

DR. PRASHANT KUMAR SHARMA

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Date of Birth: 17/06/1984; **Language Proficiency:** English, Hindi, German (learning stage)



1. **Present Position:** “Assistant Professor”, Department of Applied Physics, Indian Institute of Technology (ISM), Dhanbad 826004, India.

2. **Research Interest:** Experimental Nanoscience and Nanotechnology, Nanomaterials: Synthesis and Characterization, Nanoparticles for sensing, security & harmful chemical detection, Opto-electronic devices (LEDs & Solar Cells), Microscopic Techniques, Magnetic properties of nanostructures, Nanoparticles for Bio-medical Applications.

3. Academic Details:

| Degree | University/Board | Year | Subjects | Remarks |
|-----------------------|-------------------------|------|----------------------------------|---|
| D.Phil.* | UNIVERSITY OF ALLAHABAD | 2012 | NANOSCIENCE | |
| M.Sc. | UNIVERSITY OF ALLAHABAD | 2006 | PHYSICS | Gold Medalist Topper of M. Sc. Physics (X-Rays) |
| B.Sc. | UNIVERSITY OF ALLAHABAD | 2004 | PHY, CHEM, MAT, | |
| 12 th Std. | U. P. BOARD | 2001 | PHY, CHEM, MAT, | Ranked among top 5% of students |
| 10 th Std. | U. P. BOARD | 1999 | MAT, SCI, BIO, ENG, HIN, SO.SCI. | Ranked among top 5% of students |

* **Thesis Title:** “Study of Nanophosphors for Opto-electronic and DMS based Applications”.

Thesis supervisor: Prof. Avinash C. Pandey.

4. Details of Employment

a. Assistant Professor : July 2012 - Till Date (Ongoing)

Department of Applied Physics, Indian Institute of Technology (ISM), Dhanbad.

b. Post Doctoral Research Scientist: August 2011 - June 2012

Nanotechnology Application Centre, University of Allahabad, in DST Nano-mission project for the development of novel magnetic nanoparticles for biomedical applications (mainly for Bio-imaging, targeted drug delivery, contrast agents for magnetic resonance imaging and hyperthermia).

c. Research Scientist: April 2010 - July 2011

Nanotechnology Application Centre, University of Allahabad, in DST Nano-mission project for the development of novel magnetic nanoparticles for biomedical applications.

d. Junior Research Fellow: July 2006 - March 2010

Worked in CSIR funded NMITLI project entitled “Development of next generation Plasma Display Panel and a 50” High Definition (HDPDP) TV Prototype” at Nanotechnology Application Centre, University of Allahabad, Allahabad 211002, INDIA.

5. **Patents:** Intellectual property, technological innovations, new products etc. : 09

6. **Books/Book Chapters/Monographs** published : 17

7. **Publications in International Journals/Proceedings** : 130

8. Details of Professional Training and Research Experience, Specifying Period

| S. No. | Research Experience | Period |
|--------|--|------------------------|
| 1. | Assistant Professor: Indian Institute of Technology (ISM), Dhanbad | July 2012 - Till Date |
| 1. | Post Doctoral Research Scientist: DST Nano-Mission Project | Aug 2011 - June 2012 |
| 2. | Research Scientist: DST Nano-Mission Project | April 2010 - July 2011 |
| 3. | Junior Research Fellow (JRF): CSIR funded NMITLI Project | July 2006 - March 2010 |
| 4. | Synthesized several nanomaterials using various methods such as Sol-Gel, Reverse Miscelles, Precipitation, Hydrothermal, Solvothermal, Ultrasonication, Combustion, Solid state etc. | July 2006 - Till Date |
| 5. | Developed expertise in preparing demonstrator Opto-electronic devices (LEDs & Solar Cells) | July 2006 - Till Date |
| 6. | Hands on experience of handling high end sophisticated material characterization techniques. | July 2006 - Till Date |

| | Professional Training | Period |
|-----|--|---|
| 7. | X-Ray Diffraction (XRD) and Small Angle X-Ray Scattering (SAXS) technique. | July 2006 - Aug 2006 |
| 8. | Photoluminescence (PL/PLE) and UV-Vis spectrophotometer. | April 2007 |
| 9. | Micro Raman Spectrometer. | May 2007 – JUNE 2007 |
| 10. | Complete Probe Microscopy techniques including Atomic/ Magnetic / Electric Force Microscope (AFM/MFM/EFM). | May 2007 – JUNE 2007 & again in OCT 2009 |
| 11. | McPherson VUV spectrophotometer (The only system in India). | Nov 2007 |
| 12. | Nano-indentation / nano-hardness tester. | March 2008 |
| 13. | Profession Training on Electron Microscopy Techniques [HRTEM /SEM/ESEM / EDX & related sample preparation tools] | Aug 2007 – Oct 2007 & again in March 2008 |
| 14. | Magnetic Characterization techniques such as VSM @ IIT Delhi. | August 2008 |
| 15. | NSOM with Confocal AFM and Raman Mapping @ IIT Delhi. | December 2010 |

I have also studied following topics during pre-Ph.D. training course modules of Semester-I at Inter University Accelerator Centre (IUAC), New Delhi (**One Semester Course during Aug - Nov 2010**)

- | | |
|--|------------------------------------|
| 1. Energy Loss in Solids | 6. Instrumentation and Control |
| 2. Programming Techniques | 7. Ion Beams in Semiconductors |
| 3. Fundamental Lattice Defects in Solids | 8. Special Lecture Series on |
| 4. Numerical Analysis | Nanomagnetism for Spintronics, DMS |
| 5. Ion Beams in Materials Science | and Biomedical Applications. |

Besides this I have also attended following Schools and Training Programmes from time to time,

1. "X-ray techniques in Material Science" at IUAC, New Delhi, India, (2006).
2. "Science and Application of Luminescent Materials" at NPL, New Delhi, India, (2008).
3. "Winter School on Nanoscience: Research Training and Exposure" under the aegis of IIT-Kanpur and Nanotechnology Application Centre, University of Allahabad, Allahabad, (2010).
4. "Characterization Techniques in Nanotechnology" at National Academy of Sciences, India (2011).
5. "2nd Continuing Education and Quality Improvement Programme (CE & QIP) on Magnetic Resonance Imaging" at Indian Institute of Technology Bombay, Mumbai, India, (2011).

9. Research Projects

| S. N. | Title of Project | Funding Agency and Role | Amount (in Lakhs Rupees) | Sanction Year and Duration |
|-------|--|--|---|--------------------------------|
| 1. | Development of a Point-of-Care Assay System for Qualitative and Quantitative Analysis of Food Allergens using Artificial Antibodies | Science and Engineering Research Board (SERB)-DST (Co-Principal Investigator) | 46 | 2016 3-Years (Ongoing) |
| 2. | Faculty Development Centre Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching | Ministry of Human Resource and Development (Deputy Coordinator 1) | 756 | 2015 3-Years (Ongoing) |
| 3. | Synthesis and Assembly of Hybrid Nanostructured Materials for detection of explosives and narcotic drugs | DAE-BRNS (Principal Investigator) | 30 | 2014 3-Years (Ongoing) |
| 4. | Development of Hybrid Polymer – Nanoparticle Based White Light Emitting Diodes (WLEDs) | Department of Science and Technology (Principal Investigator) | 28 | 2014 3-Years (Ongoing) |
| 5. | Hybrid Nano-composites Optoelectronic and Photovoltaics Applications | Indian School of Mines, Dhanbad (Principal Investigator) | 10 | 2013 3 Years (Ongoing) |
| 6. | Origin and Role of valence-band states on room temperature ferromagnetism in oxide nanocrystals: An X-Ray Magnetic Circular Dichroism (XMCD) Investigations. | Photon Factory, Institute of Material Structure Science, High Energy Accelerator Research Organization (KEK-PF), Japan. (Principal Investigator - 2) | Experimental facility and Travel Support etc. (Twice a year) | 2012 Two Years (Ongoing) |

10. Teaching Experience at UG and PG Level (8 Years; including 2 years as Scientist)

| S. N. | Topics | Level |
|------------------|---|--|
| Theory | | |
| 1. | Advanced Characterization Techniques | M.Sc. |
| 2. | Materials Characterizations | PhD Course Work |
| 3. | Sensors and Transducers | Vth BTech Engg Phys. (Honors) |
| 4. | Biomedical Engineering | Vth BTech (Minors) |
| 5. | Electricity and Magnetism | IVth Int MTech (AGP) |
| 6. | Optics | Integrated M.Tech. |
| 7. | Physics II | Preparatory |
| 8. | Solid State Physics | M.Sc. |
| 9. | Nuclear and Particle Physics | M.Sc./ Integrated M.Sc. |
| 10. | Physics of Nanomaterials | M.Sc./Integrated M.Sc./M.Phil./Pre-PhD Course work |
| 11. | Quantum Mechanics | M.Sc./Integrated M.Sc. |
| 12. | Physics of Ion-Beams and X-Ray Crystallography | M.Sc. |
| 13. | X-Ray Spectroscopy | M.Sc. |
| Practical | | |
| 14. | Mechanics | B.Tech/M.Sc./Integrated M.Sc./M.Phil./ |
| 15. | Optics | B.Tech/M.Sc./Integrated M.Sc./M.Phil./ |
| 16. | Electronics | B.Tech/M.Sc./Integrated M.Sc./M.Phil./ |
| 17. | Electricity and Magnetism | B.Tech/M.Sc./Integrated M.Sc./M.Phil./ |
| 18. | X-Ray Crystallography/Spectroscopy | M.Sc. |

11. Thesis/Dissertation/Project Supervision**Summary**

| Degree | Awarded/Completed | Ongoing | Total |
|------------------------|-------------------|---------|-------|
| Ph.D. | 01 | 05 | 06 |
| M.Sc. | 13 | 02 | 15 |
| Int. M.Sc./M.Sc. Tech. | 03 | -- | 03 |
| B.Tech. | | 02 | 02 |

Details of Ph.D. Supervision

| S. N. | Student Name | Level | Registration Date | Status |
|-------|--------------------------|-------|-------------------|---------|
| 1. | Ms. Shrabani Mondal | Ph.D. | Feb, 2013 | Awarded |
| 2. | Ms. Manisha Kumari | Ph.D. | July, 2014 | Ongoing |
| 3. | Mr. Trupti Ranjan Das | Ph.D. | July, 2015 | Ongoing |
| 4. | Ms. Suryakanti Debata | Ph.D. | March, 2016 | Ongoing |
| 5. | Ms. Sanchari Banerjee | Ph.D. | August, 2016 | Ongoing |
| 6. | Mr. Minarul Islam Sarkar | Ph.D. | September, 2017 | Ongoing |

Details of M.Sc. Project Supervision

| S. N. | Student Name | Level | Registration Date | Status |
|-------|--------------------------|-------|-------------------|-----------|
| 1. | Mr. Swarndeeep Bakshi | M.Sc. | September 2017 | Ongoing |
| 2. | Ms. Rita Majumdar | M.Sc. | September 2017 | Ongoing |
| 3. | Ms. Sanchari Chakraborty | M.Sc. | May 2017 | Completed |
| 4. | Mr. Suchit Kumar Jena | M.Sc. | September 2016 | Completed |
| 5. | Ms. Jayashree Pati | M.Sc. | September 2016 | Completed |
| 6. | Mr. Sreedeeep Das | M.Sc. | August 2015 | Completed |
| 7. | Ms. Sanchari Banerjee | M.Sc. | August 2015 | Completed |
| 8. | Ms. Sathi Chatterjee | M.Sc. | August 2015 | Completed |
| 9. | Ms. Sanjana Mukherjee | M.Sc. | August 2015 | Completed |
| 10. | Ms. Lakshmi Mukhopadhaya | M.Sc. | July, 2014 | Completed |
| 11. | Ms. Bela Purty | M.Sc. | July, 2014 | Completed |
| 12. | Ms. Manisha Kumari | M.Sc. | July, 2013 | Completed |
| 13. | Mr. Arun Kumar Singh | M.Sc. | July, 2013 | Completed |
| 14. | Ms. Priya Dwivedi | M.Sc. | Oct. 2012 | Completed |
| 15. | Ms. Sneha Bharti Linda | M.Sc. | Oct. 2012 | Completed |

Details of B.Tech. Project Supervision

| S. N. | Student Name | Level | Registration Date | Status |
|-------|---------------------|---------------------|-------------------|---------|
| 1. | Mr. Nalin Shiva | B.Tech. (Engg Phys) | August 2015 | Ongoing |
| 2. | Mr. Ramendra Ranjan | B.Tech. (Engg Phys) | August 2015 | Ongoing |

Details of Int. MSc/MSc Tech Project Supervision

| S. N. | Student Name | Level | Registration Date | Status |
|-------|-------------------------|------------------|-------------------|-----------|
| 1. | Mr. Jitendra Chaturvedi | Int. M.Sc. | July, 2014 | Completed |
| 2. | Mr. S K Paswan | Int. M.Sc. Tech. | August, 2012 | Completed |
| 3. | Mr. Parva Mehta | Int. M.Sc. Tech. | August, 2012 | Completed |

12. Technical Skills and Experience:

- Synthesized several nanomaterials using various methods such as Reverse Miscelles, Precipitation, Hydrothermal, Solvothermal, Sol-Gel, Ultrasonication, Combustion, Solid state reaction and Biomimetic etc. (Annexure 1).
- Expertise in preparing demonstrator opto-electronic devices (LEDs and solar Cells).
- Good experience of characterization with
 - ❖ High Resolution Transmission Electron Microscopy (HRTEM)/EDX.
 - ❖ Scanning Electron Microscope (SEM)/EDX technique.
 - ❖ Micro Raman Spectrometer.
 - ❖ Atomic/Magnetic/Electric Force Microscope (AFM/MFM/EFM).
 - ❖ Scanning Tunneling Microscopy (STM).
 - ❖ Nanoindentor-nanohardness tester.
 - ❖ NSOM with Confocal System.
 - ❖ Magnetic Characterization techniques such as VSM and SQUID.
- Having expertise of Characterization Using McPherson VUV spectrophotometer (VUV-PL) (The one and only system in India).
- Having expertise of Characterization Using X-Ray Diffractometer (XRD) and Small Angle X-Ray Scattering (SAXS) technique.
- Have good knowledge of characterization using Photoluminescence spectrometer (PL), absorption (UV-Vis) and IR spectrometer.
- Exposed to
 - ❖ Scanning Tunneling Microscope (STM).
 - ❖ TGA/DTA/DSC etc.
 - ❖ Different sample preparation systems related to HRTEM/SEM.
 - ✚ Grid coating unit, Ultrasonic disk cutter, Ion mill, grinder cum polisher, Dimple grinder, Twin jet electropolisher
 - ✚ Biological sample preparation
 - ❖ Keithley make equipments for transport properties measurements.
 - ❖ X-ray Photoelectron Spectroscopy (XPS) and Valance Band Spectroscopy (VBS) techniques.
- Also worked on L.B. Film deposition unit and Spin coater system (Participated in four day training program at IACS, Kolkata, during 20th Nov to 24rd Nov 2006).

13. Computer Skill:

- **Atomic Scale/Nanoscale Simulation/Analysis and Visualization Software:**
Gaussian 03, Siesta,
Origin, Chem-Bio Draw, Adobe Photoshop, Coral Draw, Image J,
Gatan Digital Micrograph, Gatan 3-D view
- **Software:** Nanosolver (software for determining shape, size and distribution of nanoparticles), Nano-Hive: Nanospace Simulator (A Simulation Software on Nano technology), circuit simulator, PCB designer, Electronic Workbench, MS Office suite, RockJock 4.0/5.0 (a software to determine mineralogy), Mud-Master (a software for calculating crystallite size distributions and strain from the shapes of X-Ray diffraction peaks) etc.
- **Programming Language:** Basics, C and C++ language.
- **Operating Systems:** DOS, Windows' 98, XP, Linux operating system (Ubuntu & Fedora).
- **Hardware:** Expert in hardware maintenance and computing.

14. Administrative Responsibilities/Involvement in Institutional Work:

- ✦ **Secretary, “Digital Learning Monitoring Cell, IIT (ISM) Dhanbad”**, for recommend and implement the action plan to use the digital resources and future improvement steps as per directives of MHRD, GOI vide letter F.No.8-6/2017-TEL dated 31/08/2017.
- ✦ **Secretary, “Innovation Group, IIT (ISM) Dhanbad”**, for suggesting the Ideas and procedures for the growth and expansion of IIT (ISM) at par with other IITs.
- ✦ **Co-Coordinator, CONCETTO (Tech Fest) 2017-18, IIT (ISM) Dhanbad**, to be organized during January 12 -14, 2018.
- ✦ **Deputy Co-Ordinator(1)** for Establishment of **Faculty Development Centre (FDC)** under the scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT), funded by Department of Higher Education, Ministry of Human Recourse and Development, Government of India **worth Rs. 7.56 Crores**.
- ✦ **Faculty Member**, Core Team, for Establishment of **Centre for Innovation, Incubation and Entrepreneurship (CIIE)**. Finalized the “Approach Paper”, Floor Plan of CIIE at New building, Monitored the progress of the renovation work, indented, supervised the furniture, computers, other peripheral purchase under CIIE, and other related works.
- ✦ **Co-Ordinator**, Examination (Mid Semester and End Semester Examination), Department of Applied Physics, IIT (ISM) Dhanbad since 2013.
- ✦ **Co-Ordinator**, 2 Years M.Sc. Applied Physics Programme, ISM Dhanbad since 2013.
- ✦ **Member**, Special **Task Force** for handling emergency problems in IIT (ISM) Hostels since 2013.
- ✦ **Member**, Organizing Committee, **90th Foundation Day**, IIT (ISM), Dhanbad.
- ✦ **Departmental Co-Ordinator, Concetto 2016, Concetto 2015, Concetto 2014, Concetto 2013**, Technical Fest of IIT (ISM), Dhanbad.
- ✦ **Observer**, JRF/M.Sc./MSc Tech Entrance Examination (2014).
- ✦ Participated as well as worked as judge for various annual sports activities of IIT (ISM).
- ✦ Worked as **Tabulator** for session 2013-14, 2014-15.
- ✦ Performed **stock verification for Departmental R & D Labs** for 2012-13, 2013-14, 2014-15.
- ✦ Made the **presentation** for departmental activities and facilities and presented **before the DRDO team** visited the Institute/Department in 2013.
- ✦ **Member, Sub-Committee**, constituted for the data collection, preparation and finalizing **DST-FIST project proposal** and presentation.
- ✦ Made the **presentation** of departmental activities & facilities for placing before the committee visited the Institute/ Department in Jan 2014 **for conversion of ISM to IIT**.
- ✦ **Compiled total projects outlays and publications** of the department and prepared it in the form of bound volume for placing before the committee, chaired by Prof. Mishra, visited the Institute/ Department in Jan 2014 **for conversion of ISM to IIT**.
- ✦ Designed and made the Departmental Profile and Training and Placement Brochure.
- ✦ **Member**, Board of Course Studies (**BOCS**), Department of Applied Physics, ISM Dhanbad.
- ✦ **Scrutinizer**, ISM JRF Entrance Examination, 2014.
- ✦ **Indenter**, High Resolution Transmission Electron Microscope (**HRTEM**) **worth Rs. 15 Crore** for CRF of IIT (ISM) Dhanbad.
- ✦ **Observer**, JRF/M.Sc./MSc Tech Entrance Examination (2013).
- ✦ Member, Organizing Committee, National Conference on Advances in Laser Spectroscopy, ALS - 2012, organized by Department of Applied Physics, IIT (ISM) Dhanbad, 1-3 Nov, 2012
- ✦ **Scrutinizer**, ISM JRF Entrance Examination, 2013.

- ✚ Judged various competitions like debate, assay writing etc. organized under Hindi Pakhwara.
- ✚ Member, Departmental Advisory Committee and Purchase Committee.
- ✚ Member, Departmental Training and Placement Cell.
- ✚ Member Anti Ragging Squad, IIT (ISM).

15. Short Term Courses/Training Programmes/Workshops/Conferences Organized

- ✚ **Co-Ordinator, 3 week Refresher Programme in Physics with special focus on ‘Nano-Biotechnology’** organized under the agis of Faculty Development Centre, IIT(ISM) Dhanbad during 25th May 2017 – 14th June 2017 for the University/Institute/ College Teachers.
- ✚ **Organizer, 1 week National Training Programme on “Mineral Processing with special focus on Mineral Processing-Principles, Processes & Practice”** during June 26- July 1, 2017 organized under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
- ✚ **Organizer, 3 week Refresher Programme** on the topic “Mathematical Sciences”organized under the agis of Faculty Development Centre, IIT(ISM) Dhanbad during 16th May 2017 – 05 June 2017 for the University/Institute/ College Teachers.
- ✚ **Organizer, 3 week Refresher Programme** on the topic “Chemistry with special focus on Materials Chemistry”organized under the agis of Faculty Development Centre, IIT(ISM) Dhanbad during 01st June 2017 – 21st June 2017 for the University/Institute/ College Teachers.
- ✚ **Organizer, 3 week Refresher Programme** on the topic “Recent Trends on Microwave Devices and Antennas”organized under the agis of Faculty Development Centre, IIT(ISM) Dhanbad during 26th Dec 2016 – 15 Jan 2017 for the University/Institute/ College Teachers.
- ✚ **Co-Ordinator, 3 week Orientation Programme** organized during 09th -29th Feb 2016 for the University/Institute/ College Teachers under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
- ✚ **Co-Convener, National Conference on Recent Advances in Science and Engineering (RASE 2016)**, 28th -30th March 2016, IIT (ISM), Dhanbad.
- ✚ **Organizer, 23rd National Conference on Liquid Crystals (NCLS 2016)** Nov 07th -09th, 2016, IIT (ISM) Dhanbad.
- ✚ **Organizer, “International Topical Conference on Charged Particle Collisions and Electronic processes in Atoms, Molecules and Materials, q-PaCE 2016”**, Organized by Department of Applied Physics, Indian School of Mines, Dhanbad during 9-11 January, 2016.
- ✚ **Co-Convener, International Conference on Structural and Physical Properties of Solids (SPPS 2013)**, 18th -20th November 2013, IIT (ISM), Dhanbad.
- ✚ Member of Organizing Committee in “*National Conference on Advances in Lasers and Spectroscopy-ALS*”, during Nov 1-3, 2012, Indian School of Mines (ISM), Dhanbad.

- ✚ Member of Organizing Committee in “International Conference on Nanostructuring by Ion Beams” during 17-19 Oct 2011 jointly organized by Inter University Accelerator Centre (IUAC) and Nanotechnology Application Centre, University of Allahabad, Allahabad.
- ✚ Member of Organizing Committee in organizing two day policy support brainstorming on 'Study of Observed and Model Simulated Extreme Weather Events Over India in a Changing Climate', June 6-7, 2011 jointly organized by KBCAOS and MNSCOSS, University of Allahabad, Allahabad 211002.
- ✚ Member of Organizing Committee, also worked as resource person and delivered 3 lectures in two day workshop on “Characterization Techniques in Nanotechnology” during Feb 12-13 2011, organized by National Academy of Sciences, India, Allahabad Chapter. <http://nasi.nic.in/Regular%20Activities.htm>
- ✚ Member of Organizing Committee in “4th International Conference INDIAS 2010”, during Sep 19th - 21st 2010 at Nanotechnology Application Centre, University of Allahabad, Allahabad.
- ✚ Also worked as Associate Editor for the “Abstract Book, Proceedings and Special Issues” published in an international journal “Adv Mat Letts” for the “4th International Conference INDIAS 2010”, organized during Sep 19th -21st 2010.
- ✚ Member of Organizing Committee in three day “Winter School on Nanoscience (Research Training and Exposure)” during 24-26 Jan 2010, organized by Nanotechnology Application Centre, University of Allahabad, Allahabad 211002.
- ✚ Member of Organizing Committee in International workshop “Synergy of Nanomaterials for Newcomer Technology” organized by Nanotechnology Application Centre, University of Allahabad, Allahabad on 24th Dec 2009.
- ✚ Member of Organizing Committee in International workshop “Meghnad Saha Memorial Symposium on Emerging Trends in Laser Spectroscopy and Applications, MMSETLSA 2009” organized by University of Allahabad, Allahabad India during 23-25 March 2009.
- ✚ Member of Organizing Committee in “International Workshop on Surface and Interface Modifications by Energetic Ion Beams” jointly organized by Nanotechnology Application Centre University of Allahabad, Allahabad and Inter University Accelerator Centre, New Delhi, India on March 18th 2009.
- ✚ Member of Organizing Committee in “International Conference on Transport and Optical Properties of Nanomaterials, ICTOPON 09”, jointly organized by Department of Physics, University of Allahabad, Allahabad, India and University of Western Ontario, Canada during 5-8 JAN 2009.

16. Patents Applied / Under Consideration:

| S.N. | BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any |
|------|---|
| 1. | <p>RSREP2016 Patent Application No.: 20163110351117</p> <p>Triple signaling mode carbon dots-based biodegradable molecularly imprinted polymer as multi-tasking visual sensor for rapid and “on-site” monitoring of silver ion</p> <p>Rashmi Madhuri, Santanu Patra, Raksha Choudhary, Ekta Roy, Prashant K. Sharma</p> |
| 2. | <p>PA2010 Patent Number: 608/DEL/2010</p> <p>Development of Zinc Oxy-Sulphide Ternary Nanocrystal: A new hope for tunable white light LED nanophosphors</p> <p>Prashant K Sharma and Avinash C Pandey,</p> |
| 3. | <p>PA2010 Patent Number: 607/DEL/2010</p> <p>Performance Enhancement of Large Area Solar Cells by Incorporating Nanocrystals</p> <p>Prashant K Sharma and Avinash C Pandey,</p> |
| 4. | <p>PRA2010 Patent Number: 610/DEL/2010</p> <p>A Novel Up-scalable Solution Combustion Synthesis of Bright Blue Luminescent BAM:Eu²⁺ Nanophosphors for PDP Applications</p> <p>Prashant K Sharma, Ranu K Dutta and Avinash C Pandey.</p> |
| 5. | <p>PRA2010 Patent Number: /DEL/2010</p> <p>Combustion Synthesis and Fluorescent Properties of Eu³⁺ and Tb³⁺ Doped YBO₃ Nanorods under VUV excitations</p> <p>Prashant K Sharma, Ranu K Dutta and Avinash C Pandey,</p> |
| 6. | <p>PRA2010 Patent Number: 609/DEL/2010</p> <p>Reverse Micelles Synthesis of Quantum Confined Rare-Earth Ortho-botare Nanocrystals for High-Definition Display Devices</p> <p>Prashant K Sharma, Ranu K Dutta and Avinash C Pandey,</p> |
| 7. | <p>PRA2010 Patent Number: /DEL/2010</p> <p>Enhanced Luminescence Characteristics of YBO₃:Eu³⁺ Nanophosphors co-doped with Gd³⁺ under VUV and UV excitation</p> <p>Prashant K Sharma, Ranu K Dutta and Avinash C Pandey,</p> |
| 8. | <p>PRA2010 Patent Number: 1077/DEL/2010</p> <p>Vitamin Encapsulated Magnetofluores as Target Specific MRI Contrast Agents</p> <p>Ranu K Dutta, Prashant K Sharma and Avinash C Pandey,</p> |
| 9. | <p>RPA2009 Patent Number: 1072/DEL/2009</p> <p>Luminescent Magnetic Quantum Dots (LMQDTs): Synthesis Method and corresponding functional properties</p> <p>Ranu K Dutta, Prashant K Sharma and Avinash C Pandey.</p> |

17. Full List of Publications

A. Books

| S.N. | BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any |
|------|---|
| 1. | “Study of Nanomaterials for Opto-electronics and DMS Based Applications” Prashant K. Sharma and Avinash C. Pandey, <i>LAP Lambert Academic Publishing</i> , 244 Pages, 2012 . ISBN 978-3-8473-7963-8 |

B. Book Chapters

| S.N. | BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any |
|------|---|
| 2. | “Role of Nanomaterials as an Emerging Trend Towards the Detection of Winged Contaminants” in the book entitled, “Nanotechnology in Oil and Gas Industries” S Patra, R Madhuri, Prashant K. Sharma Chapter No. 9, 245-289, 2018 <i>Publisher: Springer</i> , https://doi.org/10.1007/978-3-319-60630-9_9 Print ISBN978-3-319-60629-3 ; Online ISBN978-3-319-60630-9 |
| 3. | “Materials Characterization using Scanning Tunneling Microscopy: From Fundamentals to Advanced Applications” Suryakanti Debata, Trupti R. Das, Rashmi Madhuri, Prashant K. Sharma Article in Press, 2017 |
| 4. | “Graphene-Based Multifunctional Magnetic Nanocomposites and Their Multimode Biomedical Applications” in the book titled Complex Magnetic Nanostructures, Editor: Surender K. Sharma, TR Das, S Debata, R Madhuri, Prashant K. Sharma , Chapter No. 10, Page numbers: 359-392, Publication date: 2017 , <i>Publisher: Springer</i> , ISBN 978-3-319-52086-5 (eBook) |
| 5. | “Role of Magnetic Nanoparticles in Providing Safe and Clean Water to Each Individual” in the book titled: Complex Magnetic Nanostructures, Editor: Surender K. Sharma, E Roy, S Patra, P Karfa, R Madhuri, Prashant K. Sharma , Chapter No. 8, Page numbers: 281-316, Publication date: 2017 , <i>Publisher: Springer</i> , ISBN 978-3-319-52087-2 (eBook) . |
| 6. | “A genuine combination of solvent-free sample preparation technique and molecularly imprinted nanomaterials”, in the book titled: Advanced Molecular Imprinting Materials, Editors: Ashutosh Tiwari, Lokman Uzun, Santanu Patra, Ekta Roy, Rashmi Madhuri, Prashant K. Sharma , Chapter number: 02, Page numbers: 29-88, Publication date: 2016 , <i>Publisher: WILEY-Scrivener Publishing, USA</i> , ISBN: 978-1-119-33629-7 . |
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(Also Selected for Publication in Virtual Journal of Nanoscale Science and Technology)
55. DNA base (cytosine) modified/capped ultrasmall $\text{Gd}_2\text{S}_3:\text{Eu}^{3+}$ gadofluoroprobes for platelet isolation
Ranu K Dutta, Prashant K. Sharma and Avinash C Pandey
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54. Differential susceptibility of *Escherichia coli* cells towards TM doped and matrix embedded ZnO nanoparticles
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53. Design and surface modification of potential luminomagnetic nanocarriers for biomedical applications
Ranu K Dutta, Prashant K. Sharma and Avinash C Pandey,
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52. Alteration of Magnetic and Optical Properties of Ultrafine Dilute Magnetic Semiconductor $\text{ZnO}:\text{Co}^{2+}$ Nanoparticles
Prashant K. Sharma, Ranu K Dutta and Avinash C Pandey,
J. Colloid Interface Sci. 345 (2), 149-153, **2010**. (Impact Factor: 3.8)
51. Surfactant Mediated Optical Properties of Cytosine Capped CdSe Quantum Dots
Prashant K. Sharma, Ranu K Dutta, Avinash C Pandey, Chun hui Liu and Ravindra Pandey,
Materials Letters, 64 (10), 1183-1186, **2010**. (Impact Factor: 2.5)
50. Engineering of Highly Susceptible Paramagnetic Nanostructures of $\text{Gd}_2\text{S}_3:\text{Eu}^{3+}$: Potentially an Efficient Material for Room Temperature Gas Sensing Applications,
Ranu K Dutta, Prashant K. Sharma and Avinash C Pandey.
Sensors & Transducers, 122 (11), 36-45, **2010**. (Impact Factor: 215)
49. Tunable visible emission of Ag doped CdZnS alloy quantum dots
Ruchi Sethi, Lokendra Kumar, Prashant K. Sharma and A. C. Pandey,
Nanoscale Res Lett., 5: 96–102, **2010**. (Impact Factor: 2.779)

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48. Influence of Co-doping on the thermal, structural, and optical properties of sol-gel derived ZnO nanoparticles
Richa Bhargava, [Prashant K. Sharma](#), Ranu K. Dutta, Sanjeev Kumar, Avinash C. Pandey, Naresh Kumar,
Mater. Chem. Phys., 120 (2-3), 393-398, **2010**. (Impact Factor: 2.3)
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47. Glycolic acid assisted one-step synthesis of Cu-Ni-Fe metal oxide nanocomposites by sol-gel-combustion method: Structural, spectroscopic and magnetic studies
Manish Srivastava, Animesh K. Ojha, S. Chaubey, [Prashant K. Sharma](#), Avinash C. Pandey,
Mater. Chem. Phys., 120 (2-3), 493-500, **2010**. (Impact Factor: 2.3)
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46. Surfactant mediated phase transformation of CdS nanoparticles
Vineet Singh, [Prashant K. Sharma](#), Pratima Chauhan,
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45. Influence of calcinations temperature on physical properties of the nanocomposites containing spinel and CuO phases
Manish Srivastava, Animesh K. Ojha, S. Chaubey, [Prashant K. Sharma](#), Avinash C. Pandey,
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44. Raman studies on Ag-ion doped CdZnS luminescent alloy quantum dots
R. Sethi, [Prashant K. Sharma](#), L. Kumar and A. C. Pandey,
Chem. Phys. Lett., 495 (1-3) 63-68, **2010**. (Impact Factor: 2.0)
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43. Consequence of doping mediated strain and the activation energy on the structural and optical properties of ZnO:Cr nanoparticles
Richa Bhargava, [Prashant K. Sharma](#), Sanjeev Kumar, Avinash C. Pandey, Naresh Kumar,
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42. Investigation on magnetic properties of α -Fe₂O₃ nanoparticles synthesized under surfactant-free condition by hydrothermal process
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[Prashant K. Sharma](#), M Kumar, Prashant K Singh, Avinash C Pandey and V N Singh
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39. Luminescence studies and formation mechanism of symmetrically dispersed ZnO quantum dots embedded in SiO₂ matrix
[Prashant K. Sharma](#), Ranu K. Dutta, Manvendra Kumar, Prashant K Singh and Avinash C Pandey
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(Most Downloaded article of the year 2009)
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37. Effect of nickel doping concentration on structural and magnetic properties of ultrafine diluted magnetic semiconductor ZnO nanoparticles
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***Digest J. Nanomat. and Biostructures*, 4, (1), 83-87, 2009. (Impact Factor: 2.5)**
35. Doping dependent room-temperature ferromagnetism and structural properties of dilute magnetic semiconductor ZnO:Cu²⁺ nanorods
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***J. Magn. Magn. Mater*, 321, 4001, 2009. (Impact Factor: 2.4)**
(5th Most Downloaded article of the year 2009)
34. Relationship between Oxygen Defects and the Photoluminescence Property of ZnO Quantum Dots: A Spectroscopic View
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33. Zinc Oxide (1% Cu) Nanoparticle in Nematic Liquid Crystal: Dielectric and Electro-Optical Studies
K K Pandey, **Prashant K. Sharma**, Rajiv Manohar and Avinash C Pandey,
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(Also Selected for Publication in Virtual Journal of Nanoscale Science and Technology)

D. Peer Reviewed Conference Proceedings having ISBN/ISSN Numbers

S.N. BibID / Title / Authors / Citation (Year wise sorted)/ Special note, if any

32. Hydrothermally synthesized reduced graphene oxide/nickel hydroxide (rGO/Ni(OH)₂) nanocomposite: A promising material in dye removal
Suryakanti Debata, Trupti R. Das, Rashmi Madhuri, and **Prashant K. Sharma**
***AIP Conf Proc.*, 1832, 050059, 2017.**
<http://doi.org/10.1063/1.4980292>
31. Electrochemical performance of Ag nanoparticle decorated reduced graphene oxide in determination of anticancer drug flutamide
Sanchari Banerjee, Shrabani Mondal, Rashmi Madhuri, and **Prashant K. Sharma**
***AIP Conf Proc.*, 1832, 050067, 2017.**
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30. Electrocatalytic activity of silver nanoparticles decorated reduced graphene oxide (AgNP@rGO) nanocomposites
Trupti R. Das, Rashmi Madhuri, and **Prashant K. Sharma**
***AIP Conf Proc.*, 1832, 050015, 2017.**
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29. CuO nanostructure modified pencil graphite electrode for non-enzymatic detection of glucose
Shrabani Mondal, Rashmi Madhuri, and **Prashant K. Sharma**
***AIP Conf Proc.*, 1832, 050011, 2017.**
<http://doi.org/10.1063/1.4980244>
28. Study of structural, optical and electrical properties of hydrothermally synthesised Cu-doped ZnO nanorods
Lakshmi Kumari, Rashmi Madhuri, and **Prashant K. Sharma**
***AIP Conf Proc.*, 1832, 050075, 2017.**
<http://doi.org/10.1063/1.4980308>
27. Imprinted magnetic graphene oxide for the mini-solid phase extraction of Eu (III) from coal mine area
Santanu Patra, Ekta Roy, Rashmi Madhuri, and **Prashant K. Sharma**
***AIP Conf Proc.*, 1832, 050009, 2017.**

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26. Development of carbon dots modified fluorescent molecular imprinted Polymer@Ag/AgCl nanoparticle for hepatocellular carcinoma marker
Paramita Karfa, Rashmi Madhuri, and **Prashant K. Sharma**
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25. Super paramagnetic iron oxide nanoparticle modified mancozeb imprinted polymer
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23. Dual doped graphene oxide for electrochemical sensing of europium ion
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22. Synthesis and characterization of Eu³⁺: Gd₂O₃ hollow spheres for biomedical applications,
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21. Designing of Target-Specific Sites on Nanostructures for the Early Diagnosis of Cancer Biomarker,
Rashmi Madhuri and **Prashant K. Sharma**,
Proceedings of International Conference on Chemistry: Frontiers & Challenges (ICFC-13), **2013**, ISBN 88-9235- 401-9.
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20. Cutting Edge Advanced Theragnostics: The Epoch of Nano-biotechnology,
Prashant K. Sharma,
Proceedings of National Conference on "Nanotechnology and Life", **2012**, ISBN 978-88-8526-901-1.
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19. A Review of Nanocomposite Semiconducting Sensing Material
Abhijit Kakati and **Prashant K. Sharma**,
Proceedings of National Conference on Advances in Lasers and Spectroscopy-ALS, Page No-248-252, **2012**, ISBN 978-81-8424-806-7.
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18. Zinc Oxy-Sulphide Ternary Nanocrystals: An efficient Nanophosphor for Performance Enhancement of Large Area Solar Cells and WLEDs
Prashant K. Sharma and Avinash C. Pandey,
Proceedings of '4th International conference on Luminescence and Its Applications-ICLA 2012', ISBN 81-6717-806-5. **2012**
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17. Superparamagnetic Eurogadofluoroprobes (EGFP) for Medical Imaging and Cancer Theragnostics
Ranu K. Dutta, **Prashant K. Sharma** and Avinash C. Pandey,
Proceedings of '4th International conference on Luminescence and Its Applications-ICLA 2012', ISBN 81-6717-806-5. **2012**
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16. Fine encapsulated ZnO nanophosphors and their potential antibacterial evaluation on the gram negative bacillus *Escherichia coli*
Ranu K Dutta, **Prashant K. Sharma** and Avinash C Pandey,
AIP Conf Proc., 1147, 528, **2009**. doi: 10.1063/1.3183485.
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15. Effect of Sol-Gel Derived ZnO Nanoparticles on the growth of Escherichia coli Bacteria
R. Bhargava, R. K Dutta, **Prashant K. Sharma**, N K Singh, A. C Pandey and Naresh Kumar,
Excel India Publishers, **ISBN 93-80043-61-9**, published in the Proceeding of 2nd National
Conference on Nanomaterials and Nanotechnology. **2009**

14. Luminescence Studies of PDP Nanophosphors under Vacuum-Ultraviolet Excitation
Prashant K. Sharma and Avinash C Pandey,
Proceedings of National Seminar on Display Phosphors and its Applications. **2009**

13. Futuristic Nanoparticles: From Solid State Lightning to MRI Contrast Agents
Prashant K. Sharma and Avinash C Pandey
Proceedings of "2nd National Conference on Nanomaterials & Nanotechnology", published by
Excel India Publishers, **ISBN 93-80043-61-9. 2009**

12. Highly stabilized monodisperse citric acid capped ZnO:Cu²⁺ nanoparticles: Synthesis and
characterization
Prashant K. Sharma, Ranu K. Dutta, M. Kumar, Prashant K. Singh and Avinash C. Pandey
Proceedings of the 3th International conference on Luminescence and Its Applications-ICLA
2008, Macmillan Advanced Research Series *Page Number 135*
ISBN 0230-63468-0,

11. Synthesis and characterization of Cd_{1-x}Zn_xS ternary nanocrystals
R. Sethi, **Prashant K. Sharma**, L. Kumar and A. C. Pandey,
Proceedings of the 14th International Workshop on the Physics of Semiconductor Devices,
IWPSD, art. no. 4472553 , pp. 472-474 © **2007** IEEE, 978-1-4244-1728-5/07/\$25.00.

Articles Under Review / Considerations

10. Size Dependent Emission Color Tunability in ZnO Quantum Dots
Prashant K. Sharma, Ranu K Dutta and Avinash C Pandey, (Under Review).

9. Dopant Concentration Mediated Defects: A Case Study for Activator Dependent Structural and
Spectroscopic Properties
Prashant K. Sharma, G.z Zolnierkiewicz, N. Guskos, C. Rudowicz, A. C Pandey, (under review).

8. Co-relation between doping induced defects and magnetic properties of ZnO:Mn Nanoparticles
Prashant K. Sharma, R. K Dutta, R J Choudhary and A. C Pandey, (Under Review).

7. Band Gap tunable optical properties of ZnO_{1-x}S_x nanocrystals
Prashant K. Sharma and Avinash C Pandey. (Under Review).

6. Structural Properties and Electron Paramagnetic Resonance Studies of Cu²⁺ Doped ZnO Nanorods
Prashant K. Sharma, A. C Pandey, G. Zolnierkiewicz, N. Guskos, C. Rudowicz, (Under Review).

5. Nanomechanical Imprints in Cancer Diagnostics
Vandana Tewari, **Prashant K. Sharma**, Nuzhat Husain and Avinash C Pandey, (Under review)

4. Fluorescent properties of Eu³⁺ and Tb³⁺ doped yttrium ortho-borate under VUV excitations
Prashant K. Sharma, Ranu K Dutta and Avinash C Pandey, (Under Review).

3. Enhanced luminescent properties of YBO₃:Eu³⁺ nanophosphors co-doped with Gd³⁺ under VUV/UV
excitation
Prashant K. Sharma, Ranu K Dutta and Avinash C Pandey, (Under Review).

2. Effect of doping concentration and synthesis process on vacuum ultraviolet excited luminescence of
blue BAM:Eu²⁺ nanophosphors
Prashant K. Sharma, R K Dutta and A C Pandey, (Under Review).

1. Effect of organic surface passivating agents on doped ZnO Nanostructure
Prashant K. Sharma, and Avinash C. Pandey. (Under Review).

18. Conferences/Workshops/Seminars contributions in relevant field:

1. Attended *ASID 2006* (9th Asian Symposium on Information Display, organized by SID & IIT Kanpur) and presented a paper which get published in the proceedings of ASID 2006.
2. Presented a paper at *ICLAN - 2006* (International Conference on Lasers and Nanomaterials, 150 years celebration of Calcutta University) which get published in the proceedings of ICLAN 2006.
3. Participated in One Day International Seminar on "*Liquid Crystals: Synthesis and Characterization*", 13th December 2006, Department of Physics, University of Allahabad, Allahabad.
4. Participated in Indo-Polish Workshop on "*Liquid Crystals: Synthesis, Characterization and molecular Engineering*", 12th December 2007, Physics Department, University of Allahabad, Allahabad.
5. Contributed in "*International Workshop on Physics of Semiconducting Devices, IWPSD-2007*", organized by IIT Mumbai and got published in the proceedings of IEEE.
6. Presented a paper at *ICLA-2008* (*International Conference on Luminescence and Its Application*), jointly organized by National Physical Laboratory (NPL), New Delhi and Luminescence Society of India (LSI) which get published in the proceedings of ICLA- 2008.
7. Presented a paper at *ICONSAT-2008* (*International Conference on Nanoscience and Technology*), organized by IIT- Chennai, Chennai.
8. Presented two papers in an International Conference "*2nd Bangalore Nano 2008*" at the Lalit Ashoka, Bangalore in Nov 2008 organized by JNCASR and IISc Bangalore.
9. Presented two papers in an International Conference "*Cochin Nano 2009*" at the Department of Physics, Cochin University, Cochin in JAN 2009.
10. Presented six papers in the "*International Conference on Transport and Optical Properties of Nanomaterials, ICTOPON 09*", jointly organized by Department of Physics, University of Allahabad, Allahabad, India and University of Western Ontario, Canada during 5-8 JAN 2009.
11. Contributed to one day "*International Workshop on Surface and Interface Modifications by Energetic Ion Beams*" jointly organized by Nanotechnology Application Centre University of Allahabad, Allahabad and Inter University Accelerator Centre, New Delhi, India on March 18th 2009.
12. Presented paper in "*Meghnad Saha Memorial Symposium on Emerging Trends in Laser Spectroscopy and Applications, MMSETLSA 2009*" organized by University of Allahabad, Allahabad India during 23-25 March 2009.
13. Contributed two papers in "*14th International Conference on X-ray Absorption Fine Structure*" during July 26-31, 2009 at Camerino, Italy.
14. Contributed one paper in "*Joint Conferences on Advanced Materials, 6th Workshop on Functional and Nanostructured Materials and 10th Conference on Intermolecular and Magnetic Interactions in Matter*" during 27-30 Sep 2009 at Sulmona-L'Aquila Italy.
15. Contributed one paper to "*National Seminar on Display phosphors and its Applications, NSDPA 2009*" during October 22-23 2009 at Bangaluru, India.
16. Presented two papers in "*International Conference on Frontiers in Prevention, Diagnosis and Therapy of Cancer*", during 21-22 Nov 2009 at Motilal Nehru Medical Collage Allahabad India.
17. Presented two papers in "*2nd National Conference on Nanomaterials & Nanotechnology*", during Dec 21-23, 2009 at Physics Department, University of Lucknow, India.

18. Contributed to one day International Seminar on *“Synergy of Nanomaterials for Newcomer Technology”* organized by Nanotechnology Application Centre, University of Allahabad, Allahabad on 24th Dec 2009.
19. Presented three papers in *“CONIAPS XI 11th Conference of the International Academy of Physical Sciences”*, having focal theme: Convergence in Science and Technology during February 20 – 22, 2010 at University of Allahabad, Allahabad, India.
20. Participated in two day national seminar on *“Physics Education Research and Development of e-Learning Modules”*, during Feb 24-26, 2010, University of Allahabad, Allahabad.
21. Presented/contributed 5 papers (1Oral) and (4 Posters) in *“4th International Conference INDIAS 2010”*, during Sep 19th -21st 2010 at Nanotechnology Application Centre, University of Allahabad, Allahabad.
22. Contributed to *“International Conference on Radiation Environment and Health”* during 20-21 Nov 2010 organized by Nehru Gram Bharti University, Allahabad.
23. Presented/contributed 3 papers in *“3rd Bangalore Nano 2010: Conference, Partnering & Exhibition”* during 8th-09th Dec 2010 at the Lalit Ashoka, Bangalore organized by JNCASR and IISc Bangalore.
24. Presented/contributed 4 papers (1Oral) and (3 Posters) in *“National Symposium on Nanomaterials in Engineering and Technology”*, during Feb 19th -20th 2011 at HMFA Memorial Institute of Engineering & Technology, Handia, Allahabad.
25. Contributed to *“International Conference on Nanostructuring by Ion Beams”* during 17-19 Oct 2011 jointly organized by Inter University Accelerator Centre (IUAC) and Nanotechnology Application Centre, University of Allahabad, Allahabad.
26. Presented two papers in *“2nd International Conference on Frontiers in Prevention, Diagnosis and Therapy of Cancer”*, during 4th- 7th Jan 2012 at Motilal Nehru Medical Collage Allahabad India.
27. Presented 1 oral talk and two posters in *“4th International conference on Luminescence and Its Applications-ICLA 2012”*, during 7-10 Feb 2012, Hyderabad India.
28. Given one Invited Talk in *“National Conference on “Nanotechnology and Life”*, during Sep 12-14, 2012, University of Allahabad, Allahabad.
29. Contributed to *“National Conference on Advances in Lasers and Spectroscopy-ALS”*, during Nov 1-3, 2012, Indian School of Mines (ISM), Dhanbad.
30. Presented one talk in *“International Conference on Chemistry: Frontiers & Challenges (ICCFC-13)”* during March 2-3, 2013, Aligarh Muslim University, Aligarh.
31. Given an Invited talk in *“International Workshop on Materials Modeling and Simulation”*, during June 24-27, 2013, at Department of Applied Physics, Faculty of Engineering & Technology, Shri Shankaracharya Group of Institutions, Bhilai, India
32. Presented three papers in *“International Conference on Structural and Physical Properties of Solids”* having focal theme ‘Smart Materials at Nano and Micro Scale’ during November 18-20, 2013 at Indian School of Mines, Dhanbad 826004, India.
33. Presented Two Papers/talk in *“3rd International Conference on Advanced Nanomaterials and Nanotechnology”* at IIT Guwahati, 2014.
34. Presented one papers/talk in *“Current Trends in Advanced Materials (CTMat-2014)”* 19th -21th Nov, 2014 VECC, Kolkata

35. Presented Two papers/talk in *“XXXIII Annual conference of Indian Council of Chemists (ICC)”*, 2014 at ISM, Dhanbad
36. Presented Two Papers/talk in *“International Conference on Multifunctional Materials, Structures and Applications (ICMMSA 2014)”*, 22-24 December 2014 MNNIT, Allahabad
37. Presented Two Papers/talk in *“2nd International conference on nanostructured materials and nanocomposites (ICNM 2014)”* Mahatma Gandhi University, Kottayam, Kerala.
38. Contributed three papers in *“Condensed Matter Days- 2015”*, August 27-29, 2015, Visva-Bharati, Santiniketan, Bolpur, W.B.
39. Contributed three papers in *“International conference on nanomaterials and nanotechnology, NANO-15”*, December 7- 10, 2015, K. S. Rangasamy College of Technology, Tiruchengode, Tamilnadu.
40. Contributed three papers in *“Second International on Advanced Materials for Power Engineering, ICAMPE-15”*, December 11-13, 2015, Mahatma Gandhi University, Kottayam, Kerala.
41. Contributed One Paper in *“International Conference on Condensed Matter and Applied Physics, ICC-15”*, 30th – 31st Oct. 2015, Govt. Engineering College, Bikaner, (Rajasthan).
42. Contributed Five papers in *“International conference on multifunctional materials for future applications (ICMFA-2015)”*, 27-29 October, 2015, Indian Institute of Technology – Banaras Hindu University, Varanasi.

19. School/Workshops Attended in Relevant Field:

- ❖ Participated in School on *“X-ray techniques in Material Science”* at IUAC, New Delhi, India, (2006).
- ❖ Participated in School on *“Science and Application of Luminescent Materials SALM – 2008”*, jointly organized by National Physical Laboratory (NPL), New Delhi and Luminescence Society of India (LSI).
- ❖ Worked as resource person in three day *“Winter School on Nanoscience (Research Training and Exposure)”* during 24-26 Jan 2010, organized by Nanotechnology Application Centre, University of Allahabad, Allahabad 211002.
- ❖ Worked as resource person and delivered 3 lectures in two day workshop on *“Characterization Techniques in Nanotechnology”* during Feb 12-13 2011, organized by National Academy of Sciences, India, Allahabad Chapter.
- ❖ *“2nd Continuing Education and Quality Improvement Programme (CE & QIP) on Magnetic Resonance Imaging”* at Indian Institute of Technology Bombay, Mumbai, India, (2011).
- ❖ Participated and delivered an Invited Talk in *“International Workshop on Materials Modeling and Simulation”*, during June 24-27, 2013, at Department of Applied Physics, Faculty of Engineering & Technology, Shri Shankaracharya Group of Institutions, Bhilai, India.
- ❖ Participated in *“International Workshop on Introduction to Gaussian: Theory and Practice”*, during Jan 6-10, 2014, at New Delhi, India.

20. Reviewer:

Worked as reviewer of various peer reviewed international journals viz.

- ❖ *Wiley*: Journal of Raman Spectroscopy,
- ❖ *ACS*: Langmuir, Journal of Physical Chemistry B/C,
- ❖ *Springer*: Journal of Nanoparticle Research, Nanoscale Research Letters,
- ❖ *AIP*: Applied Physics Letters, Journal of Applied Physics,
- ❖ *Science Direct*: Journal of Colloid and Interface Science,
- ❖ *Science Direct*: Journal of Chemical Engineering and Materials Science,
- ❖ *Science Direct*: Materials Letter, Materials Science and Engineering B,
- ❖ *Science Direct*: Journal of Alloys and Compounds, Journal of Magnetism and Magnetic Materials,
- ❖ *Science Direct*: Materials Chemistry and Physics,
- ❖ *RSC*: Nanoscale, Crystal Engineering and Communications, Journal of Materials Chemistry, etc.

21. Visits of National Laboratory:

- Visited IACS, CGCRI and Thin Film and Nanoscience Lab, Jadhavpur University, Kolkata.
- Thin film Laboratory IIT Delhi several times.
- HRTEM and SEM lab at IIT Delhi several times.
- Nanoscience and technology Lab IT BHU.
- SQUID and VSM facilities at IIT Delhi.
- Luminescent Material Division, National Physical Laboratory, New Delhi.
- PDP Production Division, SAMTEL color Lab, Gaziabad.
- HRTEM Lab at National Physical Laboratory, New Delhi.
- VSM and Mossbauer LAB at IIT Kanpur.
- XPS and PLD facilities at UGC-DAE Consortium of Scientific Research, Indore India.
- Worked at beam-line for photoelectron spectroscopy on Indus-1 at Raja Ramanna Centre for Advanced Technology, Indore.
-

22. Executive Editor and Editorial Board Member

- a. Associate Editor for Nanotechnology and Nanoscience, Publisher: Bioinfo Publications, ISSN : 0976-7630 (Print), E-ISSN: 0976-7649 (Online), Impact Factor: 4.61
<http://bioinfopublication.org/journal.php?opt=azjou&jouid=BPJ0000289&detail=editorial>,
- b. International Journal of Metals, Hindawi Publishing Corporation
(<http://www.hindawi.com/journals/ijmet/editors/>).
- c. Journal of Nanotechnology in Diagnosis and Treatment,
(<http://savvysciencepublisher.com/editorial-board-member-jndt/>).
- d. International Journal of Nanotechnology and Application (IJNA); ISSN (Print): 2277-4777; ISSN (Online): 2278-9391; Impact Factor (JCC): 1.7629,
<http://tjprc.org/journals.php?year=2013&jtype=2&id=6&details=editors> IF 1.78
- e. Worked as Guest Managing Editor for an international journal "Adv Mat Letts".
(<http://amlett.com/index.php?vol=2&iss=4&issDate=October>)
- f. Associate Editor, International Journal of NanoScience and Nanotechnology (IJNN)
http://www.ripublication.com/irph/editorial_board_of_ijnn.htm
- g. Executive Editor:
<http://jmi2012.indexcopernicus.com/Nanotechnology+and+Nanoscience.p1043.3.html>

23. Details of Professional Recognitions, Awards, and Fellowships Received

- i. **DST-Fast Track Young Scientist (PHYSICAL SCIENCE)**, Department of Science and Technology, Government of India on the topic, "Development of Hybrid Polymer - Nanoparticle Based White Light Emitting Diodes (WLEDs)", 2013.
- ii. **YOUNG SCIENTIST AWARD (PHYSICS)** for my presentation at CONIAPS-XI during February 20-22, 2010 organized by International Academy of Physical Sciences, INDIA.

- iii. **Best Poster** Prize in ICLAN 2006.
- iv. **Best Poster** Prize in ICTOPON 2009.
- v. **Best Poster** Prize in FPDTC 2009.
- vi. **Best Poster** Prize in FPDTC 2012.
- vii. **Best Poster** Prize in SPPS 2013 (won by Ph.D. student Ms. Shrabani Mondal).

- viii. **Gold Medal** for securing highest marks in **M.Sc. Physics (X-Rays)** Examinations.
- ix. Awarded '**National Scholarship**' in the Year 1999.
- x. Enlisted in **Who's Who in Science and Engineering**, 12th Edition (2012-2013), world's premier data source of notable individuals from every significant field of science and engineering.

24. References:

- **Prof. Avinash C. Pandey (Ph.D. Supervisor)**,
(Former Vice Chancellor, Bundelkhand University, Jhansi 284 128, India.)
Coordinator & Head, Principal Investigator, Nanotechnology Application Centre,
University of Allahabad, Allahabad 211002, India.
- **Prof. Ravindra Pandey**, Professor and Chair, Department of Physics, Michigan Technological University, Houghton, MI 49931, USA.
- **Dr. R. N. Bhargava**, Eminent Scientist, Nanocrystals Technology, NY USA.
- **Prof. R. N. P. Choudhary**, Indian Institute of Technology (IIT), Kharagpur, India.

25. Declaration: I hereby declare that the above information's are correct to the best of my knowledge.

(Dr. Prashant Kumar Sharma)