



Dr. Poonam Sharma
Assistant Professor, Physics, SOS

Education Qualification:

Phd (Physics), MNIT- Jaipur
M.Sc. (Physics), MNIT-Jaipur
B. Sc. (Non-Medical), MGSU, Bikaner

Research Interest:

Material Science: Corrosion, Oxidation, Metallic glasses and Ion implantation

Publications:

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 Zr₅₉Nb₃Al₁₀Ni₈Cu₂₀ alloy in aqueous HNO₃ 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, (2018) 965-969.
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, Accepted 19 Feb. 2019

Industry Experience:

Nil

Courses Taught:

Engineering Physics: Optics, Modern Physics, Solid State Physics, Quantum Mechanics

Conference & Seminar:

1. **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).
2. **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).
3. **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.
4. **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.
5. **Poonam Sharma, Anil Dhawan and S. K. Sharma, "Surface morphology study of Zr-based amorphous alloys after immersion in boiling nitric acid medium"**, accepted

for presentation in 60th DAE Solid State Physics Symposium on 21-25 Dec, 2015 at Amity University, Noida. **Got best poster presentation award**)

6. **Poonam Sharma**, J. Jayaraj, A. Dhawan, S. K. Sharma and U. Kamachi Mudali, **“Corrosion behavior of O⁺ ion implanted Zr₅₅Cu₃₀Al₁₀Ni₅ 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
7. **Poonam Sharma**, J. Jayaraj, A. Dhawan, S. K. Sharma and U. Kamachi Mudali, **“Influence of O⁺ ion implantation on corrosion behavior of Zr₅₅Cu₃₀Ni₅Al₁₀ metallic glassy alloy in different aqueous media”** presented in International Conference CORCON-2016 on 18-21 September 2016 at Leela Ambience Convention Hotel, Delhi.
8. 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**)
9. **Poonam Sharma**, Anil Dhawan and S. K. Sharma , **“Comparative studies on the corrosion behavior of some Zr-based amorphous alloys having different compositions in nitric acid medium”** Presented in International Conference on Recent Trends in Sciences, Engineering and Management, Jaipur (ICRTSEM 2019) on 30-31 March 2019 at Hotel Park Prime Jaipur.
10. Attended 19th **National Children’s Science Congress** during 27-31 Dec, 2011 organized by Jaipur National University, Jaipur.
11. Attended **National Workshop** on **"Ion beams in materials research"** (IBMR-2013) during 22-23 March, 2013, organized by Department of Physics, Malaviya National Institute of Technology, Jaipur.
12. Attended short term course on **“Frontier Materials”** during 12-17 August, 2013 at Malaviya National Institute of Technology, Jaipur.
13. Attended short term course on **“Nanotechnology & Its Applications”** during 7-11 October, 2013 at Malaviya National Institute of Technology, Jaipur.
14. Attended workshop on **“Workshop on Technical Report writing and authoring of Research Manuscripts with Latex”** Organized by MNIT and EICT Academy at MNIT Jaipur during 14-16 April, 2017.
15. Attended short term training program through ICT Mode on **“Development of Laboratory Instruction and Manual”** organized by **National Institute of Technical Teachers Training and Research, Kolkata** from 04-02-2019 to 08-02-2019.

16. Attended 3 days TEQIP-III RTU (ATU) sponsored FDP on **Internet of Things and Machine Learning** during 20th – 22nd June 2019 jointly organized by RTU Kota and Anand ICE Jaipur.

17. Participated in 5 Days GIAN Course on “**Protective Coating: Low Friction, Wear and Corrosion**” organized by **MRC, MNIT Jaipur** during 1st -5th July 2019.

Awards& Honors:

Junior research fellowship under BRNS/DAE Research Project during 2012-2016

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