, 2006-08, 2009-12)
Member-Expert, UG/PGBOS GJUS&T Hisar, KU Kurukshetra, CDLU Sirsa, DCRUS&T, Murthal and NIT Kurukshetra, MM College Israna, Central University of Haryana, Mahendergarh, G.G.D. University Bilaspur
10. Member Monitoring Committee for Credit Based System (2005-07)
11. Member Expert Committee for Establishment of Private Universities in Haryana, constituted by State Government (2010-11)

(J) Field of Specialization: Materials Science, Thin Films, Optical Characterization & Spectroscopy

(K) Research Projects :

<u>Sr.No.</u>	<u>Title</u>	<u>Sponsoring Agency</u>	<u>Duration</u>	<u>Amount</u>
(i)	Electronic and Photo electronic Properties of Modified Amorphous Semiconductors (Principal Investigator)	DST, New Delhi	3 years	Rs.17.33. lacs (1999-2003)

(ii)	Study of Electronic & Optical Properties of Ion-Irradiated Semi-Conductors (Co- Principal Investigator)	NSC-UGC	4 years	Rs. 1.06 lacs (1990- 1994)
(iii)	Electronic and Optical Properties of Modified Semiconducting Materials (Principal Investigator)	UGC	3 years	Rs. 5.34 lacs (2003 -2006)
(iv)	Study of Electron Paramagnetic Resonance, Electrical and Optical Properties of Oxide Glasses (Co-Principal Investigator)	UGC	3 years	Rs. 6.06 lacs (2004 -2007)
(v)	Development and characterization of Optical Materials for Photonic Systems and Devices (Principal Investigator)	DRDO	3 years	Rs.4.98 crores (2008-2011)
(vi)	Synthesis and Characterization of Nano composites/Micro crystallites based glass (Principal Investigator)	DRDO	3 years	Rs. 14.91 lacs (2009 - 2012)
(vii)	Studies on base line radioactivity in environment matrices around nuclear power plant site in Haryana (Principal Investigator)	DAE-BRNS	3 years	Rs. 16.05 lacs (2009-2014)
(viii)	Study of Thermal Electrical and Structural Properties of conducting polymers (Co-Principal Investigator)	UGC	3 Years	Rs. 10.04 lacs (2012 till date)
(L)	Departmental Projects			
(i)	DST-FIST (Chairman)	DST	5 years	Rs. 40 lacs (2006– 011)
(ii)	SAP (Member)	UGC	5 years	Rs. 20 lacs (2007–2012)

(M) Courses Taught:

(i) Under Graduate:

Properties of matter, heat and thermodynamics, electricity and magnetism, modern physics, optics, sound, waves and oscillations.

(ii) Post Graduate:

Classical mechanics, Electronics, Solid State Theory, Statistical Mechanics, Spectroscopy, Quantum Mechanics, Materials Science, Condensed Matter Physics, Nuclear and Particle Physics, Atomic and Molecular Physics.

(iii) Pre- Ph.D. Course:

Experimental /Analytical Techniques, Research Methodology

(N) Summer Institutes/Refresher Courses attended:

- (1) Summer Institutes in Physics (Electronics) sponsored by UGC held at Sukhadia University, Udaipur, India on June 1-21, 1985.
- (2) UGC Refresher Course in Physics held at Indian Institute of Science, Bangalore, India, on April 1—17, 1990.

(O) Invited Talks/Extension lecturers delivered

- Delivered two invited talks in ‘In Service Refresher Course for Govt. College Teachers’ held at D. Govt. College, Gurgaon in January, 1992.
- Delivered an invited talk in Govt. College, Narnaul in 1998
- Delivered extension lectures in Ahir College Rewari and S.K.Govt. College, Kanwali in March, 2003.
- Delivered invited lectures in Refresher Course held in GJUS&T,Hisar, Dec. 2009.
- Delivered invited lectures in Orientation Course held in GJUS&T,Hisar, Oct, 2009 and Jan-Feb.2010.
- Delivered extension lecture in Ahir College, Rewari in 2013 and 2014.

(P) Radio talks delivered

- Delivered talks on nuclear pollution at AIR Rohtak Station and another talk on Agni Missile.

(Q) TV Programmes

- Delivered programmes on LASER's on DD Hisar
- Delivered TV Program on Atomic Energy on DD Hisar on 07-10-2008.
- Delivered TV Talk on Glasses- An Introduction on DD Hisar on 29-02-2008.
- Delivered TV Talk on Time Machine on DD Hisar
- Delivered TV Talk on Nano Science and Nano Materials, which has been telecast on D.D. Hisar a number of times in 2009 onwards.
- Delivered two lectures on Crystalline and Amorphous Solids which were telecast as **EDUSAT lectures** for B.Sc. students by DHE, Haryana.

(R) Research Guiding Experience :

(a) Guided **M.Phil.** students for their dissertations as detailed below :

- (1) Electron Paramagnetic Resonance Studies of Vanadyl and Ferric Ions in CaO-B₂O₃ Glass System by Ms. Veena Kumari (1989)
- (2) Electron Paramagnetic Resonance Studies of K₂O-V₂O₅-Fe₂O₃ Glass System by Mr. Satyavir Singh (1990)
- (3) DC Conductivity of Se_{100-x}Te_x and Se₇₆Te₂₀M₄ (M=Zn and Cd) Glass Systems by Mr. Satish Kumar (1993)
- (4) Thickness Determination and DC conductivity Studies of Amorphous Thin films of As₂S₃ and (As₂S₃)_{1-x}(Pbs)_x by Ms. Rekha Rani (1993)

(b) Ph.D.

(i) Awarded : Twenty One

(1) Thesis Title :

“Electronic and Structural Properties of Some Amorphous Chalcogenide Semiconductors Containing Transition/ Non-Transition Metallic Impurities”

by R.S. Kundu (1995)

Supervisors: Dr. K.L.Bhatia and **Dr. Nawal Kishore**

- (2) **Thesis Title :**
“Optical and electronic properties of some binary and ternary amorphous chalcogenide semiconductors in bulk and thin film forms”.
By Mahender Singh (1996)
Supervisors: **Dr. Nawal Kishore** and Dr. K.L.Bhatia
- (3) **Thesis Title :**
“Characterization of ion-bombarded amorphous/crystalline semiconductors and investigation of their electronic and optical properties”
by Partap Singh (1996)
Supervisors: Dr. K.L.Bhatia and **Dr. Nawal Kishore**
- (4) **Thesis Title :**
“Study of Electronic Conduction in some Amorphous Semi-Conductors”.
By C.R.Singla (2001)
Supervisors: Dr. C.L. Mittal and **Dr. Nawal Kishore**
- (5) **Thesis Title :**
“Optical and Electronic Properties of Modified Amorphous/Crystalline Semi-Conductors”.
By Jitender Malik (Dec., 2002).
Supervisor: **Dr. Nawal Kishore**
- (6) **Thesis Title :**
“Study of Electron Paramagnetic Resonance Optical and Electrical Properties (Conductivity) of Glasses”.
By Ashish Agarwal (2003)
Supervisors: Dr. V.P.Seth & **Dr. Nawal Kishore**
- (7) **Thesis Title :**
“Development and characterization of Polymer Composites Suitable for Sensors”.
By Harrindra Singh (2006)
Supervisors: **Dr. Nawal Kishore** & Dr. R.M.Mehra
- (8) **Thesis Title :**
“Climate Change over the Schirmacher Region, East Antarctica”.
By Ved Prakash (2007)
Supervisors: **Dr. Nawal Kishore** & Dr.H.N.Dutta
- (9) **Thesis Title:**
“Synthesis and Characterization of Metal Oxide Nanocomposites derived from Sol-Gel Technique ”
By Surender (2009)
Supervisors: **Dr. Nawal Kishore** & Dr. P.Aghamkar

- (10) **Thesis title:**
“Investigation of Electronic and Optical Properties of Modified Amorphous Semiconductors”
by Mahender Singh Sheoran (2010)
Supervisors: **Dr. Nawal Kishore** & Dr. A.S. Maan
- (11) **Thesis Title:**
“ Randon Estimation and Mitigation Strategies”
by Ram Saran (2010)
Supervisors: **Dr. Nawal Kishore** & Dr. S.K. Chakravarti
- (12) **Thesis Title:**
“Investigation of Structural, Optical and Transport Properties of Synthesized Oxide and Non-Oxide Glasses Containing Transition Metal Ions”
By Sanjay (Thesis submitted Jan. 2011)
Supervisor: **Dr. Nawal Kishore**
- (13) **Thesis Title:**
“Study of Electronic Transport Properties of Some Modified Semiconductors”
By Rajesh Punia (2013)
Supervisors: **Dr. Nawal Kishore** & Dr. R.S.Kundu
- (14) **Thesis Title:**
“Synthesis and Characterization of Some Oxide/Chalcogenide Glasses”
By Jai Pal Singh Hooda (2014)
Supervisors: **Dr. Nawal Kishore** & Dr. R.S.Kundu
- (15) **Thesis Title:**
“Study of Optical Second and Third Harmonic Generation from Non-centro Symmetric Chalcogenide Materials”
By Sunita Rani (2014)
Supervisors: **Dr. Devendra Mohan & Dr. Nawal Kishore**
- (16) **Thesis Title:**
“Study of Oxide Glasses Containing Heavy Metals”
By Sanjay Dahiya (2014)
Supervisors: **Dr. Ashwini Sharma & Dr. Nawal Kishore**
- (17) **Thesis Title:**
“Synthesis and Characterization of Nanomaterials and Nanocomposites”
By Rajesh Kumar Sharma (2014)
Supervisors: **Dr. Ashwini Sharma & Dr. Nawal Kishore**
- (18) **Thesis Title:**
“Synthesis and Characterization of Doped and Undoped Conducting Polymers”
By Ms. Asha (2015)
Supervisors: **Dr. Sneha Lata Goyal & Dr. Nawal Kishore**

- (19) **Thesis Title:**
“Study of Structural, Thermal and Electrical Properties of Conducting Polymers”
By Ms. Smriti Sharma (2016)
Supervisors: Dr. Sneh Lata Goyal & Dr. Nawal Kishore
- (20) **Thesis Title:**
“Baseline Radioactivity (Natural and Fallout) in Different Environmental Matrices within 30 Km Radius around Proposed Nuclear Power Project, Gorakhpur”
By Balvinder Singh (2016)
Supervisors: Dr. Nawal Kishore & Dr. V.K. Garg
- (21) **Thesis Title:**
“Study of Electronic Properties of Heavy Metal Oxide Based Materials”
By Sunil Dhankhar (2016)
Supervisors: Dr. Nawal Kishore & Dr. R.S. Kundu

ii) **Thesis Submitted: Two**

- (1) **Thesis Title:**
“Synthesis and Characterization of Rare Earth Doped Oxide Glasses”
By Ms. Kirti (Submitted on July 28, 2016)
Supervisors: Dr. R.S. Kundu & Dr. Nawal Kishore
- (2) **Thesis Title:**
“Synthesis and Characterization of zinc oxide based nanomaterials”
By Ms. Sarita (Submitted on July 28, 2016)
Supervisors: Dr. Nawal Kishore & Dr. R.S. Kundu

(S) Current Research /Teaching Interests

Synthesis and characterization of amorphous/crystalline semiconductors in bulk and in thin film using XRD, DTA, DSC, EPMA etc. Investigations of electronic and optical properties of synthesized materials using DC conductivity, AC conductivity, dielectric relaxation, thermoelectric power, photoconductivity, transmission and reflectivity measurements.

Study of MeV energy heavy ion induced defects in synthesized amorphous/ crystalline semiconductors in bulk and in thin film form, which is front line area of research, is also being undertaken. The defects are monitored by optical studies, AC and DC conductivity measurements. The findings have been published in various International/National Journals of repute and presented during many International/ National Conferences/Symposia etc. Preparation and study of nanomaterials has also been initiated.

Work on development, characterization and properties of silver and Nd composites in silicate glass matrices have also been undertaken. Polymers have also been synthesized and studied. The findings have been published in international journals. Presently the work on TeO₂ based glasses and ceramics is in progress. The study will help developing materials for specific uses including the ones used in optical coatings for HUD.

Courses for M.Sc. have been modified in GJUS&T, Hisar to include recent topics/materials such as magnetic materials, nano materials etc. New contents in M.Tech. Optical Engineering have been introduced. The M.Sc. Physics course at CBLU, Bhiwani is also being modified.

(T) PUBLICATIONS

1. Research Papers in Journals of International Repute: More than **90**
 2. Research Papers in Conferences/ Symposia: More than **100**
- (a) Full papers : More than **15**
- (b) Abstracts : More than **85**
3. Books Published: **12**

(U) DETAILS OF RESEARCH PUBLICATIONS:

DETAILS OF RESEARCH PUBLICATIONS :

(a) In International/National Journals

1. *“Mossbauer spectra of $x\text{Na}_2\text{O} (1-x-y) \text{B}_2\text{O}_3 y\text{Fe}_2\text{O}_3$ glass system”*
R.Kamal, S.S. Sekhon, **N.Kishore**, R.G.Mendiratta
J.Non-Crystalline Solids 53 (1982) 227-33
2. *“Infrared spectra of sodium and barium borate glasses doped with iron”*
N.Kishore , K.Agarwal, R.Kamal, R.G.Mendiratta
Phys. & Chem. Glasses 23 (1982) 202-204
3. *“Effect of Additives on properties of zinc-manganese ferrites”*
K.H.Rao, **N.Kishore** , K.Agarwal, R.G.Mendiratta
J.App. Physics 53 (1982) 1122-26
4. *“Electron paramagnetic and direct current resistivity studies on barium borate glasses containing iron”*
N.Kishore , T.K.Bansal, R.Kamal, R.G.Mendiratta
Phys. & Chem. Glasses 23 (1984) 52-55
5. *“Mossbauer spectroscopic studies in $\text{BaO-B}_2\text{O}_3\text{-Fe}_2\text{O}_3$ glass systems”*
N.Kishore , T.K.Bansal, R.Kamal, R.G.Mendiratta
J.Non-Crystalline Solids 69 (1985) 213-19
6. *“Mossbauer spectroscopic studies in the $0.1 \text{Fe}_2\text{O}_3 0.3 \text{B}_2\text{O}_3 0.6 (x \text{B}_2\text{O}_3 (1-x)\text{V}_2\text{O}_5)$ glass system”*
T.K.Bansal, **N.Kishore** , R.G.Mendiratta
Phys. & Chem. Glasses 26 (1985) 94-96
7. *“Electron spin resonance studies of Mn in Ge-rich bismuth-modified amorphous semiconductors $(\text{Ge}_{42}\text{S}_{58})_{99.5-x}\text{Bi}_x\text{Mn}_{0.5}$ ”*
V.K.Bhatnagar, K.L.Bhatia, V.S.Yadav **N.Kishore**
Phys. Rev. B 39 (1989) 11203-06
8. *“EPR of Mn-doped Pb-modified amorphous germanium chalcogenide semiconductors”*
S.K.Malik, K.L.Bhatia, **N.Kishore** , J.S.Phor”
J.Non-Crystalline Solids 142 (1992) 55-62
9. *“Electronic conduction in Pb-modified amorphous semiconductors $\text{Pb}_{20} \text{Ge}_x \text{Se}_{80-x}$ exhibiting p- n transition”*
K.L.Bhatia, S.K.Malik, **N.Kishore** , S.P.Singh
Philos.Mag B 66 (1992) 587-599

10. *“Optical study of MeV energy heavy ion-induced effects in crystalline Ge and Si”*
K.L.Bhatia, P.Singh, M.Singh, **N.Kishore** , N.C.Mehra, D.Kanjilal
Nucl. Instr. Methods B 94 (1994) 379-387
11. *“Electronic conduction in vitreous semiconductors in pseudo-binary system (As₂S₃)_{1-x}(PbS)_x”*
M.Singh, K.L.Bhatia, **N.Kishore** , P.Singh, R.S.Kundu
J.Non-cyrst. Solids 180 (1995) 251-259
12. *“Optical and electronic properties of Bi-modified amorphous thin films Ge₂₀Te_{80-x}Bi_x”*
K.L.Bhatia, M.Singh, T.Kitagawa, **N.Kishore** , M.Suzuki
Semicond. Sci. & Techno 10 (1995) 65-70
13. *“Doping of chalcogenide glassy semiconductors by implanting Ni-ion”*
P.Singh, K.L.Bhatia, **N.Kishore** , M.Singh, S.K.Malik, D.Kanjilal
J.Non-cyrst. Solids 191 (1995) 146-154
14. *“Effect of addition of Zn-impurity on the electronic conduction in semiconducting Glasses Se_{80-x}Te₂₀Zn_x”*
R.S.Kundu, K.L.Bhatia, **N.Kishore** , C.Vijayaraghavan
Philos.Mag.(1995) B 513-528
15. *“Electronic conduction in MeV energy ion-beam irradiated semiconducting glass Pb₂₀Ge₁₉Se₆₁”*
K.L.Bhatia, P.Singh, **N.Kishore** , S.K.Malik
Philos. Mag.B. 72 (1995), 417-433
16. *“Electronic conduction in Bi-modified amorphous thin films Ge₂₀Te_{80-x}Bi_x exhibiting absence of p-n transition”*
K.L.Bhatia, M.Singh, **N.Kishore** & M.Suzuki
Philos.Mag.B 73 (1996), 383-393
17. *“Surface Morphology and optical properties of MeV energy heavy ion irradiated c-Si and c-Ge; possibility of formation of porous material”*
K.L.Bhatia, P.Singh **N.Kishore**, D.Kanjilal & N.C.Mehra
Philos.Mag.B 74 (1996) 751-775.
18. *“AC Conductivity of (AS₂S₃)_{1-x}(PbS)_x in bulk vis-a-vis thin film forms”*
M.Singh, K.L.Bhatia, P.Singh, R.S.Kundu & **N.Kishore N.Kishore**
Mater.Sci.Forum, 223-224 (1996), 271-274
19. *“Electronic conduction in amorphous semiconducting system Ge_{42-x}Se₅₈Pb_x”*
P.Singh, K.L.Bhatia, M.Singh, R.S.Kundu, S.K.Malik & **N.Kishore**.
Mater.Sci.Forum 223-224 (1996) 267-270

20. *“Optical characterization of ion-beam induced disorder in semi-conductors irradiated with heavy ions”*
K.L.Bhatia, P.Singh & **N.Kishore**
Mater. Sci. Forum 223-224 (1996) 419-428

21. *“Effect of addition of Mn-impurity on the electronic properties of amorphous semiconductor $(Se_{70}Te_{30})_{99.9}Mn_{0.1}$ ”*
K.L.Bhatia, R.S.Kundu, **N.Kishore** & V.K.Jain
Phil. Mag. B.74 (1996) 317-30

22. *“Electronic transport properties of Mn-doped $a-Se_{80-x}Te_{20}Zn_x$ system”*
R.S.Kundu, K.L.Bhatia, **N.Kishore**, M.Singh & P.Singh
Solid State Phenomena.55 (1997) 110-12

23. *“Electrical effects in MeV energy ion-irradiated amorphous As_2Se_3 ”*
M.Singh, K.L.Bhatia, **N.Kishore**, R.S.Kundu, P.Singh & D.Kanjilal
Vacuum 48 (1997) 969-72

24. *“Electrical and optical properties of thermally evaporated thin films of $(As_2S_3)_{1-x}(PbS)_x$ ”*
K.L.Bhatia, M.Singh **N.Kishore**
Thin Solid Films 293 (1998) 303-09

25. *“High Energy ion-implantation induced electrical effects in bulk amorphous As_2S_3 ”*
M.Singh, K.L.Bhatia, **N.Kishore**, R.S.Kundu & D.Kanjilal
Nucl. Instrum. Methods.B.140 (1998) 349-60

26. *“Study of the effects of thermal annealing on the optical and electrical properties of vacuum evaported amorphous thin films in the system $Ge_{20}Te_{80-x}Bi_x$ ”*
K.L.Bhatia, **N.Kishore**, J.Malik, M.Singh, A.Sharma & B.K.Srivastav
Semicond. Sci. Techno. 17 (2002), 189-97

27. *“MeV Energy Lithium Ion-Irradiated Crystalline GaAs: an optical study”*
J.Malik, K.L.Bhatia, **N.Kishore**, D.Kabiraj and A.S.Maan
Radiation Measurements 36 (2003) 647-52

28. *“Influence of ZnO on optical properties and dc conductivity of vanadyl - dopted alkali bismuthate glasses”*
P.S.Gahlot, V.P.Seth, A.Agarwal, **N.Kishore**, S.K.Gupta, M.Arora, D.R. Goyal
Rad. Effects & Defects in Solids **159** (2004) 223-231

29. *“Effect of Bi_2O_3 content on the optical band gap, density and electrical conductivity of $MO. Bi_2O_3. B_2O_3$ ($M=Ba, Sr$) glasses”*
S.Sindhu, S.Sanghi, A.Agarwal, V.P.Seth, **N.Kishore**
Materials Chemistry & Physics **90** (2005) 83-89

30. *“Electron paramagnetic resonance, optical and electrical properties of vanadyl doped alkali germanoborate glasses”*
P.S. Gahlot, V.P. Seth, A. Aggarwal, **N.Kishore**, S.K. Gupta and M. Arora
Physics and Chemistry of Solids **66** (2005) 766-772
31. *“The role of V₂O₅ in the modification of structural optical and electrical properties of vanadium barium borate glasses”*
S.Sindhu, S. Sanghi, A. Aggarwal, Sonam, V.P.Seth & **N.Kishore**
Physica B **365** (2005) 65-75.
32. *“Structural, optical, physical and electrical properties of V₂O₅.SrO.B₂O₃ glasses”*
S.Sindhu, S.Sanghi, A.Agarwal, V.PSeth, **N.Kishore**
Spectro. Chemica Part A, **64** (2006) 196-204
33. *“Influence of Piezoelectricity and Magnetic field on Stimulated Brillouin Scattering in III-V Semiconductors”*
M. Singh, P. Aghamkar, **N.Kishore** and P.K. Sen
J. Nonlinear Opt. Phys. & Mat. **15**, (2006), 465-479,
34. *“Effect of V₂O₅ on Structure and Electrical Properties of Zinc Borate Glasses”*
S. Sindhu, S. Sanghi, A. Agarwal, **N.Kishore** and V.P. Seth
Journal of Alloys and compounds **428** (2007) 206-213
35. *“Steady-State and Transient Brillouin Gain in Magnetoactive Narrow Gap Semiconductors”*
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- (b) **Other Research Papers/Invited Talks with Abstracts and details of participation in International/National Conferences/ Symposia/ Seminars/Workshops etc.**
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 5. Absorption edge spectra of layered crystalline GeS doped with P/Ag impurity
S.Madan, K.L.Bhatia **N.Kishore**
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22. Optical study of MeV energy Ni - ion induced defects in c-Si
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M.Singh, K.L.Bhatia, **N.Kishore**, P.Singh, R.S.Kundu, M.Suzuki
Proc. DAE Solid State Physics Symposium 38C, 246, (1995)
24. Mn-induced modifications in the bulk amorphous semiconductors $(\text{Se}_{70}\text{Te}_{30})_{99.9}\text{Mn}_{0.1}$
R.S.Kundu, K.L.Bhatia, M.Singh, P.Singh, **N.Kishore** & V.K.Jain
Int. Seminar on Current Developments in Disordered Materials (CDDM) Kurukshetra
Jaunary 22-24, 1996
25. Optical properties of well characterized amorphopus thin films in psuedo-binary
semiconducting system.
M.Singh, K.L.Bhatia, P.Singh, R.S.Kundu & **N.Kishore**
National conference on thin film characterization and applications (NCTFCA) held at
Bharathiar University Coimbatore June 10-12, 1996.
26. Optical effects in MeV energy ion-irradiated crystalline Si and Ge
P.Singh, K.L.Bhatia, **N.Kishore**, M.Singh, R.S.Kundu & D.Kanjilal
Accepted in 4th National Seminar on Physics and Tech. of Particle Accelerators and their
Application. (PATPAA-96) Calcutta, Nov. 26-29, 1996.
27. Distribution of ion-induced defects in ion-irradiated As_2Se_3 glass
M.Singh, K.L.Bhatia, P.Singh, R.S.Kundu **N.Kishore** & D.Kanjilal
Accepted in 4th National Seminar on Physics and Tech. of Particle Accelerators and their
Applications (PATPAA-96) Calcutta, Nov. 26-29, 1996.
28. Ion-induced effects in crystalline semiconductors studied by SEM
P.Singh, K.L.Bhatia, **N.Kishore**, N.C.Mehra, M.Singh, R.S.Kundu & D.Kanjilal
20th conference of Electron Microscope Soc. of India (EMSI) IACS, Calcutta December
5-7, 1996.
29. Electronic transport properties of Mn-doped a- $\text{Se}_{80-x}\text{Te}_{20}\text{Zn}_x$ system
R.S.Kundu, K.L.Bhatia, **N.Kishore**, M.Singh & P.Singh
3rd Int. Conference on Semiconductor Materials & Technology December 16-21, 1996,
New Delhi.

30. Reflection spectra of MeV energy ion-implanted crystalline Ge.
P.Singh, K.L.Bhatia, M.Singh **N.Kishore**, N.Kishore & D.Kanjilal
Proc. DAE Solid State Physics Symposium 39 C (1996)
31. Optical properties of thermally evaporated $(As_2 S_3)_{1-x}(PbS)_x$ thin films.
M.Singh, K.L.Bhatia, P.Singh, R.S.Kundu & **N.Kishore**
Int. Conference on Phys. of Disordered Materials held at Jaipur, January 27-29. (1997)
32. Detection of Mn as trace impurity in $Se_{80-x}Te_{20}Zn_x$ glasses by using EPR technique.
R.S.Kundu, K.L.Bhatia, **N.Kishore**, M.Singh, P.Singh & A.Sharma
Int. Conference of Phys. of Disordered Materials held at Jaipur, January 27-29, (1997).
33. MeV energy Ion-induced modifications in crystalline and non-crystalline semiconductors.
N.Kishore & K.L.Bhatia
Workshop on Swift Heavy Ions in Materials Science (SHIMS) held at IISc Bangalore on March 10-11 (1997)
34. Study of MeV energy ion-implanted As_2Se_3 bulk glass
M.Singh, K.L.Bhatia, **N.Kishore**, R.S.Kundu, P.Singh & D.Kanjilal
Proc. DAE Solid State Phys. Sympos. Cochin University of Science & Technology on Dec. 27-31 (1997)
35. Optical Effects of Elastic and Inelastic Collisions in MeV energy Ion-Irradiated c-Si.
P.Singh, K.L.Bhatia, **N.Kishore** & D.Kanjilal
Int. Conference on "Swift Heavy Ions in Materials Engineering and Characterization, SHIMEC- (1998)" held at India International Centre, 40 Max Muller Marg, New Delhi - 110003 organized by NSC, New Delhi on October 19-21 (1998)
36. MeV Energy Ion-Induced effects in $x PbCl_2(1-x) Sb_2O_3$ glass system
V.Prakash, **N.Kishore**, K.L.Bhatia
Int. Conference on "Swift Heavy Ions in Materials Engineering and characterization, SHIMEC- (1998)" held at India International Centre, 40 Max Muller Marg, New Delhi - 110003 organized by NSC, New Delhi on October 19-21 (1998)
37. Swift Heavy Ion-Semiconductor Interaction.
K.L.Bhatia **N.Kishore**
Workshop on National Facility on Research in Materials Science with Swift Heavy Ions at NSC, New Delhi on April, 8-9 (1999).
38. High Energy Heavy Ion Induced effects in crystalline amorphous semiconductors
N.Kishore K.L.Bhatia & D.Kanjilal
Users Workshops at NSC, New Delhi on July 6-7 (1999)

39. Optical Behaviour of Thermally Evaporated Amorphous Thin Film of As_2S_3 Irradiated with 75 MeV Ge-Ions.
M.Singh, K.L.Bhatia, **N.Kishore**, A.Deswal, J.Malik & S.K.Arora
Proceedings of DAE Solid State Physics Symposium vol. 42, P-312-13 Dec. 20-24, (1999) held at IGCAR, Kalpakkam, Tamilnadu.
40. Effect of Thermal Annealing on Optical Absorption Edge of Amorphous thin films $Ge_{20}Te_{80-x}Bi_x$
J.Malik, M.Singh, **N.Kishore**, R.S.Kundu, A.Sharma
National Symposium on Science & Technology of Vacuum and Thin Films held at I.I.Sc. Bangalore on Sept. 5-7, 2001.
41. Optical Properties of Thermally Annealed Amorphous Thin Films in the System $Ge_{20}Te_{80-x}Bi_x$
J.Malik, **N.Kishore**, K.L.Bhatia, M.Singh, A.Sharma, R.S.Kundu
Proc. DAE Solid State Physics Symposium 44, BARC Mumbai Dec. 26-30, 2001
42. Effect of Annealing on the Electronic Properties of a-thin films of $Ge_{20}Te_{80-x}Bi_x$
N.Kishore, K.L.Bhatia, J.Malik, M.Singh, A.S.Mann and D.R.Goyal
National Conference on Frontiers in Materials Science and Technology (FSMT02), Materials Science Centre, IIT Kharagpur, Feb. 22-23, 2002
43. Study of Surface Morphology and Optical Spectra of a- As_2S_3 Thin films Irradiated with 75 MeV Ge ions.
N.Kishore, K.L.Bhatia, J.Malik, M.Singh, A.S.Mann, N.C.Mehra
National Seminar on Physics of Materials for Electronic and Opto Electronic Devices (NSOME OD-02), Physics Department, J.N.V. University, Jodhpur, Feb. 25-27, 2002
44. High Energy Heavy Ion Induced Effects in Amorphous Semiconductors
Nawal Kishore, Jitender Malik, M.Singh, P.Singh and K.L.Bhatia
National Symposium on Frontiers in Condensed Matter Physics (NSFCMP'02) G.J.University, Hisar, March 22-23, 2002.
45. Electron Paramagnetic Resonance of Cr(III) in $Ti_x K_{1-x}Al(SO_4)_2 \cdot 12H_2O$
V.K.Jain and **N.Kishore**
National Symposium on Frontiers in Condensed Matter Physics (NSFCMP'02) G.J.University, Hisar, March 22-23, 2002
46. Study of Sequentially Annealed Amorphous Thin Films of $Ge_{20}Te_{80-x}Bi_x$
Jitender Malik, Mahender Singh, **Nawal Kishore**, K.L.Bhatia, R.S.Kundu & S.K.Malik
National Symposium on Frontiers in Condensed Matter Physics (NSFCMP'02) G.J.University, Hisar, March 22-23, 2002
47. An optical Study of MeV Energy Lithium Ion-Irradiated GaAs
J.Malik, K.L.Bhatia, **N.Kishore**, D.Kabiraj, A.S.Maan
21st International Conference on Nuclear Tracks in Solids, India Habitat Centre, New Delhi on Oct. 21-25, 2002.

48. Divacancy formation and Optical Absorption Edge Spectra of c-Si Irradiated with 75 MeV Heavy Ions (Ti, Co, Ni, Ge,Ag)
J.Malik, K.L.Bhatia, **N.Kishore** and P.Singh
Proc. DAE Solid State Physics Symposium, held at P.U.Chandigarh on Dec. 26-30, 2002.
49. Surface Morphology and Optical Effects of 50 MeV Li-Ion Irradiated Crystalline GaAs
J.Malik, K.L.Bhatia, **N.Kishore**, N.C.Mehra, A.S.Maan, D.R.Goyal
Proceedings DAE Solid State Physics Symposium, held at Jiwaji University, Gwalior on Dec. 26-30, 2003.
50. Effect of MoO₃ on EPR and Optical Transmission of vanadyl doped sodium borate glasses A.Agarwal, V.P.Seth, **N.Kishore**, M.Arora and S.K.Gupta
XX International Congress on Glass, Kyoto (Japan) Sept. 26 - Oct. 01,2004
51. Effect of Fe₂O₃ on the DC conductivity of Lead Borate Glasses Sanjay, Sonam, Anshu, M.S.Sheoran, Ashish.Agarwal, V.P.Seth and **Nawal Kishore**
National conference on All aspects of Condensed Matter Physics including Nano Materials BARC & TIFR Mumbai Dec. 5-9,2005
52. Semiconductor Photo Refracting Mixing in Applied Magnetic Field D.Sharma, P.Aghamkar,M.Singh, Surender,S.Rohilla & **Nawal Kishore**
National Conference on All aspects of Condensed Matter Physics including Nano Materials BARC & TIFR Mumbai Dec. 5-9, 2005
53. Effect of Externally Applied Electric and Magnetic Fields on Semiconductor Photorefractivity D.Sharma, P.Aghamkar, M.Singh, Surender, S.Rohilla, **N.Kishore**
National Laser Symposium-2005 Vellore Institute & Technology Vellore Dec 7-10,2005
54. Non Linear Absorption and Self Phase Modulation of Brillouin Stokes Mode in Magnetized III-V Semiconductor Waveguide
M.Singh, P. Aghamkar, D.Sharma, Surender, S.Rohilla & **N.Kishore**
National Laser Symposium-2005 Vellore Institute & Technology Vellore Dec 7-10,2005
55. Formation and Eraser of Photorefractive Grating in GaAs : Cr in presence of dc Electric and Magnetic Fields
D.Sharma, P.Aghamkar, M.Singh, Surender, S.Rohilla **N.Kishore**
International Conference on Optics and Optoelectronics (ICOL) IRDE Dehradun Dec. 12-15,2005
56. Study of the Effect on Thermal Annealing of x B₂O₃ (95-x) TeO₂ 5 F₂O₃ Glass
N.Kishore, Myo Lwin, Pho Kaung, M.S.Sheoran & P.K.Bajpai
International Conference on Inter Disciplinary Approach in Physical Sciences C.CS University, Meerut Dec. 29 - 31,2005
57. Delivered on Invited Talk on "Swift Heavy Ion - Solid Interaction in Chalcogenide Glasses" in International Conference on Inter Disciplinary Approach in Physical Sciences C.CS University, Meerut Dec. 29 - 31,2005

58. Attended EDUSAT workshop of Resource Persons on Script Writing and Multimedia Video Production at NITTR Chandigarh organized by Commissioner Higher Education Chandigarh on April 3-7, 2006.
59. Attended Indo-Japan Workshop - 2006 on ZnO Thin Films and Devices held at University of Delhi South Campus, Delhi on Dec. 18 - 20, 2006.
60. Synthesis and Characterization of $\text{Nd}_2\text{O}_3/\text{SiO}_2$ Nano Composition
S.Duhan, P.Aghamkar, M.Singh & **N.Kishore**
Proc. DAE Solid State Physics Symposium p 317-18 (2006) held on Barkatullah University Bhopal on Dec. 26 - 30, 2006.
61. Electrical Characterization and Dielectric Behaviour of Fe_2O_3 in Li_2O Bi_2O_3 B_2O_3 Glasses
S.Rani, AAgarwal, Anshu & **N.Kishore**
Proc. DAE Solid State Physics Symposium p 399-400 (2006) held on Barkatullah University Bhopal on Dec. 26 - 30, 2006.
62. Structural Modification on Alkali Borate Glasses in Presence of WO_3 Anshu, S.Rani, AAgarwal, S.Sanghi, V.P.Seth & **N.Kishore**
Proc. DAE Solid State Physics Symposium p 383-84 (2006)
held on Barkatullah University Bhopal on Dec. 26 - 30, 2006.
63. Thermal & Electrical Properties of MoO_3 - PbO - B_2O_3 Glasses Sanjay, M.S.Sheoran, **N.Kishore**, AAgarwal & V.P.Seth
Proc. DAE Solid State Physics Symposium p 409-410 (2006) held on Barkatullah University Bhopal on Dec. 26 - 30, 2006.
64. Control of Optical Properties of Weakly Polar III-V Semiconductors by an Internal Magnetic Field
M.Singh, P.Aghamkar, S.Duhan & **N.Kishore**
Proc. DAE Solid State Physics Symposium p 811-12 (2006) held on Barkatullah University Bhopal on Dec. 26 - 30, 2006.
65. Attended EDUSAT workshop of Resource Persons at NITTR Chandigarh organized by Commissioner Higher Education Chandigarh on April 3-7, 2006.
66. Comparison between stimulated Raman and Brillouin Scattering Processes in Magnetized Doped III-V Semiconductors
N.Kishore, M. Singh and P. Aghamkar SPIE, 6455, (2007), 38,(USA)
Oral Presentation at San Jose Convention Centre San Jose, (USA) during International Symposium on Lasers & Applications in Science & Engineering held on Jan. 20-25, 2007.
67. Study of Electron Paramagnetic Resonance in Vandyl Doped Tungsten Lithin Borate Glasses
Anshu, S.Rani, A Agarwal, S.Sanghi, **N.Kishore** & V.P.Seth
2nd National Conference on Condensed Matter and Material Physics (Abstract page c-6) held at University of Rajasthan, Jaipur on Feb. 1 - 3, 2007.

68. Structural Role of Transition Metal Oxide Li_2O Bi_2O_3 B_2O_3 Glasses Sonam Rani, Anshu, S.Sanghi, A.Agarwal & **N.Kishore**
2nd National Conference on Condensed Matter and Material Physics (Abstract page c-16) held at University of Rajasthan, Jaipur on Feb. 1 - 3, 2007.
69. Thermal and Electrical Properties of MoO_3 - Bi_2O_3 - B_2O_3 Glasses Sanjay, **N.Kishore**, A.Agarwal, V.P.Seth & M.S.Sheoran
2nd National Conference on Condensed Matter and Material Physics (Abstract page c-20) held at University of Rajasthan, Jaipur on Feb. 1 - 3, 2007.
70. Attended the workshop on “Recent Trends in Nanotechnology” as Resonance person and delivered an invited Talk on Basics of Nanoscience organized by Deptt. Of Engineering and Technology M.D. University, Rohtak on 27.03.2007
71. Study of Electron Paramagnetic Resonance in vanadyl doped tungsten lithium borate glasses, Anshu, S. Rani, A. Agarwal, S. Sanghi, **N.Kishore** and V.P. Seth.
II National Conference on Condensed Matter and Material Physics, University of Rajasthan, Jaipur, Feb 1-3, 2007
72. Structural role of transition metal oxide in Li_2O . Bi_2O_3 . B_2O_3 , Anshu, S. Rani, A. Agarwal, S. Sanghi, **N.Kishore** and V.P. Seth. II national Conference on Condensed Matter and Material Physics, University of Rajasthan, Jaipur, Feb 1-3, 2007
73. Attended Seminar on “Nuclear Energy & Environment”, Organised by Deptt. of EVS, GJUS&T, Hisar on 25-10-07.
74. Paper entitled ‘Radon, Thoron and their Progeny in Some Dwellings of North Haryana using SSNTDs’
R. S. Saini, Mahabir Nain, R.P. Chauhan, S.K.Chakarvarti & **Nawal Kishore**,
15th National Symposium on Solid State Nuclear Track Detector and Their Applications, June-21-23, 2007, HNB Garhwal University (Uttaranchal)
75. Attended National Workshop on E-Waste Management, Organised by Deptt. of EVS, GJUS&T, Hisar on 15-12-07.
76. Attended Workshop on Impact of TEQIP & Excellence in Engineering Education” Organised by NIT Kurukshetra on 24 & 25-12-07.
77. Oral presentation on “Comparison between stimulated Raman and Brillouin Scattering Processes in Magnetised doped III-V semiconductors” during international symposium on lasers and applications in Science and Engineering held at San Jose Convention Centre, USA on January 20-25, 2007.
78. Attended Workshop on “Contemporary Communication Technology” 4 March 2008, organized by Department of Electronics and Communication Engineering, GJUS&T, Hisar

79. Delivered an invited talk “Nanotechnology – A solution for world’s future energy problem” during state level seminar on Energy Scenerio in India held at GCW, Rohtak on March 24-35, 2008
80. Attended International Conference on “Changing Environmental Trends and Sustainable Development (CETAS - 2009)”organized by Deptt. of Environmental Science and Engineering, GJUST, Hisar. (February 9-11, 2009).
81. Attended Two-day National Conference on “Advances in Computer Networks & Information Technology (NCACNIT - 09)” organized by Deptt. of Computer Science and Engineering, GJUST, Hisar. (March 24-25, 2009).
82. Attended National Workshop on “Recent Trends in Engineering & Technology (RTET - 09)” organized by the Faculty of Engineering & Technology, GJUST, Hisar (March 17, 2009).
83. Attended International Training Programme conducted by University of Manitoba, Canada on “Introduction to Emerging Technologies for Learning” at Deptt. of Computer Science and Engineering, GJUST, Hisar (March 23-29, 2009).
84. Paper entitled ‘Variation in concentration of radon and thoron with depth’
R. S. Saini, R.P. Chauhan, S.K.Chakarvarti & **Nawal Kishore**,
Sixteenth National Symposium on Solid State Nuclear Track Dectector and Their Applications, Nov.9-11, 2009 at GNDU, Amritsar
85. Attended International Workshop on Radiation Ecology held at BARC Mumbai on March 8-12, 2010.
86. National workshop on “Recent Trends in Engineering and Technology” GJUS&T, Hisar held on March 15, 2011
87. Paper entitled “ Synthesis and optical absorption studies of nano size cadmium oxide powder” in the International Conference on Advances in Condensed & Nano Materials (ICACNM-2011) on February 23- 26,2011 held at Panjab University, Chandigarh, India.
88. Paper entitled “Investigation of Structural and Optical properties of $\text{MoO}_3\text{-PbO-B}_2\text{O}_3\text{:V}_2\text{O}_5$ Glasses” in the International Conference on Advances in Condensed & Nano Materials (ICACNM-2011) on February 23-26,2011 held at Panjab University, Chandigarh, India.
89. Paper entitled “Effects of Bi_2O_3 on the Dielectric Properties of Ternary Zinc Bismuth Vanadium Glasses” in the International Conference on Advances in Condensed & Nano Materials (ICACNM- 2011) on February 23-26,2011 held at Panjab University, Chandigarh, India.

90. Paper entitled “MeV energy ions induced effects on electronic transport properties of Ge-S glassy system” in National seminar on Advanced Materials and Devices GVM College, Sonapat from July 3-4, 2011
91. Paper entitled “Characterization and Optical Properties of Iron containing Bismuth Borate Glasses” in International Conference on Specialty Glass and Optical Fiber: Materials Technology and Devices (ICGF- 2011), 4-6 August, 2011 at CSIR-CGCRI, Kolkata.
92. Attended national workshop on “ Patent awareness VIS-À-VIS intellectual property rights” organized by IPR & TC Cell, GJUS&T, Hisar on August 9, 2011
93. Attended national Seminar on “ Hindi Bhasha, Media & Vaishwik Chunautiyan” organized by Deptt. of Advt. Mgt. & PR, GJUS&T, Hisar on September 16, 2011
94. Paper entitled “Study of Optical Properties of MoO₃ doped Bismuth Borate Glasses” National Conference on Recent Trends in Materials Science (RTMS-2011), 08-10 October-2011, at JUIT Solan – 173234, H.P., India
95. Synthesis and optical absorption studies of nano-size cadmium oxide powder, S.Dhankhar, R.S. Kundu, R. Punia, R. Dhar, J. Hooda and N.Kishore, Proceedings of International Conference on advances in Condensed and Nano Materials held at P.U. Chandigarh on February 22-26,2011
96. Delivered an Invited talk on Synthesis and Characterisation of Nanopowder and Thin Film of materials during National Conference on Recent Trends in Materials Science held at Dayal Singh College, Karnal on February 25-26, 2012
97. Attended National Conference on Global Challenges-Role of Sciences & Technology in Giving Their Solutions (GCRSTS-2012) Deptt. of Applied Sciences & Hum., ECE & CSE GJUS&T, Hisar March 3-4,2012
98. Participated in the Procurement and PMSS Training at Chandigarh 15 March 2012
99. Attended National Conference on “ Role and Application of ICT in Inaccessible Areas” Deptt. of Computer Science and Engineering GJUS&T, Hisar March 21, 2012
100. International Conference on Materials Science and Technology (ICMST 2012). Deptt. of Physics, St. Thomas College Pala Kottaayam, Kerala 10-14 June 2012
101. Attended consultaion programme of Senior Teachers and Administrators at IIM Indore on December 14-15, 2012 under TEQIP-II.

102. Delivered an invited talk on Impact of Nanotechnology on Environment during International Conference on “Emerging Trends in Physics for Environmental Monitoring & Management (ETPEMM-12)” held at Punjabi University Patiala on December 17-19, 2012 and chaired a session therein
103. Effect of Fe_2O_3 on Optical Properties of Heavy Metal based Silicate Glasses, proceedings of National Conference on Functional Material held at GVM Girls College Sonapat by MRSI, Delhi Chapter on September 24-25, 2012
104. Optical Properties of Ternary $\text{SiO}_2\text{Bi}_2\text{O}_3\text{TiO}_2$ Glass system, proceedings of National Conference on Functional Material held at GVM Girls College Sonapat by MRSI, Delhi Chapter on September 24-25, 2012
105. Effect of Nd_2O_3 on Optical basicity and electronic polarizability of barium-zinc borate Glasses, proceedings of National Conference on Functional Material held at GVM Girls College Sonapat by MRSI, Delhi Chapter on September 24-25, 2012.
106. Synthesis of Ni doped ZnO nano particles by Sol-gel method, proceedings of National Conference on Functional Material held at GVM Girls College Sonapat by MRSI, Delhi Chapter on September 24-25, 2012
107. Synthesis and Optical Properties of $\text{TeO}_2\text{-BaO-ZnCl}_2$ Glasses, Proceedings of National Conference on Functional Material held at GVM Girls College Sonapat by MRSI, Delhi Chapter on September 24-25, 2012
108. Effect of Fe_2O_3 on Physical and optical properties of Bismuth Silicate Glasses, R. Parmar, R.S. Kundu, R. Punia, S. Dhankhar, P. Aghamker and N.Kishore, Proceedings of International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials held at University of Delhi, Delhi on March 13-16,2012
109. Development of Novel tellurite based glasses for optic mid IR applications, S. Dhankhar, R.S. Kundu, R.Dhar, J.Hooda. R. Parmar and N.Kishore, Proceedings of International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials held at University of Delhi, Delhi on March 13-16,2012
110. Study of structural properties of heavy metal based oxide glasses, S. Dahya, A.Sharma, Sanjay, N.Kishore, R.S. Kundu, Proceedings of International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials held at University of Delhi, Delhi on March 13-16,2012
111. Synthesis and characterisation of $\text{Bi}_2\text{O}_3\text{-B}_2\text{O}_3\text{-ZnO}$ glasses, Meenakshi, Kirti, Sarita Sharma, S.Dhankhar, R.S. Kundu and N.Kishore, Proceedings of International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials held at University of Delhi, Delhi on March 13-16,2012
112. Structural investigation on Ni-doped ZnO Nano particles, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013

113. Importance of transition metal doped ZnO Nano materials, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
114. Applicability of Dyre's Random free energy barrier model to bismuth modified zinc vanadate glasses, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
115. Rare earth ions modified glassy networks for optoelectronic applications, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
116. Effect of Temperature on Real Part of the Electric Modulus of Bismuth Zinc Vanadate Glass, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
117. Effect of transition metal ions on optical basicity and electronic polarizability of bismuth silicate glasses, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
118. Effect of bismuth on the physical properties of novel tellurite based glass, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
119. Structural study of Zinc doped bismuth boro-tellurite glasses, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
120. Effect of Nd_2O_3 on optical basicity and electronic polarizability of barium-tellurite-borate glasses, Proceedings of New Frontiers in Physics held at D.N. College, Hisar during March 12-13, 2013
121. Study of optical properties of bismuth modified zinc vanadate glasses by spectroscopic ellipsometry, Proceedings of International Conference on Electron Microscopy and XXXV Annual Meeting of EMSI held at University of Delhi, Delhi on July 9-11, 2014
122. Physical and Structural Characterization of bismuth, zinc vanadate glass ceramics, Proceedings of International Conference on Electron Microscopy and XXXV Annual Meeting of EMSI held at University of Delhi, Delhi on July 9-11, 2014
123. Physical and Structural Properties of $\text{B}_2\text{O}_3\text{-SiO}_2\text{-Bi}_2\text{O}_3\text{-TeO}_2$ glass system, Proceedings of International Conference on Electron Microscopy and XXXV Annual Meeting of EMSI held at University of Delhi, Delhi on July 9-11, 2014
124. Fabrication and effect of annealing temperature of structural properties of Sol-gel derived ZnO thin films, Proceedings National Symposium on Electroceramics, Materials and Devices (NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22, 2014

125. Effect of Fe_2O_3 on Physical and thermal properties of Bismuth Silicate Glasses, Rajesh Parmar, R.S. Kundu, R. Punia, P. Aghamkar and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
126. Structural analysis of Fe_2O_3 doped bismuth silicate glasses by Raman spectroscopy, R.S. Kundu, R. Parmar, R. Punia, P. Aghamkar and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
127. Phase formation and electrical properties of vanadium substituted barium titanate, Preeti, R.S Kundu, R.Punia , N. Ahlawat, **N.Kishore**, J.K. Juneja, Sangeeta Singh, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
128. Structural characteristics of TiO_2 containing bismuthate glasses by FTIR spectroscopy, R.S. Kundu, Meenakshi Dult, Sarita Sharma, R.Punia and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
129. Optical properties of $50\text{SiO}_2:(50-x)\text{Bi}_2\text{O}_3.x\text{Fe}_2\text{O}_3$ glasses, Rajesh Parmar, R.S Kundu, R. Punia, P. Aghamkar and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
130. Effect of TiO_2 on physical and thermal properties of bismuth silicate glasses, Meenakshi Dult, Kirti Nanda, R. Punia, R.S Kundu and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
131. Structural investigations of TiO_2 containing silicate glasses by Raman Spectroscopy, R.Punia, Meenakshi Dult, Rajesh Parmar, **N.Kishore** and R.S. Kundu, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014.
132. Reitveld Refinement of Ni doped ZnO Nano Particles Synthesized by Sol-Gel method, R.S. Kundu, Sarita Sharma, Preeti Sharma, R. Punia and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices (NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014.

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136. Optical characterization of Ni doped ZnO nano particles synthesized by sol-gel route, R.Punia, Sarita Sharma, Meenakshi Dult, R.S. Kundu and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
137. Physical properties and DC conductivity of ZnO modified MoO₃.V₂O₅ glasses, R. Punia, Rakesh Sharma, Kirti Nanda, R.S. Kundu and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
138. Applicability of hydrogenic excitonic model for Nd³⁺ modified barium-zinc borate glasses, R.S. Kundu, Kirti Nanda, R.Parmar, R.Punia and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
139. Optical Characterization of Fe₂O₃ Modified Bismuth Silicate Glasses: An applicability of Hydrogenic Excitonic Model. R.Punia, R. Parmar, R.S. Kundu, P. Agahmker and **N.Kishore**, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
140. Structural Investigations of TiO₂ Containing Silicate Glasses by Raman Spectroscopy, R.Punia, Meenakshi Dult, R. Parmar, **N.Kishore** and R.S. Kundu, Proceedings National Symposium on Electroceramics, Materials and Devices(NSE-MD-2014) organized by GVM Girls College, Sonipat and MRSI, Delhi Chapter on February 21-22.2014
141. DC electrical Conductivity studies on PANI/Zinc nitrate composites, S.L. Goyal, Smriti Sharma and **N.Kishore**, Proceedings National Conference on Photonics and Materials Science held at GJUS & T., Hisar on March 20-21,2014

142. Third order non-linear optical properties of amorphous chalcogenide thin films, Sunita Rani, D.Mohan, **N.Kishore** and Ajay Shanker, Proceedings National Conference on Photonics and Materials Science held at GJUS & T., Hisar on March 20-21,2014
143. Impedance studies of Ni doped ZnO nanoparticles synthesized by Sol-gel method, R. Punia, Sarita Sharma, R.S. Kundu, Meenakshi Dult and **N.Kishore**, Proceedings National Conference on Photonics and Materials Science held at GJUS & T., Hisar on March 20-21,20

(V) **BOOKS PUBLISHED**

1. Advanced College Physics Volume-I
V.P.Seth, S.P.Taneja, **N.Kishore**
Vijaya Publications, Ludhiana (Pb.)
(1989)
2. Advanced College Physics Volume-II
S.P.Taneja, **N.Kishore**, V.P.Seth
Vijaya Publications, Ludhiana (Pb.)
(1989)
3. Solid State Physics and Electronics
S.P.Taneja, **N.Kishore**, V.P.Seth
Vijaya Publications, Ludhiana (Pb.)
(1990)
4. Nuclear Physics and Elementary Particles
N.Kishore, V.P.Seth, S.P.Taneja
Vijaya Publications, Ludhiana (Pb.)
(1991)
5. Advanced College Practical Physics
N.Kishore & V.P.Seth
Vijaya Publications, Ludhiana (Pb.)
(1992)
6. Electronics and Nuclear Physics
N.Kishore , V.P.Seth, S.P.Taneja
Vijaya Publications, Ludhiana (Pb.)
(1992)
7. Optics: Waves and Oscillations
V.P.Seth, S.P.Taneja and **N.Kishore**
Vijaya Publications, Ludhiana (Pb.)
(1994)
8. Solid State Physics, Atomic, Molecular and Laser Physics
V.P.Seth, and **Nawal Kishore**
Vijaya Publications, Ludhiana (Punjab)
(2004)
9. Quantum Mechanics and Nuclear Physics
Nawal Kishore and V.P.Seth
Vijaya Publications, Ludhiana (Punjab)
(2004)

10. Atomic, Molecular, Laser and Nuclear Physics
V.P.Seth, and **Nawal Kishore**
Vijaya Publications, Ludhiana (Punjab)
(2011)
11. Solid State Physics and Quantum Mechanics
V.P.Seth, and **Nawal Kishore**
Vijaya Publications, Ludhiana (Punjab)
(2011)
12. Quantum Mechanics, Laser and Nuclear Physics
Nawal Kishore and V.P.Seth
Vijaya Publications, Ludhiana (Punjab)
(2011)

(W) SYMPOSIA/CONFERENCES/WORKSHOPS/PROGRAMMES ORGANISED

(a) As Convenor/Chairman/Director

1. National Symposium on Frontiers in Condensed Matter Physics (NSFCMP-02). March 22-23, 2002.
2. Workshop on “Recent Trends in Security Printing”, GJUS&T, Hisar, 2008.
3. National Seminar on “Recent Trends in Printing Technology”. GJUS&T, Hisar, March13-14, 2009.
4. Workshop on “Emerging Trends in Packaging Technology”,GJUS&T, Hisar in April 2009.
5. Workshop on “IUAC Acquaintance Programme on Accelerator Based Science & Technology”, GJUS&T, Hisar, October 23, 2009.
6. Celebration of UN day on October 24, 2010 was made by organizing a lecture on Activities and Utility of United Nations by Sh. Madan Lal Goyal, Deptt. of Political Science, Govt. College Hisar. The function was attended by Hon’ble Vice Chancellor, Registrar, other dignitaries, staff members and students of the University.
7. Workshop on “‘Trends in Optical Coatings for Head-Up-Display and High Laser Damage Threshold’ on June 27, 2011
8. Organised National Science Day function on February 28, 2012 with Hon’ble Vice-Chancellor as Chief Guest and Dr. S. Gumasta, Add. Chief Engineer, NPCIL, Hisar as Keynote speaker in the Department of Applied Physics. The Speaker delivered a talk on Clean Energy and Nuclear Safety.
9. Organised Faculty Development Programme under TEQIP-II on September 20-28, 2013.
10. Organised Staff Development Programme under TEQIP-II on September 26-27, 2013.
11. Organised Technical Staff Development Programme under TEQIP-II on September 27-28, 2013.
12. Organised Workshop on Vacuum, Plasma and Thin film deposition techniques November 24-25, 2014 at CBLU, Bhiwani.

(b) As Member

1. National Conference on Photonics and Material Science held by the Deptt. of Applied Physics, GJUS&T, Hisar on March 20-21, 2014.

(Prof. Nawal Kishore)