

Name of the Candidate: POONAM KUMARI (ASSISTANT PROFESSOR)

**TOTAL TEACHING/RESEARCH
EXPERIENCE:** 7.5Yrs

Father's Name: BALDEV ATTRI

Date of Birth: 02 AUGUST 1987

Gender: FEMALE

Permanent Address: VPO-BHUJOND,
TEH.-SANGRAH, DISTT.- SIRMOUR,
HIMACHAL PRADESH, 173023

Correspondence Address: DR.
POONAM KUMARI, ASSISTANT
PROFESSOR, AKAL COLLEGE OF
BASICS SCIENCES, ETERNAL
UNIVERSITY, BARU SAHIB, NEAR
RAJGARH, DISTT. SIRMOUR,
HIMACHAL PRADESH 173101.



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1. WORK EXPERIENCE	
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TOTAL EXPERIENCE: 7 YEARS 5 MONTHS

Presently: Working as an Assistant Professor at Department of Physics, Akal College of Basic Sciences, Eternal University, Baru Sahib Road, Sirmour, Himachal Pradesh -173101, Rejoint from 08 august 2020 – continue.

- Educational Qualification:** M.Sc., Ph.D.
- Post-Doctoral Research Experience** **Research Associate (RA): 2 Years' experience from Panjab University SSG Regional Centre, UIET, Punjab 146021, UNDER CSIR R/P NO. 3(1410)/17/EMR-II Entitled " A Green approach for the Synthesis, Characterization of Bio-Conjugated Zinc Oxide Nanoparticles and Studying their Interactions through First Principles Method: Biological, and catalytic Applications"**
July 2018-March 2020.
Pay & Pay Scale: 47000+ 12.5%HRA
- Teaching Experience**
- i) **Assistant Professor: 2 Years 6 months teaching experience from Department of Physics, Akal College of Basic Sciences, Eternal University, Baru Sahib Road, Sirmour, Himachal Pradesh - 173101**
10 Feb. 2016 – 30 June 2018.
Pay & Pay Scale: 18192 (Basic Pay)+ 6000(AGP) +8467 (DA)=32659/-
- ii) **2 Years teaching experience from Panjab University SSG Regional Centre, UIET, Punjab 146021, July 2018-March 2020.**
For classes: B. Tech. IT 1st Year and B. Tech. Mechanics 1st year.
- A. Assistant Professor** Department of Physics, Akal College of Basic Sciences, Eternal University, Baru Sahib Road, Sirmour, Himachal Pradesh -173101
Rejoin from 08 Aug. 2020 - Continue.
Pay & Pay Scale: 19,000 (Basic Pay)+ 6000(AGP) +12500 (50%DA)=37500/-
- B. Junior Research Fellowship** "Development Organization (DRDO), Govt. of India, for financial support under the research project No. ERIP/ER/1303129/M/01/1564." From: **June, 2015- Feb. 2016.**
Pay & Pay Scale: 16,000+ HRA

2. SUBJECT TAUGHT / WILLING TO TEACH

S. No.	Subject taught	Willing to teach
A	At UG Level: Courses 1. Electricity and magnetism-I 2. Electricity and magnetism-II 3. Basic Physics-I 4. Atomic & molecular Physics 5. Nuclear and particle Physics 6. Solid State Physics	1. Ceramic Science & Technology 2. Basic Materials Science & Engineering 3. Material Characterization

7. Vibrations and Waves

4. Mechanical Behavior of Materials

C	At UG Level: Elective Courses	1. Materials science	1. Computational Material Science
	At PG Level: Core Courses	3. Condensed Matter Physics 4. Classical Mechanics 5. Nano Physics. 6. Materials science. 7. Mathematical Physics	2. Electron Microscopy 1. Introduction to Materials Science 2. Characterization of Materials 3. Electron Microscopy

4. PG DISSERTATION GUIDED

Sl. No.	Title of Dissertation/Project	Department/ Institute	Name of student[s]	Co-Supervisor[s], if any	Year
1.	Synthesis and characterization of Aluminium doped Ba _{0.7} Gd _{0.3} Fe ₁₂ O ₁₉ hexaferrite nanoparticles by sol-gel auto-combustion method.	Department of Physics, Eternal University, Baru Sahib, Near Rajgarh, Distt. Sirmour, Himachal Pradesh 173101	Nivedita Bhatiya	NA	2022
2.	Structural and Magnetic Properties of BZT-NF composite by using solid state reaction method	Department of Physics, Eternal University, Baru Sahib, Near Rajgarh, Distt. Sirmour, Himachal Pradesh 173101.	MANJOT KAUR	NA	2020
3.	The doping effect of Aluminum on Nickel site in Nanostructured Nickel ferrite	Department of Physics, Eternal University, Baru Sahib, Near Rajgarh, Distt. Sirmour, Himachal Pradesh 173101.	SUNNY CHAUDHARY	NA	2017

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|----|---|---|---------------|----|------|
| 4. | To study structural, dielectric and magnetic properties of piezoelectric-ferrite multiferroic composites. | Department of Physics, Eternal University, Baru Sahib, Near Rajgarh, Distt. Sirmour, Himachal Pradesh 173101. | SHILPA KUMARI | NA | 2018 |
| 5. | To study the influence of doping manganese and cobalt in nickel ferrite synthesized by sol gel method. | Department of Physics, Eternal University, Baru Sahib, Near Rajgarh, Distt. Sirmour, Himachal Pradesh 173101. | MANJEET SINGH | NA | 2018 |

6. EDUCATIONAL QUALIFICATION/TRAINING:

1. Ph.D.

Ph.D Physics (Awarded)- 2016 , **CGP 6.05**

Shoolini University, Solan-Oachghat-Kumarhatti Highway, Bajhol, Himachal Pradesh 173229, **India.**

Thesis Title: “ Influence of A- site and B- site doping on the structural and electrical properties of lead free ceramics ”

Supervisor: Dr. Radheshyam Rai.

2. M.Sc.

M.Sc. Physics (2012)

Panjab University, Sector 14, Chandigarh, 160014, **Punjab, India**

%age 63

3. Bachelor of Science

B.Sc. Non-medical (2008)

Dr.Y.S. Parmar Govt. PG College Nahan, Distt. Sirmour. 173001, H.P., India. Under **Himachal Pradesh University**, Summer Hill, Shimla, Himachal Pradesh 171005 **Shimla, India**

%age 56

**4. Bachelor of Education
(B.Ed.)**

Non-medical (2009)

Himachal Pradesh University, Summer Hill, Shimla, Himachal Pradesh 171005 **Shimla, India**

%age 66

5. Higher Secondary (10+2)

Non-medical (2005)

GSSS Bogdhar, Sirmour, **HP** 173104.

HP. Board Dharmshala, Distt: Kangra, **HP** 176213, **India**

%age 60

6. 10th

(2003)

GSSS Bogdhar, Sirmour, **HP** 173104.

HP. Board Dharmshala, Distt: Kangra, **HP** 176213, **India**

%age 70

**7. 6 months diploma in
Computer + 1 year
computer training**

Nehru Yuva Kenrda Nahan in 2007 + Panjab University, Sector 14, Chandigarh, 160014.

**8. 4 months Teaching
experience as TGT (NM)**

GSSS Bogdhar, Sirmour, **HP** 173104.

Aug. 2009 – Dec. 2009

7. KEYSKILLS:

**Organisational /
managerial
skills**

- Demonstrated systems thinking ability and Understands organizational culture.
- Is sensitive to diversity and multiculturalism.
- Able to gather and synthesize information on internal and external environments.

Job-related skills

- Synthesis of Ceramic Materials (Solid State reaction method, Co-precipitation, Sol gel method, Green synthesis, Hydrothermal).
- Synthesis of gold nanoparticles by using Seed growth method.
- Polymers/gold nanoparticles for biosensors applications

Techniques skill

- XRD.
- SEM
- TEM
- Impedance Spectroscopy
- Raman Spectroscopy
- Electrospinning
- Ferroelectric and Ferromagnetic properties

Computer skills

- MS office
- Origin 9
- POWD
- X-pert
- JCPDS
- ZSIMPWIN

8. AWARDS/HONORS:

1. Member of organizing committee of **2nd International Conference** on Innovative Research in Engineering, Science and Technology (IREST-2017) held in **Eternal University**, Baru Sahib, HP during **07- 08 April, 2017**.
2. Member of organizing committee of **5th Convocation** held in **Eternal University**, Baru Sahib, HP during **2017**.
3. Member of organizing committee for Certificate and Prize Distribution Committee of **National Science Day** held in **Eternal University**, Baru Sahib, HP during **2021**.
4. Poster Presentation Award by **2nd International Conference** on Innovative Research in Engineering, Science and Technology (IREST-2017) held at **Eternal University**, Baru Sahib, HP during **07- 08 April, 2017**.

9. PUBLICATIONS/ BOOK CHAPTERS / PATENTS:

Papers published in Science Citation Index (SCI) or Scopus Indexed Journals

1. Kumari, P., Deeksha, Nanda, D., Thakur, S., Kumari, S., Singh, A., & Rai, R. (2023). Conductivity and structural analysis of perovskite-like BiAlO₃ doped (K_{0.44}Na_{0.52}Li_{0.4})(Nb_{0.86}Ta_{0.14}Sb_{0.04})O₃ based perovskites system. *Ferroelectrics*, 603(1), 210-221. . I.F.= **0.86**
2. Sharma, S., Kumari, P., Thakur, P., Brar, G. S., Bouqellah, N. A., & Hesham, A. E. L. (2022). Synthesis and characterization of Ni_{0.5}Al_{0.5}Fe₂O₄ nanoparticles for potent antifungal activity against dry rot of ginger (*Fusarium oxysporum*). *Scientific Reports*, 12(1), 20092. . I.F.= **4.999**
3. **Kumari Poonam**, Thakur, S., Guleria, G., Thakur, S. and Sharma, S., 2022. Spectroscopic and Magnetic Performance of Cobalt (Co) Incorporated NiMn_{0.05}

- Fe 1.9504 Nanoferrites: A Potent Antifungal Activity Against *Aspergillus Niger* (MT675916). *Nano*, p.2250113. I.F.= **1.556**
4. Guleria, G., Thakur, S., Shandilya, M., Kumar, S., **Kumari, P.**, Sharma, D. K., & Thakur, S. (2022). Synthesis of α -Fe₂O₃/ethyl cellulose-based nanocomposites to extend the shelf-life of *Capsicum annuum* L. var. *grossum*. *Materials Today: Proceedings*. I.F.= **0.355**
 5. Guleria, G, Thakur S, Dhananjay K., Thakur S, **Kumari P**, and Shandilya M. (2022) Environment-friendly and biodegradable α -Fe₂O₃/C₂₀H₃₈O₁₁nanocomposite growth to lengthen the *Solanum lycopersicum* storage process." *Advances in Natural Sciences: Nanoscience and Nanotechnology* 13(2): 025004. **I.F. 2.379**
 6. Thakur P, Thakur S, **Kumari P**, Shandilya M, Sharma S, Poczai P, Abdullah A, and Sayyed R. Z. (2022) Nano-insecticide: synthesis, characterization, and evaluation of insecticidal activity of ZnO NPs against *Spodoptera litura* and *Macrosiphum euphorbiae*." *Applied Nanoscience* 12: 1-16. **I.F. 4.288**
 7. Kumari, Shilpa, Radheshyam Rai, Pawan Kumar, **Poonam Kumari**, and Alexey Dronov. (2020) "Rietveld analysis and negative dielectric behavior of perovskite-like La_{1-x} Eu_x MnO₃ system." **Ferroelectrics Letters Section** 47, no. 4-6: 61-70. **I.F. 0.86**
 8. **Poonam Kumari**, S. K. Tripathi, Gurinder Singh, and Aman Kaura, (2019) "The mechanism of tuning the morphology of bio-conjugated ZnO nanoparticles with citrate coated gold nanoparticles for degradation of EBT: DFT and experimental study. **Journal of Molecular Liquids**: 111706. **I.F. 6.633**
 9. **Poonam Kumari**, Madan Lal, Sunil Kumar, Radheshyam Rai, Anupinder Singh, D. V Karpinsky, Igor Bdikin, (2019) Comprehensive investigation of structural, dielectric and local piezoelectric properties of KNN ceramics, **Journal of Advanced Dielectrics**, Volume 9, Issue 2, 1950016-488. **I.F. 1.99**
 10. **Poonam Kumari**, Radheshyam Rai, Arpana Singh; Enhanced electrical and magnetic properties in BZT/NFO multiferroic composites derived by MARH, **Journal of Materials Science: Materials in Electronics**, 29(21), 18221-18230, 2018. **I.F. 2.779**
 11. **Poonam Kumari**, Radheshyam Rai, Seema Sharma and M.A. Valente; Effect of Tb doped on dielectric, electrical conduction and magnetic properties of multiferroic Bi_{0.8} Ba_{0.1} Fe_{0.9} Ti_{0.1} O₃ perovskite compound, **Journal of Advanced Dielectrics**, 7(05), 1750034. 2017. **I.F.1.99**
 12. **Poonam Kumari**, Radheshyam Rai, Seema Sharma and Anderi L. Kholkin, Study of Ca doping on A- site on the structural and physical properties of BLTMNZ ceramics, **Advanced Material Letter.**, 5(5), 255-259, 2014. **I.F. 0.6**

13. **Poonam Kumari**, Radheshyam Rai, Seema Sharma, Mamta Shandilya, and Ashutosh Tiwari State – of – the –art of lead free ferroelectrics: A Critical Review; **Advanced Material Letter.**, 6, 6, 453-484, 2015 **I.F.=0.6**
14. **Poonam Kumari**, Radheshyam Rai, and A. L. Kholkin. Influence of BiFeTaO₃ addition on the electrical properties of Na_{0.4725}K_{0.4725}Li_{0.055}NbO₃ ceramics system using impedance; **Journal of Alloys and Compounds** 637, 203–212, 2015. **I.F.= 6.371**
15. Seema Sharma, Kashif Shamim, **Poonam Kumari**, and Radheshyam Rai; Impedance and modulus spectroscopy characterization of Lead free Barium Titanate ferroelectric ceramics. **Ceramics International**, 41, 7713–7722, 2015. **I.F.= 5.532**
16. Radheshyam Rai, **Poonam Kumari** and M. A. Valente; Study the structural and magnetic properties of rare-earth ions (La and Gd) doped Ba_{0.9575}Ca_{0.0025}Ti_{0.80685}Mn_{0.002475}Nb_{0.002475}Zr_{0.1782}O₃ (BCTMNZ) ceramics. **Journal of advanced dielectrics**, 5, 3, 1520001, 2015. **I.F.=1.99**
17. **Poonam Kumari**, Pawan Kumar and Radheshyam Rai Study the structural and dielectric properties of rare-earth (La) doping on A -site and (Mn, Nb) doping on B-site of BZT ceramics. **Integrated Ferroelectrics**, 167:1–11, 2015. **I.F.=0.86**

Book Chapters published

1. **Poonam Kumari**, Madan Lal, Shashi Prakash Rai, Radheshyam Rai Piezoelectric Electroceramic Perovskites and Their Applications; Smart Materials for Smart Living, Nova Science Publisher, Inc **2017; Chapter 7; ISBN:978-1-53612-269-5.**
2. **Poonam Kumari**, Mamta Shandilya Madan Lal, Radheshyam Rai, High Dielectric Materials for Supercapacitor; Smart Materials for Smart Living, Nova Science Publisher, Inc **2017; Chapter 3; ISBN:978-1-53612-269-5.**

PATENT

1. Shandilya M., Rai, R., Kumar R., **Kumari, P.**, Varma R., (2018) NANOSCALE RESTRAINT OF POLAR COUPLING IN Ba_{0.85}Mg_{0.15}TiO₃ RELAXOR FERRO ELECTRIC, 201811036624A. IP Nation. Status.
2. Shandilya, M., Thakur, S., Mahajan, A., **Kumari, P.**, Rai, R. (2019) LEAD FREE, FERROELECTRIC, NANO SIZED CERAMIC COMPOUND BZT-BCT) FOR INDUSTRIAL USE, 201911007198A, IP Nation. Status.
3. Shandilya M., Rai, R., Kumar R., **Kumari, P.**, Kaur GA., (2020) BARIUM ZIRCONATE TITANATE MATERIAL AND METHOD OF MANUFACTURING THE SAME, 201911012843A, IP Nation. Status.

8. CONFERENCES /SHORT TERM COURSE /WORKSHOP ATTENDED

- CONFERENCES**
1. **Attended International E-conference on Synthesis, Characterization & Applications of Emerging Materials with Special reference to Sustainable Technologies"** during 22nd to 24th February 2021; Deptt. of Applied Physics, Jabalpur Engineering College, Jabalpur M.P. INDIA.
 2. Sunny Choudhary, **Poonam Kumari** and Radheshyam Rai.; Study of structural, dielectric and magnetic properties of $1-x$ (BaZr_{0.15}Ti_{0.85}O₃)- x (NiFe₂O₄) composites (where $x = 0.07$ and 0.10) synthesized by solid state reaction method, IREST-2017 to be conducted in the **Eternal University, Baru Sahib HP, India, April 7-8, 2017.**
 3. **Poonam Kumari**, Radheshyam Rai*, Seema Sharma and A. L. Kholkin.; Structural Characterization and Electrical Study of Lead Free Barium Titanate Ferroelectric Ceramics Synthesized by Solid State Reaction Method” **Nano SciTech, 18-20 February, 2016 at Punjab University, Chandigarh.**
 4. **Poonam Kumari**, Radheshyam Rai, A. L. Kholkin., To study the structural and electrical properties of BiFeTaO₃ doped Na_{0.4725} K_{0.4725} Li_{0.055} NbO₃ ceramics system using impedance spectroscopy, **SMART (National conference on Smart Materials: Advances in Research and Techniques) Shoolini University, Solan (26-27 November, 2015).**
 5. **Poonam Kumari**, Radheshyam Rai*, Seema Sharma and A. L. Kholkin., Dielectric, magnetic and Impedance properties of Bi_{0.8} Tb_{0.1} Ba_{0.1} Fe_{0.9} Ti_{0.1} O₃ multiferroic ceramics. **International Conference on Condensed Matter and applied physics-30-31 October, 2015, Bikaner – 334004, Rajasthan, India.**
 6. **Poonam Kumari**, S. Thakur, and Radheshyam Rai., Investigation of electrical and magnetic properties of Bi_{1-x-y} Dy_x Ba_y Fe_{1-y} Ti_y O₃ ceramic system” **ICRTMD (International Conference on Recent Trends in Materials and Devices) Amity University, Noida, (2013).**
 7. **1 st multifunctional advanced materials - School of Physics at Shoolini University Solan, 2 nd to 4 th May. 2013.**
 8. Participated in 6th Chandigarh science congress, Punjab University, 26-28 Feb. **2012.**
- SHORT-TERM COURSES**
1. **Short-term course on Advanced Energy Materials from 12/10/2020 to 16/10/2020**, organized by Department of Physics, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab (India).
 2. **Short-term course on Renewable Energy Materials and Technology** in Academia and Industry to be conducted in the Department of Applied Physics, **ISM Dhanbad during the period March 2-4, 2016**
- WORKSHOP**
1. **Workshop Attended on Aspects of Material Science & Engineering-I (WAMSE-I: School of Basic & Applied Sciences; Lingaya’s Vidyapeeth Faridabad; 22nd-23rd February, 2021**

DECLARATION

I hereby declare that all the information given above is true to the best of my knowledge and belief.

Dr Poonam Kumari

Date:

Signature of the Candidate