## Review Form 3

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| Journal Name: | **Journal of Materials Science Research and Reviews** |
| Manuscript Number: | **Ms_JMSRR_123911** |
| Title of the Manuscript: | **Design and Production of Automotive Piston using Hybrid AA6061/SiC/Carbonized Coconut Shell Nanocomposite** |
| Type of the Article | |

## Review Form 3

**PART 1: Review Comments**

| **Compulsory** REVISION comments | **Reviewer's comment** | **Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
|---|---|---|
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.** | 1) The average fuel consumption of the engine using the fabricated piston, was found to be 0.00701 litres/kWh, resulting in a 16.83% savings then the conventional piston; 2) Density of the designed piston material reduced by 8.5% of the density of the base alloy, resulting in efficient fuel saving; and 3) It was analyzed using static analysis module found that the maximum deflection of the piston for composite materials was very low compared to that of the existing material, the tensile strength for CMC and MMC pistons were respectively 216.798 MPa and 168.056 MPa, with deflections 0.01634 mm and 0.008149 mm for CMC and MMC pistons respectively. | |
| **Is the title of the article suitable?**<br>**(If not please suggest an alternative title)** | Yes, it is. May be better the title refined to Design, Casting, and Testing of Automotive Piston AA6061/SiC/Carbonized Coconut Shell Nanocomposite | |
| **Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.** | Yes, it is. At the end of the abstract, the ultimate tensile testing of the cast piston, 176-249 MPa, should be shown. | |
| **Are subsections and structure of the manuscript appropriate?** | Yes, they are. | |
| **Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.** | All the unit of $N/mm^2$ are need to be changed with MPa.<br>The Toyota brand should not be included in scientific articles, because scientific forums should be impartial to all parties.<br>The kilo Watt unit should be written kW, not Kw in Table 2.<br>The mold cavity temperature should not be at 28°C, but should be made higher, for example 80°C, to avoid explosion if there is water vapor.<br>Tensile test data which produces the ultimate tensile testing value of the cast piston of 176- 249 MPa, should be displayed, standard dimensions and test results. | |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**<br>**-** | Yes, they are. | |
| Minor REVISION comments<br><br>**Is the language/English quality of the article suitable for scholarly communications?** | Yes, it is. | |
| **Optional/General** comments | The article is quite good, should the sizes 42.3 nm and 50.01 nm for SiC and CCS respectively be stated how they are obtained or measured?<br>The method for citing references must be consistent in its application, (Khurmi and Gupta, 2007) it should simply be written with [2] according to what is in the Reference List. | |

## Review Form 3

**PART 2:**

| | **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)* |
|---|---|---|
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* | |

**Reviewer Details:**

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|---|---|
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