

Dr. POONAM SHARMA

Address: 417-A GSFC
Fertilizer Nagar Vadodara
Gujarat- 391750



Objectives:

To work with full conviction and motivation to achieve long term objective of constantly learning new skills and perspectives to make more efficient contribution to my work place.

Educational Qualifications:

Name of degree	Year	University	Percentage
Ph.D.	2018	Malaviya National Institute of Technology, Jaipur	Awarded
M.Sc. Physics	2011	Malaviya National Institute of Technology, Jaipur	8.1 CGPA
B.Sc. (PCM)	2009	Maharaja Ganga Singh University, Bikaner	73.78%
Senior School Certificate Examination	2006	Board of Secondary Education, Rajasthan	80.62%
Secondary School Certificate Examination	2004	Board of Secondary Education, Rajasthan	81.67%

Ph.D. Detail:

Thesis Title:

“Corrosion Investigations on As-prepared and Ion Implanted Zr-based Bulk Amorphous Alloys”

Supervisor: Prof. S. K. Sharma, MNIT, Jaipur

Prof. Anil Dhawan, Anand ICE, Jaipur

Research work carried out at “**Indira Gandhi Center for Atomic Research, Kalpakkam, Tamilnadu**” under **BRNS/DAE Research Project**.

Teaching Experiences: 7.5 Years

- Worked as an **Assistant Professor (Physics)** at **Jaipur National University** for one year (May, 2011- May, 2012).
 - Worked as an **Assistant Professor (Physics)** at **Anand International College of Engineering, Jaipur** from July 2016 - July 2019.
 - Working as an **Assistant Professor (Physics)** at **GSFC University** from July 2019 to present.
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Research Experiences: 4 Years

- Worked on the Research Project entitled “**Chaos (Nonlinear dynamics)**” at IISER, Mohali under Prof. Sudeshna Sinha in summer research program.
 - Worked as research staff (SRF) under research project entitled, “**Development of Zr and Ni - based metallic glasses and Surface modification for reprocessing applications**” from **BRNS/ Department of Atomic Energy, Govt. Of India** under the guidance of Prof. **Anil Dhawan, Anand International College of Engineering, Jaipur** during **May, 2012-March, 2016**.
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Research Experience with Teaching: 6 Years

Academics Projects Guided:

- Supervisor of M.Sc. Student for M.Sc. Dissertation “**Effect of Banyan Tree Leaf Extract on Corrosion behavior of Mild steel in HCl Medium**” GSFC University, Vadodara.

- Supervisor of M.Sc. Student for M.Sc. Dissertation “**Effect of Banyan Tree Leaf Extract on Corrosion behavior of Mild steel in H₂SO₄ Medium**” GSFC University, Vadodara.
- Supervisor of M.Sc. Student for M.Sc. Dissertation “**Effect of Banyan Tree Leaf Extract on Corrosion behavior of Mild steel in NH₃ and HNO₃ medium**” GSFC University, Vadodara.
- Co-supervisor of M.Sc. Student for M.Sc. Dissertation “**Inhibition study of Banyan Tree Leaf Extract in Prevention of Corrosion on Mild steel in HCl Medium**” GSFC University, Vadodara.
- Co-supervisor of M.Sc. Student for M.Sc. Dissertation “**Inhibition study of Banyan Tree Leaf Extract in Prevention of Corrosion on Mild steel in H₂SO₄ Medium**” GSFC University, Vadodara.
- Co-supervisor of M.Sc. Student for M.Sc. Dissertation “**Inhibition study of Banyan Tree Leaf Extract in Prevention of Corrosion on Mild steel in HNO₃ Medium**” GSFC University, Vadodara.
- Faculty mentor of Graduate students for an Interdisciplinary Internship Project of 2 months “**Development of photosynthetic solar cell**” at GSFC University, Vadodara.
- Faculty mentor of Graduate students for an Interdisciplinary Internship Project of 2 months “**Smart sanitizer bin for new normal**” at GSFC University, Vadodara.
- Faculty mentor of Graduate students for an Interdisciplinary Internship Project of 2 months “**Multipurpose wheelchair for new normal**” at GSFC University, Vadodara.

Courses taught:

- Engineering Physics
- Optics
- Corrosion Science
- Nano Science
- Material Science & Metallurgy

Certification

- COURSERA course, **Protecting the World: Corrosion Science and Engineering** from The University of Manchester
- COURSERA course, **Nanotechnology: A Maker’s Course** from Duke University
- COURSERA course, **Everyday Excal. Part 1** from University of Colorado Boulder
- COURSERA course, **How things work: An introduction to Physics** from University of Virginia
- COURSERA course, **Material Behavior**, Georgia Institute of Technology

- COURSERA course **Nanotechnology and Nanosensors, Part 1**, Technion-Israel Institute of Technology
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Current Work Responsibilities:

- Teaching
- Industrial Internship Faculty mentor of the students
- Start-up coordinator, School of Science under GSFC University Innovation Incubation Technology Applied Research Centre (GUITAR) Council.
- Work for Laboratory Development for Physics Department.

Past Work Responsibilities:

- Worked as an Examination Cell Co-Coordinator at Anand International College of Engineering, Jaipur from August 2017 – March 2017
 - Working as an Examination Cell Coordinator at Anand International College of Engineering, Jaipur from March 2017 - July 2019.
 - R&D Lab setup and monitoring
 - Experience of Counseling and Admission work.
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Industrial Experience:

- Industrial Internship at **Varroc Engg. Ltd. Halol, Vadodara** on Injection Molding System.

Academics Projects Undertaken:

- During M.Sc.: **Simulation of Ion Beam Irradiation on Ti-based Alloys project** under the supervision of **Prof. S. K. Sharma, Department of Physics, MNIT, Jaipur.**
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Publication:

In Journals (International/National)

1. **Poonam Sharma, Anil Dhawan and S.K. Sharma, “High Temperature Corrosion Study of Zr-based Amorphous Alloys in Aqueous HNO₃ media”, IJMCTR Vol.2, Issue 1 (2014) 1-4.**

2. **Poonam Sharma, Anil Dhawan and S. K. Sharma, “Corrosion and surface characterization of Zr-based metallic glasses in nitric acid”, J. Advance Microscopy Research 9, (2014) 262-267.**
3. **Poonam Sharma, Anil Dhawan and S. K. Sharma, “Corrosion behavior of amorphous $Zr_{59}Nb_3Al_{10}Ni_8Cu_{20}$ alloy in aqueous HNO_3 media”, Anti-Corrosion Method & Materials, Vol. 63, Issue 2 (2016) 97-104.**
4. **Poonam Sharma, Anil Dhawan and S. K. Sharma, “Surface morphology study of Zr-based amorphous alloys after immersion in boiling nitric acid medium”, AIP Conf. Proc. 1731, 070021 (2016).**
5. **Poonam Sharma, Anil Dhawan and S. K. Sharma, "Electrochemical investigation of amorphous $Zr_{60}Pd_5Cu_{15}Ni_{10}Al_{10}$ and $Zr_{57}Nb_5Cu_{20}Ni_8Al_{10}$ alloys in oxidizing medium" Advanced Science Letters, 22 (2016) 56-59.**
6. **Poonam Sharma, Anil Dhawan, S. Faheem Naqvi, S. K. Sharma, “Effect of Ni ion irradiation on microstructure and corrosion properties of $Zr_{59}Nb_3Cu_{20}Al_{10}Ni_8$ amorphous alloy” Indian Journal of Pure & Applied Physics. Vol 56, 965-969 (2018).**
7. **Poonam Sharma, Anil Dhawan and S. K. Sharma, “Influence of nitrogen ion implantation on corrosion behavior of $Zr_{55}Cu_{30}Ni_5Al_{10}$ amorphous alloy” Journal of Non-crystalline Solids 511 (2019) 186-193.**
8. **Poonam Sharma, Anil Dhawan, S. K. Sharma, “Comparative studies on the corrosion behavior of some Zr-based amorphous alloys having different compositions in nitric acid medium”, IOP Conf. Series: Journal of Physics: Conf. Series 1455 (2020) 012030**

International/ National Conferences

9. **Poonam Sharma, Anil Dhawan and U. K. Mudali, “Potentiodynamic Polarization Studies of Bulk Amorphous Alloy $Zr_{57}Cu_{15.4}Ni_{12.6}Al_{10}Nb_5$ and $Zr_{59}Cu_{20}Ni_8Al_{10}Ti_3$ in aqueous HNO_3 Media”, presented at International conference NACE, CORSYM-2013 (28 Feb.-02 March, 2013 at Chennai).**
10. **Poonam Sharma, Anil Dhawan and S. K. Sharma, “Corrosion behavior of amorphous $Zr_{59}Nb_3Cu_{20}Ni_8Al_{10}$ and $Zr_{60}Pd_5Cu_{15}Ni_{10}Al_{10}$ alloys in aqueous HNO_3 media at boiling temperature", presented in National Conference "National conference on thermophysical properties, (NCTP-2013)" during October, 17-19, 2013 at Kanpur University (India).**
11. **Anil Dhawan, Poonam Sharma, S. Mathur and S. K. Sharma, “Comparing the corrosion behavior of the bulk amorphous alloy $Zr_{65}Cu_{17.5}Ni_{10}Al_{7.5}$ with binary alloy $Ti_{60}Ni_{40}$ in aqueous HNO_3 medium before and after irradiation”, presented in a National**

conference on Perspectives of Physics in Multidisciplinary Research on 12-13 March, 2014 at Department of Physics, University of Rajasthan, Jaipur.

12. **Poonam Sharma**, Anil Dhawan and S. K. Sharma, “**Electrochemical investigation of amorphous $Zr_{60}Pd_5Cu_{15}Ni_{10}Al_{10}$ and $Zr_{57}Nb_5Cu_{20}Ni_8Al_{10}$ alloys in oxidizing medium**”, presented at International Conference of Emerging Materials: Characterization and Applications 2014 on 4-6 Dec. 2014 at CSIR-CGCRI, Kolkata.
13. **Poonam Sharma**, Anil Dhawan and S. K. Sharma, “**Surface morphology study of Zr-based amorphous alloys after immersion in boiling nitric acid medium**”, presented in 60th DAE Solid State Physics Symposium on 21-25 Dec, 2015 at Amity University, Noida. **Got best poster presentation award**)
14. **Poonam Sharma**, J. Jayaraj, A. Dhawan, S. K. Sharma and U. Kamachi Mudali, “**Corrosion behavior of O^+ ion implanted $Zr_{55}Cu_{30}Al_{10}Ni_5$ bulk metallic glassy alloy in nitric acid medium**” presented in International Conference on Frontiers at the Chemistry-Allied Sciences Interface on April 25-26, 2016 at Department of Chemistry, University of Rajasthan Jaipur
15. **Poonam Sharma**, J. Jayaraj, A. Dhawan, S. K. Sharma and U. Kamachi Mudali, “**Influence of O^+ ion implantation on corrosion behavior of $Zr_{55}Cu_{30}Ni_5Al_{10}$ metallic glassy alloy in different aqueous media**” presented in International Conference CORCON-2016 on 18-21 September 2016 at Leela Ambience Convention Hotel, Delhi.
16. Anil Dhawan, **Poonam Sharma**, S. F. Naqvi and S. K. Sharma, “**Effect of ion irradiation on the structure sensitive properties of the Zr-based amorphous alloy**” presented at IISF, New Delhi on 7-10, Dec. 2016 (**Got best poster presentation award**)
17. Anil Dhawan and Poonam Sharma, “**Surface morphology of Ni ion irradiated Zr-based bulk amorphous alloy at room and elevated temperature**” presented in International Conference on Recent Development in Engineering & Technology (ICRDET-2019) on 14th-15th September, 2019 at Anand International College of Engineering, Jaipur, India

Workshop, FDP and Seminar (Technical):

- a) Attended National Children Science Congress at Jaipur National University, Jaipur during 27-31 Dec 2011
- b) Attended workshop on **Ion beams in materials research** at Malaviya National Institute of Technology, Jaipur during 22-23 March, 2013

- c) Attended short term course on **Frontier Materials** at Malaviya National Institute of Technology, Jaipur during 12-17 August, 2013
- d) Attended short term course on **Nanotechnology & Its Applications** at Malaviya National Institute of Technology, Jaipur during 7-11 October, 2013
- e) Attended workshop on **Technical Report writing and authoring of Research Manuscripts with Latex during** at MNIT Jaipur during 14-16 April, 2017
- f) Attended short term training program on **Development of laboratory Instruction and Manual** organized NITTR, Kolkata at Anand International College of Engineering, Jaipur during 04 -08 Feb. 2019
- g) Attended short term training program on **Problem based learning** organized by NITTR, Kolkata at AnandICE, Jaipur during 11 -15 Feb. 2019
- h) Attended National Workshop on **Nanotechnology & Its Applications** at Anand International College of Engineering, Jaipur during 5-7 March 2019
- i) Attended FDP on **IoT and Machine Learning** at Anand International College of Engineering, Jaipur during 20-22 June 2019
- j) Attended GIAN Course on **Protective Coating: Low Friction, wear and Corrosion** at Malaviya National Institute of Technology, Jaipur during 1-5 July 2019
- k) Attended FDP on Digital tools for writing, authoring and reviewing manuscript, jointly organized by E&ICT Academies, IITG, NITP, IITK, MNITJ, IITR, IITDMJ from 12-23 July 2021.

Workshop, FDP and Seminar (Non-Technical):

- a) Attended 8 days workshop on “Universal Human Values” organized by Anand-ICE, Jaipur in coordination with Value Education Cell AKTU, Lucknow from December 26, 2017 to January 2, 2018.
- b) Attended Teacher training workshop on “Induction Program” organized by Rajasthan Technical University, Kota under TEQIP-III RTU (ATU) Project at SKIT, Jaipur from 22-24 March, 2018.

Webinars attended

- “Building Innovation & Startup Ecosystem” by Mr. Gosavi Harshit , Dr. Nikhil M. Zaveri and Mr. Maulik Bhansali, at Vadodara by on 29 June 2020, organized by i-Hub. Gujarat
 - “Building a Social Entrepreneurship Ecosystem in India - the AFI Story” by Mr. Sanjay Kadaveru on 22 June 2020 organized by i-Hub. Gujarat
 - “CUI over Coffee A digital Mindset” By Mr. Stuart Bond and Mr. Mark Stone , hosted by Mr. Prafull Sharma, on 25 June 2020 organized by Corrosion Radar USA
 - “Powering Start-ups from 1 to 10⁶ by Growth Hacking” by Mr. Amar Jyoti on 20 June 2020 organized by i-Hub. Gujarat
 - “Disruptive Innovations For startups” by Dr A. Sivathanu Pillai, on 10 June 2020 organized by i-Hub. Gujarat
 - “Idea to market; The Design Journey” by Shashank Mehta on 31 May 2020 organized by i-Hub. Gujarat
 - Participated in “International Conference on Recent Trends in Advanced Materials-2020” (ICRTAM-2020) on 06 July 2020
 - Attended national webinar on “Nanotechnology and its application in Engineering” held on 10 August 2020 organized by Anand International College of Engineering, Jaipur
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Book Published:

- **Sanjiv Class VII Science, Publisher: Sanjiv Prakashan, 2018**

Membership (Editorial board/Reviewer board/ Scientific Society)

- Life membership of SAEST Karaikudi

Technical Skills:

- **Machine Handling:** Autolab Potentiostat, Vacuum tubular Furnace, Hot corrosion testing setup, 150 KeV Ion beam accelerator
 - **Software Relevance:** Origin 8.1, NOVA 2.0- Metrohm Autolab, CASA Software, Latex
 - **Packages:** Power Point, MS-Word, MS-Excel,
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Personal Information:

Name	Poonam Sharma
Date of Birth	19 Sep. 1990
Spouse Name	Mr. Anubhav Sharma
Languages	Hindi, English, Punjabi
Marital status	Married
Present Address	417-A GSFC Fertilizer Nagar Vadodara Gujarat
Permanent Address	Near Govt Sr. Sec. School, Gothada Bhukaran, Tah. Dhod, Sikar
Contact No.	966047499

References: Dr. S. K. Sharma, MNIT, Jaipur, Rajasthan, India

Dr. Anil Dhawan, Anand ICE, Jaipur, Rajasthan, India

Dr. K. Santhosh Kumar, GSFC University, Vadodara, Gujarat, India

Declaration:

I hereby declare that the information furnished above is true to best of my knowledge.

Place: Vadodara

Date: 30-11-2022

Dr. Poonam Sharma