**RESPONSE LETTER**

Dear *Editor*

Editor of Indonesian Journal of Biotechnology,

This is our response on the review of our manuscript entitled *"[* **Spectroscopic analysis of plant trace element incorporated silver nanoparticles synthesis from *Datura metel L.****]”*.

Please find our responses below each issue that the reviewers addressed in the Table below.

Together with this response letter, we send a marked-up copy of our manuscript with highlights changes made to the original version, an unmarked version of our revised paper, and a separate TIF file containing figures.

We are looking forward to hearing from you and your Journal again.

Thank you very much.

On behalf of the author,

*[Dr. K. Gurushankar]*

**Reviewer A**

|  |  |  |
| --- | --- | --- |
| No | Comments | Reply Action Taken |
| 1. | I don’t think this is inclusive enough, considering some non-spectroscopic techniques were also deployed for the characterization. Consider expanding. | Dear reviewer, Thank you for nice suggestion. Based on the application, materials title of the work was changed.  |
| 2. | Please do a thorough language editing on the manuscript to improve clarity. Pay attention to the sentence structure (including the subject-verb agreement), tenses, and the use of passive voice. | We thank to reviewer, the grammatical inaccuracy noted and carried out on entire manuscript. It improves the clarity of the manuscript.  |
| 3. | What does the word “their” refer to? | We thank to reviewer, the mentioned word is changed in the updated manuscript. |
| 4 | The transition is rough here. How do supplements relate to nano Ag?  | First of all, we say sorry to reviewer for our unknown things in the previous manuscript. It removed in the updated manuscript. |
| 5 | Does it mean the author(s) previously moved from a research group to another one? Or does it refer to a past research work in the group? | Dear reviewer, We thank to your comments, it helped to avoid the confusion. It was rewritten, we feel it is better than previous manuscript. |
| 6 | This explanation does not seem to support/relevant to the argument made at the end about utilizing Datura metel l. for Ag NPs synthesis | Dear reviewer, thank you for valid comments, after answering this comment we feel about manuscript is well molted. Hence, now it support to the argument of Ag NPs using Datura metel L. |
| 7 | Because Datura metel was previously used to synthesize Cu2O (?) This can be a supporting information that shows D. metel could be useful for Ag NPs synthesis. However, there is still a logical gap on why this synthesis route is needed in the first place. What is lacking from currently available synthesis methods? | Dear reviewer, thank you for your valuable comments. Logical gap of synthesis route and available synthesis methods are discussed in the updated manuscript.  |
| 8 | Having the image of the product solution added would be informative here. Was there any specific size of NPs that was set as a target? Why? What was the rationale for selecting this synthesis procedure? | Dear reviewer, thank you for your nice suggestions. The product solution given in the updated manuscript.  |
| 9 | Define this | Dear reviewer, K is defined in updated manuscript. |
| 10 | Please elaborate more | Dear reviewer, Thank you for suggestion. The Ag NPs discussion are discussed elaborately in updated manuscript.  |
| 11 | The SEM images appear out of focus. It is difficult to estimate the size using the available images. Do the authors have better images to show? Or did authors do another experiment to measure particle size distribution (using DLS for example)? | Dear reviewer, thank you for your comments. SEM images are updated and size of the particles estimated in revised manuscript.  |
| 12 | I’ve never heard of O and C categorized as trace elements given their abundances | First of all, we thank to reviewer. We agree with you. explanation about O and C given in updated manuscript. |
| 13 | Based on data on Figure 5, the atomic percentage of Ag is very low (<1%) compared to other elements. Can the authors comment on this? | Dear reviewer, we apologies to you. claim this percentage as major nanoparticles. Upated EDAX spectrum given in the revised manuscript. |
| 14 | How was the AgNPs fixated on the Ni foil surface? How did the author ensure that the measured signal only comes from Ag NPs and not from Ni? | Dear reviewer, your comment was very nice. For electrode fabrication, we use pvdf in appropriate amount in Dr. Blade technique, which act as binder. Hence, Ag NPs fixed on the Ni foil. Your thinking was admirable regarding measured signal. During the analysis of electrochemical reaction occurred on the surface of the electrode even if come we can analyse bare Ni electrode after that we can ensure that signals belongs to NPs.  |
| 15 | Working | Dear reviewer, thank your good suggestion. Active changed into working in revised manuscript.  |
| 16 | Ref? | Dear reviewer, thank you for your suggestion. Reference added in revised manuscript. |
| 17 | There are 4 components (Ag NPs, activated C, PVDF, and NMP), but only 3 in the ratio | Dear reviewer, thank you for your good comment. It helped to avaid confusion in manuscript. It was claeary rewritten in updated manuscript. |
| 18 | This is vague. Make sure to be specific on what is moving/increasing. | Dear reviewer, we thank to you, your comment help to omitting boring to reader. The ions in the electrolyte moving during the changes of scan rates. Which clarly given in the updated manuscript.  |
| 19 | Not scan rate? | Dear reviewer, we agree with you and apolozies our mistakes i.e scan rate, it changed in revised manuscript.  |
| 20 | What ions? Changes in peak separation and the shape of the peak (Figure 6A) indicate a difussion-controlled process, which should not be a case if Ag NPs were well fixated on Ni substrate. Could these results suggest that AgNPs desorb from the Ni surface? | Dear reviewer, we agree with you and thank you for valuble comments. As per the suggestion diffusion occurred at surface of the electrode, which is mentioned in revised manuscript.  |
| 22 | I don’t think these are a correct choice of words | Dear reviewer, thank you for your nice suggestion. Words are changed with clear understanding in revised manuscript.  |
| 23 | I am not sure which peaks were being referred to here. The author could put the peak potentials in brackets to make it clearer | We thank to reviewer, your comment helpful to improvement of manuscript. As per reviewer suggestion, peak potentials are mentioned in brackets in revised manuscript. |
| 24 | Ag is not an ion, and it’s already a reduced form | Dear reviewer, we agreed with your suggestions. we thank to you to unnoticed error mentioned given by you. It is changed in revised manuscript.  |
| 25 | I don’t think this is true. Shifting to a higher potential (more positive for oxidation/more negative for reduction) indicates more sluggish electron transfer. However, this is normal for a diffusion-controlled process when the scan rate is increased. | Dear reviewer, we thank to your nice suggestion, the lines mentioned by reviewer, deleted in revised manuscript. |
| 26 | Please recheck the formula, should be integral I(V)dV | We thank to reviewer for mentioning the unnoticed mistakes in the manuscript. Intergral symbol added in revised manuscript.  |
| 27 | How does this compared to other reported Ag NPs-based electrodes? | Dear reviewer, We thanks to your comments. Other reports for Ag NPs based electrode coated in revised manuscript. |
| 28 | I don’t think internal resistance would be affected by diffusion/scan rate | Dear reviewer, We apolozies to our mistakes. In upated manuscript clear informartions are discussed. |
| 29 | Citation of reference(s) is needed | Dear reviewer, thank you for suggestions. The citation is added in revised manuscript. |
| 30 | The discussion should focus more on the results, not the theory behind EIS measurement | Dear reviewer, thank you for your nice suggestion. In the updated manuscript, discussions focused on results given in the revised manuscript. |
| 31 | Needs to be supported with arguments comparing the performance of the proposed electrode with those of currently available batteries | Dear reviewer, thank you for your nice suggestions. The proposed electrode arguments are given in the conclusion part of the manuscript. We also feel about our proposed electrode on laboratoty benchmark only, we assure you, this valuble suggestion will be taken in our future works.  |
| 32 | Synthesized | Dear reviewer, thank you for comments. Synthesized changed in updated manuscript. |
| 33 | Seems to be switched | Dear reviewer, we agree with you. changed in upated manuscript. |

**Reviewer B**

|  |  |  |
| --- | --- | --- |
| No | Comments | Reply Action Taken |
| 1. | Italic | Dear reviewer, thank you for your nice suggestions. |
| 2. | What kind of compound extracted from Datiura metal used for Cu2O nanoparticle preparation? | Dear reviewer, thank you for your good comment. Compounds names are mentioned in the revised manuscript. |
| 3. | Material and methods is too short | Dear reviewer, thank you for nice suggestion. Material and methods are briefly discussed in revised manuscript. |
| 4. | Avoid the formula and method in this section. Provide a more comprehensive discussion. | Dear reviewer, thank you for your nice suggestion. As per the suggestion, formula and methods are shifted in materials and method section of the revised manuscript.  |
| 5. | Is there any data? Fig. 1 shows only the UV-Vis spectrum not SPR. | Dear reviewer, thank you for nice comment, UV-Vis part of the manuscript well molted. Discussions are given in the updated manuscript.  |
| 6. | Explain more this value. | Dear reviewer, thank you for your nice sugestions. The value of band gap explained in detail manner given in updated manuscript. |
| 7. | It would be more clear if the authors provide crystal model in figure. | Dear reviewer, thank you for your nice suggestions. Crystal model is given in the figure 2. |
| 8. | (Figure 2) | Dear reviewer, (Figure 2) mentioned in the appropriate place in updated manuscript. |
| 9. | How do the authors relate between this FTIR data and the formation of nano particle complex form? | Dear reviewer, thank you for your comments. The FTIR data and formation of nanoparticles identified with orginal form source material. i.e Datura metel L. here. In this FTIR data noted in our previous article. Hence, in this work identify the Ag NPs formation with extra peak at metal region.  |
| 10. | Standart measurement? | Dear reviewer, Yes. For your reference attached article link here. <https://doi.org/10.1016/j.apsusc.2020.145275> |
| 11. | What is the result of this part? This part should be include in Material and Methods section. | Dear reviewer, thank you for your comment. The result of electrochemical analysis part given the results and discussion. |
| 12. | Is there any reference? | Dear reviewer, Yes. Reference added in updated manuscript. |
| 13. | What is the results?. It should be include in materials and methods section. | The result of electrode preparation added and included in materials and method section in the updated manuscript. |