

CURRICULUM –VITAE

Dr. Kamni Pathania
Professor
Department of Physics and Astronomical Sciences
Central University of Jammu
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Academic Qualification

Degree	Year	Affiliation
Ph. D. Physics	2005	Jammu University, Jammu 2005 Title: Investigation of the crystal structure and molecular packing interactions in some organic compounds of medicinal importance
M. Phil. Physics	2002	Jammu University, Jammu, 2002 Title: The role of hydrogen bonding in organic molecular assemblies: A case study of some steroids
M. Sc. Physics	2000	Jammu University
B. Sc. Non-Medical	1998	Jammu University

Professional Recognition Fellowship and Certificate received

S. No.	Name of Award	Awarding Agency	Year
1.	Research Associate	Indian Council of Medical Research	2006
2.	Ph.D. Research Fellowship	UGC	2003-2005
3.	Merit Certificate for best oral presentation	International Conference on Modern Functional materials (ICMFM 2021), Sri Sai Ram Engineering College, Chennai	24-25 th June 2021.
4.	Letter of Appreciation	Govt. of Jammu and Kashmir, Information Technology Department, Civil Secretariat, Jammu.	26-27 th Nov., 2022.

Teaching Experience

1. Govt. College for Women, Parade, Jammu w.e.f 19-8-2004 to 31-3-2005
2. GGM Science College, Canal Road, Jammu w.e.f 18-7-2005 to 16-05-2006
3. Shri Mata Vaishno Devi University, 3rd Oct., 2006 to 21st January 2025.
4. Central University of Jammu, 22nd January 2025 onwards.

PG Projects Supervised : Thirty one

Area of Specialization:

- Materials Science
- Single crystal XRD
- Synthesis and Characterization of Nanomaterials

Courses Taught:

- Condensed Matter Physics
- X-ray Crystallography
- Physics of Nanomaterials
- Materials Science
- Elements of Thermodynamics
- Statistical Mechanics
- Atmospheric Physics

Research Projects Undertaken

S. No.	Role	Title and Year	Funding Agency	Status
1.	Principal Investigator	Biological-Activity-Predictions, X-ray Structure Analysis and Molecular Interactions in Some Organic Compounds of Medicinal Importance (2015-2018).	University Grants Commission (UGC)	Completed
2.	Co-Coordinator	Dr. C V Raman Chair in Physical Sciences 2022 at Shri Mata Vaishno Devi University.	Higher Education Department (HED JK)	Ongoing
3.	Principal Investigator	Synthesis, Spectroscopic and Microscopic Studies of Doped Alkali-Alkaline Hybrid Vanadates (2022-2025)	UGC-DAE CSR Indore	Ongoing

Ph.D. Guidance

S. No.	Name	Title of Thesis	Status
1.	Mr. Vikram Dev Singh	X-ray Crystallographic Characterization, Activity and Molecular Interactions of Some Organic Compounds	Awarded
2.	Ms. Preasha Rajput	Synthesis, Structural and Spectral Studies of Rare Earth /Transition Metal Doped Alkaline Earth Zincates	Awarded
3.	Ms. Parul Sharma	Synthesis, Structural and Spectral Studies of Doped Alkali-Alkaline Hybrid Vanadates	Awarded
4.	Ms. Neha Lalotra	Synthesis and Characterization of Some Inorganic Nanophosphors Containing a Tetrahedrally Coordinated Functional Group	Thesis Submitted
5.	Ms. Pallavi Jamwal	Synthesis, Spectroscopic and Microscopic Studies of Some Selected Rare Earth and/or Transition Metal Ion Doped Inorganic Nanophosphors	In Progress
6.	Mr. Manav Sharma	Synthesis and Characterization of Some Selected Transition and/or Rare-Earth Metal Ion Doped Spinel Nano-Ferrites	In Progress
7.	Mr. Rohit Raina	Synthesis, characterization and luminescence studies of some rare earth/transition metal ions doped borates	In Progress

Affiliations/Subscriptions

S. No.	Association	Membership
1.	Indian Crystallographic Association(ICA)	Life Member (LM 279)
2.	The Indian Association of Physics Teachers(IAPT)	Life Member (9465 L5818)
3.	Hindi Vigyan Sahitya Parishad, BARC, Mumbai	Life Member (LMO/2012/06)
4.	Vijnana Bharti	Life Member ID-20019)

Membership of Academic and Administrative Committees

1. Head, School of Physics, SMVDU.
2. Chairperson, Gender Sensitization Committee Against Sexual Harassment (GSCASH), SMVDU.
3. Vice-President, Board of Cultural Activities (BCA), SMVDU.
4. Joint Warden, Vaishnavi Girls Hostel, SMVDU.
5. Member, Quality Circle for Institutional Research and development unit (IRDU), SMVDU.
6. Member, Directorate of Quality Assurance (DQA), SMVDU.
7. Member, Quality Circle for Research and Development, SMVDU.
8. Member, Institution Innovation Council (IIC), SMVDU.
9. Member, Academic Affairs, DQA, SMVDU.
10. Member, “Nano-Technology Cell” of SMVD University.
11. Member, Anti-Ragging Squad, SMVDU
12. Member, Flying Squad, SMVDU
13. Member, University Prospectus Design and Print Committee, SMVDU
14. External Member, Board of Studies, Department of Physics, Govt. College for Women, Parade.
15. External Subject Expert, Research Advisory Committee (RAC), Department of Physics and Astronomical Sciences, Central University of Jammu.
16. Member, Advisory Committee, GDC Vijaypur, Samba, Jammu.
17. Member Secretary, Board of Studies (BoS), School of Physics, SMVDU.
18. Member Secretary, School Purchase Committee (SPC), School of Physics, SMVDU
19. Member Secretary, Academic Affairs Committee, School of Physics, SMVDU.
20. Member, Department Research Committee (DRC), School of Physics, SMVDU
21. Member, Tender Opening Committee, School of Physics, SMVDU
22. Member, Student Faculty Committee, School of Physics, SMVDU
23. Mentor, Mentor and Guardianship Committee, School of Physics, SMVDU
24. Member, Admission Committee, M.Sc. Physics program, SMVDU.
25. Member, Convocation Committee, SMVDU.
26. Member, Admission Committee, Integrated program in Physics, SoP, SMVDU.
27. Member, Organizing Committee, 20th Foundation Day SMVDU, 19th August, 2023, SMVDU.
28. Member, SRC, School of Philosophy and Culture, SMVDU.
29. Member, Internal Complaints Committee (ICC), 2024-2027, SMVDU.

Membership of Selection Committees

1. Vice- Chancellor’s nominee in the JRF Selection committee, SOP, SMVDU, 2011.
2. Subject Expert in Project Fellow Selection committee, SOP, SMVDU, 2015.
3. Member, Assessment Committee for upgradation of JRF to SRF, Department of Physics, Jammu University, 2023.

Refresher Courses/FDP's/ Workshops Attended

S. No.	Course	Date
1	Orientation Course UGC's Academic Staff College, Jammu University,	December, 2009, ASC, Jammu University
2	Refresher Course in Physics UGC's Academic Staff College, Jammu University,	March, 2011, ASC, Jammu University
3	AICTE approved Staff Development Program on "Introduction to MATLAB and Matrox Imaging Library MIL with emphasis on hands on practice",	December, 2011, SMVDU
4	Science Academies [IASc-NASI-INSa] 52 nd two weeks Refresher Course on Experimental Physics, Shri Mata Vaishno Devi University	8-24 th Oct., 2013, SMVDU
5	TEQUIP-III sponsored FDP on "Sustainable Design and Manufacturing (SDM-2018)"	12-16 Feb., SMVDU, 2018
6	FDP on "Effective Teaching-Learning in Higher Education",	04-06 July, 2018, SMVDU
7	Two week AICTE approved FDP on "Foundation Program in ICT for Education" SMVDU	March 8- April 12, 2018, IIT Bombay.
8	Two week AICTE approved FDP on "Pedagogy for online and blended Teaching Learning Process" SMVDU.	3-30 May, 2018, IIT Bombay
9	TEQUIP-III sponsored FDP on "Best manufacturing Practices in industries", SME, SMVDU in collaboration with MED JNTUH, Hyderabad,	17-21 Dec., 2018, SMVDU and JNTUH, Hyderabad,
10	One week Workshop on "Pedagogy" under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMNMTT) scheme of MHRD, GOI, Faculty Development Centre, SMVDU	11-15 March, 2019, FDC, SMVDU
11	TEQUIP-III sponsored one week Workshop on "Role of Soft Skills in Effective Classroom Management"	19-23 rd August, 2019, SMVDU
12	E-STC on "Material Characterization Techniques"	24-28 th August 2020, NIT, Jalandhar.

13	Online Workshop on “Material Characterization Techniques” on 20-22 nd , July 2020.	Chitkara University Research and Innovation Network (CURIN), Chitkara University, Punjab.
14	FDP on Chemistry in Medicine and Materials Science	21-25 Sept., 2020, NIT Andhra Pradesh
15	TEQUIP-III sponsored two week International Winter School on Fluid dynamics, heat Transfer and Applications	18-29 January, 2021, NIT Uttarakhand.
16	AICTE-ISTE sponsored Induction/Refresher program on “Sustainable Product Design and Manufacturing (Phase II)”	April 15-21, 2021, SMVDU
17	Indo-Australia Workshop on Nano and Biomaterials: Synthesis and Applications	21-25 th June, 2021, National Institute of Technology NIT Tiruchirappalli.
18	Recent Research Advances in Materials: Water and waste water treatment	2-7 th August 2021, Department of Sciences and Humanities, Bharat institute of Engineering and Technology, Hyderabad, Telengana.
19	Indo Isreal symposium on Women in STEM-2022	29-30 March, 2022 Department of Applied Sciences Northcap University, India and Department of Chemical Engineering, Ariel University, Israel
20	One week short term course on “ Emerging trends and modeling in advanced functional Materials and Devices	28 March-01 April, 2022 Dr. B R Ambedkar NIT, Jalandhar.
21.	FDP on “Developing Leadership Skills among Future Academic Leaders”	20-24 February, 2023 UGC HRDC, Jammu University
22.	Innovation Ambassador Training Program	Ministry of Education’s Innovation Cell and AICTE during the IIC calendar year 2022-2023.
23	Materials Characterization Techniques	AICTE recognized FDP 04.12.2023-08-12.2024 by NITTTR Chandigarh

University Events Organized

S.No.	Title of Conference/Seminar etc.	Date(s) of the event	Organized by	Whether International/ National	Organized as convener / co-convener
1.	25th National Conference on e-Governance held in UT of J & K	25-26 th Nov., 2022	Govt. of India	National	Chairman of the cultural committee
2.	Conference-Critical appraisal and Evaluation of Dogri Novel	18-19 th Nov., 2022	Sahitya Akademi, New Delhi and SMVDU	National	Co-Convener
3.	Educational Trip , Air Force Station, Udhampur	12 th Oct., 2022	Headquarters of Air Officer Commanding JK&L	National	Coordinator
4.	Trikuta Natya Utsav Dogri Hindi Drama Festival	13-21 st March, 2023 SMVDU	Jammu Kashmir Academy of Art Culture and Languages (JKAACL) and SMVDU	National	Coordinator
5.	Heritage Walk , Manwal	3 rd March, 2023	Department of Excise and SMVDU	State	Coordinator
6.	The Tawi Festival of Art and Ideas, 2023	26 th Feb., 2023	Amar Mahal Museum and library, Jammu	National	Coordinator
7.	Surinsar Mansar Festival	17-18 th Sept., 2022	Department of Tourism	State	Coordinator
8.	World Heritage Day	18 th April, 2023	Department of Excise and SMVDU	State	Coordinator

9.	Guest Lecture by Prof. Prabhakar Singh, IIT BHU on “Stable Pervoskite Photovoltaics”	1 st Sept., 2022	SMVDU	University	Coordinator
10.	One day workshop on International women’s Day on the theme Gender Equity: Theory and Praxis	8 th March 2021	SMVDU	University	Organizing Secretary
11.	One day workshop on “Gender Champions for Gender Sensitization and Equality”	5 th March, 2020	GSCASH SMVDU	University	Convener
12.	International Women’s Day ,	March, 2019	GSCASH SMVDU	University	Coordinator
13.	National Conference on Emerging Trends in Material science	Feb., 2018	SMVDU	National	Convener
14.	National Conference on Recent Advances on Material science and Spectroscopy	Feb., 2017	SMVDU	National	Co-Convener
15.	Guest Lecture on Women and Law by Mrs. Sonia Gupta, Registrar Judicial, J & K, High court	28 th January, 2020	GSCASH SMVDU	University	Coordinator
16.	National Workshop on “Product Design and Development: Current Trends”	31 st August, 2023	IIC SMVDU	National	Organizing Secretary
17.	ICT based One Week Training Programme on “Materials Characterization Techniques”	4 th -8 th Decem ber, 2023	NITTTR Chandigarh and SOP SMVDU	National	Co-Coordinator
18.	National Science Day 2024	29.02.2024	IIC, FoS and JAKEDA	National	Coordinator
19.	Resurgence 2024-A Cultural and Literary Festival	26-29 th March , 2024	SMVDU	University	Coordinator

Publications

1.Neha Lalotra and **Kamni**

Combustion Synthesis and Influence of Dy^{3+} ions on Structural and Photometric Attributes of Olivine-type LiMgPO_4 Nanophosphors for Illumination Applications

Journal of Fluorescence (2024)

<https://doi.org/10.1007/s10895-024-04043-7>

2.Manav Sharma , Aamir Ahmed , Anoop Singh , Neha Lalotra , Aman Dubey , Sandeep Arya , **Kamni**
Combustion synthesis, structural and electrochemical studies on the dysprosium-doped cobalt ferrite nanoparticles to investigate its performance as a supercapacitor electrode

Materials Chemistry and Physics 324 (2024) 129676

<https://doi.org/10.1016/j.matchemphys.2024.129676>

3.Neha Lalotra, Manav Sharma and **Kamni**

Facile synthesis and effect of samarium doping on structural and optical properties of barium strontium orthosilicate nanophosphors with potential implications in optoelectronic and display optimization

Journal of Materials Science Volume 59, pages 12630–12647, (2024)

<https://doi.org/10.1007/s10853-024-09924-7>

4.Pallavi Jamwal, Neha Lalotra, Parul Sharma and **Kamni**

Protocol for Dy^{3+} modified NaCaVO_4 Nanophosphors in Solid-State Lighting Applications: Structural and Luminescence Investigations

Bulletin of Materials Science 47 (2024) 186

<https://doi.org/10.1007/s12034-024-03229-w>

5.Neha Lalotra, Priya Kaith and **Kamni**

Microscopic and Luminescence Characteristics of Dy^{3+} Doped KsrVO_4 Nanophosphors as Energy Efficient Photoluminescent Material with Potential Application In White Light Emitting Diodes

Environmental Science and Pollution Research Vol 30, 108928–108945, (2023)

<https://doi.org/10.1007/s11356-023-29948-x>

6.Neha Lalotra, Parul Sharma, Preasha Rajput and **Kamni**

Composition-dependent structural, morphological and luminescent characteristics of Sm^{3+} doped $\text{LiZr}_2(\text{PO}_4)_3$ prepared *via* combustion synthesis route

Bulletin of Materials Science (2023) 46:96

<https://doi.org/10.1007/s12034-023-02934-2>

7.Pankaj Biswas, Vinay Kumar, and **Kamni**

$\text{KsrVO}_4:\text{Tb}^{3+}$ -A potential green-emitting nanophosphor candidate for white LEDs

Journal of Material Science: Material in Electronics (2023) 34:149

<https://doi.org/10.1007/s10854-022-09633-4>

8.Parul Sharma, Prabhakar Singh, Indu Bhushan and **Kamni**

Combustion synthesis of NaSrVO₄: Nd³⁺ nanophosphors with enhanced NIR 1.056 μm luminescent performance for solid-state laser and bioimaging applications

Journal of Materials Science (2022) 57:17219–17233

<https://doi.org/10.1007/s10853-022-07746-z>

9.Parul Sharma, Prabhakar Singh and **Kamni**

Study of synthesis mechanism, structural, optical and luminescent properties of bluish-violet rare earth doped K₂SrVO₄: Nd³⁺ nano powders

Materials Science and Engineering B 276 (2022) 115564

<https://doi.org/10.1016/j.mseb.2021.115564>

10.Malvika Mehta, Mahima Sharma, **Kamni Pathania**, Pabitra Kumar Jena & Indu Bhushan

Degradation of synthetic dyes using nanoparticles: A mini-review

Environmental Science and Pollution Research (2021) 28:49434–49446

<https://doi.org/10.1007/s11356-021-15470-5>

11.Parul Sharma, Pankaj Biswas, Prabhakar Singh and **Kamni**

Effect of Transition Metal Mn²⁺ ion Doping on the Structural, Spectral and Photoluminescent Properties of NaSrVO₄ Prepared by Combustion Synthesis

Journal of Alloys and Compounds 872 (2021) 159626

<https://doi.org/10.1016/j.jallcom.2021.159626>

12. Preasha Rajput, Pargam Vashishtha, Govind Gupta, **Kamni**

A comparative study on structural and optical properties of ZnO nanoparticles prepared by three different synthesis methods

Materials Today: Proceedings 43 (2021) 3856-3861

<https://doi.org/10.1016/j.matpr.2020.12.1177>

13.Preasha Rajput, Pragati Singh, Pargam Vashishtha and **Kamni**

Investigation on Structural, Morphological and Luminescent Properties of Mg²⁺ Doped ZnO Nanophosphors Prepared by Simple Combustion Synthesis

Bulletin of Materials Science (2021)44:137

<https://doi.org/10.1007/s12034-021-02438-x>

14.Parul Sharma, Pragati Singh and **Kamni**

Spectroscopic and Microscopic Properties of K₂SrVO₄: Mn²⁺ Synthesized by Low-Cost Combustion Method

Physica B: Physics of Condensed Matter Vol. 602, February (2021), 412500.

<https://doi.org/10.1016/j.physb.2020.412500>

15.V D Singh, A Uppal, **Kamni**, Y Khajuria, R Srinivasan, B Narayana, B K Sarojini, Sumati Anthal & Rajni Kant

Synthesis, FT-IR, UV-VIS, DFT studies and SCXRD structure of 1-(tert-butyl) 3-ethyl-3-(hydroxy(thiophen-2-yl)methyl)piperidine-1,3-dicarboxylate

Indian Journal of Chemistry-B Vol. 59B, July (2020), pp. 1043-1056

16. Preasha Rajput, Pargam Vashishtha, Govind Gupta, Pragati Singh, **Kamni**
Synthesis, characterization and photoluminescence of Dy³⁺-doped MgZnO nanophosphors
Applied Physics A (2020) 126:593
<https://doi.org/10.1007/s00339-020-03783-0>

17. Pankaj Biswas, Vinay Kumar, **Kamni**
The structural and spectral study of LiSrVO₄:Tb³⁺ phosphor for UV-shifted imaging devices
Materials Today: Proceedings 28(2020)1018-1023
<https://doi.org/10.1016/j.matpr.2019.12.342>

18. Preasha Rajput, Pankaj Biswas, Vivek K. Singh, **Kamni**
Structural and spectral studies of MgZnO:Cr³⁺ nanophosphors prepared by combustion synthesis
Applied Physics A (2019) 125:793
<https://doi.org/10.1007/s00339-019-3069-8>

19. Anshul Uppal, **Kamni**, Yugal Khajuria
Spectroscopic, thermodynamic properties and Fukui Function analysis of (4Z)-2-phenyl-1-
{(E)-[4-propan-2-yl]benzylidene}amino}-4- [(thiophen-2-yl)methylidene]-1H-imidazol-
5(4H)-one
Journal of Molecular Structure 1179 (2019) 76e85

20. Sumati Anthal, Vikram. D. Singh, N. R. Desai, D. B. Arunakumar, cS. Sreenivasa, **Kamni**
and Rajni Kant
tert-Butyl 4-{3-[6-(4-methoxyphenyl)-2-methylpyrimidin-4-yl]quinolin-2-yl}piperazine-1-
carboxylate
IUCrData (2018). 3, x180427
<https://doi.org/10.1107/S2414314618004273>.

21. Vikram. D. Singh, Sumati Anthal, N. R. Desai, D. B. Arunakumar, S. Sreenivasa, **Kamni**
and Rajni Kant
3-[6-(4-Methoxyphenyl)-2-methylpyrimidin-4-yl]-2-(4-methylpiperazin-1-yl)quinoline
IUCrData (2018). 3, x180030.

22. Vikram D. Singh, Vinutha V. Salian, B. Narayana, B. K. Sarojini, **Kamni**, Sumati
Anthal, and Rajni Kant
Synthesis and Crystal Structure of a Chalcone Derivative
Crystallography Reports, 2017, Vol. 62, No. 7, pp. 1157–1159.

23. Vikram D. Singh, **Kamni**, K. N. Subbulakshmi, B. Narayana, B. K. Sarojini, Sumati Anthal
and Rajni Kant
(4Z)-1-[(E)-(4-Methoxybenzylidene) amino]-2-phenyl-4-[(thiophen-2-yl)methylidene]-
1Himidazol-5(4H)-one
IUCrData (2016). 1, x160566

<http://dx.doi.org/10.1107/S2414314616005666>

24. **Kamni**, Vikram D. Singh, K. N. Subbulakshmi, B. Narayana, B. K. Sarojini, Sumati Anthal and Rajni Kant
(4Z)-2-Phenyl-1-[(E)-[4-(propan-2-yl)benzylidene]-amino]-4-[(thiophen-2-yl)methylidene]-1H-imidazol-5(4H)-one
IUCrData (2016). 1, x160587
<http://dx.doi.org/10.1107/S2414314616005873>
25. Vikram Dev Singh, **Kamni**, Musarat Amina, Nawal Al-Musayeib, Sumati Anthal and Rajni Kant
Crystal structure of 15,16-epoxy-7 β ,9 α -dihydroxylabdane-13(16),14-dien-6-one
Acta Cryst. (2015). E71, o483–o484
26. **Kamni**, B. K. Sarojini, P. S. Manjula, B. Narayana, Sumati Anthal and Rajni Kant
Crystal structure of 4-[(E)-(4-chlorobenzylidene) amino]-3-(2-methylbenzyl)-1H-1,2,4-triazole-5(4H)-thione
Acta Cryst. (2014) E70, o1015–o1016
27. Rajnikant, Sabeta Kohli, M. B. Deshmukh and **Kamni**
Synthesis and X-Ray Crystallographic Analysis of 2-(2, 4-Dimethyl Pyrrolyl) Benzothiazole
Journal of Chemical Crystallography, 40(2010) 765-768
28. Rajnikant, Lovely Sarmal, **Kamni**, Dinesh and M.B Deshmukh
Synthesis and X-ray structure of acetoxy-4-methyl phenyl methyl acetate
Journal of Chemical Crystallography 39 (2009) 835-37
29. Rajnikant, L.Sarmal, Sabeta Kohli, **Kamni**, Mehtab Praveen.
3-Anilinothiocarbonyl-4-hydroxychromen-2-one
Acta Crystallographica Section E65 (2009) o938
30. Rajni Kant, **Kamni**, B. Narayana, K. Veena and H. S. Yathirajan
(E)-3-(4-Bromophenyl)-1-(3,4-dichlorophenyl)prop-2-en-1-one
Acta Crystallographica E [2009]. E65, o836
31. Rajnikant, Dinesh, **Kamni**, Bandhan Sharma, S.Lotus and K.Gupta
A comparative crystallographic analysis of the X-ray determined structure of three cholest-based steroidal molecules
Indian Journal of Chemistry-B, Vol.46B [2007] 1855-1859
32. Rajnikant, Dinesh, M.B. Deshmukh and **Kamni**
Synthesis, X-ray structure and study of X-H...A interactions in N,N'-bis-(4-methoxybenzylidene)-hydrazine
Indian Journal of Pure and Applied Physics, Vol.44[2006]602-605

33. Rajnikant, Dinesh and **Kamni**
The weak C-H...O Hydrogen bond in alkaloids: A case study
Bulletin of Materials Science, Vol. 28(3) [2005] 187-198

34. Rajnikant, Dinesh, **Kamni** and M.B. Deshmukh
Molecular and crystal structure of 4-ethoxycarbonyloxy-1-oxo-1H-Phthalazine-2-carboxylic acid ethyl ester
Crystallography Reports, Vol.51(4) [2006] 655-658

35. Rajnikant, Dinesh, **Kamni**, D.H. Purohit, H.S. Joshi, B.B. Parekh, M.J. Joshi and K. Priyanka
Analysis of N-H...O and O-H...O hydrogen bonding in 4-(2-hydroxy- phenylamino)pent – 3-en-2-one
Heterocyclic Communications, Vol. 12 [2006] 129-134

36. Rajnikant, Dinesh, M.B. Deshmukh and **Kamni**
Synthesis, X-ray structure and N-H...O interactions in 1,3-diphenyl urea
Bulletin of Materials Science, Vol. 29(3) [2006] 1-4

37. Rajnikant, Dinesh, M.B. Deshmukh, S.S Patil, S R Desai and **Kamni**
Crystallography investigations of benzothiazol-2-yl-hydrazine
Journal of Chemical Crystallography, Vol.34(4) [2005] 293-296

38. Rajnikant, Dinesh, **Kamni**, M.B. Deshmukh, Savita Dhongade Desai, B.S. Shinde and Priyanka Kanwal
Synthesis and X-ray structure analysis, structure-activity relationship of benzoic acid [1-(6-methyl-2,4-dioxo-3,4-dihydro-2H-pyran-3-yl)-eth-(E)-ylidene]-hydrazide with a water molecule (C₁₅H₁₄N₂O₄.H₂O)
Journal of Chemical Crystallography, Vol.35(5) [2005] 357-360

39. Rajnikant, Dinesh, **Kamni** and Bandhan Sharma
Crystallographic analysis of 1H, 4H-tetrahydro-8-methyl-quinolizino (9,9a,1gh coumarin
Indian Journal of Pure and Applied Physics, Vol.42 [2004] 338-340

40. Rajnikant, Dinesh, M.B. Deshmukh, Savita Dhongade and **Kamni**
Synthesis and X-ray structure analysis of 2-acetylamino-benzoic acid”
Journal of Chemical Crystallography, Vol.34(7) [2004] 471-475
ISSN: 1074-1542 (print); 1572-8854 (web)

41. Rajnikant, Dinesh, M.B. Deshmukh and **Kamni**
2,6-Dimethylquinolin-4-1H-one
Acta Cryst. E., Vol E59 [2003] o1768-o1769
<http://dx.doi.org/10.1107/S1600536803023249>

42. Preasha Rajput, Parul Sharma, A Gupta, S Sharma, Pankaj Biswas and **Kamni**
Synthesis, Structural and spectral studies of MgZnO:Mn^{2+} nanoparticles
AIP Conference Proceedings (2020) <https://doi.org/10.1063/5.0001414>
43. Anshul Uppal, **Kamni**, and Yugal Khajuria
Quantum chemical investigations on the molecular structure, FTIR, UV-Vis and HOMOLUMO analysis of 15-16-epoxy-7b, 9a dihydroxylabdane 13(16), 14-dien-6-one
AIP Conference Proceedings 1953, 140042 (2018); doi: 10.1063/1.5033217
44. Preasha Rajput, Pallavi Sharma, Pankaj Biswas, and **Kamni**
Structural and spectral properties of $\text{MgZnO}_2\text{:Sm}^{3+}$ phosphor
AIP Conference Proceedings 1953, 030170 (2018); doi: 10.1063/1.5032505
45. Yugal Khajuria, Surbhi Sharma, Ujval Gupta, Satishwer Singh, and **Kamni**
Computational Studies on Molecular Structure and Vibrational Spectra of an Organic Molecule 2-(2,4-Dimethyl Pyrrolyl) Benzothiazole Using Density Functional Theory
Materials Focus Vol. 4, 338–345, 2015 ISSN: 2169-4303
46. Yugal Khajuria, Meera Mahajan, Ujval Gupta, Satishwer Singh, and **Kamni**
Computational Studies on Molecular Structure and Vibrational Spectra of an Organic Molecule 2-Acetylamino-Benzoic Acid Using Density Functional Theory
Materials Focus Vol. 4, 385–391, 2015 ISSN: 2169-4303
47. Vikram D. Singh, Vinutha V Salian, B. Narayana, B. K. Sarojini, **Kamni**, Sumati Anthal, Rajni Kant
Synthesis and Crystal Structure of (2E)-1-(Anthracen-9-yl)-3- (3,4 dichlorophenyl)prop-2-en-1-one
Journal of Applied Chemistry (IOSR-JAC)
Volume 10, Issue 9 Ver. I (September. 2017), PP 53-57
48. Palvi Gupta and **Kamni**
Biological activity predictions and hydrogen bonding analysis in quinolines
International Journal of Modern Physics: CS, Vol.22 (2013) 603-611.
49. Rajnikant, Dinesh, **Kamni** and Dalbir Singh
Biphenyls: their Possible importance, single crystal growth, investigation of polymorphism and three-dimensional X-ray structure determination
Proc. Nat. Con. On Tech. Important Crystals, Macmillan, [2006], P-29 India
50. Rajnikant, Dinesh, **Kamni** and Nusrat Aziz
Comparative Crystallography of some steroids and role of hydrogen bonding
Proc. Nat. Con. On Tech. Important Crystals, Macmillan, [2006], P-315. India
51. Rajnikant, V. K. Gupta, Dinesh, **Kamni**
The role of hydrogen bonding in organic molecular assemblies: A case study of some steroids
Asian Journal of Physics, Vol. 12(1) [2003] 85-91

e-Resources Developed

S. No.	Title of e-Resource	Author's Name	Publisher	Year of Publication
1	A Scilab Textbook Companion for Solid State Physics: Structure And Properties of Materials by M. A. Wahab	Pankaj Biswas and Kamni	Funded by a grant from the National Mission on Education through ICT, http://spoken-tutorial.org/NMEICT-Intro . This Textbook Companion and Scilab codes written in it can be downloaded from the "Textbook Companion Project" section at the website http://scilab.in .	22 nd January, 2013
2	A Scilab Textbook Companion for Atomic And Nuclear Physics by N. Subrahmanyam, Brij Lal, Jivan Seshan	Palvi Gupta and Kamni	Funded by a grant from the National Mission on Education through ICT, http://spoken-tutorial.org/NMEICT-Intro . This Textbook Companion and Scilab codes written in it can be downloaded from the "Textbook Companion Project" section at the website http://scilab.in .	10 th August, 2013
3	A Scilab Textbook Companion for Solid State Physics- Properties and Applications by R. Asokamani	Pankaj Biswas and Kamni	Funded by a grant from the National Mission on Education through ICT, http://spoken-tutorial.org/NMEICT-Intro . This Textbook Companion and Scilab codes written in it can be downloaded from the "Textbook Companion Project" section at the website http://scilab.in .	20 th January, 2014
4	Scilab Textbook Companion for The Fundamentals of Engineering Physics by P. S. Khare and A. Swarup by	Ranjeev Salathia, and Kamni	Funded by a grant from the National Mission on Education through ICT, http://spoken-tutorial.org/NMEICT-Intro . This Textbook Companion and Scilab codes written in it can be downloaded from the "Textbook Companion	21 st June, 2014

			Project” section at the website http://scilab.in .	
5	Scilab Textbook Companion for Engineering Physics by D. C. Ghosh, N. C. Ghosh and P. K. Haldar1	Pankaj Biswas and Kamni	Funded by a grant from the National Mission on Education through ICT, http://spoken-tutorial.org/NMEICT-Intro . This Textbook Companion and Scilab codes written in it can be downloaded from the “Textbook Companion Project” section at the website http://scilab.in .	September 23, 2014

Conferences/Seminars/ Workshops Attended

S. No.	Conference/ Seminar/ Workshop	Date
1	31 st National Seminar on Crystallography	BARC, Mumbai, June 19-22 nd , 2001
2	32 nd National Seminar on Crystallography	Jammu University, Oct. 24-26 th , 2002
3	One day NSC Acquaintance Programme	Jammu University, May 21 st , 2004
4	Seminar on Physics of Materials	Jammu University, Nov. 25-26 th , 2004
5	National Seminar on Recent Advances in Materials Science	Kurukshetra University Sept. 27-29 th , 2006
6	National Conference on Advanced Technologically Important Materials	Delhi University Oct. 12-14 nd , 2006
7	36 th National Seminar on Crystallography	Madras University Jan. 22-24 th , 2007
8	37 th National Seminar on Crystallography	Jadavpur University, Kolkata Feb. 6-8 th , 2008
9	V th J & K Science Congress	Jammu University, Jammu Feb. 18-20 th , 2010
10	39 th National Seminar on Crystallography	Jammu University Oct. 26-28 th , 2010
11	7 th JK Science Congress	Jammu University Oct. 13-15 th , 2011
12	UGC sponsored international conference on global warming	GDC, Udhampur Feb., 24-26 th , 2012
13	National Symposium on Interdisciplinary Sciences	Govt. Gandhi Memorial

		Science College, Jammu. March 2-3 rd , 2012.
14	UGC sponsored national seminar on Wireless communication and Networks with special emphasis on Adhoc & WSN	Shri Mata Vaishno Devi University, Katra, March 24-25 th , 2012
15	One Day Acquaintance Programme on Accelerator Based Research	Shri Mata Vaishno Devi University, Jammu June 14 th , 2012
16	DST sponsored National Workshop on “Nanoera: Future Prospectus of Nano-technology”	GDC, Udhampur, February 6, 2013
17	National Conference on Physics of Engineering Materials (NCPPEM-13)	Deenbandhu Chhoturam, University of Science and Technology, Haryana March 15-17, 2013
18	Two-Week ISTE Workshop on Database Management Systems under the National Mission on education through ICT(MHRD, Govt. of India)	IIT Bombay, 21-31 st May, 2013
19	Two-Week ISTE Workshop on Analog Electronics under the National Mission on education through ICT(MHRD, Govt. of India)	IIT Kharagpur 4-14 th June, 2013.
20	2 nd J & K Women Science Congress-2013	Govt. College for Women, Jammu 5-7 th November, 2013.
21	Two-Week ISTE Workshop on Signals and Systems under the National Mission on education through ICT(MHRD, Govt. of India)	IIT Kharagpur 2-12 th January, 2014.
22	National Seminar on X-ray Crystallography and its relevance to Crystal Engineering and Drug Design	Jammu University, Jammu 3 rd March, 2014
23	(“□□□□□□□□ □□□□ □□□□□□□□ □□□□ □□□□□□□□ □□ □□□□□□ □□□□□□ □□□□□□□□□□□□□□□□”) organized jointly by School of Physics, SMVDU and Hindi Vigyan Sahitya Parishad, Bhabha Atomic Research Centre (BARC), Mumbai.	SMVDU 25-27 February, 2015.
24	National conference on Microscopy and advances in Material Science-2015	Jammu University 2-4 March, 2015

25	A workshop on “Modern Developments and Applications in Imaging Techniques”	Shri Mata Vaishno Devi University 26-27 May, 2015.
26	Two Week ISTE short Term Training Program on “Engineering Physics” under the National Mission on education through ICT(MHRD, Govt. of India)	IIT-Bombay 8-18 December, 2015
27	AICTE’s One Week short term training course on recent Trends in Mobile Computing	SMVDU 15 Feb., 2016-19 Feb., 2016.
28	AICTE’s One Week short term training course on recent Trends in Automobile Engineering	SMVDU 29 Feb., 2016-04 March, 2016
29	4 th J and K Women Science Congress	GCW, Gandhi Nagar, Jammu 1-3 rd September, 2016
30	One day workshop on patent drafting and filing in association with TIFAC and DST	SMVDU 20 th October, 2016
31	3 rd International conference on recent trends and advancements in engineering and Technology (ICRTAET)	SMVDU 17-18 November, 2016
32	UGC sponsored two day workshop on ultra low power biosensors and implantable Microsystems	SMVDU 2-3, December, 2016
33	AICTE recognized short term course on optimization using MATLAB through ICT	SMVDU 24-28 th Oct., 2016
34	National conference on Recent advances in Materials science and Spectroscopy-2017	Department of Physics, SMVDU 15-17 Feb., 2017
35	4 th International conference on recent trends and advancements in engineering and technology (ICRTAET)	SMVDU, 3-4 November, 2017
36	2 nd International Conference on Condensed Matter and Applied Physics	GEC Bikaner, 24-25 Nov., 2017.
37	One day seminar on Raman Spectroscopy and micro array printing,	20 th August, 2018, SMVDU.
38	International conference on Mechanical engineering and Allied Sciences	School of Mech. Engg. SMVDU 14-15 September 2018.
39	5 th International conference on recent trends and advancements in engineering and technology (ICRTAET),	SMVDU 25-26 Oct., 2018
40	9 th International Conference on Applied Physics and Mathematics 2019,	Chulalongkorn University, Bangkok, Thailand. 21-23 Jan., 2019.

41	One Day National Seminar on Trends in Genomics and Proteomics	29 March 2019, SMVDU.
42	TEQIP III sponsored National workshop on 3D printing for New Product development	13 Sept., 2019, School Of Mechanical Engineering, SMVDU
43	Short Course on Recent Developments in non-local material and structural models	19 th November, 2019 at BITS Pilani, Dubai Campus, Dubai.
44	2 nd International Conference on Recent Advances in Materials & Manufacturing Technologies (IMMT 2019)	20-22 nd November, 2019 at BITS Pilani, Dubai Campus, Dubai.
45	Workshop on “Waste Material Management and Uses”	13-14 July, 2020 by Chitkara Univ. Research and Innovation Network(CURIN), Chitkara University, Punjab.
46	Chaired a Technical Session	4 th National Conference on Recent trends in Mathematical sciences 13-14 th Dec., 2019, SMVDU.
47	Chaired a Technical Session	6 th International conference on recent trends and advancements in Engg and Technology 17-18 th Jan., 2020, SMVDU.
48	Participated in One Day Webinar on Gender Equality and Women’s Right	NIT Kurukshetra, 16 July, 2020.
49	Participated in a Cambridge University Press Webinar on “Speaking is saying more than words”	Cambridge Online Asia Experience 20 th May, 2020.
50	Participated in a Cambridge University Press Webinar on “An introduction to positive psychology: Well being for your classroom”	Cambridge Online Asia Experience 20 th May, 2020.

MOOC Courses Completed

S. No	Title	Date and Year
1.	Science of engineering materials – a course of study offered by MISIS an online learning initiative of National University of science and technology through edx.	17.07.2017
2.	Principle of semiconductor devices part I: Semiconductors, PN Junctions and Bipolar Junction transistors A course of study offered by The Hong Kong university of Science and Technology through edx.	26.07.2018
3.	Electricity and Magnetism Part-I A course of study offered by Rice University, Houston through edx.	03.05.2019

4.	Quantum Mechanics of Molecular structure A course of study offered by University of Tokyo through edx.	12.03.2020
5.	Career Decisions: From Insight to Impact an online course authorized by Wesleyan University and offered through Coursera	24.04.2021
6.	Inclusive Leadership: The Power of Workplace Diversity an online course authorized by University of Colorado and offered through Coursera	22.05.2021
7.	The Science of Success: What Researchers Know That You Should Know an online course authorized by University of Michigan and offered through Coursera	16.07.2021
8.	How to write a Resume (Project Centered Course) an online course authorized by State University of New York and offered through Coursera	19.07.2021
9.	Nanotechnology: Introduction, Essentials and Opportunities an online course offered through Udemey	26.05.2023
10.	Self-Directed Learning for Higher Education an online course offered by Commonwealth of Learning in Collaboration with Research Unit Self Directed Learning North West University, South Africa	31.05.2024

Presentations in Conferences and Seminars

S. No.	Title of the Presentation	Year
1	Biphenyls: their Possible importance, single crystal growth, investigation of polymorphism and three-dimensional X-ray structure determination	Oral presentation, National Conference on Advances in Technologically important Crystals, Delhi University, 12-14 Oct., 2006
2	Comparative Crystallography of some steroids and role of hydrogen bonding	Oral presentation, Delhi University, 2006
3	India in space technology	All India Radio, Radio Kashmir Jammu, Jammu, Sept. 2006.
4	Single crystal X-ray diffraction studies of linearly chained biphenyls(liquid crystals)	Oral presentation, National Conference on Recent advances in Materials Science Kurukshetra University, Kurukshetra, 27-29 Sept., 2006.
5	X-ray structure Analysis of 3 β -hydroxy...:A steroid	Oral presentation,

		National Conference on Recent advances in Materials Science Kurukshetra University, Kurukshetra, 27-29 Sept., 2006.
6	Crystallographic Analysis, Activity Determination, Analysis of Intra- and Intermolecular Interactions in a Series of N-Containing Molecules: A Comparative Analysis	Oral presentation, 36 th National Seminar on Crystallography, 22-24 January, Madras University, 2007
7	X-ray Crystallography of some Nitro-containing compounds	Oral presentation, 37 th National seminar on Crystallography Jadavpur University Kolkata, 6-8 Feb., 2008.
8	Analysis of hydrogen bonding in steroids : An Overview	Poster presentation, Jadavpur University Kolkata, 2008.
9	X-H...A intermolecular interactions and crystal structure of quinoxaline	XXXIX National Seminar on Crystallography, Oral Presentation, Jammu University, 25-27 th Oct., 2010.
10	Synthesis and molecular structure of benzothiazole	XXXIX National Seminar on Crystallography, Oral Presentation, Jammu University, 25-27 th Oct., 2010.
11	The Planet is heating up: Causes, effects and solutions	Oral Presentation, UGC sponsored International Conference on Global Warming, Govt. Degree College (Boys), Udhampur, Feb., 24-26., 2012.
12	Synthesis and X-ray crystallographic analysis of 2-[2,4-diethyl pyrrolyl] benzothiazole	Poster Presentation, UGC sponsored National Symposium on Interdisciplinary Sciences, GGM Science College, Jammu, 2-3 March, 2012.
13	Biological activity predictions and intermolecular interactions	Oral Presentation,

	in pyrazoles : A case study”	National Conference on Physics of Engineering Materials, Deenbandhu Chhoturam, University of Science and Technology, Haryana, 15-17 March, 2013.
14	Computational Studies on the Structure and Vibrational Spectra of Benzothiazol-2-yl- Hydrazine	Oral Presentation, 2 nd J&K Women Science Congress-2013, 5-7 th November, 2013
15	Activity predictions of organic Molecules	Poster Presentation, Indian Science Congress, Jammu University 6 th February, 2014
16	“Biological activity prediction in Molecular assemblies”, School of Physics, SMVDU and Hindi Vigyan Sahitya Parishad, Bhabha Atomic Research Centre (BARC), Mumbai.	Poster Presentation, SMVDU □□□□□□□□ □□□□ □□ □□□□□ □□□□□□□□□□ □□ □□ □□□□□□ □□□ □□□□□□ □□□ □□□□□□ □□□□□□”, 25-27 th February, 2015.
17	X-ray Structure of an organic molecule and its Comparative Crystallographic Analysis	Oral Presentation, National conference on Microscopy and Advances in Material Science-2015, Jammu University 2-4 March, 2015.
18	An overview of X-ray Crystallography and crystallographic investigations of (4Z)-2- Phenyl- 1- {(E)-[4-(Propan-2-yl)benzylidene]-amino}-4- [(thiophen-2-yl)methelydene]-1H- imidazole-5(4H)-One	Oral Presentation, 4 th J &K, Women Science Congress, GCW, Gandhi Nagar, 1-3 rd Sept., 2016.
19	Synthesis and crystal structure of (2E-1-(Anthracene-9-yl)-3-(3,4-dichlorophenyl) prop-2- en-1-one	Acted as Technical chair and oral Presentation, 3 rd International conference on recent trends and advancements in Engineering and Technology (ICRTAET) SMVDU, 17-18

		November, 2016
20	Quantum Chemical investigations, vibrational spectra, HOMO-LUMO, NBO and Fukui Function analysis of (4Z)-1-[(E)-(4-Methoxybenzylidene)amino]-2-phenyl-4-[(thiophen-2-yl)methylidene]-1H-imidazol-5(4H)-one	Poster Presentation, NCRAMSS-2017, SMVDU 15-17 February, 2017.
21	Synthesis and crystal structure of an organic compound	4 th International conference on recent trends and advancements in engineering and technology (ICRTAET), SMVDU 3-4 November, 2017
22	Structural and spectral investigations of BaZnO ₂ : Sm ³⁺ phosphor	2 nd International Conference on Condensed Matter and Applied Physics, GEC Bikaner, 24-25 Nov., 2017
23	An introduction to the scope and potential of X-ray structure Analysis	Chaired a technical session and presented a paper in National Conference on Emerging Trends in Materials Science (NCETMS 2018) 7-8 th Feb., 2018, School of Physics, SMVDU.
24	Synthesis and crystal structure of (4Z)-2-phenyl-1-[(E)-[4-(propan-2-yl)benzylidene]amino]-4-[Thiophen-2-yl)methylidene]-1H imidazole-5(4H)-one	Chaired a Technical session and presented a paper in International conference on Mechanical engineering and Allied Sciences, School of Mech. Engg. SMVDU 14-15 September 2018.
25	Comparative crystallographic analysis and role of intermolecular interactions in molecular assemblies	5 th International conference on recent trends and advancements in engineering and technology (ICRTAET), SMVDU 25-26 th October, 2018.
26	Structural and Spectral Studies of MgZnO:Cr ³⁺ Phosphor	9 th International Conference on Applied Physics and Mathematics

		2019, 21-23 Jan., 2019, Chulalongkorn University, Bangkok, Thailand
27	Synthesis, Structural and Spectral studies of Mn^{2+} doped KsrVO_4	2 nd International Conference on Recent Advances in Materials & Manufacturing Technologies (IMMT 2019) 20-22 nd November, 2019 at BITS Pilani, Dubai Campus, Dubai.
28	Investigation on structural, optical and PL activity of a transition metal ion doped vanadate	Sixth Conference of Bangladesh Crystallographic Association, Bangladesh 15-16 th Jan., 2021.
29	Effect of Mn^{2+} ion doping on the structural, optical and luminescent properties of an orthovanadate nanophosphor	International Conference on Nanomaterials ICON BEES, NIT Trichy, 11-13 th March, 2021
30.	Synthesis, structural and luminescent properties of Nd^{3+} doped nano material containing an orthovanadate group	International Conference on Modern Functional materials (ICFMF 2021), Sri Sai Ram engineering College, Chennai 24-25 th June 2021.
31.	Structural and Luminescent Properties of rare earth doped KSrVO_4 nano powders prepared by low cost combustion route	Pittsburgh Diffraction Conference (PDC) by Pittsburgh Diffraction Society hosted by SLAC National Accelerator Laboratory, Stanford University USA, 20 th Sept., 2021.
32.	Combustion Synthesis of NaSrVO_4 : Nd^{3+} Nano Powders with Enhanced NIR 1.056 μm Luminescent Performance for Solid State Laser and Bio-Imaging Applications	4 th International Conference on Advanced Engineering Technologies, Bayburt University, Bayburt, Türkiye on September 28-30, 2022.
33.	Co-chaired a technical session and presented paper “Synthesis, Mechanism, Structural, optical and Luminescent properties of KSrVO_4 : Nd^{3+} nano powders”.	International Conference on Emerging Trends in Biosciences and Chemical Technology-2022 3-5 th December, 2022 SMVDU.
34.	RE doped phosphors : Investigating the structural, optical and Luminescent performance	3 rd International Conference on Nano architectures on chemical, biological and therapeutic applications (NCBTA 2023) Dept. of Chemistry, GLA University Mathura in collaboration with Jadavpur University Kolkata and Pittsburg State University,

		USA. 24-26 Nov., 2023.
35	5 th National Conference on Recent Trends in Mathematical Sciences-2024	Chaired a Technical session in NCRTMS-2024 organized by SOM, 21-22 March, 2024 SMVDU.
36.	Combustion synthesis and characterization of Samarium activated Barium Strontium Orthosilicate nanophosphors with potential implications in energy efficient optoelectronic and display optimization	5 th International Conference on Advanced Engineering Technologies, Bayburt University, Bayburt, Türkiye on September 25-27, 2024.

Invited Talks/Lectures/ Counseling Sessions

S. No.	Title of the Talk	Date
1	Nanotechnology in medicine and healthcare in One Day workshop under Star College Scheme, DBT, GOI, Dept of Electronics and Physics, GDC (Boys) Udhampur	Invited Talk, Govt. Degree College(Boys), Udhampur, 6 th Feb., 2013.
2	Biological-Activity Predictions and Hydrogen Bonding Analysis in Chalcones	Invited Talk, Govt. Degree College for Women (Parade), Jammu, 5-7 Nov. 2013.
3	Role of hydrogen bonding interactions in thiazole structures and their activity predictions	Invited Talk, Jammu University, 3 rd March, 2014.
4	“Michelson Interferometer” at Govt. College for Women, Parade, Jammu	Invited Lecture, 18 May, 2015
5	“Fresnel Biprism” at Govt. College for Women, Parade, Jammu	Invited Lecture, 19 May, 2015
6	“Improving the Teaching of Science” in a five day Workshop for Teachers Training at APS, Dhar Road, Udhampur	Invited talk, 23 May, 2016
7	“An overview of Crystallography and X-ray structure analysis” in National Level Seminar on Science & Technology for the Unreached: Notions, Values and Applicability organized by Indian Science Congress Association Jammu chapter	Invited talk, 20-21 April, 2018 GDC Samba, Jammu.
8	“Self-esteem and Confidence building in girls”	GSCASH Lecture cum counseling session, 7 th December, 2018, Delhi Public School, Jammu.

9	“Polymers” in Faculty Induction Program (FIP) at Faculty Development Centre (FDC), SMVDU	Invited talk, 30 th Jan., 2019
10	Structure, Properties and Applications of Materials in Faculty Induction Program (FIP) at Faculty Development Centre (FDC), SMVDU.	Invited talk, 4 th April, 2019
11	Shine like a star: A lecture on Confidence building”	GSCASH Lecture cum counseling session, 30 th April, 2019, Jammu Sanskriti School, Jammu
12	Structural and spectral studies of oxide nanophosphors	Invited Talk in Regional e-symposium in Physics, IIT Jammu, 9-11 June, 2020.
13	Synthesis, structural and spectral studies of Dy ³⁺ doped nanophosphors	Invited Talk in Virtual International conference on Emerging Trends in Chemical Sciences (ERTCS) Govt. PG College Rajouri, Jammu. 24-26 July, 2020.
14	Gender Mainstreaming and Sensitization at work places	Invited Guest Lecture, GDC Vijaypur Under the aegis of Higher Education Department, J & K, 13 Sept., 2020.
15	Motivating Millennials for Science Education	Invited Talk National Conference on Integrated Approach in Science and Technology for sustainable future (IAST-SF) 27 th Feb., 2022.
16	Combustion synthesis and rare earth doped nanophosphors with enhanced luminescent performance for display and imaging applications	Two days national workshop on Tools and Eyes of nanotechnology (TEN-2022), SBBS University, Jalandhar, Punjab 18-19 th May, 2022.

PG Projects Supervised

S. No.	Title	Year
1	Guided Mr. Bhubneshwar Kumar, M.Sc. fourth semester student on the project titled “ A comparative crystallographic analysis of intermolecular interactions in thiazoles ”.	2011

2	Guided Ms. Saniya Gupta and Mr. Ujwal Gupta, M.Sc. fourth semester students on the project titled “X-ray structure and C-H...O interactions in diphenyl propanone” .	2011
3	Guided Ms Dheeraj Dubey and Ms Rahella Yusuf, M.Sc. fourth semester students on the project titled “The role of hydrogen bonding in organic molecular assemblies: A case study of alkaloids” .	2011
4	Guided Ms Sarika Shrama and Ms. Shivani Sharma, M.Sc. fourth semester students on the project titled “Preliminary X-ray study of nitrogen containing compound by using Oscillation, Rotation and Weissenberg Techniques” .	2012
5	Guided Tanvi Sharma M.Sc. fourth semester student on the project titled “Molecular structure and Vibrational analysis of Benzothiazol-2-yl-hydrazine” .	2013
6	Guided Neha Sambyal M.Sc. fourth semester student on the project titled “Molecular structure and Vibrational analysis of 1, 3-diphenyl urea” .	2013
7	Guided Megha Raina and Reema Gupta M.Sc. fourth semester students on the project titled “Role of hydrogen bonding interactions in pyrrole structures and their activity predictions: A case study” .	2014
8	Guided Rahul Puri and Hitesh Kharka M.Sc. fourth semester students on the project titled “Preliminary analysis of an organic compound by using X-ray diffraction techniques” .	2014
9	Guided Meera Mahajan M.Sc. fourth semester student on the project titled “Molecular structure, vibrational analysis, thermodynamical properties and homo-lumo analysis of 2-acetylamino benzoic acid” .	2015
10	Guided Surbhi Sharma M.Sc. fourth semester student on the project titled “DFT studies of 2-(2,4-dimethyl pyrrolyl)benzothiazole” .	2015
11	Guided Prerna Jamwal M.Sc. fourth semester student on the project titled “Hydrogen bonding in indoles” ,	2016
12	Guided Sapna Verma M.Sc. fourth semester student on the project titled “A case study of Hydrogen bonding in benzofuran derivatives” .	2016
13	Guided Monica Sharma M.Sc. fourth semester student on the project titled “Role of Hydrogen bonding in carbazoles: A case Study” .	2016.
14	Guided Pallavi Sharma and Preasha Rajput M.Sc. fourth semester student on the project titled “Structural and optical characterization of Sm³⁺ doped MgZnO₂ nanoposphor” .	2017

15	Guided Perna and Kajal Sharmat M.Sc. fourth semester student on the project titled “Synthesis and characterization of Sm³⁺ doped BaZnO₂ nanoparticles” .	2017
16	Guided Pallavi Sharma and Urvashi M.Sc. fourth semester student on the project titled “Synthesis and characterization of Sm³⁺ doped MgZnO nanoparticles” .	2018
17	Guided Harsh and Ankita M.Sc. fourth semester student on the project titled “Synthesis and characterization of Cr³⁺ doped MgZnO nanoparticles” .	2018
18	Guided Sunanda Sharma and Arushi Gupta M.Sc. fourth semester student on the project titled “Structural studies and Band Gap tuning of Mn²⁺ doped MgZnO nanoparticles” .	2019
19	Guided Brinda Sharma and Anil Sharma M.Sc. fourth semester student on the project titled “Structural studies and Band Gap tuning of Cr³⁺ doped BaZnO₂ nanomaterial” .	2019
20	Guided Pallavi Jamwal, Megha Andotra, Meenakshi Sharma M.Sc. fourth semester student on the project titled “Structural Studies and Band Gap Tuning of a Doped Vanadate Based Nanomaterial” .	2020
21	Guided Vimal Sharma and Neeraj Mathur M.Sc. fourth semester student on the project titled “Synthesis, Structural and optical characterization of pure and doped ZnO nanoparticles” .	2020
22	Guided Grimma Coudhary and Vishaly Mankotia M.Sc. fourth semester student on the project titled “Synthesis, Structural and Optical Characteristics of Pure and Alkali Alkaline Transition Metal Doped Mixed Vanadate” .	2021
23	Guided Anjana Sharma and Bandana Sharma M.Sc. fourth semester student on the project titled “Synthesis, Structural and Optical Characterization of undoped and Alkali Alkaline rare earth Doped Mixed Vanadate”	2021
24	Guided Bindiya Sharma and Manvi Sharma M.Sc. fourth semester student on the project titled “Synthesis, Structural and Optical Characterization of undoped and Alkali Alkaline rare earth Doped Mixed Phosphate”	2022
25	Guided Anjali Chib and Manvi M.Sc. fourth semester student on the project titled “Synthesis Structural and Optical Characterization of	2022

	undoped and Doped Vanadate"	
26	Guided Harsh Aditya Singh Jasrotia and Gifty Sharma M.Sc. fourth semester student on the project titled "Synthesis and effect of Dy³⁺ doping on Ferrites" .	2023
27	Guided Aditya Pangotra and Usha Thakur M.Sc. fourth semester student on the project titled "Structural and Optical Investigation on Undoped and Dy³⁺ Doped Phosphates" .	2023
28	Guided Vishvkirti M.Sc. fourth semester student on the project titled "Investigation of Structural and Spectral properties of Sm³⁺ doped Li₂NaPO₄ nanophosphors" .	2024
29	Guided Kimmi M.Sc. fourth semester student on the project titled "Impact of Dy³⁺ doping on Structural, Optical and Luminescent properties of Li₂NaPO₄ nanophosphors" .	2024
30	Guided Sunandan Sumbria and Abhijeet Singh M.Sc. fourth semester student on the project titled Synthesis and effect of Cr³⁺ doping on ferrites	2024
31	Guided Pallavi Sharma and Ankita Chib M.Sc. fourth semester student on the project titled "Syntesis and Optical Properties of Lanthnum doped Vanadate Phosphors"	2024
32	Guided Ruchi Sharma, Tavishi Sharma, Anu Priya and Rohit B.Sc. V sem Students on the project titled "Mobile cum Power Bank 3D printed Case"	2024