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

1. Research Interest

Advanced Functional Nanomaterials for **Energy Generation & Storage** (Water Splitting-HER/OER), **Sensing/bio-sensing**, **Bio-Medical** (Disease Diagnosis & Drug delivery) applications and **Opto-Electronic Devices** (LEDs & Solar Cells) etc.

2. 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% in UP Board
10 th Std.	U. P. BOARD	1999	MAT, SCI, BIO, ENG, HIN, SO.SCI.	Ranked among top 5% in UP Board

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

Thesis supervisor: Prof. Avinash C. Pandey, presently **Director, IUAC, New Delhi**, (Former Vice-Chancellor, Bundelkhand University, Jhansi; Professor, Nanotechnology Application Centre, University of Allahabad, Prayagraj).

3. Details of Employment**a. Associate Professor: April 2021 - Till Date (Ongoing)**

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

b. Assistant Professor: July 2012 – April 2021

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

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

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

d. Research Scientist: April 2010 - July 2011

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

e. Junior Research Fellow: July 2006 - March 2010

Worked in CSIR-NMITLI funded project at Nanotechnology Application Centre, University of Allahabad, Prayagraj 211002, India.

4. Patents: Intellectual property, technological innovations, new products etc. : **11**

5. Books/Book Chapters/Monographs published : **21**

6. Publications in International Journals/Proceedings : **115**

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

S. No.	Research Experience	Period
1.	Associate Professor: Indian Institute of Technology (ISM), Dhanbad	April 2021 – Till Date
2.	Assistant Professor: Indian Institute of Technology (ISM), Dhanbad	July 2012 – April 2021
3.	Post Doctoral Research Scientist: DST Nano-Mission Project	Aug 2011 - June 2012
4.	Research Scientist: DST Nano-Mission Project	April 2010 - July 2011
5.	Junior Research Fellow (JRF): CSIR funded NMITLI Project	July 2006 - March 2010
6.	Synthesized several nanomaterials using various methods such as Sol-Gel, Reverse Miscelles, Precipitation, Hydrothermal, Solvothermal, Ultrasonication, Combustion, Solid state etc.	July 2006 - Till Date
7.	Developed expertise in preparing demonstrator Opto-electronic devices (LEDs & Solar Cells)	July 2006 - Till Date
8.	Hands on experience of handling high end sophisticated material characterization techniques.	July 2006 - Till Date
Professional Training		Period
9.	X-Ray Diffraction (XRD) and Small Angle X-Ray Scattering (SAXS) technique.	July 2006 - Aug 2006
10.	Photoluminescence (PL/PLE) and UV-Vis spectrophotometer.	April 2007
11.	Micro Raman Spectrometer.	May 2007 – JUNE 2007
12.	Complete Probe Microscopy techniques including Atomic/ Magnetic / Electric Force Microscope (AFM/MFM/EFM).	May 2007 – JUNE 2007 & again in OCT 2009
13.	McPherson VUV spectrophotometer (The only system in India).	Nov 2007
14.	Nano-indentation / nano-hardness tester.	March 2008
15.	Profession Training on Electron Microscopy Techniques [HRTEM /SEM/ESEM / EDX & related sample preparation tools]	Aug 2007 – Oct 2007 & again in March 2008
16.	Magnetic Characterization techniques such as VSM @ IIT Delhi.	August 2008
17.	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).

8. 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.
- 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).
 - ❖ Nanoindenter-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).

Computer Skill:

- **Atomic Scale/Nanoscale Simulation/Analysis and Visualization Software:**
Origin, Chem Draw, Chem-Bio Draw, 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).

9. Laboratory Development

a. **Functional Nanomaterials Research Lab (FNRL):**

This lab is developed with the help of funding from DST, DAE, BRNS and IIT (ISM) Dhanbad in the year 2013 for the “Synthesis and Characterizations of Efficient Functional Nanomaterials for the Sensing, Security & Harmful Chemical Detection, Electro-catalysis (Energy generation-HER-OER and Storage), Opto-electronic devices (LEDs & Solar Cells), magnetic nanomaterials for Bio-medical Applications.”

FNRL houses:

- ✚ Various equipment required for chemical synthesis of nanomaterials including:
 - ❖ Verities of Magnetic Stirrer
 - ❖ Micro-Balance
 - ❖ Hot-Air Oven
 - ❖ Vacuum Oven
 - ❖ Box Furnaces with/without gas purging facility
 - ❖ Micro-centrifuges and Vortex Mixers
 - ❖ pH-Meters
 - ❖ Autoclaves (Teflon Lined as well as pressurized chambers)
 - ❖ Orbital Shakers
 - ❖ Bath Sonicators
 - ❖ Water/Oil Baths
 - ❖ Double Distillation water plants
 - ❖ Microwave Synthesis Reactor
- ✚ Electrochemical Device/Workstation (Potentiostat/Galvanostat with EIS)
- ✚ I-V measurement setup (Keithley- a Tektronix company)
- ✚ Portable Glove Box
- ✚ Gas Sensing Setup: in-house developed customized Gas Sensing Chamber
- ✚ Mass Flow Controller
- ✚ UV Chamber
- ✚ Fume Hood
- ✚ Laminar Air Flow Cabinet
- ✚ *in-house* Fuel cell set-up.

Since its inception in 2013, FNRL has made significant advances in high quality research by developing:

- ✓ Highly efficient multifunctional electrocatalysts for the promotion of overall water splitting in various medium for Hydrogen/Oxygen production.
- ✓ A fully functional water/various solvent based electrolyzers based set-up for Hydrogen/Oxygen production. These facilities can be used for water splitting as well as CO₂ reduction, which will able to solve not only the problem of energy crisis but able to reduce the CO₂ content from the environment in healthy and safe way.
- ✓ Selective and Sensitive Non-Enzymatic Glucose Sensor.
- ✓ Vitamin C Sensor at lab-scale using PEGlyted Nanoparticles.
- ✓ We have also developed a good facility for sensing of various kind of biologically/medically relevant compounds using handheld potentiostat/galvanostat.
- ✓ Electrochemical sensor for cyanometallic compound using TiO₂/PVA nanocomposite.
- ✓ A selective and convenient method for the detection of anticancer drug Flutamide (FLT) is developed using Ag/N doped reduced graphene oxide (Ag/N-rGO).
- ✓ Acetaminophen and acetone electrochemical sensor.

- ✓ Developed a Multi-tasking visual sensor for on-site monitoring of various biologically/medically relevant compounds.
- ✓ We have also designed a Stainless-steel Gas/humidity sensing chamber as per requirement of my Research Lab.
- ✓ We have also developed a good facility for detection and removal of toxic dyes/pigments/chemical compounds from waste water/soil.

FNRL's Contribution in combating COVID-19

Coronavirus Disease 2019 (COVID -19) is an acute respiratory disease caused by a novel Coronavirus (SARS-CoV-2), transmitted in most instances through respiratory droplets, direct contact with cases and also through contaminated surfaces/objects. The provision of safe water, sanitation and waste management and hygienic conditions is essential for preventing and for protecting human health during all infectious disease outbreaks, including of coronavirus disease 2019 (COVID-19).

Though the coronavirus survives on environmental surfaces for varied period of time, it gets easily inactivated by chemical disinfectants. The spread of infectious disease, including of coronavirus disease 2019 (COVID-19) can be controlled using alcohol based disinfectants, popularly known as sanitizers or hand rubs. In 2020 because of shortages of hand sanitizer in the wake of the COVID-19 pandemic, hundreds of liquor, perfume manufactures along with pharmaceutical industries switched their manufacturing facilities from their normal product to hand sanitizer. In order to keep up with the demand, local distilleries also started using their alcohol to make hand sanitizer. Due to the high demand, despite the Government's capping and control, these commercial products are mostly very costly and are out of reach to the common people or in some cases not feasible to be used in large amount in offices, labs or Institution. Even some of these commercial products are reported to be dangerous, either due to poor oversight and process control, or fraudulent motive. They are of poor quality or are very hard/rough to the hands of user.

To overcome these problem, FNRL has modified the World Health Organization (WHO) guide for manufacturing the alcohol based hand sanitizer/hand rubs. The FNRL hand sanitizer is having an alcohol base enriched with goodness of Essential oil, Aleovera, Vitamin E, Rose extracts, Glycerine. The FNRL developed hand sanitizer is soft to the hand (cares for your hand) and is hard to the virus/bacteria and germs. It can be developed at large scale in a small lab or even in our home and can be used in home, offices, labs or Institution.



Image of the FNRL developed hand sanitizer in varieties of bottles.

b. B.Tech. and MSc Physics Laboratory:

Designed and successfully implemented few experiments, as mentioned below, for B.Tech. and MSc Physics Laboratory.

Exp 1: Determination of crystal structure of materials by indexing the given X-ray diffraction pattern. Determination of lattice constants and lattice planes.

Exp 2: Identification of crystal structure from a given electron diffraction pattern and Indexing the given selected area electron diffraction pattern and determination of lattice parameters.

10. Membership of Academic/Scientific/Professional bodies

S. N.	Membership Type	Society
1.	Life Member	Luminescence Society of India (LSI)
2.	Life Member	Electron Microscopy Society of India (EMSI).
3.	Life Member	Chemical Research Society of India (CRSI).
4.	Life Member	Luminescence Society of Karnataka, India (LSKI).
5.	Life Member	International Association for Advanced Materials (IAAM), Sweden
6.	Life Member	Society of Physics, IIT (ISM) Dhanbad

11. Teaching Experience at UG and PG Level (13 Years)

S. N.	Theory Papers Taught in Last 5 years	Level
1.	Nanoelectronics and Nanophotonics	7 th B.Tech. (Open Elective)
2.	Advanced Materials and Energy Devices	Ph.D. Course Work
3.	Physics (Modern Physics)	1 st Year U. G. Common)
4.	Nanotechnology	8 th B.Tech. Engg Phys. (Honors)
5.	Advanced Characterization Techniques	M.Sc.
6.	Materials Characterizations	Ph.D. Course Work
7.	Physics of Nanomaterials	M.Sc./Integrated M.Sc./M.Phil./Pre-PhD Course work
8.	Nuclear and Particle Physics	B. Tech. (Engg. Phys.) / MSc Physics

12. Thesis/Dissertation/Project Supervision

a. Summary

Degree	Awarded/Completed	Ongoing
Ph.D.	02 [†]	05
M.Sc.	18	02
B.Tech.	02	01
Int. M.Sc./M.Sc. Tech.	03	

[†] Four students were transferred to other faculty members in March 2019.

b. Details of Ph.D. Supervision

S. N.	Student Name	Level	Registration Date	Status
1.	Ms. Priyanshu Chaubey	Ph.D.	July 2021	Ongoing
2.	Mr. Subhajit Sarkar	Ph.D.	July 2022	Ongoing
3.	Mr. Shubham Dharai	Ph.D.	July 2023	Ongoing
4.	Mr. Anayatullah	Ph.D.	July 2023	Ongoing
5.	Mr. Chinmay Chiranjeev Nayak	Ph.D.	July 2024	Ongoing
6.	Dr. Shrabani Mondal	Ph.D.	Feb, 2013	Awarded
7.	Dr. Trupti Ranjan Das	Ph.D.	July, 2015	Awarded
8.	Ms. Manisha Kumari	Ph.D.	July, 2014	Transferred to Other Faculty in March 2019
9.	Ms. Suryakanti Debata	Ph.D.	March, 2016	
10.	Ms. Sanchari Banerjee	Ph.D.	August, 2016	
11.	Mr. Minarul Islam Sarkar	Ph.D.	September, 2017	

c. Details of M.Sc. Project Supervision

S. N.	Student Name	Level	Registration Date	Status
1.	Mr. Ankit Vishwakarma	M.Sc.	January 2024	Ongoing
2.	Ms. Swati Kumari	M.Sc.	January 2024	Ongoing
3.	Mr. Rahul Kaman	M.Sc.	January 2023	Completed
4.	Mr. Subharthi Samanta	M.Sc.	September 2018	Completed
5.	Mr. Mikon Das	M.Sc.	September 2018	Completed
6.	Mr. Swarndeeep Bakshi	M.Sc.	September 2017	Completed

S. N.	Student Name	Level	Registration Date	Status
7.	Ms. Rita Majumdar	M.Sc.	September 2017	Completed
8.	Ms. Sanchari Chakraborty	M.Sc.	May 2017	Completed
9.	Mr. Suchit Kumar Jena	M.Sc.	September 2016	Completed
10.	Ms. Jayashree Pati	M.Sc.	September 2016	Completed
11.	Mr. Sreedeeep Das	M.Sc.	August 2015	Completed
12.	Ms. Sanchari Banerjee	M.Sc.	August 2015	Completed
13.	Ms. Sathi Chatterjee	M.Sc.	August 2015	Completed
14.	Ms. Sanjana Mukherjee	M.Sc.	August 2015	Completed
15.	Ms. Lakshmi Mukhopadhyaya	M.Sc.	July, 2014	Completed
16.	Ms. Bela Purty	M.Sc.	July, 2014	Completed
17.	Ms. Manisha Kumari	M.Sc.	July, 2013	Completed
18.	Mr. Arun Kumar Singh	M.Sc.	July, 2013	Completed
19.	Ms. Priya Dwivedi	M.Sc.	Oct. 2012	Completed
20.	Ms. Sneha Bharti Linda	M.Sc.	Oct. 2012	Completed

d. Details of B.Tech. Project Supervision

S. N.	Student Name	Level	Registration Date	Status
1.	Ms. Shivani Kushwaha	B.Tech. (Engg Phys)	August 2015	Completed
2.	Mr. Nalin Shiva	B.Tech. (Engg Phys)	August 2015	Completed
3.	Mr. Ramendra Ranjan	B.Tech. (Engg Phys)	August 2015	Completed

e. 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

13. 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) PI: Dr. R. Madhuri	~46	2016 3.5-Years
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 5-Years
3.	Synthesis and Assembly of Hybrid Nanostructured Materials for detection of explosives and narcotic drugs	DAE-BRNS (Principal Investigator) Co-PI: Dr. R. Madhuri	~25	2014 3-Years
4.	Development of Hybrid Polymer – Nanoparticle Based White Light Emitting Diodes (WLEDs)	Department of Science and Technology (Principal Investigator)	~20	2014 3-Years
5.	Hybrid Nano-composites Optoelectronic and Photovoltaics Applications	IIT (ISM), Dhanbad (Principal Investigator)	10	2013 3 Years
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. (PI - 2)	Experimental facility and Travel Support etc. (Twice a year)	2012 Two Years

14. Administrative Responsibilities/Involvement in Institutional Work

S.No.	Responsibility	Duration
1.	Chairman , Department Post Graduate Committee (DPGC)	Oct 2024 - Continuing
2.	Associate NCC Officer (ANO) & Care Taking Officer (CTO)	2023 - Continuing
3.	Co-ordinator , 1 st Year B.Tech. (Common) Physics Lab	July 2018 - Continuing
4.	Co-Ordinator , Examination (Mid Semester and End Semester Examination), Department of Physics, IIT (ISM) Dhanbad.	Jan 2013 - Continuing
5.	Member, DFSC (Department Faculty Scrutiny Committee)	Oct 2024 - Continuing
6.	Faculty-in-Charge , R&D Fair, Department of Physics, IIT (ISM) Dhanbad	2022 - Continuing
7.	Scrutinizer JoSAA , verification and scrutiny of applications (online as well as Physical) for admission in BTech program through JEE-Advanced	2017 - Continuing
8.	Coordinator, Departmental Documentation Cell	Jan 2013 - Continuing
9.	Faculty-in-Charge (FIC-Store Incharge)	2021-2025
10.	Board Member , Sports and Physical Education Centre, Inter IIT Student and Staff Sports Meet	2022-Jan 2025
11.	Counsellor (Sports and Games)	2022-2024
12.	Treasurer, Parakram (Annual Sports Fest) 2023	2023
13.	Reporting Centre (RC) Officer, JEE Advanced	2023, 2024
14.	Member, DPAC (Department Purchase Advisory Committee)	2022-2024
15.	DPGC (Department Post Graduate Committee) Member	Aug 2020-Oct 2024
16.	Secretary, Documentation Cell , IIT(ISM) Dhanbad	2017 - 2019
17.	Chief Hostel Warden (CHW) , International Hostel & Married Accommodation	July 2022 - Jan 2025
18.	Co-ordinator , 1 st Year B.Tech. (Common) Physics Theory course	July 2018 – June 2024
19.	Faculty-in-Charge , Training and Placement, Department of Physics, IIT (ISM) Dhanbad	July 2019 – June 2022
20.	Co-Ordinator , 2 Years M.Sc. Physics Programme, Department of Physics, IIT (ISM) Dhanbad.	Jan 2013 – July 2021
21.	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 Ministry of Human Recourse and Development, GOI worth Rs. 7.56 Crores.	Sep 2015 - Continuing
22.	Liaising Officer, OBC Cell , IIT (ISM) Dhanbad for monitoring the recruitment process and enforcement of orders of reservation in posts and services as per the directives of Central Government at IIT (ISM) Dhanbad.	July 2015 – Aug 2019
23.	Faculty Member, Founder Core Team , Centre for Innovation, Incubation and Entrepreneurship (CIIE).	Dec 2013 - June 2019
24.	Member, Special Task Force for handling emergency problems in IIT (ISM) Hostels, particularly mess services.	Nov 2013- June 2018
25.	Scrutinizer JAM . Verification and scrutiny of application (online as well as Physical) for admission in MSc Physics programme,	2018, 2019, 2020
26.	Institute Faculty Co-Cordinator , CONCETTO, Annual	2018

	Techno-Management Festival, IIT (ISM) Dhanbad	(January 12 -14, 2018)
27.	Departmental Faculty Co-Ordinator, CONCETTO , Annual Techno-Management Festival, IIT (ISM) Dhanbad	2013-2017 and 2019
28.	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	2017-2018
29.	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.	2016-18
30.	Secretary and Co-coordinator, Design Innovation Centre , IIT (ISM) Dhanbad. Collaborating with different Institutes and suggesting the Ideas as per Government of India directives.	2016-18
31.	Member, Ranking Committee , NIRF (MHRD, GOI), QS (World, BRICKS, Asia etc.), India Today, Times etc	2017-18
32.	Member, Advertisement Committee, IIT (ISM) Dhanbad	2017-18
33.	Member , Organizing Committee, 90th Foundation Day , IIT (ISM), Dhanbad.	2015
34.	Member , IIT (ISM) Extension Centre at New Delhi	
35.	Mentor , 1 st Year BTech new entrants in IIT (ISM) Dhanbad	2017- Continuing
36.	Observer , Conducted and Observed the ISM entrance examination at Delhi (2015), Lucknow (2013, 2014)	2013 - 2015
37.	Performed stock verification for Departmental R & D Labs	2013- Continuing
38.	Worked as Tabulator .	2013-14, 2014-15
39.	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 .	2014
40.	Compiled total projects outlays and publications of the department and prepared it in the form of bound volume for the committee, chaired by Prof. Mishra, visited the Institute/ Department in Jan 2014 for conversion of ISM to IIT .	2014
41.	Made the presentation for departmental activities and facilities and presented before the DRDO team visited the Institute/Department in 2013.	2013
42.	Member, Sub-Committee , constituted for the data collection, preparation and finalizing DST-FIST project proposal and presentation.	2012
43.	Designed and made the Departmental Profile and Training and Placement Brochure.	
44.	Member , Board of Course Studies (BOCS), Department of Applied Physics, ISM Dhanbad.	
45.	Member Anti Ragging Squad, IIT (ISM).	
46.	Participated as well as worked as judge for various annual sports activities of IIT (ISM).	
47.	Represented Institute in Knowledge Expo, 2017 organized by Rastrapati Bhavan, New Delhi (at Pragati Maidan, New Delhi)	2017

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

1. **Co-ordinator, 3 week** "Induction Training/ Orientation Programme" organized during Nov 15 – Dec 12, 2019 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
2. **Organizer, 3 week** "Refresher Programme in Chemistry" organized during June 08 – June 28, 2018 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
3. **Organizer, 3 week** "Refresher Programme in Physics with special focus on Bio-Photonics" organized during May 29 – June 18, 2018 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
4. **Organizer, 1 week National Training Programme** on "Advanced Material Characterization Techniques" organized during March 18 – 24, 2018 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
5. **Organizer, 3 week** "Induction Training/ Orientation Programme" organized during Dec. 28, 2017 – Jan. 25, 2018 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
6. **Organizer, 1 week National Training Programme** on "Research Methodology" organized during December 18 – 23, 2017 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
7. **Organizer, 1 week National Training Programme** on "Wireless Sensor Networks" organized during December 18 – 22, 2017 under the agis of Faculty Development Centre, IIT(ISM) Dhanbad.
8. **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.
9. **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.
10. **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.
11. **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.
12. **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.
13. **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.
14. **Co-Convener, National Conference on Recent Advances in Science and Engineering (RASE 2016)**, 28th -30th March 2016, IIT (ISM), Dhanbad.
15. **Organizer, 23rd National Conference on Liquid Crystals (NCLS 2016)** Nov 07th -09th, 2016, IIT (ISM) Dhanbad.

16. **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.
17. **Co-Convener**, **International Conference on Structural and Physical Properties of Solids (SPPS 2013)**, 18th -20th November 2013, IIT (ISM), Dhanbad.
18. 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.
19. 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.
20. 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.
21. 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>
22. Member of Organizing Committee in “*4th International Conference INDIAS 2010*”, during Sep 19th -21st 2010 at Nanotechnology Application Centre, University of Allahabad, Allahabad.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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 (Granted/Pubhed/Applied)

S.N.	BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any
1.	PP2025 Patent Application No.: 202531020217 Co ₃ S ₄ dodecahedrons coupled with MoO ₂ microspheres for water splitting application and the preparation method thereof Piyanshu Chaubey and Prashant Kumar Sharma
2.	PP2024 Patent Application No.: 202431066933 A multi-interface heterostructure SnO ₂ -Co ₃ O ₄ -MoS ₂ nanocomposite for water splitting application and the preparation method thereof Piyanshu Chaubey and Prashant Kumar Sharma
3.	RSREP2016 Patent Application No.: 20163110351117 Triple signaling mode carbon dots-based biodegradable molecularly imprinted polymer as multi-tasking visual sensor for rapid and “on-site” monitoring of silver ion Rashmi Madhuri, Santanu Patra, Raksha Choudhary, Ekta Roy, Prashant K. Sharma
4.	PA2010 Patent Number: 608/DEL/2010 Developement of Zinc Oxy-Sulphide Ternary Nanocrystal: A new hope for tunable white light LED nanophosphors Prashant K Sharma and Avinash C Pandey,
5.	PA2010 Patent Number: 607/DEL/2010 Performance Enhancement of Large Area Solar Cells by Incorporating Nanocrystals Prashant K Sharma and Avinash C Pandey,
6.	PRA2010 Patent Number: 610/DEL/2010 A Novel Up-scalable Solution Combustion Synthesis of Bright Blue Luminescent BAM:Eu ²⁺ Nanophosphors for PDP Applications Prashant K Sharma , Ranu K Dutta and Avinash C Pandey.
7.	PRA2010 Patent Number: /DEL/2010 Combustion Synthesis and Fluorescent Properties of Eu ³⁺ and Tb ³⁺ Doped YBO ₃ Nanorods under VUV excitations Prashant K Sharma , Ranu K Dutta and Avinash C Pandey,
8.	PRA2010 Patent Number: 609/DEL/2010 Reverse Micelles Synthesis of Quantum Confined Rare-Earth Ortho-botare Nanocrystals for High-Definition Display Devices Prashant K Sharma , Ranu K Dutta and Avinash C Pandey,
9.	PRA2010 Patent Number: /DEL/2010 Enhanced Luminescence Characteristics of YBO ₃ :Eu ³⁺ Nanophosphors co-doped with Gd ³⁺ under VUV and UV excitation Prashant K Sharma , Ranu K Dutta and Avinash C Pandey,
10.	PRA2010 Patent Number: 1077/DEL/2010 Vitamin Encapsulated Magnetofluores as Target Specific MRI Contrast Agents Ranu K Dutta, Prashant K Sharma and Avinash C Pandey,
11.	RPA2009 Patent Number: 1072/DEL/2009 Luminescent Magnetic Quantum Dots (LMQDTs): Synthesis Method and corresponding functional properties Ranu K Dutta, Prashant K Sharma and Avinash C Pandey.

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, LAP Lambert Academic Publishing, 244 Pages, <u>2012</u>. ISBN 978-3-8473-7963-8

B. Book Chapters

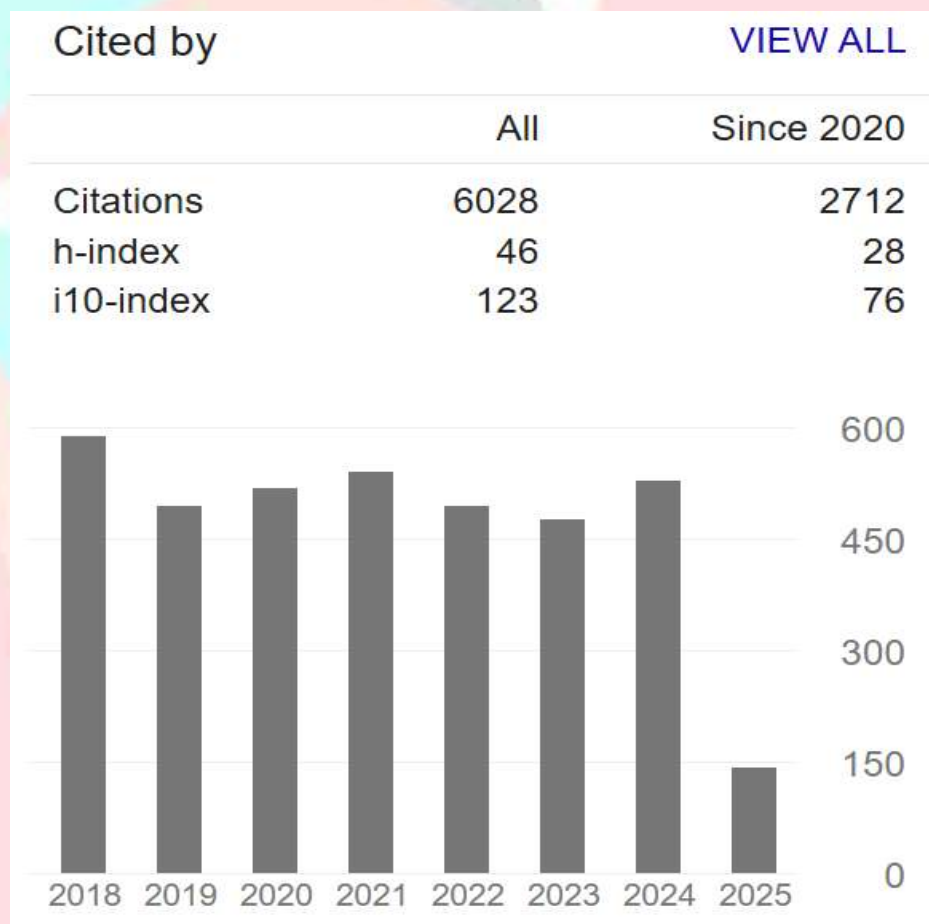
S.N.	BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any
2.	“Quality control of beverages for health safety: Starting from laboratory to the point-of-care detection techniques”, Santanu Patra, Raksha Choudhary, Rashmi Madhuri, Prashant K. Sharma, Book: Quality Control in the Beverage Industry (Volume 17: The Science of Beverages), <u>2019</u>, Chapter 2, page no. 1-45, Publisher: Elsevier.
3.	“Stimuli-responsive polymers for treatment of Diabetes Mellitus, Book: Stimuli Responsive Polymeric Nanocarriers for Drug Delivery Applications” Santanu Patra, Rashmi Madhuri and Prashant K. Sharma, <u>2019</u>, Chapter 18, page no 491-518, Publisher: Elsevier.
4.	“Materials Characterization using Scanning Tunneling Microscopy: From Fundamentals to Advanced Applications” Suryakanti Debata, Trupti R. Das, Rashmi Madhuri, Prashant K. Sharma Handbook of Materials Characterization, <u>2018</u>, pp 217-261, DOI: 10.1007/978-3-319-92955-2_6. Publisher: Springer
5.	“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: <u>2018</u>, Publisher: Springer, ISBN 978-3-319-52086-5 (eBook)
6.	“Graphene-Based Portable, Flexible, and Wearable Sensing Platforms: An Emerging Trend for Health Care and Biomedical Surveillance”, Santanu Patra, Raksha Choudhary, Rashmi Madhuri, Prashant K. Sharma, Chapter 13: Book: Graphene Bioelectronics, <u>2018</u>, Pages 307-338. DOI:10.1016/B978-0-12-813349-1.00013-5, Publisher: Elsevier.
7.	“Functionalization of Carbon Nanostructures, Book: Reference Module in Materials Science and Materials Engineering” Paramita Karfa, Shrabani De, Kartick C. Majhi, Rashmi Madhuri, Prashant K. Sharma <u>2018</u>, DOI: 10.1016/B978-0-12-803581-8.11225-1. Publisher: Elsevier.
8.	“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 Publisher: Springer**,
https://doi.org/10.1007/978-3-319-60630-9_9
Print ISBN978-3-319-60629-3; Online ISBN978-3-319-60630-9
9. “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, Publisher: Springer**,
ISBN 978-3-319-52087-2 (eBook).
10. “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**,
Publisher: **WILEY-Scrivener Publishing, USA**,
ISBN: 978-1-119-33629-7.
11. “Imprinted carbonaceous nanomaterials: A tiny looking big thing in the field of selective and specific analysis”, in the book titled: Advanced Molecular Imprinting Materials, Editors: Ashutosh Tiwari, Lokman Uzun, Ekta Roy, Santanu Patra, Rashmi Madhuri, **Prashant K. Sharma**,
Chapter number: 05, Page numbers: 165-216, Publication date: **2016**
Publisher: **WILEY-Scrivener Publishing, USA**,
ISBN: 978-1-119-33629-7
12. “A technique comes to life for security of life: The food contaminant sensors”, in the book titled: NanoBioSensors, Editor: Alexandru Mihai Grumezescu, Santanu Patra, Ekta Roy, Rashmi Madhuri, **Prashant K. Sharma**,
Chapter number: 17, Volume: 08, Page numbers: 773-772, Book Publication date: **2016**,
Publisher: **Elsevier**,
ISBN: 978-0-12-804301-1
13. “Combination of Molecular Imprinting and Nanotechnology: Beginning of a New Horizon” in “Advanced Materials” book series.
Rashmi Madhuri, Ekta Roy, Kritika Gupta and **Prashant K. Sharma**
WILEY-Scrivener Publisher, 2013/14
14. “Functionalized Biocompatible Nanoparticles for Site Specific Imaging and Therapeutics” in book entitled “Advances in Polymer Science: Polymers in Nanomedicine”
Ranu K Dutta, **Prashant K Sharma**, Hisatoshi Kobayashi and Avinash C Pandey,
Springer-Verlag Berlin Heidelberg 1-43, DOI: 10.1007/12(2011)155, **2012**,
ISBN 978-3-642-27855-6

15. "High Resolution Transmission Electron Microscopic Investigations of Nanocrystals Growth and Defect Formation",
in book entitled 'Current microscopy contributions to advances in science and technology (Microscopy Book Series, number #5)',
Prashant K. Sharma and Avinash C Pandey,
Formatex Publications, Spain **2012**.
16. "Multifunctional core-shell luminescent magnetic nanocrystals for targeted imaging and therapy",
in book entitled "Nanobiomaterials for Intelligent Medical Devices",
Prashant K. Sharma and Avinash C Pandey,
WILEY-Scrivener Publishing LLC, USA, Chapter 16, (**2012**).
17. "Advancement in Semiconducting Nanomaterials Based Solar Cell Applications",
In book entitled 'Nanomaterials and Nanotechnology'
Prashant K. Sharma and Avinash C Pandey,
VBRI Press, India, **2012**. **ISBN 978-81-920068-33**
18. "II-VI Semiconductor Nanocrystals for Energy Securing 'Green' Technology and Solid State Lighting",
in book entitled "Intelligent Nanomaterials",
Prashant K. Sharma and Avinash C. Pandey,
Scrivener Publishing LLC, USA, Chapter 7, (**2011**).
19. "Rare-Earth Based Insulating Nanocrystals: Improved Luminescent Nanophosphors for Plasma Display Panels",
in book entitled "Intelligent Nanomaterials",
Prashant K. Sharma and Avinash C. Pandey,
Scrivener Publishing LLC, USA, Chapter 3, (**2011**),
20. "Potential Advancement of the Nanomedicines in Cancer Theragnosis",
in book entitled "Recent Advances in Nanomedicine",
Prashant K Sharma, Ranu K Dutta and Avinash C Pandey,
VBRI Press, India, Chapter 8, (**2011**). **ISBN 978-81-920068-03**
21. "Recent Advances in Biomedical Applications of Multifunctional Nanocomposites"
In book entitled "Recent Developments in Bio-Nanocomposites for Biomedical Applications",
Avinash C. Pandey, **Prashant K. Sharma**, Ranu K. Dutta,
Nova Science Publishers, Inc, Chapter 20, pp.409-432, **2010**. **ISBN 978-1-61761-008-0**

C. Peer Reviewed Research Articles

Citation till March 2025 (Google Scholar)



Publications in International Journals/Proceedings: 115

Q1 Journals: 56,

Q2 Journals: 16,

Q3 Journals: 09,

Q4 Journals/others: 14/20

No. of Q1 publications as First Author: 14

No. of Q2 publications as First Author: 01

No. of Q1 publications as Corresponding Author: 23

No. of Q2 publications as Corresponding Author: 07



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.
43. 3rd International E-Workshop/Conference on "*Computational Condensed Matter Physics and Materials Science*" IWCCMP-2015, ABV-IIITM, Gwalior, 18-22 Oct. 2015
44. Chaired a session and given invited talk at a Workshop on *Recent Trends in Biomaterials, Biodiagnostics, Tissue Engineering, Drug Delivery and Regenerative Medicines*. Organized by Department of Biomedical Engineering, IIT Delhi, 14-17 April, 2016, IIT Delhi
45. Contributed 6 papers in *61st DAE Solid State Physics Symposium-2016*. KITT University BBSR, 26-30 December, 2016, Bhubaneswar, Orissa.
46. Chaired a Session in *23rd National Conference on Liquid Crystals*, 07-09 December, 2016, IIT(ISM) Dhanbad
47. Contributed 2 papers in *6th Interdisciplinary symposium on material chemistry* at Bhaba Atomic Research Centre Mumbai, 06-10 December, 2016, BARC Mumbai.
48. AICTE Sponsored Short Term Course On "*Geometrical & Mathematical Crystallography with Applications to Structural studies*" School of Materials Science & Technology, Indian Institute of Technology (BHU), Varanasi, India during February 14 - 19, 2017
49. Invited talk at *International Conference on Nanomaterials and Nanotechnology* held during 1-3 March 2017 at University of Allahabad, Allahabad, India.
50. *1st annual workshop on catalysis* at IIT(ISM) Dhanbad organized by Department of Applied chemistry, 06-09 March, 2017, IIT(ISM) Dhanbad.
51. 4th *International Symposium on Semiconductor Materials and Devices*. Jadavpur University, 08-10 March, 2017, Jadavpur, Kolkata.
52. Contributed 4 papers in *4th International Conference on Nanoscience and Nanotechnology (ICONN 2017)*, SRM University, Chennai during 9-11 Aug 2017.
53. Contributed 2 papers in *I2CAM School on Clean and Renewable Energy Technologies via Chemical Route*, JNCASR, Bangalore during 22/11/2017-2/12/2017.
54. Contributed 5 papers in *National Conference on Advances in Spectroscopic Techniques and Materials (ASTM-2018)*, IIT(ISM) Dhanbad during 14-16 March 2018.
55. Contributed 2 papers in *4th India International Science Festival* during 5-8 Oct 2018 at Lucknow.
56. Contributed a paper in *63rd DAE Solid State Physics Symposium*, December 18-22, 2018 at Guru Jambheshwar University of Science and Technology, Hisar, Haryana
57. Contributed 4 papers in *5th International Conference on Nanoscience and Nanotechnology (ICONN 2019)*, SRM Institute of Science and Technology, Chennai during 28-30 Jan 2019.

19. School/Workshops Attended in Relevant Field

1. Participated in School on “X-ray techniques in Material Science” at IUAC, New Delhi, India, (2006).
2. 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).
3. 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.
4. 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.
5. “2nd Continuing Education and Quality Improvement Programme (CE & QIP) on Magnetic Resonance Imaging” at Indian Institute of Technology Bombay, Mumbai, India, (2011).
6. 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, Bilai, India.
7. Participated in “International Workshop on Introduction to Gaussian: Theory and Practice”, during Jan 6-10, 2014, at New Delhi, India.
8. 3rd International E-Workshop/Conference on “Computational Condensed Matter Physics and Materials Science” IWCCMP-2015, ABV-IIITM, Gwalior, 18-22 Oct. 2015
9. 1st annual workshop on catalysis at IIT(ISM) Dhanbad organized by Department of Applied chemistry, 06-09 March, 2017, IIT(ISM) Dhanbad.
10. 4th International Symposium on Semiconductor Materials and Devices. Jadavpur University, 08-10 March, 2017, Jadavpur, Kolkata.
11. I2CAM School on Clean and Renewable Energy Technologies via Chemical Route, JNCASR, Bangalore during 22/11/2017-2/12/2017.

20. Reviewer

Worked as reviewer of various peer reviewed international journals viz.

- ❖ Nature: Nature Nanomaterials, Scientific Reports.
- ❖ Wiley: Advanced Functional Materials, Journal of Raman Spectroscopy,
- ❖ ACS: Langmuir, Applied Materials and Interfaces, Journal of Physical Chemistry A/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 IIT 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: The Nanotechnology and Nanoscience, ISSN: 0976–7630 & E-ISSN: 0976–7649
<http://jml2012.indexcopernicus.com/Nanotechnology+and+Nanoscience.p1043.3.html>

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

- i. **Awarded and got felicitated by the Hon'ble Director, IIT(ISM) Dhanbad** on the occasion of Institute Foundation Day **for being ranked in the top 2% of scientists of the world from India** in a survey conducted by Stanford University and published by Elsevier (Elsevier's Database, **2020 and 2021**, for two consecutive years).
- ii. **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.
- iii. **Best Poster** Prize in SPPS 2013 (won by Ph.D. student Ms. Shrabani Mondal).
- iv. **Best Poster** Prize in FPDTC 2012.
- v. **YOUNG SCIENTIST AWARD (PHYSICS)** for my presentation at CONIAPS-XI during February 20-22, 2010 organized by International Academy of Physical Sciences, INDIA.
- vi. **Best Poster** Prize in ICTOPON 2009.
- vii. **Best Poster** Prize in FPDTC 2009. Frontiers in Prev
- viii. **Best Poster** Prize in ICLAN 2006.
- ix. **GB Deodhar Gold Medal** for securing highest marks in **M.Sc. Physics (X-Rays)** Examinations, 2006, Department of Physics, University of Allahabad, Prayagraj 211002, India.
- x. Awarded '**National Scholarship**' in the Year 1999.
- xi. 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.

References:

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



(Prof. Prashant Kumar Sharma)