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## IJTech special issue

3 messages

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**Isichem reviewer** <isichemreviewer@gmail.com>  
To: ifnata@ulm.ac.id

Fri, Feb 22, 2019 at 6:07 PM

**No. : 004-12/ISIChem/IJTech/2019**

Surabaya, 23 Februari 2019

**Dear Authors,**

**Yulia Nurul Ma'rifah, Iryanti Fatyasari Nata, Hesti Wijayanti, Agus Mirwan, Chairul Irawan, Meilana Dharma Putra, Hidetaka Kawakita**

On behalf of Editor in Chief of International Journal of Technology, we are pleased informing you that your manuscript "**ONE-STEP SYNTHESIS TO ENHANCE THE ACIDITY OF BIOCARBON-BASED SULFONATED SOLID ACID CATALYST**" is selected to be published in International Journal of Technology (IJTech).

The result of plagiarism checked is attached. Please do revised your manuscript and carefully follow the guideline of the IJTech (attached), fulfilled the similarity below 30%. Subsequently, do the submission process online via <http://ijtech.eng.ui.ac.id/register> no later than **February 27, 2019**.

Thank you for your kind cooperation,

Best Regards,

Hakun wirawasista, Ph.D

Chemical Engineering Department, Institut Teknologi Sepuluh Nopember (ITS)


Kampus ITS Keputih Sukolilo, Surabaya 60111, Indonesia.


Tel: 62-31-5922934, Fax: 62-31-5999282; Author ID: 56664385800.

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### 3 attachments

 **Guideline for Authors\_IJTech.docx**  
21K

 **ijtech\_template.doc**  
467K

 **IS-CR-015\_ithenticate.pdf**  
3526K

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**Iryanti Nata** <ifnata@ulm.ac.id>

Fri, Feb 22, 2019 at 6:09 PM


To: Yulia Nurul Ma'rifah <ynmarifah@gmail.com>, "Meilana Dharma Putra, ST., M.Sc., Ph. D" <mdputra@ulm.ac.id>, Hesti Wijayanti <hesti.wijayanti@ulm.ac.id>, cirawan@ulm.ac.id, Agus Mirwan <agusmirwan@ulm.ac.id>


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### 3 attachments

 **Guideline for Authors\_IJTech.docx**  
21K

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 **IS-CR-015\_ithenticate.pdf**  
3526K

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**Hesti Wijayanti** <hesti.wijayanti@ulm.ac.id>

Fri, Feb 22, 2019 at 6:40 PM

To: Iryanti Nata <ifnata@ulm.ac.id>

Cc: Yulia Nurul Ma'rifah <ynmarifah@gmail.com>, "Meilana Dharma Putra, ST., M.Sc., Ph. D" <mdputra@ulm.ac.id>, cirawan@ulm.ac.id, Agus Mirwan <agusmirwan@ulm.ac.id>

Sip sip..mantap 😊

[Quoted text hidden]

## [IJTech] Editor Decision

2 messages

IJTech <noreply@ijtech.eng.ui.ac.id>

Sun, Mar 24, 2019 at 7:19 PM

Reply-To: "noreply@ijtech.eng.ui.ac.id" <noreply@ijtech.eng.ui.ac.id>

To: ifnata@ulm.ac.id

Cc: ynmarifah@gmail.com, hesti.wijayanti@ulm.ac.id, agusmirwan@ulm.ac.id, cirawan@ulm.ac.id, mdputra@ulm.ac.id, kawakita@cc.saga-u.ac.jp



*Decision Result : Revise*

Dear **Prof. Iryanti Nata**

We have finished the review and made decision on your manuscript entitled [ **ONE-STEP SYNTHESIS TO ENHANCE THE ACIDITY OF BIOCARBON-BASED SULFONATED SOLID ACID CATALYST** ] which was submitted to International Journal of Technology.

We have decided that your manuscript **Need to be Revised**

We also send you the review result from the reviewers. Here is the detail review result:

Notes from Editor:

Please revise according to reviewer's comment

Reviewer (1)

### **Introduction:**

1. From the title, author wrote the one-step synthesis to enhance the acidity of biocarbon? But in throughout of manuscript, I can not find this issue 2. Author should mention what are the other methods, two steps or more steps? Please explain what has been done and what is the new from this paper? 3. Sulfonated is functional group to increase the acidity? So what is the solid catalyst?

### **Methodology:**

Add grade and city, country from where materials purchased

### **Results and Discussion:**

Results: 1. Figure 1 is interesting. Please add the name of reaction and use the same font if possible 2. Revise figure 3. Currently is not interesting. All XRD patterns is amorphous. Why EFB is crystal? 3. Biocarbon without sulfonation, carbon with sulfonation containing hydroxyethylsulfonic acid are 10 wt.%, 20 wt.% and 30 wt.% namely BC, BC-SO<sub>3</sub>H-1, BC-SO<sub>3</sub>H-2, and BC-SO<sub>3</sub>H-3, respectively. I suggested author can simply the codes. 4. Revise page 5. Some number in bahasa were found. 5. The difference concentration of hydroxyethylsulfonic acid gives difference intensity peaks for sulfonate group, the higher concentration, the sharper peaks were formed. This observation is related with XRF result. Where is the XRF data? 6. Why the higher concentration of sulfonic acid gave more mass loss on TGA curve? 7. Author can make more discussion related the thermal properties of these compounds, and kinetics reaction. Discussion: 1. Add more discussion, what is application of the acidity strength from these products? 2. From table 1, the acidity strength is only 3.5 and S content is 38. So what is the correlation between acidity and S content?

### **References:**

Please include and cite some references such as 1. International Journal of Technology. Volume 9(7), 2018, pp. 1498-1508

**Other:**

Revise abstract.

Originality	2 ( <i>fair</i> )
Technical	3 ( <i>average</i> )
Methodology	2 ( <i>fair</i> )
Readability	2 ( <i>fair</i> )
Practicability	3 ( <i>average</i> )
Organization	3 ( <i>average</i> )
Importance	3 ( <i>average</i> )

**Additional Comment:**

The objective of this study is to evaluate the effect of hydroxyethylsulfonic acid concentration and addition of acrylic acid during hydrothermal process.

**Attachment File:**

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Reviewer (2)

**Introduction:**

-

**Methodology:**

-

**Results and Discussion:**

Please revise Table 1 according to the journal format

**References:**

Please add references from IJTECH paper

**Other:**

Please give background in abstract

Originality	3 ( <i>average</i> )
Technical	3 ( <i>average</i> )
Methodology	3 ( <i>average</i> )
Readability	3 ( <i>average</i> )
Practicability	3 ( <i>average</i> )
Organization	3 ( <i>average</i> )
Importance	3 ( <i>average</i> )

**Additional Comment:****Attachment File:**

-

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Please login into application <http://ijtech.eng.ui.ac.id/login> for more detail.

You must respond to this revise and resubmit request before **01 Apr 2019**, after which point we will presume that you have withdrawn your submission from International Journal of Technology (IJTech) Online System.

Yours sincerely,

Dr. Nyoman Suwartha  
[nsuwartha@eng.ui.ac.id](mailto:nsuwartha@eng.ui.ac.id)  
Managing Editor  
International Journal of Technology (IJTech)  
p-ISSN : 2086-9614  
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**Iryanti Nata** <[ifnata@ulm.ac.id](mailto:ifnata@ulm.ac.id)>  
To: Yulia Nurul Ma'rifah <[ynmarifah@gmail.com](mailto:ynmarifah@gmail.com)>

Sun, Mar 24, 2019 at 7:35 PM

Dicek yul,.... Kita revisi

[Quoted text hidden]

### List of Changes

Manuscript:

#### ONE-STEP SYNTHESIS TO ENHANCE THE ACIDITY OF BIOCARBON-BASED SULFONATED SOLID ACID CATALYST

Response and Revision made by Author(s)

Reviewer #1:

No	Comments	Revision/Changes
1	<p><b>Introduction:</b> From the title, author wrote the one-step synthesis to enhance the acidity of biocarbon? But in throughout of manuscript, I cannot find this issue.</p>	<p>The addition the issue has been added in the revised manuscript.</p> <p>In order to produce high content of functional groups, it is possible to modify the surface by one-step HTC process for sulfonation and improve the acidity of carbon.</p> <p>Refer to page 2 in 3<sup>rd</sup> paragraphs. We are very grateful to the reviewer for the comments that helped in improving the revised version of this manuscript. Changes are now written in blue fonts.</p>
2	<p><b>Introduction:</b> Author should mention what are the other methods, two steps or more steps? Please explain what has been done and what is the new from this paper?</p>	<p>We were added the information regarding method that has been done and the novelty of ours in the revised manuscript in page 2 in blue fonts.</p> <p>In the previous work, Xiao et al. (2010) has done hydrothermal treatment with hydroxyethylsulfonic acid as sulfonate agent to produce carbon from glucose and use it for esterification process in order to examine its catalytic ability. However, this procedure only acquired 1.7 mmol/g of acidity and still owned little of functional groups. Hence to generate carbonaceous material loaded with carboxylic groups which known as active group that participate in the reaction, acrylic acid was added.</p> <p>We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.</p>

<p>3</p>	<p><b>Introduction:</b> Sulfonated is functional group to increase the acidity? So what is the solid catalyst?</p>	<p>Yes, it is. The sulfonate functional groups on biocarbon could be increased the acidity. The author has been describing in result and discussion part.</p> <p>The more hydroxyethylsulfonic acid used in sulfonation process, the higher S content accommodated on the carbonaceous materials which resulting more acidic groups such as carboxyl, carbonyl and hydroxyl group cannot bind with the biocarbon, whereas these acid groups acted as the supplier of H<sup>+</sup> ion that help produced biocarbon with high acidity. Refer to page 4 in 3<sup>rd</sup> paragraphs which changes in blue fonts.</p> <p>Solid acids catalyst is the type of catalysis where the phase of the catalyst differs from the phase of the reactants, it also call heterogeneous catalyst.</p>
<p>4</p>	<p><b>Methodology:</b> Add grade and city, country from where materials purchased</p>	<p>The addition information about the chemicals has been appeared in method part. Refer to page 2 in material part.</p>
<p>5</p>	<p><b>Results:</b> Figure 1 is interesting. Please add the name of reaction and use the same font if possible</p>	<p>We have been modified the figure base on your comments. The new figure has been added in revised manuscript, refer to page 4</p>
<p>6</p>	<p><b>Results:</b> Revise figure 3. Currently is not interesting. All XRD patterns is amorphous. Why EFB is crystal?</p>	<p>The Figure 3 shows the diffraction peak of all samples by XRD, this figure also proves that different concentration of hydroxyethylsulfonic acid in treatment is not affect to amorphous structure of the carbon.</p> <p>The additional description has been added in revised manuscript, page 6 in 1<sup>st</sup> paragraph with blue font.</p> <p>For the EFB, characterization peaks showed the crystal structure of lignocelluloses material. It is well known that biomass generate highly cross-linked, multi-ringed, aromatic structure anchored to lignin. Due to this property, the EFB have crystal structure.</p>

<p>6</p>	<p><b>Results:</b> Biocarbon without sulfonation, carbon with sulfonation containing hydroxyethylsulfonic acid are 10wt.%, 20 wt.% and 30 wt.% namely BC, BC-SO<sub>3</sub>H-1, BC-SO<sub>3</sub>H-2, and BC-SO<sub>3</sub>H-3, respectively. I suggested author can simply the codes.</p>	<p>The author has been changed the code become simple. Biocarbon without sulfonation, carbon with sulfonation containing hydroxyethylsulfonic acid are 10wt.%, 20 wt.% and 30 wt.% namely BC, BSC-1, BSC-2, and BSC-3, respectively.</p> <p>All the part used this code in manuscript has been changed into new one. The changes are written in blur font. We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.</p>
<p>7</p>	<p><b>Results:</b> Revise page 5. Some numbers in bahasa were found.</p>	<p>The author has been changed the number in English format. Refer to page 6 in blue font. We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.</p>
<p>8</p>	<p><b>Results:</b> The difference concentration of hydroxyethylsulfonic acid gives difference intensity peaks for sulfonate group, the higher concentration, the sharper peaks were formed. This observation is related with XRF result. Where is the XRF data?</p>	<p>The XRF data was presented in Table 1. Detail description in page 4, in 3<sup>rd</sup> paragraphs in blue font.</p>
<p>9</p>	<p><b>Results:</b> Why the higher concentration of sulfonic acid gave more mass loss on TGA curve?</p>	<p>The higher concentration of sulfonic acid gave more mass loss on TGA curve. This phenomenome of mass loss indicated the material contained in catalyst rapidly diminish as the temperature increased and is related with amount of sulfonic group which obtained by XRF result. It conclude that biocarbon based solid catalyst sulfonated with higher amount of sulfonate agent have more frail structure and unstable against the alteration of temperature compared to the original biocarbon or the biocarbon catalyst sulfonated with less sulfonate agent.</p> <p>This description has been added in revised manuscript page 7 in blue font. We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.</p>



10	<b>Results:</b> Author can make more discussion related the thermal properties of these compounds, and kinetics reaction.	This additional theory has been included in revised manuscript page 7 in blue font (refer to comment number 6). Sulfonation of biocarbon lowered the temperature at which the mass loss occurred and partially oxidized the structure, reducing thermal stability. In this case, author focus on the "surface modification" on the surface of biocarbon, the kinetic reaction could be observed in other experiments.
11	<b>Discussion:</b> Add more discussion, what is application of the acidity strength from these products?	The author was added the advantage of high acidity catalyst.  The higher acidity content in solid acid catalyst will improve the reactivity during reaction such as hydrolysis and esterification. In the case of hydrolysis reaction, the H <sup>+</sup> ion in catalyst will break the polymer bond of amylose.  Refer page 4, 3 <sup>rd</sup> paragraphs in revised manuscript.
12	<b>Discussion:</b> From table 1, the acidity strength is only 3.5 and S content is 38. So what is the correlation between acidity and S content?	We had been describing the correlation between acidity and S content in our manuscript at page 4 in 3 <sup>rd</sup> paragraphs.  The addition of 10% of hydroxyethylsulfonic acid has increasing number of S content about 38%, however the acidity of biocarbon turn to decreased when hydroxyethylsulfonic acid was added >10%. This is probably due to competitiveness of each functional group when taking place and binding with biocarbon during hydrothermal treatment. The more hydroxyethylsulfonic acid used in sulfonation process, the higher S content accommodated on the carbonaceous materials which resulting more acidic groups such as carboxyl, carbonyl and hydroxyl group cannot bind with the biocarbon, whereas these acid groups acted as the supplier of H <sup>+</sup> ion that help produced biocarbon with high acidity.

		We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.
13	<b>References:</b> Please include and cite some references such as 1. International Journal of Technology. Volume 9(7), 2018, pp. 1498-1508	We have been added new references base on reviewer comments in page 1. We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.
14	<b>Other:</b> Revise abstract	Author has been modified the abstract in revised manuscript.

**Reviewer #2:**

No	Comments	Revision/Changes
1	<b>Results and Discussion:</b> Please revise Table 1 according to the journal format	The author has been changed the table base on journal format. Refer to page 5 in revised manuscript. We are very grateful to the reviewer for the comments that helped in improving the quality of manuscript.
2	<b>References:</b> Please add references from IJTECH paper	We have been added new references in revised manuscript

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## [IJTech-CE-2924] Result of Line-editing of the Paper (ISiChem)

1 message

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IJTech <ijtech@eng.ui.ac.id>

Mon, Apr 8, 2019 at 12:50 AM

To: ifnata@ulm.ac.id

Cc: yanmarifah@gmail.com, hesti.wijayanti@ulm.ac.id, agusmirwan@ulm.ac.id, cirawan@ulm.ac.id, mdputra@ulm.ac.id, kawakita@cc.saga-u.ac.jp

Dear Prof. Iryanti Nata,

We have conducted line editing to your paper as part of the publication process in IJTech. Enclosed, please find the comments from the line editor indicated by the character in color besides black.

We would like to ask you to complete the following:

1. Please make necessary revise the paper accordingly to the line editor comments.
2. Please complete detail information for the name of the author(s), and affiliation of each author(s). Please refer to Guideline for Author to write the affiliation section

After the revision complete, please send it back to [ijtech@eng.ui.ac.id](mailto:ijtech@eng.ui.ac.id) or by reply to this email, no later than **April 10, 2019**

We will proceed to the next step (Layouting, Final proof & Copyright) of the revised paper before printing.

We are looking forward to receiving your revised paper soon.

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With kind regards,

Nyoman Suwartha  
Managing Editor  
International Journal of Technology (IJTech)  
ISSN : 2086-9614  
<http://www.ijtech.eng.ui.ac.id>

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### 2 attachments



**R1-CE-2924-20190328230729\_tracked changes version.docx**  
2330K



**R1-CE-2924-20190328230729\_clean version.docx**  
2643K