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To
The Editor,
Sir,

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I request that the following message may kindly be published in your esteemed daily:

TNAU's hydrothermal liquefaction reactor granted with Design patent

Tamil Nadu Agricultural University with scientists from the Department of Renewable Energy Engineering Dr.R.Divyabharathi and Dr.P.Subramanian have received a national patent for a hydrothermal liquefaction reactor. This patent was granted by the Office of the Controller General of Patents, Designs and Trademarks of the Union Ministry of Commerce and Industry.

The hydrothermal liquefaction system consists of a high-pressure reactor with an agitator, electric heater and condenser that exclusively derives biocrude oil, char and aqueous phase from wet lignocellulosic biomass. This innovative design helps in direct thermochemical conversion to yield bioenergy products thereby saving the drying costs and energy associated with conventional thermochemical systems. The biocrude oil can either be used directly as a fuel oil in combustion systems or upgraded to resemble transportation fuels. The char obtained can be used as solid biofuel or in soil amendment and adsorption applications. The aqueous phase is rich in organic chemicals and other nutrients which can be used for chemicals recovery in industries. The patent signifies TNAU's commitment in offering a sustainable solution to mitigate the energy demand and environmental pollution in the country.



Public Relations Officer