

Review of: "Recycling of Waste Bamboo (*Bambusa vulgaris*) into Value-Added Platform Chemicals: Bioethanol and Bioethylene"

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Potential competing interests: No potential competing interests to declare.

Overall, the publication offers a comprehensive and perceptive examination of the process of transforming bamboo biomass into valuable compounds. The content is meticulously organised and provides comprehensive explanations of scientific procedures. Nevertheless, enhancing the quality of the work could be achieved by incorporating additional empirical evidence, employing visual aids to enhance comprehension, and formulating a more robust conclusion that provides practical advice. Augmenting the number of references and ensuring that all assertions are substantiated would further bolster the document's credibility and utility.

Strengths:

The purpose and relevance are well defined and evident. The document clearly highlights the need for utilising bamboo biomass as a viable and environmentally friendly substitute for fossil fuels. The text discusses the ecological and environmental issues related to crude oil and proposes bamboo as a sustainable alternative for the production of bioethanol and bioethylene. **Precise Methodology:** The procedure for transforming bamboo into bioethanol and bioethylene is thoroughly elucidated. The text provides a detailed explanation of the complete technique, including pulverisation, pretreatment, enzymatic hydrolysis, fermentation, and catalytic dehydration. **Contextual Background:** The introduction and literature review sections offer a comprehensive overview of the issues associated with fossil fuels and the benefits of utilising bamboo. Citations to prior research and statistical data regarding the growth and distribution of bamboo enhance the document's credibility. **Scientific Rigour:** The document demonstrates a high level of academic rigour by utilising scientific terminology and references. The discourse regarding the chemical composition of bamboo and the intricate elucidation of the enzymatic activities evinces a profound comprehension of the topic.

Limitations:

Data and findings presentation: The document is deficient in precise data and outcomes derived from experiments. Enhancing the effect of the findings would involve incorporating quantitative data, such as the yield of bioethanol and bioethylene, efficiency percentages, and conducting a comparative analysis with other biomass sources. **Visual aids:** The presence of visual aids, such as charts, graphs, or photographs, to depict the procedures and outcomes, is limited. Visual depictions have the potential to enhance readers' comprehension of intricate processes and information. **Conclusion and recommendations:** The conclusion section might be more comprehensive. Although the document acknowledges the

potential of bamboo as a bioresource, it lacks specific suggestions for future research or practical uses. Proposing strategies for the widespread adoption of this technology or tackling potential obstacles would be advantageous.

References and citations: Although the paper includes references to different research, it would be advantageous to have a more comprehensive reference list and in-text citations to substantiate specific assertions. Academic honesty requires the use of reputable sources to support all data points and statements.