



# ANNUAL REPORT 2022-23



वार्षिक प्रतिवेदन  
2022-23

होमी भाभा राष्ट्रीय संस्थान

HOMI BHABHA NATIONAL INSTITUTE

परमाणु ऊर्जा विभाग की सहायता प्राप्त संस्था  
और यूजीसी अधिनियम 1956 की धारा 3 के तहत विश्वविद्यालय माना जाता है  
( A Deemed to be University u/s 3 of UGC Act 1956 and a Grant-in-Aid  
Institute of the Department of Atomic Energy, Govt. of India)



microbiologically influenced corrosion protection performance” at CORCON 2022 held at Udaipur during Sept 19-22, 2022.

- **Awards Received by HBNI Students**

1. Dr. Neena G. Shetake, BARC has received Asian Association for Radiation Research Young Scientist Award for the year 2022 during the 5th Asian Congress of Radiation Research and 3rd Biennial Meeting of Society for Radiation Research (SRR) held at DAE Convention Centre, Anushaktinagar, during November 17-20, 2022.
2. Shri Sourab Kumar Das, BARC received best Poster Prize during the 5th Asian Congress of Radiation Research and 3rd Biennial Meeting of Society for Radiation Research (SRR) held at DAE Convention Centre, Anushaktinagar, during November 17-20, 2022.
3. Miss Ritu Parashar, BARC, received the Mrs. Chinnamaul Memorial Prize for her paper titled, “Composite palladium-based membranes for separation and recovery of hydrogen in bio-jet fuel production unit,” by Indian Institute of Chemical Engineers, at the proceeding Annual Session of the Institute in December 2022.
4. Shri Rajath Alexander, BARC has received Young Scientist in Material Science award by Indian Science Congress Association for his paper titled, “Synthesis of three-dimensional self-assembled carbon nanotube aerogel and its application as a high-performance virus filter.”
5. Shri Lokesh Kumar, BARC has received Sekhar Basu Memorial award for his work, “Estimation of environmental release of tritium from heavy water moderated reactor and feasibility study of online monitoring.”
6. Shri Bikash Chandra Saha, BARC has received one of the Best Poster awards in the Interdisciplinary Symposium on Materials Chemistry held at DAE Convention Centre, Mumbai during December 7-10, 2022.
7. Miss Himanshi Singh, BARC has received one of the Best Poster awards for her poster titled, “Probing stability of charged colloids in re-entrant phase,” at 66<sup>th</sup> DAE Solid State Physics Symposium 2022 held at Birla Institute of Technology Mesra, Ranchi, Jharkhand, during December 18- 22, 2022.
8. Shri Sajan Kumar, BARC has received one of the Best Poster awards for his poster titled, “Li-ion Diffusion in amorphous LiAlGeO<sub>4</sub> using AIMD,” at 66<sup>th</sup> DAE Solid State Physics Symposium 2022 held at Birla Institute of Technology Mesra, Ranchi, Jharkhand, during December 18- 22, 2022
9. Shri Deepak, BARC has received the Best Thesis Award at 66<sup>th</sup> DAE-Solid State Physics Symposium (SSPS) -2022, held at Birla Institute of Technology Mesra, Ranchi, Jharkhand, during December 18- 22, 2022.
10. Shri Amit Kumar Sharma, BARC received Best Poster Award for his poster titled, “Comparative Study of Radiopeptides, <sup>177</sup>Lu-DOTA-A9 and <sup>177</sup>Lu-DOTA-PEG4-



A9 Targeting HER2-receptors in breast cancers”, at 1st HBNI interaction meeting in Chemical Sciences, NISER, Bhubaneswar, 18-20 Jan, 2023. He also received Best Poster award given by American Chemical Society (ACS) for his poster titled, “Electrochemical and Spectroscopic Investigation of HER2-Targeting Peptide”, in the Conference on Electrochemistry for Industry, Health and Environment, Mumbai, 7-11 Feb, 2023.

11. Shri K. Sandeep Rao, BARC received Best Poster Award for his poster titled, “Iron oxide modified separator for enhanced performance in lithium sulphur battery”, in the Interdisciplinary Symposium on Materials Chemistry held at DAE Convention Centre, Mumbai during December 7-10, 2022.
12. Shri Atanu Jha, BARC received Best Poster Award for his poster titled, “Breathable water repellent cotton fabric using radiation technology” in the Interdisciplinary Symposium on Materials Chemistry held at DAE Convention Centre, Mumbai during December 07-10, 2022.
13. Miss Debarati Das, BARC received Best Poster Award for her poster titled, ‘Defect and valence engineering in CeO<sub>2</sub> through aliovalent ion doping for enhanced activity towards ORR catalysis”, in the Conference on Electrochemistry for Industry, Health and Environment, Mumbai, 7-11 Feb, 2023.
14. Miss Sudipa Manna, BARC received Best Poster Award for her poster titled, “BiVO<sub>4</sub> and 3D graphene nano composite photoanodes for improved photoelectrocatalytic splitting of water,” at 1st HBNI interaction meeting in Chemical Sciences, NISER, Bhubaneswar, 18-20 Jan, 2023. She also received ACS Best Oral Presentation Award for her paper titled, “Catalyst-carbon nanocomposites for enhanced electrochemical & photoelectrochemical water splitting”, in the Conference on Electrochemistry for Industry, Health and Environment, Mumbai, 7-11 Feb, 2023.
15. Miss Swarnima Rawat, Ph.D. (Chem. Sci.), BARC has been selected as one of the winners of Popular Science Stories-Ph.D. Category Award by AWSAR-DST (Department of Science and Technology) in March 2023.
16. Miss Sanchita Ghosh, BARC received Best Oral Presentation Award for her paper titled, “Gum Arabic Coated Ga<sub>2</sub>O<sub>3</sub>:<sup>69</sup>Ge nanoparticles as an intrinsically radiolabeled PET probe”, in the International Conference on “Emerging Smart Materials in Applied Chemistry” held at KIIT Deemed to be University, Bhubaneswar during December 20-22, 2022.
17. Shri Meghnath Sen, BARC received Best Poster Award for his poster titled, “Development of Al<sub>5</sub>BO<sub>9</sub>:Ce<sup>3+</sup> for high intensity thermal neutron dosimetry applications,” in the Interdisciplinary Symposium on Materials Chemistry held at DAE Convention Centre, Mumbai during December 7-10, 2022.
18. Dr. Geetisubhra Jena, IGCAR, received the Best Thesis Award by NACE International India Section – during CORCON 2022, held at Udaipur during September 19-22, 2022 for her thesis titled “Development of graphene oxide based composite coating with improved corrosion resistance and antibacterial properties”.