A study on the utilization of waste biomass available in N.E. India for Syn-Gas Generation

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I. Abstract

The current study deals with the selection of the most potent biomass which is most suitable for Fluidized Bed gasification and abundantly available in the north-eastern part of India. The north eastern part of India is considered as the biological hotspot of India as numerous amount of biomass samples are available and in plenty out of which very few samples were studied for their fuel wood characteristics over the last few years. The biomass samples like Hevea brasiliensis, Boehmeria nivea and Melocanna baccifera were found out to be very good gasifying agents with gross calorific values ranging around 20-25 MJ/kg. Various analytical and characterization techniques like FTIR, DSC, HPLC, Bomb Calorimeter, CHNS Analyser etc. were used to evaluate the biomasses which were more suitable for gasification purposes.

II. Image:

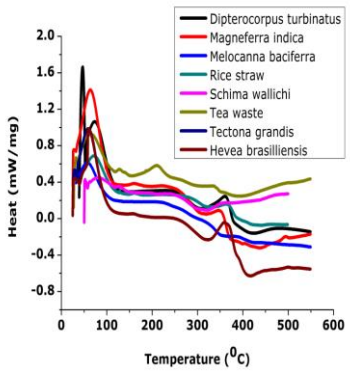


Fig. 1. DSC curves of the biomass samples

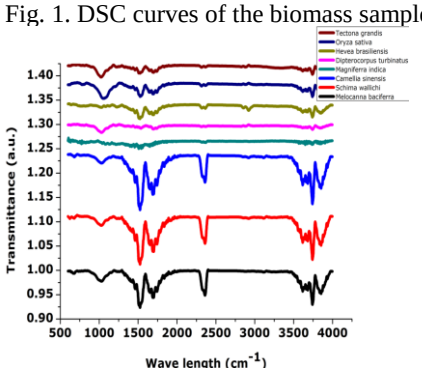


Fig. 2. FTIR curves of the biomass samples

III. Reference:

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IV. Biography:

Miss. Sumata Das has completed her M. Tech in Chemical and Polymer Engineering the age of 25 years from Tripura University, India. She worked under the guidance of Mr. Harjeet Nath, Assistant Professor, Dept. of Chemical and Polymer Engineering, Tripura University, India.

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