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(57) Abstract:

ABSTRACT: Title: Method for Enhancing a Calorific Value of Biomass Materials Using Laser Light and Solvent Treatments The present disclosure proposes a method for enhancing the calorific value of biomass using a combination of laser light and solvent treatment, thereby increasing the utilization of biomass as a sustainable and efficient energy source. The proposed method increases efficiency in converting biomass into valuable products by utilizing green laser light to enhance chemical reactions and improve the transformation of organic components. The proposed method utilizes renewable energy sources and biomass as a primary raw material, contributes to environmental sustainability, and reduces the industry's reliance on petroleum-based resources. The proposed method aids in purifying the final products and improving their properties, increasing their industrial and commercial value. The proposed method eliminates waste matter in biomass conversion processes, thereby leading to better resource utilization and minimizing negative environmental impacts.

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