

IIT Roorkee develops food packaging paper from pine needles & it could reduce deforestation

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Moving towards sustainable food packaging, researchers at IIT Roorkee have developed ethylene scavenging functional paper from pine needle waste, as environment-conscious consumers are avoiding single-use plastic packaging.

There is a huge quantity of fall of these leaves in pine forests every year, which dry up and pose a fire hazard to the forests. The net annual pine needle waste yield in the state of Uttarakhand is nearly 1.3 million tonnes.

On the forest floor, the deep layer of dry pine needles is the leading cause of forest fires yearly in India.

Researchers turned to these needles for making functional paper and contributing towards sustainable development goals (SDGs).

Professor Kirtiraj K Gaikwad and PhD research scholar Avinash Kumar at the Department of Paper Technology, IIT Roorkee, have turned to finding an environment-friendly substitute for food packaging materials.

The results of the research work that was funded by the Department of Science and Technology (DST) grant have recently been published in the Industrial Crops and Products (an International Journal).

Each year, paper mills produce about 400 million tons of paper per year, globally, which contributes to deforestation.

Pine needles are non-wood and makes for a solid alternative for wood.

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