Journal Name: Physical Science International Journal
Manuscript Number: Ms_PSIJ_44368
Title of the Manuscript: Manufacturing and electrical characterization of MOS devices of ultrathin silicon dioxide layer
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:

### Compulsory REVISION comments

Fig. 1 shows a SiO2 thickness range of 3-6 microns, and the experimental structure analyzed has 3.04-5.92 nm. Clearly there is an error in this figure. Units in y-axis of Fig. 11 are not clearly stated. Most of the graphs are too small to be clearly read. Axes and inset labels of the majority of the graphs cannot be read properly. Also, markers are a little fuzzy so they cannot be distinguished easily. If graphs are made bigger, this could be the solution for this issue.

Language should be thoroughly checked since there is some comprehension difficulty when one tries to follow the concept that authors are trying to explain. Besides, there are some words that are maybe unintentionally added, as you can see in row 148, where the unit “nm” has nothing to do in what is trying to be explained, as the label of the samples. Or row 228 where there is a space that makes the sentence hard to understand.

It will be of great help if models used in figures 5 and 6 for the model for the approximation of tunnel and direct tunnel mechanisms of conductivity are expressed with the values of the parameters used in simulation. If this is addressed, it is necessary to give the references from which these values are obtained. The research widely describes detailed characterization that can be made to tunnel MOS devices with thin silicon dioxide using Al as gate. However, I cannot see a clear definition of the contribution of this research work. Although the fabrication procedure of these structures is described, the results obtained are specific for a particular technology and laboratory and this should be considered and mentioned in the manuscript, since conditions may be different in other laboratories. Despite of this, I do not find nothing else than results from I-V, C-V, G-V and XPS characterization. I should recognize that results are promising, but I was hoping that some recommendations and discussions were made of what else can be done to improve quality of silicon dioxide or if these results can be considered optimum for some kind of applications. Maybe in this sense, some key issues can be expressed that can be useful in specific applications which can suggest future work within this research field.

So, in general, this manuscript should be improved before it can be accepted for publication.

### Minor REVISION comments

Quality and clarity of graphs should be improved.

### Optional/General comments

In the actual state, this manuscript cannot be accepted since I do not see a conclusive contribution of this submission. Some comments should be addressed before it can be accepted.
PART 2:

<table>
<thead>
<tr>
<th>Reviewer’s comment</th>
<th>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)</th>
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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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<tr>
<th>Name</th>
<th>Mario Alfredo Reyes-Barranca</th>
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<td>Department, University &amp; Country</td>
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