

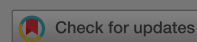
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# Application of MLP-ANN strategy to predict higher heating value of biomass in terms of proximate analysis

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## ABSTRACT

One of the important parameters in development of bioenergy industry and economical investigation of fuels is higher heating value (HHV) of biomass in the present study; multi-layer perceptron (MLP) artificial neural network was applied to predict HHV of biomass in terms of volatile matters (VMs), fixed carbon (FC), and ash content (ASH).

The purpose of this study is to estimate the HHV of biomass by using artificial neural network (ANN) model. The data set was divided into training and testing sets. The ANN model was trained using the training set and tested using the testing set. The results showed that the ANN model can predict the HHV of biomass with high accuracy. The ANN model can be used as an alternative for laboratory experiments.

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