

CURRICULUM VITAE



NAME : **Bajpai Parmendra Kumar**

Present Position : **Professor & Head
Department of Pure & Applied Physics**

Additional charges: **Centre In-charge
National Centre for Accelerator Based Research**
Department of Pure & Applied Physics
Guru Ghasidas Vishwavidyalaya (A Central University)
Bilaspur (C.G.) India 495 009
3.0 MV Pelletron Accelerator Based Research centre
supported by DAE under BRNS
**A Flagship initiative for the Accelerator based
interdisciplinary Research (Project cost ~70 Crores)**

Officer on Special Duty (2010-2017)

Guru Ghasidas Vishwavidyalaya
(A Central University)
Bilaspur (C.G.) India 495 009

Head

**Sophisticated Analytical Instrumentation Facility
(SAIF)**

Guru Ghasidas Vishwavidyalaya (A Central University)
Bilaspur (C.G.) India 495 009
(Established by the Department of Science & Technology
(DST) Govt. of India, New Delhi.)

Coordinator

**National Knowledge Commission network based
activities (2012-2017)**

Guru Ghasidas Vishwavidyalaya (A Central University)
Bilaspur (C.G.) India 495 009

**Chairman- Core Committee, Integrated University
Management System (IUMS) – An E-governance
initiative of the University (2012-2017)**

Guru Ghasidas Vishwavidyalaya (A Central University)

Bilaspur (C.G.) India 495 009

Coordinator/ Director (2004-2018)

Internal Quality Assurance Cell (IQAC)

Guru Ghasidas Vishwavidyalaya (A Central University)
Bilaspur (C.G.) India 495 009

Coordinator (2013-2018)

**National Centre for Protection and Preservation of
Endangered languages**

Guru Ghasidas Vishwavidyalaya, Bilaspur
(A Program supported by UGC)

Date of Birth : Born on 02-05-1963 at Jhansi, (U. P.) India.

Other Information : Sex : Male
Marital Status : Married
Nationality : Indian
Language Known : Hindi, English, French

**Communication
Address**

Permanent

D-40, Dream City, Khamtari Rd, Bilaspur

Correspondence

Department of pure and applied physics

Guru Ghasidas University, Bilaspur

Chhattisgarh - 495 009

E-mail- bajpai_pk@yahoo.com

Ph.: 91-7752-260249 (R) ; 91-7752-260007 (O)

Mobile- 94241-54024; Fax: 07752-260148

Academic Qualifications:

1988

Ph.D.

Department of Physics,

North-Eastern Hill University, Shillong.

(Worked at IIT Kanpur, Under UGC project)

1985

Pre-Ph.D. (Equivalent to M. Phil) (Grade - A).

Department of Physics,

North-Eastern Hill University, Shillong

1983

M.Sc,

Bundelkhand University, Jhansi (U.P.)

Division- I (64.4%). University Second Topper

1981

B.Sc.,

Bundelkhand University, Jhansi (U.P.)
Division- II (58 %).

1979

Intermediate,
U.P. Board, Allahabad
Division-I (68.8 %) Merit List of UP Board

1977

High School,
U.P. Board, Allahabad
Division-I (71.2%) Merit of UP Board

Noteworthy Achievements

- 1. Established National Centre for Accelerator Based Research – A 3.00 MV Particle Accelerator based Interdisciplinary Research Centre in the Department of Pure & Applied Physics- a flagship program of the University**
- 2. Established Computer Application Centre for PG Applications, UGC (1997-2002).**
- 3. Established Institute of Technology, G.G. University in the initial Phase as its first In-charge Director (1997-1998)**
- 4. Established Department of Pure & Applied Physics almost from the beginning as Head of the department (From 1996 onwards except for a brief period in 2012 and 2017).**

Brought the following prestigious programs in the department as Coordinator

- 5. FIST Program, DST (2005-2010)**
- 6. FIST program, DST (2012-1017)**
- 7. SAP DRS-I, UGC (2012-2017)**
- 8. SAIF, DST (2013-2018) for the region**
- 9. Conceptualized and brought Centre for Preservation of Endangered Languages as Coordinator of the program (2014-2019)**
- 10. Actively contributed in the establishment of Institute of Bio-physics & Self Organizing System at NEHU, setup by UGC (1988-1993).**
- 11. Established various sophisticated instruments facilities (FTIR, UV-VIS, Mass spectrometer, ICP-coupled Plasma, NMR, etc) at RSIC, NEHU (1987-1999).**

- 12. Established Instrumentation Maintenance Facility at Guru Ghasidas University, UGC.**
- 13. Established state of Art Research Facilities in the Department of Pure & Applied Physics in the field of Material Science.**
- 14. Coordinated and drafted five year plans for the University from IX-plan to XII Plan**
- 15. Drafted more than 59 ordinances and regulations including Purchase ordinance, Promotion rules as Chairman, Draft Committee, GGV, Bilaspur.**
- 16. Developed Integrated University Management System- an e-governance ERP based online modules for making the academic, financial and administrative processes online, as Head, IUMS Committee.**
- 17. Played vital role in developing systems, restructuring the academic programs, establishing the basic infrastructure, academic departments, admission processes (VET & VRET) in the central University as Officer on Special Duty from 2010-2017.**
- 18. Started, Department of Chemistry as Dean-School of Physical Sciences (2010-2012).**
- 19. Developed University campus network under NMEICT, MHRD as coordinator (Successfully provided more than 8 Km long optical cable based internetworking)**
- 20. Conducted NAAC Accreditation process and quality improvement in the University as Director, IQAC (2004-2018).**

21. Contributed immensely as Chairman of various committees including Chairman, Purchase Committee, Instruments Maintenance and AMC committee, Draft regulation for appointment of Assistant Professors, Non-teaching employees promotion rules, Research regulation, National Test for admission to various programs. Formulated a number of developmental proposals for the university including establishing USIC, Academic Staff College, National Law Institute, UGC-ERNET, Assessment report for Central University Status to GGU.
22. Coordinated the activity of project cell
23. Coordinator, ERNET-UGC scheme
24. Chairman, Committee for Internet
25. Chairman, UFM Committee
26. Member, College Complaint Redresser Committee
27. Member of the Editorial Board for Preparing Annual Report of the University (2000-2001);
28. Member of inspection committee for recommending Examination Centers of Guru Ghasidas University Annual examinations (2003).
29. Member of the Committee for recommending whether to run academic programs under Distance Education Mode in Guru Ghasidas University (2007) .

Honors and Awards:

Fellow of American Nano Society (Full Member)

Fellow of International Academy of Physical Sciences (IAPS), Allahabad

Fellow of New York Academy of Sciences (USA)

INSA-Costed Visiting Fellowship (1992).

SERC visiting fellowship (1995-96).

Member, Executive Council, Indian Society for Particle Accelerator (ISPA)

Member, Board of Directors for research, American Biographical Institute, USA.

Included in "Marquais World who is who" 15th, 16th & 17th , 23rd Edition.

Regional Editor-

International Journal of Applied Sciences, Engineering & Technology
Published by Maxwell Science Publications.

Executive Editor-

Chhattisgarh J. Science & Technology (A Joint publication of GGV and CCOST)

Editor- Focus- University Magazine (2006-2009)

Visiting Professor and Indian Expert for Quantum Electronics in Yangon University for Research Assistance to Myanmar, Selected by MHRD through EDCIL under the tripartite agreement between Govt. of India, Govt. of Myanmar.(2005-2006)

Invited as Board Member of “The Open Material Science Journal”
Bentham Science Publishers Ltd. (2007)

Ph.D. Thesis was selected as one of the six best research work in solid state physics at National Level in 1987 (Prof. S.N. Satyamurty Award lecture in DAE, BARC, Mumbai).

National Merit Scholarship (1977-83)
Department of Secondary Education, Govt. of Uttar Pradesh

Chairman, Technical Sessions in a number of International /National Conferences

Delivered Keynote address in a number of Conferences
Member, Jury for Young Scientist award in IAPS conference
2001-02, 2002-03, 2003-2004.

Felicitated by Ferroelectric & Dielectric Community of the country in National Conference on Ferroelectrics & Dielectrics (NSFD-XVI) at ITER, Bhuvneshwar for special contribution in the field.

Board Member of “The Open Material Science Journal” Bentham Science Publishers Ltd. (2007)

Member of the Selection Committee for a Number of Universities in Maharastra, Orissa, Chattisgarh, Uttar Pradesh, IUAC Expert Member in the selection committee for Research scholars in the Universities under UFR scheme of IUAC, New Delhi, 2008.

9. Expert Member, Selection Committee for a large number of College Teachers appointments.

Important Visits Abroad:

1. Japan, (Yokohama & Tokyo)
INSA-COASTED Visiting fellow (1992)
2. Thailand (Bangkok) 1992
3. International Centre for Theoretical Physics, Italy (1994)
4. Yangon University, Myanmar
(As Govt of India representative under tripartite agreement for developing research in Yangon University, 2005-06 & 2006-07)

5. North Texas University & Puerto-Rico University, San Huan, USA, 2008.
For Collaborative Research with Professor R.S. katiyar's group & to deliver invited talks in CARRI-2008
6. Beijing, China
Invited to Beijing Technology University for delivering invited talk and discuss collaborative Research
Also delivered invited talk in 1st World Nano Conference on Advanced Materials (2012).

Positions in Statutory Bodies of various Universities:

1. Visiting Professor and Expert in Quantum Electronics in Yangon University, March-April 2005 & Nov.-Dec, 2005, to assist R & D in Myanmar under the Tripartite agreement between Govt. of India and Govt. of Myanmar.
4. External Expert for Research Committee in Physics, Bundelkhand University, Jhansi.
5. UGC expert for SAP program in Department of Physics, Tezpur University, Assam, Cochin University of Science & technology, Cochin and Jai Narayan Vyas University, Jodhpur, Rajasthan.
6. Member of Academic Council, NEHU, Shillong.
9. Governor Nominee in J.N. University for Science & Technology, Raipur
10. Member, Central Board of Studies of Physics in M.P. & Chhattisgarh.
11. Member, Academic Council, Central University, Mizoram.
12. Campus Coordinator and representative for United States International Programs in GGV.
13. Member, School Board of Studies, Mizoram Central University
14. Member, Board of Studies in Physics, NEHU, Shillong (2017-2020).
15. Member, DSIR, Department of science & technology, New Delhi, Committee for recognizing BALCO as certified Laboratory.
16. Member of Board of Studies in a number of Autonomous Colleges in Chattishgarh.

Reviewer of the International Journals: More than 30

(Including Journals from Elsevier, Institute of Physics, Wiley, Springer, SJI, API, etc)

Research Contributions:

Research Publications: 285- Original contributions in Journals/ conferences

In International/ National Journals-135

Book Chapters/Symposium / Conference Proceedings-148

Edited Books: 02

H-index : 13

I10-index : 22

Citation in Google Scholar-584

Research Supervision:

Ph.D. Supervision: Completed - 15

M.Phil Dissertation (supervised) - 33

M.Sc.(Project):- > 250

One semester project on experimental/ theoretical problems; dissertation evaluated by external experts.

MCA - 01

M.E. by Research-01

Appointed External Examiner for Ph.D. Thesis evaluation in more than 60 Indian Universities and two Universities abroad.

Research projects Undertaken: 17

Completed as Principal Investigator - 08
Completed as Co-Investigator - 04
Sanctioned & Undergoing - 01
Departmental Research Projects - 04
(SAP, FIST, SAIF, Centre for Endangered languages)

International/ National Seminars / Conferences Organized: 29

Appendix-II

Seminars / Conferences / Workshops Organized by Prof. P.K. Bajpai

1. 2nd International conference of International Academy of physical Sciences, Held at GGU, Bilaspur (1997)
P.K. Bajpai, Co-coordinator
2. National Symposium on Advanced Electronic Materials & Information Technology (NSAEM-2003) April 18-20, 2003. Sponsored by CCOST, UGC & SECL.
P.K. Bajpai, Convener
3. **Nuclear Science Centre** Acquaintance Program,
July 26, 2003, Sponsored by Nuclear Science Centre, New Delhi.
P.K. Bajpai, Coordinator
4. 12th M.P. Young Science Congress
Organized by Madhya Pradesh Council of Science & Technology, Held at GGU, Bilaspur (1998).
P.K. Bajpai, Co-cordinator

5. Two days workshop on S & T Regional mission identification in Madhya Pradesh, Feb. 17-18, 2000, organized jointly by Gramodaya University, Chitrakoot and GG University, Bilaspur.
P.K.Bajpai, Local Coordinator
6. National Convention of Indian Association of Physics Teachers (IAPT).
Chairman, Local Organizing Committee
7. DAE Solid State Physics Symposium 2000.
Member, Local Organizing Committee
8. Member, Organizing Committee, CMDAYS 2000.
9. Organised two "one-month certificate course in Computer applications" successfully respectively to University/ college teachers & University/ Bank Employees.
10. National Conference on Advances in Electronic Materials & Devices,
Chairman, Organising Committee, Department of Physics, G.G. University, Bilaspur, March 5-6, 2006.
11. National Conference on Advances in Electronic Materials & Devices,
Chairman, Organising Committee, Department of Physics, G.G. University, Bilaspur, March 25-26, 2007.
12. Seminar on Excellence in Higher Education: Emerging Issues and Challenges in context of Chhattisgarh, Oct. 5, 2005
Coordinator
13. Workshop on "Laboratory Maintenance & Electronic Instrumentation", Feb 26-March,3, 2007,
Coordinator.
14. **Organizing Secretary**- Silver Jubilee International Conference" Xth Conference of International Academy of Physical Sciences entitled 'Interdisciplinary Approaches in Physical Sciences-Growing Trends and Recent Advances", Jan. 12-14, 2008.
15. **Convener**- 6th Chhattisgarh Young scientist congress 'organized by Guru Ghasidas university, Bilaspur, Feb.28-March 1, 2008.
16. **Chairman**, 3rd National Conference on "Advances in Electronic Materials and Devices-AEMD-07, Organized by Department of Pure & Applied Physics, Guru Ghasidas University, Bilaspur, March 25-26, 2007.
17. **Coordinator**, Workshop on "Enhancing quality in Higher Education: Role of Leadership and Ethics, 26th July, 2006 (inaugurated by H.E. the governor of Chhattisgarh, Sri K.M. Seth.

18. **Convener**, One week program under the national program of ‘Appreciating Physics in everyday life, July, 8-16, 2007.
19. **Coordinator**, Workshop on Laboratory maintenance & Electronic Instrumentation, Organized by Instrumentation Maintenance centre, Department of Pure & applied Physics, Guru Ghasidas University, Bilaspur in technical collaboration with USIC, Mumbai University, Feb.26 – March 3, 2007.
20. **Convener**, Workshop on Research methodology in Sciences and Identification of thrust areas, Oct. 2007. Organized by Department of Pure & Applied Physics, Guru Ghasidas University, Bilaspur.
21. *Convener*, National Workshop on Low Energy Accelerators and Their Applications to Research and Industry, *March 12-13, 2010 Organized by* Department of Pure & Applied Physics, Guru Ghasidas University, Bilaspur.
22. Convener, XVI-National Seminar on Ferroelectrics & Dielectrics, Dec. 2-4, 2010, Department of Pure & Applied Physics, G.G. Vishwavidyalaya, Bilaspur
23. Convener, IUAC Acquaintance Program, organized at Department of Pure & Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, 19 June, 2013
24. *Convener*, National Workshop on Particle Accelerators for Interdisciplinary Research, *February, 18-19, 2014 (Under the Ages of ISPA) Organized by* Department of Pure & Applied Physics, Guru Ghasidas University, Bilaspur.
25. Program Coordinator, Refresher Course on Research Methodology, 13.07.2016-02.07.2016, organized by HUMAN RESOURCE DEVELOPMENT CENTRE, GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR.
26. Course Coordinator, Special Summer School (Refresher Course on Research Methodology)- (Interdisciplinary Refresher Course), 16.06.2018-06.07.2018, organized by HRDC, G.G. Vishwavidyalaya, Bilaspur.
27. Convener, IQAC Workshop on NAAC Accreditation Preparation & training to faculty members, 12 June, 2018, organized by IQAC Cell, GGV, Bilaspur.
28. Convenor, Interactive *One-day Seminar on*” Sustainable Quality Education & Millennium Goals of Development (MGDs)-Sensitization towards MGD's & their
29. Convener, XX-National Seminar on Ferroelectrics & Dielectrics, Dec. 18-21, 2018, Department of Pure & Applied Physics, G.G. Vishwavidyalaya, Bilaspur.

Appendix-III

Positions in Statutory Bodies of various Universities:

1. Visiting Professor and Expert in Quantum Electronics in Yangon University, March-April 2005 & Nov.-Dec, 2005, to assist R & D in Myanmar under the Tripartite agreement between Govt. of India and Govt. of Myanmar.
4. External Expert for Research Committee in Physics, Bundelkhand University, Jhansi.
5. UGC expert for SAP program in Department of Physics, Tezpur University, Assam, Cochin University of Science & technology, Cochin and Jai Narayan Vyas University, Jodhpur, Rajasthan.
6. Member of Academic Council, NEHU, Shillong.
9. Governor Nominee in J.N. University for Science & Technology, Raipur
10. Member, Central Board of Studies of Physics in M.P. & Chhattisgarh.
11. Member, Academic Council, Central University, Mizoram.
12. Campus Coordinator and representative for United States International Programs in GGV.
13. Member, School Board of Studies, Mizoram Central University
14. Member, Board of Studies in Physics, NEHU, Shillong (2017-2020).
15. Member, DSIR, Department of science & technology, New Delhi, Committee for recognizing BALCO as certified Laboratory.

Appendix-IV

Contribution to the University Administration:

Worked as

- **Member, Executive Council, Guru Ghasidas University (2007-2009; 2016-2018)**
- **Member, Apex Committee constituted for advising / assisting the Vice-Chancellor during transition period from State to Central University (2009)**
- **Convener, IX plan Draft preparation of the University & Evaluation report of VIII plan.**
- **Coordinator, X, XI and XII Plan committee, GGV, Bilaspur**
- **Chairman, Steering Committee, University Examinations 2002-2003.**

(Responsible for University examinations 2003-2004 including examination centres, conduct of examination, Central valuation and declaration of results).

- **Chairman**, Central Purchase Committee, Guru Ghasidas University, (2007-2011) onwards
- **Convenor**, Draft Committee for drafting all statues, ordinances, regulations and rules of the Guru Ghasidas Central University.
- **Member of Central Flying Squad**, 2001, 2002, 2003, 2004, 2005, 2006, 2007
- **Coordinator**, Steering committee for NAAC accreditation, Guru Ghasidas University (2004, 2014)
- **Coordinator**, Nodal Computer Centre, G.G. University (from 2001, Centre is providing training to PG students of five to six departments).

Appendix-V

Recognition/ Member of the Professional Bodies

- **SERC Fellow at Cultivation of Science, Kolkata with Prof. D. Charkravorty, 1994**
- **INSA-COASTED Visiting Fellow at Yakohama, Japan 1992**
- **SERC One Month School on Lasers, Dharwad University, Karnataka**
- **PDF at Department of Physics, IIT, Kanpur**
- **New York Academy of Science- Fellow**
- **Fellow of American Nano Society**
- **Indian Association of Physics Teachers, Life Member**
- **Indian Science Congress-Member**

- **Ferroelectrics & Dielectric society of India**
Joint Secretary & Member National Advisory Committee
- **International Academy of Physical Sciences-** Life Member & Secretary (from 2004-2012), Vice-President (2014-Continue).
- **Fellow of International Academy of Physical Sciences (2011)**
- **National Laser Society-** Life Member
- **Material Research Society, Life member**
- **Indian Society of Particle Accelerators (ISPA), Life member & Executive Council member (2014-2016).**
- **Visiting Professor, Yangon University, Myanmar (2005)**
- **Visiting Fellow, San Juan University, Puerto-Rico, USA (2008)**
- **Visiting Researcher, Beijing Institute of Technology, China (2012).**

Appendix-VI

Research Projects Undertaken

S. No.	Client / Organization's name	Nature of project	Duration of project	Amount of grant (Rupees)
01.	Council for Scientific & Industrial Research (CSIR), New Delhi Extramural Research Project entitled" Spectroscopic Investigations of the functional mechanism of Ribosome inactivating protein-Gelonin".	Extramural Research Support Principal Investigator	(1991-95).	9, 98,000 /-
02.	Department of Science & Technology, Govt. of India, New Delhi Sponsored Research Project entitled "Vibrational & Dielectric studies of microscopic mechanism of structural phase transitions and role of dopants in some ferroelectric crystals".	Principal Investigator	(1997-2000)	13,80,000/-
03.	Department of Science & Technology, Govt. of India, New Delhi Sponsored Research Project entitled Lichen eradication from temples of	Co-investigator	(1994-96).	N.A.

	southern India <i>Dr. Ajay Singh, National Institute of Conservation of Cultural Property" Lucknow as Principal Investigator</i>			
04.	Research Project entitled Effect of doping and irradiation on the structural, dielectric and pyroelectric properties of some ferroelectric materials for IR imaging.	Principal Investigator	(2003-2007).	2,73,000/-
05.	University Grants Commission, New Delhi Major Research Project entitled Investigation of ferroelectric relaxor properties of $M(A_{1/3}B_{2/3})O_3$ (M= Pb, Ba, Sr; A= divalent ions; B=Nb) type materials and their solid solutions.”.	Principal Investigator	(2005 – 2008).	11,00,000/-
06.	University Grants Commission, New Delhi Major Research Project entitled Relaxor behavior and dielectric relaxation in bismuth sodium niobate based non-lead relaxors: solid solutions with perovskite, columbite and tungsten bronze phases	Principal Investigator	(2012-2015).	13,80,000/-
07.	UFPP Project, Inter-University Accelerator Centre, New Delhi Research Project entitled Studies of swift heavy ion beam irradiation on ceramic perovskite thin films of $BaSnO_3$, $SrSnO_3$ and $Ba/SrSnO_3$ for specific gas sensing applications	Principal Investigator	2013-2016.	3,00,000/-
08.	UFPP Project, Inter-University Accelerator Centre, New Delhi Research Project entitled “Metal Induced Crystallization of Amorphous Semiconductors under Swift Heavy Ion Irradiation” Dr. Shiv Poojan Patel, as Principal Investigator	Co-investigator	2014-2017	3,00,000/-
09.	University Grants Commission, New Delhi Major Research Project entitled Density functional theoretical study of magneto-opto-electronic properties of transparent conducting oxides Dr. Madhvenra Nath Tripathi as Principal Investigator	Co-investigator	2013-2016	8,00,000/-

10.	Chhattisgarh Council of Science & Technology Mini Research Project entitled” Effect of excess oxide and additives on the pyrochlore phase formation in Relaxors: structural and electrical properties in bulk and spin coated films.	Principal Investigator	2011-2013	2,50,000/-
11.	University Grants Commission, New Delhi Special Assistance Program in Physics F.530/2/DRS/2012(SAP-I)	Coordinator	2012-2018	75,00,000/- 05 BSR Fellowships
12.	Department of Science & Technology, Govt. of India FIST program in Physics & Electronics	Coordinator	2005-2010	80,00,000/-
13.	Department of Science & Technology, Govt. of India FIST program in Physics & Electronics [No. SR /FST/PSI-180/2012]	Coordinator	2012-2017	80,00,000
14.	Department of Science & Technology, Govt. of India Establishment of Sophisticated Analytical Instrumentation Centre (SAIF) at GGV (Under MoU with DST) No. SR/RS/BP-1/2013 dated 15.05.2013 Total amount 5.50 crores	Head of the facility	2013-2018	5,50,00,000 /-
15.	Department of Atomic Energy (DAE)- Board of Research in Nuclear Physics (BRNS) Mega Project under MoU Project entitled” Establishment of national Centre for Accelerator Based Research at GGV” Total amount 8.50 crores	Principal Investigator	2013-2021	5,50,00,000 /- 3,00,00,000 /- (2 nd phase)
16.	University Grants Commission, New Delhi, Establishment of “Centre for preservation and protection of endangered languages” in cluster mode	Coordinator	2014-2019	3,59,00,000

List of Research Publications
Dr. P. K. Bajpai

1. Phase transition and Temperature dependence of the Molecular distortion of SO_4^{2-} modes in Ammonium sulphate.
Y.S.Jain, **P.K. Bajpai**, R. Bhattarjee & D. Chowdhury.
J.Phys.C: Solid State Physics, 19, 3789 (1986). (I.F. = 2.711)
[Citations-02 \(Google scholar\)](#).
2. Phenomenological theory of phase transition in improper ferroelectrics Ammonium Sulphate.
P.K. Bajpai, P. N. Ram, Y. S. Jain,
J.Phys.C: Solid State Physics, 20, 5577 (1987) (I.F. = 2.711)
[Citations-12 \(Google scholar\)](#).
3. Structural phase transition in Ammonium sulphate: Dynamics of Deuterated Ammonium ions and Heat of Transition
P.K. Bajpai, Y. S. Jain,
J.Phys.C: Solid State Physics, 20, 387 (1987).(I.F. = 2.711)
[Citations-16 \(Google scholar\)](#).
4. Phenomenological theory of phase transition in improper ferroelectric ammonium sulphate.
P.K. Bajpai, P. N. Ram, Y. S. Jain,
Phase transition 69, 56 (1987) (I.F. = 1.006)
5. Ferroelectric phase transition in $(\text{NH}_4)_2\text{BeF}_4$: possibility of molecular distortion type transition.
P.K.Bajpai.

- Physica Status Solidi (b) 159b, 101(1989). (I.F. = 1.454)**
[Citations-03 \(Google scholar\)](#).
6. Infrared and Raman studies of distortive structural phase transition.
Y. S. Jain and **P.K. Bajpai**
Vibrational Spectra and Structure 17B, 17-35(1989).
 7. Temperature dependence of line width of SO₄²⁻ modes in Raman spectra of ammonium sulphate.
Y. S. Jain, **P.K. Bajpai** & H. D. ist.
J. Raman Spectroscopy. 21, 327 (1990). (I.F.-3.09)
[Citations-10 \(Google scholar\)](#).
 8. Ultra weak photon emission from seeds: A signal of biological order.
R. P. Bajpai, **P.K. Bajpai** and D. Roy.
J. Bioluminescence & Chemiluminescence, 6, 227 (1991). (I.F. 1.731)
[Citations-20 \(Google scholar\)](#).
 9. A new technique for investigating the effect of biocides in Lichens.
R. P. Bajpai, **P.K. Bajpai** & G. P. Sinha
International Bio deterioration & Biodegradation 30, 1-8 (1992) (I.F. 2.07)
[Citations-08 \(Google scholar\)](#)
 10. Biophotonic emission as a positional probe of organizational structure.
P.K. Bajpai. and R. P. Bajpai
Annals of Applied Information sciences, 17, 49 (1991).
 11. Light induced Biophotonic emission from plant tissues.
R. P. Bajpai, **P.K. Bajpai**
J. Bioluminescence & Chemiluminescence 7, 177-184 (1992) (I.F. 1.731)
[Citations-06 \(Google scholar\)](#)
 12. Spectral characteristics of some biologically significant chelating schiff bases.
Surjit Chowdhury, T Basu Baul, **P. K. Bajpai**, W. L. Wasaiawmoit.
Spectrochimica Acta A 49, 1028 (1993). (I.F. 2.931)
 13. Raman spectroscopic study of alanine doped tri-glycine sulphate ferroelectric crystals.
L. Santra, A. L. Verma, **P. K. Bajpai**, B. Hilczer & P. V. Huong.
J. Phys. Chem. Solids 55, 405 (1994). (I.F. 2.048)
[Citations-27 \(Google scholar\)](#)
 14. Structure of some azo-phenols and azonaphthols in solid state: A resonance Raman study.
P. K. Bajpai, Biswajit Pal and T. S. Basu Baul.
J. Raman Spectrosc. 26, 217-222 (1995) (I.F.-3.09)
[Citations-10 \(Google scholar\)](#)
 15. Structural characterization of some Quinolin-8-ol containing azo dyes in solid and solution state as probed by resonance Raman, Fourier transform IR and

- electronic spectroscopic techniques.
P. K. Bajpai, B. Pal & T. S. BasuBaul.
J. Raman Spectrosc. 26, 351-361 (1995) (I.F.-3.09)
[Citations-06 \(Google scholar\)](#)
16. Biphasic decay of Biophotonic emission of plants tissues.
P. K. Bajpai, R. P. Bajpai
Asian J. Physics, 5, 139-150 (1996)
[Citations-03 \(Google scholar\)](#)
17. Vibrational studies on the heterobifunctional cross-linking agents N-succinimidyl 1
3-(2-pyridyldithio) Propionate and N-succinimidyl 1[6-3'(2-pyridyldithio)
propionamido] hexanoate and theoretical elucidations.
B. Pal, **P. K. Bajpai**, Jyoti Sen Gupta and V. Singh
J. Raman Spectrosc. 28, 323-329 (1997) (I.F.-3.09)
[Citations-01 \(Google scholar\)](#)
18. Efficiency of five agricultural biocides on lichens eradications.
P.K. Bajpai, R.P. Bajpai, S. Chatterjee, A. Singh, G.P. Sinha
In "Biology of Lichens" Edited by K.G. Mukerji, B.P. Chamola, D.K. Upreti, R.K.
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National Conference on Advances in Electronic Materials & Devices, March 25-26, 2007, G.G. University, Bilaspur
79. Impedance Analysis of $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$
Mukul Pastor, P.K. Bajpai & R.N.P. Chowdhury
National Conference on Advances in Electronic Materials & Devices, March 25-26, 2007, G.G. University, Bilaspur
80. Effect of Rare earth doping on the electrical properties of strontium titanate: semiconductor sensors
KuldeepRatre ,Mukul Pastor & P.K. Bajpai
National Conference on Advances in Electronic Materials & Devices, March 25-26, 2007, G.G. University, Bilaspur
81. Effect of swift heavy ion beam irradiation on the dielectric response of $\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$ (BST) Ceramics
C.R.K. Mohan and P. K. Bajpai
National Conference on Advances in Electronic Materials & Devices, March 25-26, 2007, G.G. University, Bilaspur.
82. Studies of Pure and Mn doped BZT bulk ceramics for DRAM applications(X= 0.05,0.1&0.15)
C.R.K.mohan, Shiv ShankerPandey , B. Nag Bhargavi& P.K. Bajpai
National Conference on Advances in Electronic Materials & Devices, March 25-26, 2007, G.G. University, Bilaspur.

83. Swift Heavy Ion Beam Induced Modifications in Ferroelectric Single crystals and in Ceramics
P.K. Bajpai, C.R.K. Mohan, Deepak Shah V. Shiv Kumar & Ravi Kumar
In "Annual Report of IUAC", New Delhi, 2006-07.
84. Controlled nanostructures on polar ferroelectric surfaces using swift heavy ion beam.
P.K. Bajpai, Ravi Kumar
In "International conference on advances in nano-technology", Nov. 06-08, 2008, MATS University, Raipur.
85. Swift Heavy ion beam induced modifications in $\text{Ba}_{0.75}\text{Sr}_{0.25}\text{TiO}_3$ ceramics
P.K. Bajpai and Ravi Kumar
In "20th International conference on the Application of Accelerators in Research & Industry-CAARI-2008, Fort Worth, Texas, USA, Aug. 10-15, 2008. Full length paper is published in Amer. Institute of Physics (AIP J. Conf. Proceedings).
86. Swift heavy ion modified behavior of pure and doped TGS crystals.
P.K. Bajpai
In "20th International Conference on the Application of Accelerators in Research & Industry, CAARI-2008, Fort Worth, Texas, USA, Aug. 10-15, 2008. Full length paper is published in Amer. Institute of Physics (AIP J. Conf. Proceedings).
87. Synthesis, Dielectric and Electrical characterization of SnO_2 Nano-particle prepared by Co-precipitation Method
Proceedings of the 54th DAE Solid State Physics Symposium, M.S. University, Baroda(2009)
Raman Mishra and P.K. Bajpai
88. Structural, Dielectric and Impedance Characterization of $\text{Pb}(\text{Ba}_{1/3}\text{Nb}_{2/3})\text{O}_3$
Proceedings of the 54th DAE Solid State Physics Symposium M.S. University, Baroda(2009)
Raman Mishra and P.K. Bajpai
Mukul Pastor, K.N. Singh, P.K. Bajpai, R.N. P. Chowdhury
89. Investigation of Dielectric dispersion and relaxor behavior in $\text{BaZr}_x\text{Ti}_{1-x}\text{O}_3$.
P.K. Bajpai and C.R.K. Mohan
In XII Conference of International Academy of Physical Sc. 21-23 February, Allahabad University, Allahabad.
90. Synthesis, structural, dielectric and electrical impedance study of SrNb_2O_6 phase pure columbite material.
K.N. Singh and P.K. Bajpai
In XII Conference of International Academy of Physical Sc. 21-23 February, Allahabad University, Allahabad.
91. Investigation of Dielectric dispersion and relaxor behavior in $\text{BaZr}_x\text{Ti}_{1-x}\text{O}_3$
P.K. Bajpai and C.R.K. Mohan
In: International Conference on Electro ceramics, LC373, Dec 13-17, Delhi University, (2009)
92. Recent Advances in Surface and Domain Structures of Ferroelectric Crystals Probed with Atomic Force Microscopic Probes
P.K. Bajpai
Invited talk in "National Conference of Electron Microscopic Society of India" Bundelkhand University, Jhansi, Jan17-20, 2009.
93. Synthesis, structural, dielectric and electrical impedance study of SrNb_2O_6 phase pure columbite material

- K.N. Singh and P.K. Bajpai
In: International Conference on Electro ceramics, LC372, Dec 13-17, Delhi University, (2009)
94. Swift Heavy Ion Beam as a Tool to Control Ferroelectric Material Modification in TGS Crystals.
P.K. Bajpai, Deepak Shah, Ashok Kumar and R.S. Katiyar
In” National Conference on Condensed Matter Physics” organized by Department of Physics, NEHU, Shillong, March21-23, 2010
95. Effect of Rare-Earth Doping on the Structural, Dielectric and Impedance Properties of SrSnO₃.
P.K. Bajpai, Rakes Kurre and K. Ratre
In” National Conference on Condensed Matter Physics” organized by Department of Physics, NEHU, Shillong, March21-23, 2010
96. Recent Advances in AC Impedance Technique in SOFC Research: A status Review (Invited)
P.K. Bajpai
In “National Conference on Advances in Materials and Devices for Renewable Energy Sources, Organized by Jaipur Engineering College, Jaipur, 25-27 February (2010).
97. Ion Beam Induced Modification in Ferroelectrics: Controlled Long Range Ordering and Nanostructure Formation on Polar Surfaces
P.K. Bajpai (Invited)
In **National Conference on "Recent Trends in Materials and Devices (RTMD- 2010)"**
Organized by Amity Institute of Applied Sciences and Amity School of Engineering & Technology, Amity University, Amity University Campus, Noida (U.P.), 20th to 22ndMay, 2010.
98. XRD and FTIR Investigation of (Na_(1-x)K_x)_{0.5}Bi_{0.5}TiO₃ Solid Solution
K. S. Ojha and P. K. Bajpai
In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
99. Structural, dielectric and temperature dependent Raman spectroscopic studies on swift heavy ion beam irradiated TGS crystals
P.K. Bajpai, Deepak Shah and Ravi Kumar, Ashok Kumar and R.S. Katiyar
In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
100. Dielectric and Impedance Spectroscopic studies on diffuse phase transitions in Bismuth Sodium Titanate
K. S. Ojha, K. N. Singh and P. K. Bajpai
In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
101. Dielectric relaxation, electrical conductivity and impedance response of BaNb₂O₆ synthesized by sol-gel and solid state reaction route: A comparative study
K.N. Singh, B.R. Chauhan and P.K. Bajpai
In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
102. Ground Based Scatterometer Measurement of Dielectric Constant of Soil for Remote Sensing Applications
Ajay Dubey, P.K. Bajpai, D. Singh, V.K. Dubey

- In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
103. Synthesis and Dielectric study of NBT- BSN: A lead free relaxor materials
Nitin Kumar, K.N. Singh and P.K. Bajpai
In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
104. Vibrational Spectroscopic Studies of Some double AlakliTungstates belonging to Orthorhombic Class at Room Temperature
Usha sharaff, P.K .Bajpai, R.N.P. Choudhary
In” XVI-National Seminar on Ferroelectrics & Dielectrics (NSFD-XVI)”, Organized by , Department of Pure & applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Dec.2-4, 2010.
105. Synthesis, Characterization and Applications of olymer-Semiconductor Nanoparticle Composites: Issues and Challenges for Applications in Sensors and Energy Storage Devices
P.K. Bajpai
1st World Conference on Advanced Materials, June 2012, Beijing, China (invited Talk).
106. Synthesis and electrical characterization of cerium doped strontium stanate compositions for specific gas sensors
Rakesh Kurre and P.K. Bajpai
In “Current Trends in Condensed Matter Physics” Assam University, Silchar, 3 - 5 February 2011.
107. DOPING INDUCED ORIENTATIONAL DYNAMICS OF IONS IN FERROELECTRIC CRYSTALS PROBED BY POLARIZED LASER RAMAN SPECTROSCOPY
P.K. Bajpai
Invited Talk in”National Conference on Electronic Materials and Applications, 10-11 June 2011, Jiwaji University, Gwalior, M.P.
108. ION BEAM IRRADIATION ON FERROELECTRIC MATERIALS: DIELECTRIC AND FERROELECTRIC PROPERTIES
P.K. Bajpai
Invited Talk in CONIAPS-XIII, Petroleum University, Dehradun, Sept. 2011.
109. Dielectric Relaxation and Electrical Conductivity in $\text{Pb}(\text{Ca}_{1/3}\text{Nb}_{2/3})\text{O}_3$: A New Ferroelectric relaxor
P.K. Bajpai, Mukul Pastor and K.N. Singh
Invited Talk in” National Conference on Ultrasonics, Bundelkhand University, Jhansi (U.P.) India.
110. RECENT PROGRESS IN THE DIELECTRIC RELAXATION IN PEROVSKITE BASED FERROELECTRIC RELAXORS
P.K. Bajpai
Invited talk CONIAPS, NIT SURAT, DEC. 2011
111. Dielectric relaxation in perovskite based relaxor ferroelectrics: Current status and challenges
P.K. Bajpai (Invited Talk)
Invited Talk ,NCMAT-2012 IIITM, Gwalior.
112. Material Modification Using Swift Heavy Ion Beam Irradiation: Controlling the Surface Morphology and Properties in Polar Dielectrics
P.K. Bajpai (Invited Talk)

- Recent Trends in Condensed Matter Physics, Assam University, Silchar, 3-5 February, 2011
113. Exciting Possibilities of Material's modification Using Ion Beams: irradiation, implantation and ion beam analysis using 3 MV Pelletron Accelerator based facility at GGV, Bilaspur, India
P.K. Bajpai (Invited for presentation)
In"15th international conference of the International Academy of Physical Sciences (CONIAPS XV) Rajamangala University of Technology, Thanyaburi, Thailand December 09-13, 2012.
 114. Swift heavy ion induced material modifications in ferroelectrics: understanding molecular reorientation and strain development through temperature dependent Raman spectroscopy
Parmendra Kumar Bajpai
(Invited for presentation in 22nd Conference on Applications of Accelerators in Industry & Research, Texas, USA (2012).
 115. Study of Diffuseness and Dielectric Relaxation in solid solution of $(1-x)(\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3)-x(\text{SrNb}_2\text{O}_6)$: Lead-Free Ceramic Material
K.N. Singh and P.K. Bajpai
In"15th international conference of the International Academy of Physical Sciences (CONIAPS XV) Rajamangala University of Technology, Thanyaburi, Thailand December 09-13, 2012.
 116. Dielectric relaxation in Lead Free Ferroelectric Relaxors: Recent Advances
P.K. Bajpai (Invited Talk)
In" 17th National Seminar on Dielectrics and Ferroelectrics (XVII NSFD) 17-19 December 2012, Institute of Technical Education & Research (ITER) Bhubaneswar, Orissa.
 117. Dielectric relaxation in Microwave Barium Magnesium Niobate: $\text{Ba}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$
K.N. Singh and P.K. Bajpai
In" 17th National Seminar on Dielectrics and Ferroelectrics (XVII NSFD) 17-19 December 2012, Institute of Technical Education & Research (ITER) Bhubaneswar, Orissa.
 118. Swift heavy ion induced material modifications in ferroelectrics: understanding molecular reorientation and strain development through temperature dependent Raman spectroscopy
P.K. Bajpai
In "International Conference on Technological Innovation through Modern Engineering Sciences", IET, Alwar, Rajasthan.
 119. Conclusive growth of CdTe nanorods by solvothermal decomposition using single source precursors
A.K. Tiwari, V.K. Verma, Tripti A. Jain, P.K. Bajpai
ICE, VNIT, Nagpur, January, 2013.
 120. A Facile Route to Access CdSe Nanoparticles: Synthesis and characterization
A.K. Tiwari, V.K. Verma, Tripti A. Jain, P.K. Bajpai
NCFMA, Rungta College of Technology & Management, Raipur (2013).
 121. Research Facilities and Programs at the National Centre for Accelerator Based Research: An upcoming 3 MV Pelletron facility
P. K. Bajpai, C. Mallik, Tarkeshwar Trivedi, Shiv Poojan Patel, Madhvendra Tripathi, Ajay Gupta, T.G.Reddy, S.K. Srivastava, Pradeep Das, R.P. Prajapati and Lakshman Chaturvedi
In" DAE-BRNS Indian Particle Accelerator Conference-2013 (InPAC-2013), Variable Energy Cyclotron Centre, Kolkata, Nov. 19-22, 2013. (Id-301, pp.187).

122. National Centre for Accelerator based Research at GGV Bilaspur: Emerging facility for Neutron Generation
P. K. Bajpai, C. Mallik, Tarkeshwar Trivedi, Shiv Poojan Patel, Madhvendra Tripathi, Ajay Gupta, T.G.Reddy, S.K. Srivastava, Pradeep Das, R.P. Prajapati and Lakshman Chaturvedi
In” DAE-International Conference on Nuclear Physics, Bhabha Atomic Research Centre (BARC), Trombay, Mumbai, Dec. 02-06, 2013.
123. Synthesis and characterization of Copper Sulphide Nano powders at Different pH: effect of pH in stabilizing nano phases.
Sandhya Yadav, S.K. Srivastava, T.G.R. Reddy and P.K. Bajpai
In “Advancement in Material Science and Nanotechnology- AMSAN-2013”, National Conference organized by Chouksey Engineering College, Bilaspur, 12-13, September, 2013, pp. 140.
124. Synthesis and electrical characterization of 1% Mn doped Ba(ZrxTi1-x)O3.
Ratnamala Gangir, Ajay Gupta and P.K. Bajpai
In “Advancement in Material Science and Nanotechnology- AMSAN-2013”, National Conference organized by Chouksey Engineering College, Bilaspur, 12-13, September, 2013, pp. 142.
125. Density functional theoretical calculations on Sr-doped BaTiO3.
Chaya Sidar, M.N. Tripathi and P.K. Bajpai
In “Advancement in Material Science and Nanotechnology- AMSAN-2013”, National Conference organized by Chouksey Engineering College, Bilaspur, 12-13, September, 2013, pp. 141.
126. Diffuse phase transition and dielectric relaxation in (1-x)(Bi0.5Na0.5TiO2)-x(SrNb2O6) Composition: Lead free materials
Preeti Tamrakar, K.N. Singh, P.K. Bajpai
In” International conference on radiation induced effect” VECC, Kolkata, 20-21 Oct. 2014.
127. DFT based electronic and optical properties of (Sr,Ba)SnO3 for Transparent conducting oxide (TCO) applications
Chhaya Sidar and P.K. Bajpai
Accepted for Presentation in IWCCMP-14, IITM, Gwalior, Dec.5-6, 2014.
128. Effect of Swift Heavy ion irradiation on the dielectric properties of Ba_xSr_{1-x} TiO₃ (X= 0.9, 0.85, 0.75).
Ranajit Dey, C.R.K. Mohan, S.P. Patel, P.K. Bajpai
In” International conference on radiation induced effect” VECC, Kolkata, 20-21 Oct. 2014.
129. Status of 3.0 MV Pelletron Accelerator at National Centre for Accelerator based Research at GGV, Bilaspur
P. K. Bajpai, T. Trivedi, S. P. Patel, C. Mallik and L.Chaturvedi
In” DAE symposium on Nuclear Physics, to be held at Varanasi, Dec. 2014.
130. Au⁵⁺ ion implantation induced changes in structural and phonon properties of ferroelectric Bi_{0.5}Na_{0.5}TiO₃
Preeti Tamrakar, P.K. Bajpai
In CONIAPS-XXII held during 13-15 April, 2018 at Dr. Ram Manohar Lohia Avadh University, Faizabad (Ayodhya), U.P., India.

131. Effect of Mn doping on the electrical properties of $\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$ ceramics
Ratnamala Ganjir, P.K. Bajpai
In International Conference CONIAPS-XXII held during 13-15 April, 2018 at Dr. Ram Manohar Lohia Avadh University, Faizabad (Ayodhya), U.P., India.
132. Effect of Au^{5+} ion implantation on the structure and phonon behavior of barium stannate
Sharmila Bajpai and P.K. Bajpai
Paper presented in CONIAPS-XXII to be held during 13-15 April, 2018 at Dr. Ram Manohar Lohia Avadh University, Faizabad (Ayodhya) – 224001, U.P., India.
133. Effect of Samarium doping on the vibrational and optical properties of charge compensated $\text{Sr}_{1-3x/2}\text{Sm}_x\text{SnO}_3$ compositions
Rakesh Kumar Kurre and P.K. Bajpai
Paper presented in CONIAPS-XXII to be held during 13-15 April, 2018 at Dr. Ram Manohar Lohia Avadh University, Faizabad (Ayodhya) – 224001, U.P., India.
134. Effect of Lanthanum doping on the specific gas sensing behavior of BaSnO_3
Sharmila Bajpai and P.K. Bajpai
Paper presented in “International Conference on Materials for Energy Applications”, 04-06 December, 2018, (ICME-2018), S.S.Jain Subodh PG College, Jaipur, Rajasthan.
135. Al_2O_3 modified BaSnO_3 Thick films with improved gas sensing properties
Rakesh Kurre and P.K. Bajpai
Paper presented in XX National Seminar on Ferroelectrics and Dielectrics -14-16 December, 2018 (XX NSFD - 2018) Department of Pure and Applied Physics GGV (A Central University), Bilaspur 495009, (C.G.), India
136. Deposition and Characterization of CuS/PVA nanocomposite thin films using sol-gel route: Effect of annealing.
Sandhya Yadav and P.K. Bajpai
Paper presented in XX National Seminar on Ferroelectrics and Dielectrics -14-16 December, 2018 (XX NSFD - 2018) Department of Pure and Applied Physics GGV (A Central University), Bilaspur 495009, (C.G.), India
137. Structural and Dielectric Study of Nb_2O_5 modified $\text{BaZr}_x\text{Ti}_{1-x}\text{O}_3$
Ratnamala Ganjir and P.K. Bajpai
Paper presented in XX National Seminar on Ferroelectrics and Dielectrics -14-16 December, 2018 (XX NSFD - 2018) Department of Pure and Applied Physics GGV (A Central University), Bilaspur 495009, (C.G.), India
138. Dielectric and magnetic studies of phase pure GaFeO_3 multiferroic material
Ranjit De and P.K. Bajpai
Paper presented in XX National Seminar on Ferroelectrics and Dielectrics -14-16 December, 2018 (XX NSFD - 2018) Department of Pure and Applied Physics GGV (A Central University), Bilaspur 495009, (C.G.), India.

139. Ferroelectric and Piezoelectric properties of relaxor solid solution of perovskite (BNT) with tetragonal tungsten bronze ceramics
Preeti Tamrakar and P.K. Bajpai
Paper presented in XX National Seminar on Ferroelectrics and Dielectrics -14-16 December, 2018 (XX NSFD - 2018) Department of Pure and Applied Physics GGV (A Central University), Bilaspur 495009, (C.G.), India.
140. Structural distortion and phonon behaviour in charge compensated Lanthanum doped $Ba_{1-x}La_{2x/3}SnO$
Sharmila Bajpai and P.K. Bajpai
Paper presented in XX National Seminar on Ferroelectrics and Dielectrics -14-16 December, 2018 (XX NSFD - 2018) Department of Pure and Applied Physics GGV (A Central University), Bilaspur 495009, (C.G.), India.

Appendix-I

Invited Talks Delivered: 85

International: 24 National: 61

International forum

1. Structural Phase Transitions in ferroelectrics
P.K. Bajpai
Invited talk delivered in **2nd International Conference** of IAPS, Dec. 14, 1997, Guru Ghasidas University, Bilaspur.
2. Introduction to Raman spectroscopy
P.K. Bajpai
Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, March 28, 2005.
3. Basic Concepts of Lasers and Laser Physics
P.K. Bajpai
Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, March 29, 2005.
4. Structural Phase Transitions in Solids-I: Concepts
P.K. Bajpai
Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, March 30, 2005.
5. Structural Phase Transitions in Solids-II: Landau Theory

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April, 1, 2005.

6. Ferroelectrics for IR imaging: Issues related to materials modifications

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April 4, 2005.

7. Fundamentals of impedance spectroscopy

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April 5, 2005.

8. Relaxor materials: Investigations using impedance spectroscopy

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April 6, 2005.

9. Fourier Transform IR Spectroscopy: Theory and applications

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April 7, 2005.

10. IR and Raman spectroscopy for students

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April 8, 2005.

11. Applications of group theory to vibrational spectroscopy

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, April 11, 2005.

12. Fundamentals of Sol-Gel Technology

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, Nov. 29, 2005.

13. Applications of swift heavy ion beams in material research

P.K. Bajpai

Invited talk delivered in Department of Physics & IT, **Yangon University**, Myanmar as Visiting Professor and expert of Quantum Electronics under Tripartite agreement between Govt. of India and Myanmar, Nov. 22, 2005.

14. Swift Heavy Ion Beam Induced Material Modification in BST: Probing Molecular Structure.

Talk delivered in Spec lab group of **Department of Physics, Puerto-Rico University, San Huan, USA**, Aug.20, 2008.

15. Swift heavy ion modified behavior of pure and doped TGS crystals, In “20th International Conference on the Application of Accelerators in Research & Industry, CAARI-2008, **Fort Worth, Texas, USA**, Au. 10-15, 2008.

16. Synthesis, Characterization and Applications of Polymer-Semiconductor Nanoparticle Composites: Issues and Challenges for Applications in Sensors and Energy Storage Devices

Invited talk delivered in 1st Annual World Congress on Advanced Materials (WCAM-2012) at Beijing International Convention Center (BICC), **Beijing, China** held on 6-8 June 2012.

17. 3 MV Particle Accelerator based researches at Guru Ghasidas Vishwavidyalaya in the field of Material modifications

Delivered at **Beijing University of Technology**, June 8, 2012 (Invited talk: invited by Dr. Jinshu Wang, Vice-Chairman BUT).

18. Role of Vedic Knowledge in the development of Modern Theory of Quantum Physics

P.K. Bajpai

In the International Conference on Bharat Rejuvenation (From Glorious past to Modern Era) Organized by Guru Ghasidas Vishwavidyalaya, Bilaspur in association with Bhartiya Shikshan Mandal, Nagpur, October 15-17, 2017 at Guru Ghasidas Vishwavidyalaya, Bilaspur.

19. Impedance spectroscopic representation for electronic ceramic materials: need for caution
P.K. Bajpai

In the 12th International Conference of International Academy of Physical Sciences (CONIAPS-XII), Dec.22-24, 2010, Rajasthan University, Jaipur (India).

20. ION BEAM IRRADIATION ON FERROELECTRIC MATERIALS: DIELECTRIC AND FERROELECTRIC PROPERTIES

P.K. Bajpai

Invited Talk in International Conference CONIAPS-XIII, Petroleum University, Dehradun, Sept. 2011.

21. Accelerators and their role in interdisciplinary research with specific reference to National Centre for Accelerator Based Research at Bilaspur.

P.K. Bajpai

Invited talk delivered in “17th International conference of International Academy of Physical Sciences” organized by Rajasthan University, Jaipur, January 16-18, 2015.

22. Recent Advances in the Design of Lead Based/ Lead Free Perovskite Based Environmental Friendly Ferroelectrics and Piezoelectric Ceramics
P.K. Bajpai
Invited talk delivered in 18th International Conference of International Academy of Physical sciences on Recent Trends in Physical Sciences. December 22-24, 2015. Faculty of Sciences, University of Allahabad, Allahabad.

23. Material modifications using low energy ion beams from 3.0 MV Pelletron Accelerator at NCAR, Bilaspur”,
P.K. Bajpai
In 20th International Conference of International Academy of Physical Sciences (CONIAPS-XX) on Recent Trends in Physical Sciences and Future Challenges, organized by Faculty of Science, Osmania University, Hyderabad, July 14-16, 2017.

- 24. Possibility of controlled material’s modifications using synergistic effect of low energy ion beams” in
P.K. Bajpai**
in 22nd International Conference of International Academy of Physical Sciences (CONIAPS-XXII) on Emerging Trends in Physical Sciences, organized by Faculty of Science, RML Awadh University, Faizabad (U.P.), April 13-15, 2018.

National Forum

1. Scaling behaviour of dielectric susceptibility in alanine doped triglycine sulphate single crystals
P.K. Bajpai and N.K. Chandan
Invited talk delivered in Condensed Matter Days-2002, organized by T.M. Bhagalpur University, Bihar, Aug. 29-31, **2002**.

2. Swift heavy ion beam as a tool to engineer material properties in ferroelectrics
P.K. Bajpai (Invited Talk)
National Seminar on ferroelectrics & Dielectrics-XIV, Dec. 18-22, **2006**, IIT Kharagpur

3. Ion beam as a tool to material research
P.K. Bajpai
Delivered in’ XXIV Convention of Orissa Physical Society and National Seminar on Physics Education and research- Challenges Ahead”, ISPAT College, Rourkela, Feb. 10-11, **2007**.

4. Developing nanostructures on polar surfaces of ferroelectrics,
P.K. Bajpai
Invited talk delivered at Inter University Accelerator Centre, New Delhi, **2007**.

5. Research Skills and Data Analysis Tools in Social Science Research
Talk delivered in “Workshop on Research Methodology in Social Sciences, Organized by Department of Management Studies, Guru Ghasidas University, Bilaspur, Oct. **2007**.

6. Nano science & Nano Technology: Present status and Future directions.
P.K. Bajpai (Invited Talk)
Invited talk delivered in “National Seminar on Technology for Sustainable Development – Perspective & Strategies” 6-7 January, **2007**. Organized by “Institute of Technology, Guru Ghasidas University, Bilaspur.
7. Study of the perovskite Electro-ceramics for memory applications: Dielectric relaxation and Complex impedance analysis.
P.K. Bajpai
Invited talk delivered in Techno vision, **2007**. A National conference on Horizons of Electrolytic, Electronic and Photonic Material Physics, SSCET, Bhilai.
8. Nanotechnology: Fundamental concepts and recent advances
P.K. Bajpai
Keynote address in “Workshop on the Dawn of new Age of Nanotechnology”
Organized by Department of applied Physics, Bundelkhand University, Jhansi, March 18-19, **2008**.
9. Recent Advances in AC Impedance Technique in SOFC Research: A status Review (Invited)
P.K. Bajpai
In “National Conference on Advances in Materials and Devices for Renewable Energy Sources, Organized by Jaipur Engineering College, Jaipur, 25-27 February (**2010**).
10. Ion Beam Induced Modification in Ferroelectrics: Controlled Long Range Ordering and Nanostructure Formation on Polar Surfaces
P.K. Bajpai (Invited)
In **National Conference on "Recent Trends in Materials and Devices (RTMD- 2010)"**
Organized by Amity Institute of Applied Sciences and Amity School of Engineering & Technology, Amity University, Amity University Campus, Noida (U.P.), 20th to 22nd May, **2010**.
11. Delivered keynote address” Material modification using swift heavy ion beams: controlling the surface morphology and properties in polar dielectrics in “National Seminar on Current Trends in Condensed Matter Physics”, organized by Assam University, Silchar, Feb. 03-05, **2011**.
12. Quality Assurance in Higher Education: Accreditation and Method of Assessment
P.K. Bajpai
Invited talk delivered in Orientation program conducted by Academic Staff College, Guru Ghasidas Vishwavidyalaya, Bilaspur, Nov. 11, **2011**.
13. Evaluation & Feedback in Higher Learning
P.K. Bajpai
Invited talk delivered in Orientation program conducted by Academic Staff College, Guru Ghasidas Vishwavidyalaya, Bilaspur, Nov. 11, **2011**.
14. Material modifications using Ion beams
P.K. Bajpai

Invited as **Chief Guest** in the national Conference on Ultrasonic applications in material Science” being organized by the Department of Physics, Bundelkhand University, Jhansi. 11-19, Nov. **2011**.

15. Issues, Challenges and reforms in Higher education for knowledge society,
P.K. Bajpai
Invited talk delivered In” Workshop on the status of higher education in India, organized by Guru Ghasidas University, Bilaspur to commemorate the 120th birth celebration of Dr Maulana Abul Kalam Azad, the first education Minister of India (**2012**).
15. Dielectric relaxation in Lead Free Ferroelectric Relaxors: Recent Advances
P.K. Bajpai
Invited talk delivered In “National Conference on Ferroelectrics & Dielectrics NSFD-XVI, organized by ITER, Bhuvaneshwar, Dec. 17-20, **2012**.
16. DOPING INDUCED ORIENTATIONAL DYNAMICS OF IONS IN FERROELECTRIC CRYSTALS PROBED BY POLARIZED LASER RAMAN SPECTROSCOPY
P.K. Bajpai
Invited Talk delivered in National Conference on Advanced Electronic Materials, Jiwaji University, Gwalior. (**2012**)
17. Dielectric relaxation in perovskite based relaxor ferroelectrics: Current status and challenges
P.K. Bajpai
Invited talk delivered in ICMAT at IITM, Gwalior **2012**.
18. How to write research paper in science discipline
P. K. Bajpai
Invited talk delivered in short term course “How to write Research Papers and Project Proposals” organized by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 13th September to 15th September, **2013**.
19. Recent Advances in Nano structuring: Nano-synthesis of Semiconductors
Invited Talk delivered in “Short Term Course in Chemistry, organized by Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur, (**2015**).
20. Application of Ion beam in Chemistry – I
P. K. Bajpai
Refreshers course on Chemistry and Chemical Technology, organised by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 1st May to 21st May, 2015.
21. Application of Ion beam in Chemistry – II
P. K. Bajpai
Refreshers course on Chemistry and Chemical Technology, organised by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 1st May to 21st May, 2015.
22. Low energy particle Accelerators as an important tool for material modifications
P.K. Bajpai

Invited talk delivered at BITCON, national conference organized by the Department of Applied Physics, Bhilai Institute of Technology, Durg on 20th February, **2015**.

23. Probing ion-solid interactions in ferroelectric and dielectric materials using low energy ion Accelerators: Current status and future prospects
P.K. Bajpai
Invited Talk delivered in “18th National Seminar on Ferroelectrics & Dielectrics, organized by Manipur University, Imphal (**2015**).
24. Low Energy Particle Accelerators for Interdisciplinary Research: New Prospects
P.K. Bajpai
Invited talk delivered at “Innovative Centre for Biomedical Sciences” Bundelkhand University, Jhansi, on 20th January, **2015**.
25. Quality in Higher Education-I
P. K. Bajpai
14th Orientation Program, organised by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 11th May to 06th June, **2015**.
26. How to write a Good Research Paper-I
P. K. Bajpai
14th Orientation Program, organized by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 11th May to 06th June, **2015**.
27. Quality in Higher Education -II
P. K. Bajpai
15th Orientation Program, organized by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 15th June to 11th July, **2015**.
28. How to write a Good Research Paper-II
P. K. Bajpai
15th Orientation Program, organized by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 15th June to 11th July, **2015**.
29. Research Methodology in Pure & Applied Science
P. K. Bajpai
Refreshers course on Methodology in Social Science & Pure and Applied Sciences, organized by UGC-Human Resource Development Centre of Guru Ghasidas Vishwavidyalaya, 18th November to 09th December, **2015**.
30. Facilities for Materials modification Using Low Energy Ion Accelerators at NCAR, Bilaspur.
P.K. Bajpai
Workshop on the Use of Low Energy Ion Beams, organized as a part of 40th Year of Academic Activities of Institute of Physics, Bhubaneswar, November 7 - 9, **2015** at Institute of Physics, Bhubaneswar.
31. Low energy particle Accelerators as an important tool for material modifications
P.K. Bajpai

Invited Talk delivered in BITCON, 2015, A National Conference on Nanostructured Materials and their Characterization”, BIT, Durg, Feb, 21, 2015.

32. Designing nanostructures and the controlled material modifications using 3.0 MV Pelletron based Ion Beam facility at national centre for Accelerator based research at GGV, Bilaspur
P.K. Bajpai
Invited Talk delivered in “Innovations and product design” organized by Indian Institute of Information technology, Design and manufacturing, Jabalpur, 11-13 May, 2015.
33. Material Science Research Using Low Energy Ion Accelerator with specific reference to National Centre for Accelerator Based Research at Bilaspur
P.K. Bajpai, S.P. Patel, Tarkeshwar Trivedi, C. Mallik, Rakesh Kumar, Ranjit Dey
Invited Talk delivered by P.K. Bajpai at NIB **2015**, Agra.
- 34. Material Science Research Using 3.0 MV Pelletron Accelerator at National Centre for Accelerator Based Research at Bilaspur**
Invited talk delivered in “National Level Short Term Training Program on Medical and Industrial Applications of Radiation Dosimetry and Advances in Dust & Noise Control”, July 15-19, **2016**, organized by Department of Physics, National Institute of Technology, Raipur.
- 35. Basic Notions of Research Methodology and Scientific Methods: Understanding the scientific way of problem solving**
P.K. Bajpai
Invited Talk delivered in “One-week workshop on Research Methodology, July 5, **2016**, organized by Bilaspur University, Bilaspur.
36. Recent Advances in Material Science Research Using Low Energy Accelerators and facilities at 3.0 MV Pelletron Based National Centre for Accelerator Based Research At Bilaspur.
P.K. Bajpai
Invited Talk delivered at “National School cum Workshop in Accelerator Physics” March 15-18, **2016**, organized by Centre for Advanced Study in Physics, Punjab University, Chandigarh.
37. Role and relevance of interdisciplinary approach in enhancing skill level in Teaching and Research- I
P. K. Bajpai
16th Orientation Program, organized by UGC-Human Resource Development Centre, Bilaspur, 30th May to 25th June, **2016**. (Invited Talk by P.K. Bajpai).
38. Role and relevance of interdisciplinary approach in enhancing skill level in Teaching and Research- II
P. K. Bajpai
16th Orientation Program, organized by UGC-Human Resource Development Centre, Bilaspur, 30th May to 25th June, **2016**. (Invited Talk by P.K. Bajpai).
39. Material Science Research Using 3.0 MV Pelletron Accelerator at National Centre for Accelerator Based Research at Bilaspur.

P.K. Bajpai,
National Workshop, NIT, Raipur, March 17, 2016.

40. Research methodology for Sciences & Applied Sciences: New paradigm with post positivism approach
P.K. Bajpai
Invited Talk delivered in "Short term course on Research Methodology".
Organized by Human Resource Development Centre, GGV, Bilaspur, June 22, 2017. 2016.
41. Dissemination of Research: How to write good research paper
P.K. Bajpai
Invited Talk delivered in "Short term course on Research Methodology".
Organized by Human Resource Development Centre, GGV, Bilaspur, June 22, 2017. 2016.
42. Synergic effect of low energy ion beams on structural and phonon properties of ferroelectrics and multiferroics"
P.K. Bajpai
in National Conference on **Recent Trends in Condensed Matter Physics (RTCMP 2017)** from 31stOctober to 3rdNovember 2017, organized by Bose Institute, Kolkata As a part of centenary celebration and to commemorate its 100th birth anniversary.
43. **Recent Advances in the Synthesis, Characterization and biological applications of Chalcogenide Nanoparticles"**
P.K. Bajpai
in National conference on **Plants and Microbial products: progress, potentials and IPR issues (NCPMP-2018)**' organized by Botany Department, Guru Ghasidas Vishwavidyalaya (A central University) Bilaspur (Chhattisgarh), February **07-09**, 2018.
44. **Tools and techniques in earth science study-I**
P.K. Bajpai
In the Refresher Course on Earth Science (September 04-23, 2017) on 07.09.2017 organized by UGC-Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya, Bilaspur.
45. **Tools and techniques in earth science study-II**
P.K. Bajpai
In the Refresher Course on Earth Science (September 04-23, 2017) on 07.09.2017 organized by UGC-Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya, Bilaspur.
46. **Science and technology intervention in tribal development: issues and challenges**
P.K. Bajpai, invited Talk as Valedictory Speaker
In" National seminar on "Role of Science and technological interventions for Tribal Development", Department of Education, Indira Gandhi National Tribal University Amarkantak (MP).
47. **Low energy ion beams for chemical applications**
P.K. Bajpai

Invited talk delivered in In” 96th DAE-BRNS Workshop on Radiochemistry and applications of radioisotopes, organized by Indian Association of Nuclear Chemists and Allied Scientists, BARC and Guru Ghasidas Vishwavidyalaya, Bilaspur, 7-12, August, **2017**.

48. Role And Relevance Of Interdisciplinary Approach In Enhancing Skill Level In Teaching & Research-I

P.K. Bajpai

Invited talk delivered In “17th Orientation Program organized by HRD Centre, Guru Ghasidas Vishwavidyalaya, Bilaspur, January 17, **2017**.

49. Role And Relevance Of Interdisciplinary Approach In Enhancing Skill Level In Teaching & Research-I

P.K. Bajpai

Invited talk delivered In “17th Orientation Program organized by HRD Centre, Guru Ghasidas Vishwavidyalaya, Bilaspur, January 17, **2017**.

50. **Ekatm Manav Darshan- An alternative scientific approach for national development**

P.K. Bajpai

In “ The usefulness of the thoughts of Pt. Deen Dayal Upadhyay in the present context, National Research Seminar organized by Govt. Digvijay P.G. College, Rajnandgaon. Dec. 20-21, 2018.

51. **Ekatm Manav Vad- A Scientific approach for sustainable and inclusive development**

P.K. Bajpai, Invited Talk

Invited talk delivered In “Orientation Program organized by HRD Centre, Guru Ghasidas Vishwavidyalaya, Bilaspur, 20th February, 2018.

52. **Governance model and Ekatm Manav Vad- Need to look for sustainable model for development using Indian Model of democracy**

P.K. Bajpai, Invited Talk

In “Orientation Program organized by HRD Centre, Guru Ghasidas Vishwavidyalaya, Bilaspur, 20th February, 2018

53. Energy demands for sustainable development: Role of Nuclear energy and current perspectives

P.K. Bajpai

Lecture delivered in Science camp. under the INSPIRE programme of Department of Science and Technology, GOI from 9 July, 2018, Indira Gandhi National Tribal University, Amarkantak, MP.

54. Basic elements of Research Methodology in Social Science, Sciences & Applied Sciences- Part-I Introduction: the Essence of Research

P.K. Bajpai

In “Special Summer School (Refresher Course on Research Methodology)- (Interdisciplinary Refresher Course), 16.06.2018-06.07.2018, organized by HRDC, G.G. Vishwavidyalaya, Bilaspur, 18.06.2018.

55. Basic elements of Research Methodology in Social Science, Sciences & Applied Sciences- **Part-II Research Methodology: Sciences & Applied Sciences**

P.K. Bajpai

In “Special Summer School (Refresher Course on Research Methodology)- (Interdisciplinary Refresher Course), 16.06.2018-06.07.2018, organized by HRDC, G.G. Vishwavidyalaya, Bilaspur, 18.06.2018.

56. Strategies for Size, Shape and Morphology Control in Chalcogenide Nanoparticles for Catalytic and Biological applications

Invited talk delivered in International conference CONIAPS-XXII held during 13-15 April, 2018 at Dr. Ram Manohar Lohia Avadh University, Faizabad (Ayodhya), U.P., India.

57. Semiconductor nanotechnology: Synthesis, Characterization and applications of Chalcogenide Nanoparticles

P.K. Bajpai

Invited Talk Delivered in Refresher course for Engineering & Technology, organized by HRDC, Guru Ghasidas Vishwavidyalaya, Bilaspur, July, 02, 2019.

