



वार्षिक प्रतिवेदन
Annual Report
2020-21



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)

27. Dr. Shishir P. Deshpande, IPR has been appointed on the Board of Editors of the Journal "Nuclear Fusion" until December 2023.
28. Mainak Bandyopadhyay, Jervis R Mendonca and Shantanu Kumar Karkari were awarded IOP Trusted Reviewer Award. It indicates a high level of peer review competence and the ability to constructively critique scientific literature to an exceptional standard.
29. Dr. Devendra Sharma, IPR has been recognized as an Outstanding Reviewer for the IOP Journal "Plasma Research Express" for the year 2019.

❖ Technical Achievements

Patent Applications filed during the year, based on the inventions of the HBNI Faculty Members and students

1. Mr. B.N. Upadhyay, Mr. Pushkar Mishra, Mr.S.C. Vishwakarma, Mr. Rajesh Arya. Dr. S.M. Oak and Dr. P.D. Gupta (RRCAT), "An improved laser welding method for enhanced weld quality and enhanced surface smoothness", Indian patent application number: 202027031799 dated 24 July 2020; US patent application number: 16/999814, dated 21 August 2020.
2. Dr. Amit Kunwar, Dr. Liladhar B. Kumbhare, Dr. Indira Priyadarsini (BARC), Ms. Vishwa V. Gandhi (HBNI), Dr. Khushboo A. Gandhi, Dr. Vikram Gota, Dr. Jayant Sastri Gota, Dr. Jyoti Kode (ACTREC) and Dr. V.K. Jain (CBS), "Use of 3,3'-Di-Seleno-Dipropionic Acide (DSePA) as an Anti-Cancer Agent" US patent application number: 17/003420, dated 26 August 2020.
3. Shri S.L. Gawli, Dr. K.C. Barick, Dr. K.I. Priyadarsini and Dr. P.A. Hassan (ChD, BARC), "Liposomes and A Process for preparing the Same Using Supercooled Micelle and Emulsion, Indian patent application number: 202021051229, dated 25 November 2020.
4. Dr. Subhendu Raychowdhury, Shri Atanu Jha (IRAD, BARC) and Dr. Pradeep Kumar Pujari (RCD, BARC), "Mechanically reliable water repellent finish breathable cotton fabric and electron beam assisted bio-inspired preparation process of the same", Indian patent application number: 202021052418, dated 2 December 2020.
5. Dr. Jung Bahudur Singh and Dr. Amit Verma (MMD, BARC), "Ni-Cr-Mo Based Superalloy Age Hardened by Ni₃(Cr, Mo, Ti, W) Phase Practices" Indian patent application number 202021053024, dated 5 December 2020.
6. Dr. S.T. Mehetre and Dr. V.P. Venugopalan (NABTD< BARC), "Modular and Compact Helical Biodegradable Waste Converter", Indian patent application number: 202121000812, dated 7 January 2021.
7. Dr. N.N. Meeravali, Smt. K. Madhavi and Dr Sunil Jai Kumar (BARC), "Process to Determine parts per billion levels of Ammonia in Water with Emphasis on Boiler Coolant Water", Indian patent application number: 202121004484, dated 2 February 2021.
8. Mr. Uttam Jain, Dr. Abhishek Mukherjee, Dr. Sanjay Kumar and Dr. Raghvendra Tewari (Materials Group, BARC), "Production of dilute Pb (0.2 to 1.1 wt %)-Li alloys", European patent application no.: 18773618.6, dated 18 February, 2021.
9. Dr. S.N. Jamdar, Shri N. Mallikarjunan and Mrs. V. Rajalakshmi (FTD< BSG< BARC), "Preparation of Fiber Fortified Idli-Using Legumes (other than Urad) and Hydrocolloids-with Improved Textural Properties", Indian patent application number: 202121007181, dated 20 February, 2021.