

NITK Professor receives patent for Cardanol

He got it for 'A Thin Film Reactor for Obtaining Cardanol' and he had filed for it in 2015

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PROF Raj Mohan B of Chemical Engineering Department, National Institute of Technology Karnataka (NITK), Surathkal, has got a patent for 'A Thin Film Reactor for Obtaining Cardanol'. He had filed for the patent in 2015.

A press release from NITK said that out of the 14 claims, eight got granted which is about a cost-effective continuous process for obtaining cardanol from the waste cashew nutshell extract.

The cashew nutshell waste after extracting CSNL (Cashew Nut Shell Liquid) is further subjected to a solvent extraction process to obtain the remaining CSNL (up to 40%). The extract CSNL is subjected to a catalyst-based decarboxylation process using a thin film reactor operated in a continuous mode to obtain higher percentages of cardanol at lower temperatures compared to the existing cardanol extraction process. Mohan has been granted two patents by the government of India for the inventions of Arsenic Removal



from Water using Functionalised Melanin' in the year 2021 and 'Removal of Heavy Metals from Contaminated Water by Adsorption using Melanin Bound Activated Carbon' in the year 2020 both filed in the year 2018.

Mohan is a recipient of the Karnataka State's prestigious Prof Satish Dhawan Award for Young Engineers for 2019 and a recipient of VGST's Award for Publication in Research (APR) for the same year. Currently, he is a member of the Committee to revise the National Chemical Hazard Rules and Regulations 2007. Mohan said, "The shell waste is usually burnt in industries for energy which contains CNSL (Anacardic acid) goes into the environment if not scrubbed properly and it is highly corrosive. The invention can prevent the public from occupational health hazards. It will help farmers (Cashew Nut farms), public (environmental issues) and industries (Better conversion, energy savings and clean product)."

Shrutee L, an engineering analyst at Infosys, is co-inventor.