



SDI Review Form 1.6

Journal Name:	Advances in Research
Manuscript Number:	Ms_AIR_20716
Title of the Manuscript:	Bi-ZnO heterogeneous catalystfor transesterification of crude jatropha oil to fatty acid methyl ester
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>Line 6 : Delete the entire sentence and replace with "The catalyst was prepared by co-precipitation technique, calcined and characterized with XRD, TEM and the surface area, pore volume and pore size distribution of the developed catalyst were measured using BET method to give insights into its performance."</p> <p>Line 13: Separate these two words "jatropha oil"</p> <p>Line 59 : Separate these two words " to the"</p> <p>The introduction should be enriched by citing current references on the related work such as Year 2010 and above.</p> <p>Line 63 : Replace "Experimental " with " Material and Methods"</p> <p>Line 66 : Insert "was" between value and 14.47mg KOH/g and put comma after water content.</p> <p>Line 69 : State the percentage purity of the chemicals used.</p> <p>Line 75 : Separate "to from 0.0296M"</p> <p>Line 76 : State the speed of stirring and where it was aged.</p> <p>Line 77 : State size of the filter.</p> <p>Line 78 : Replace the sentence with " The above procedure was repeated by varying ratio of Bi:Zn from 1:49 to 4:49.</p> <p>Line 80 : Separate "550°C for 5h"</p> <p>Line 85 : Separate "samples were"</p> <p>Line 90 : Crude jatropha oil is generally known to have</p>	<p>ALL FORMATTING, CORRECTIONS AND MODIFICATIONS HAVE BEEN DONE. THEY ARE HIGHLIGHTED IN THE MANUSCRIPT.</p>



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	<p>high content of free fatty acid (FFA) greater than 1 % which must be esterified before trans esterification is carried out otherwise leads to saponification reaction lowering the yield of FAME. You did not give the percentage of FFA presence in the oil and how it was esterified. Similarly, presence of water in the oil in excess of 1% also adversely affects trans esterification reaction by hydrolysing the triglyceride. No mention of percentage of water in the oil was made and how it was removed.</p> <p>Line 98 : Separate “jatropa” and “oil”</p> <p>Line 94 : Mention the stirrer speed used.</p> <p>Line 97 : Check the unit 2000g. Centrifuge is measured either in rps or rpm.</p> <p>Line 99: Separate these words “layer was”</p> <p>Line 107 : ‘d’ should be changed to capital letter</p> <p>Line 108 : Remove italics</p> <p>Line 109 : “as”</p> <p>Line 110 : Separate these words “Zinc and has”</p> <p>Line 111 : Separate these words “and & average”</p> <p>Line 112 : Separate these words “samples and are”</p> <p>Line 116 : Remove “as”</p> <p>Line 117 : Double spacing should be provided in the Table.</p> <p>Line 132 : Put semi column after Fig 1:</p> <p>Line 133 : Separate “2:49 and calcined”</p> <p>Line 144 : Put semi column after Fig 2:</p> <p>Line 167 : Put semi column after Fig 3:</p> <p>Line 168 : Remove italics</p> <p>Line 174 : Separate “methanol and to”</p> <p>Line 178 : Put semi column after Fig. 4(A): and the figure title is different from the figure itself. FAME vs molar ratio of methanol to oil not FAME vs reaction time.</p> <p>Line 223-258 : Style of referencing did not conform with the standard guideline. For instance;</p>	
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	Line 223 : Zabeti M, Wan Daud WMA, Aroua MK. Fuel process Tech. 2009; (90): 770-777.	
<u>Minor</u> REVISION comments	The re-usability of the catalyst should be mentioned in the abstract as it was mentioned in line 202-203 .	It has been included
<u>Optional/General</u> comments	To get optimum reaction conditions (catalyst loading, reaction time and methanol to oil ratio), factorial design or response surface methodology are strongly recommended.	Agreed but will be used in future experiment and comparison will be made to the results