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Muhammad Faizal

AUTHOR

JEENG-01858-2020-01

Valorization of palm empty fruit bunch waste for syngas production through gasification

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DETAILS

PAYMENT

PROOF

Published


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CORRESPONDING AUTHOR: Muhammad Faizal	INSERTED: 2020-06-13	SUBMITTED: 2020-06-14
DECISION: 2020-07-16		

TITLE AND TYPE	Title Valorization of palm empty fruit bunch waste for syngas production through gasification
1	Type Research paper

ABSTRACT	The rapid progress of the CPO industry in Indonesia is not in line with good waste management and utilization. Palm empty fruit bunch as the first waste from the CPO production process in Indonesia is mostly piled on the ground. Palm empty fruit bunch must be processed to reduce pollution and increase use-value. This study aimed to convert oil palm empty fruit bunches solid waste through the gasification process using Indonesia's natural zeolite into synthesis gas. Gasification takes place at 400 - 550°C by added 12.5% wt zeolite using a modified updraft gasifier. Good results were achieved at 550°C with a gas composition of 22.64% vol CH4, 29.22% vol CO, and 3.4% vol H2. Gasification efficiency is evaluated through carbon conversion efficiency (CCE) and cold gas efficiency (CGE). Both the highest CCE and CGE were found at 550C by 95.74% and 81.65% respectively. The results showed that gasification temperature has the most influence in driving higher carbon conversion to syngas and palm empty fruit bunches are very suitable to be converted into environmentally friendly syngas in the CPO industry.
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AUTHOR'S STATEMENTS

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KEYWORDS

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catalytic, palm mill, updraft gasifier, zeolite

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Renewable energy technologies

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Table 2. Characterization of producer gas

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Figure 1. Schematic diagram of PEFB gasification



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**Authors:**

Nabila Aprianti, Muhammad Faizal, Muhammad Said, Subriyer Nasir

**Decision letter:**

July 16, 2020

JEENG-01858-2020-01

Valorization of palm empty fruit bunch waste for syngas production through gasification

Dear Dr. Muhammad Faizal,

I am pleased to inform you that your manuscript, entitled: Valorization of palm empty fruit bunch waste for syngas production through gasification, has been accepted with minor revisions after a few typos and other details.

Thank you for submitting your work to us.

Kindest regards,  
Gabriel Borowski  
Editor-in-Chief  
Journal of Ecological Engineering

**Files:**

[Faizal\\_text.docx](#)



Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

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**JEE, 21(7), 2020**

2 pesan

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**Journal of Ecological Engineering** <office@jeeng.net>  
Kepada: muhammadfaizal@unsri.ac.id

20 Agustus 2020 22.51

Dear Author,

I am sending a proof version of the article for publication in the Journal of Ecological Engineering, vol. 21, iss. 7, 2020.

Please read the final version of the work, and use the attached PDF files if you need to add your comments.

I am waiting for your acceptance.

Best Regards,  
Gabriel Borowski

*Editor-in Chief*  
*Journal of Ecological Engineering*  
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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>  
Kepada: Journal of Ecological Engineering <office@jeeng.net>

25 Agustus 2020 20.04

Dear Editor in Chief,

Thank you very much for the information. Actually we made a small correction on the article in connection with a typo we have made still (abstract section). We are really sorry for knowing it lately and for the late response to this important information email. We have already added the comment below and in the article that we attach. Thank you very much for your cooperation.

Note:

The typo was in the abstract section, 400 must be replaced by 350.

Thank you.

Yours sincerely,

Muhammad Faizal  
[Kutipan teks disembunyikan]

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Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

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**Decision on manuscript JEENG-01858-2020-01**

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**Journal of Ecological Engineering** <kontakt@editorialsystem.com>

16 Juli 2020 15.08

Balas Ke: "gabriel@borowski.net.pl" &lt;gabriel@borowski.net.pl&gt;

Kepada: Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

July 16, 2020

JEENG-01858-2020-01

Valorization of palm empty fruit bunch waste for syngas production through gasification

Dear Dr. Muhammad Faizal,

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Thank you for submitting your work to us.

Kindest regards,

Gabriel Borowski

Editor-in-Chief

Journal of Ecological Engineering

Your manuscript has been analyzed by a web-based anti-plagiarism system (iThenticate).

Manuscript evaluation and file attachments are available here:

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Editor has attached the file to this decision.

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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>

17 Juli 2020 10.14

Kepada: "gabriel@borowski.net.pl" &lt;gabriel@borowski.net.pl&gt;

Thank you very much for the decision. After the acceptance, please let us know what is the next step of our article publication process, and if it is possible please give us the guidelines on how to process the payment of article processing charge. Thank you.

Yours sincerely,

Muhammad Faizal

[Kutipan teks disembunyikan]



Muhammad Faizal &lt;muhammadfaizal@unsri.ac.id&gt;

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**The manuscript requires editing (JEENG-01858-2020-01)**

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25 Juni 2020 17.21

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Dear Dr. Muhammad Faizal,

Please edit your manuscript Valorization of palm empty fruit bunch waste for syngas production through gasification (JEENG-01858-2020-01) according to the Editorial guidelines.

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2. Figure and Table captions should be included in the text.

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**Muhammad Faizal** <muhammadfaizal@unsri.ac.id>

26 Juni 2020 22.18

Kepada: "gabriel@borowski.net.pl" &lt;gabriel@borowski.net.pl&gt;

Thank you very much for checking the manuscript patiently and for giving us the opportunity to edit the manuscript. We have edited the manuscript based on guidelines. We look forward to the next step. Thank you

Yours sincerely,

Muhammad Faizal

[Kutipan teks disembunyikan]



Muhammad Faizal <muhammadfaizal@unsri.ac.id>

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## New manuscript received by Editorial Office (JEENG-01858-2020-01)

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15 Juni 2020 00.02

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Kepada: Muhammad Faizal <muhammadfaizal@unsri.ac.id>

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Thank you for your manuscript: Valorization of palm empty fruit bunch waste for syngas production through gasification.

The following number has been assigned to it: JEENG-01858-2020-01.

The manuscript will be checked by Editors and then sent to the Reviewers.

You will be informed by email about any further decisions on this article.

Thank you for submitting your work to our journal.

Kindest regards,  
Gabriel Borowski  
Editor-in-Chief  
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