Facilitation Centre for Industrial Plasma Technologies

Institute for Plasma Research

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Photo	Name : Nisha Chandwani Qualification : M.Sc Designation : Scientific Assistant-E
Contact	Phone : 079-23269033 E-mail ID : nisha@ipr.res.in
Field of Work	Atmospheric Pressure Plasma Surface Activation and Surface Characterization
Projects and Technologies	Development of inline plasma system for surface modification of 2.5 meter width textiles Development of an atmospheric pressure plasma system for surface modification of HDPE (High density Polyethylene) film for application in Geo-membrane
Publications (IEEE format)	***Experimental Studies on Applications of Atmospheric Pressure Air Plasma for Eco-friendly Processing of Textiles and Allied Material*** Nisha Chandwani, Vishal Jain, Purvi Dave, Hemen Dave,P. B. Jhala, Sudhir K. Nema (2021) J. Inst. Eng. India Ser. E https://doi.org/10.1007/s40034-021-00219-z ***Antimicrobial finishing of hide/leather by atmospheric pressure plasma and extractsof Cassia renigera and Cassia fistula bark*** Mona Vajpayee, Mumal Singh, Hemen Dave, Nisha Chandwani, Lalita Ledwani & S. K. Nema (2020) Rendiconti Lincei. Scienze Fisiche e Naturali https://doi.org/10.1007/s12210-020-00954-2 ***Optimization and Surface Modification of Silk Fabric using DBD Air Plasma for Improving Wicking Properties"*** K.Vinisha Rani, Nisha Chandwani, Purvi Kikani, S.K. Nema, Arun Kumar Sarma and Bornali Sarmaa The Journal of the Textile Institute ,Volume 109,Issue 3 (2018)368-375

	"Hydrophobic Surface Modification Of Silk Fabric Using Plasma Polymerized HMDSO" K.Vinisha Rani, Nisha Chandwani, Purvi Kikani, S.K. Nema, Arun Kumar Sarma and Bornali Sarma Surface Review and Letters, Vol. 25, No. 5 (2018) 1850060 (10 pages) "***Improvement of Inter-face Layer Coating by Plasma Treatment of Carbon Fiber for Carbon Fiber Reinforced Silicon arbide Composite Applications***" Sonam H. Suthar , Nisha Chandwani and Chetan Jariwala, IOP Conf. Series:Materials Science and Engineering 404 (2018) 012031 Book Chapter: "***Enhancement in Gas Diffusion Barrier Property of Polyethylene by Plasma Deposited SiOx Films for Food Packaging Applications***" Purvi Dave ,Nisha Chandwani, S. K. Nema and S. Mukherjee in the book "Trends and Applications in Advanced Polymeric Materials" by Wiley Scrivener Publishing, October 2017 ***"Improving anti-felting characteristics of Merino wool fiber by 2.5 MHz atmosphere pressure air plasma***" Nisha Chandwani, Purvi Dave, Vishal Jain, Sudhir Nema and Subroto Mukherjee IOP Conf. Series: Journal of Physics: Conf. Series 18234 (526071879) 0012010 2017
Patents	Patent filed "***Apparatus for Plasma Surface Modification & Sterilization of Materials at Atmospheric Pressure"*** S. K. Nema, Nisha Tanwani, R. Rane, A. Sanghariyat, S. Mukherjee Indian Patent No.336974 Patent filed "***Process for Plasma Surface Treatment of Angora Wool at Atmospheric Pressure"*** S. K. Nema, P. B. Jhala, Nisha Tanwani,R. Rane, A. Sanghariyat, S. Mukherjee, G. A. Gandhi, P. I. John Indian Patent No. 335045 Patent filed ***"Process for Atmospheric Pressure Plasma Surface Treatment of Denim to Create Worn-out Effect "*** S. K. Nema, Nisha Chandwani, Adam Sanghariyat, R. Rane, Balasubramanian C.,P.B. Jhala, S. Mukherjee Application No.,1044/MUM/2010 filed on Oct 21, 2010
Awards	-