Response to Reviewer 2 Comments

Point 1: It is important to exhibit the novelty of your study in the abstract section.

Response 1: Thank you for your suggestion. We have revised the abstraction section to exhibit our novelty.

Point 2: In the introduction section, more literature papers have to be included to explain the subject better. Some giving citations need to be check such as [9-11], [26-29] as they may not provide the required information in a sentence. Now the list of references needs to be supplemented with at least several more references published over the past 5 years. The introduction section has been written beautifully but need to include recent published papers on ball milling studying Y_2O_3 and Ag or other soft matrix phases
Synthesis and characterization of ecofriendly silver nanoparticles combined with yttrium oxide (Ag-Y_2O_3) nanocomposite with assorted adsorption capacity for Cu(II) and Cr(VI) removal:
A mechanism perspective
Effect of ball milling time on the structural characteristics and mechanical properties of nanosized Y_2O_3 particle reinforced aluminum matrix composites produced by powder metallurgy route
Effect of milling time on the microstructure, physical and mechanical properties of Al-Al_2O_3 nanocomposite synthesized by ball milling and powder metallurgy

Response 2: Thanks for this comment. We have checked the wrong citations and revised the relative contents. We also have supplemented more references published over the past 5 years. And the required references have been inserted in our manuscript, please see on page 2 from line 63 to line 64.

Point 3: At the last paragraph of the introduction, please clearly show the general outline of the paper and show the importance of the study along with the main aim.

Response 3: Thank you for your suggestion. We have rewritten the last paragraph of the introduction. Please see page 2 line 67.

Point 4: The authors should give the actual photos belong to experimental infrastructure (preferable). Also, a graphical abstract represented in Figure 1 is very helpful for the presentation of the study. However, this figure should be moved to material and method section to better understanding of experimental infrastructure since it is not result it is an experimental setup. Furthermore, there is an interesting approach and design exists, I just propose to emphasis the practical significance of the presented methodology in several points of article.

Response 4: We are grateful for the reviewer's insight on this issue. We have made the following improvements: First of all, we regret that we can't provide actual experimental pictures before the deadline due to the ban of COVID-19; Secondly, we moved Figure 1 to the materials and methods section and revised the description; Thirdly, we mentioned the practical significance of the presented methodology, see page 2, line 94 and page 4 line 147.

Point 5: Please fix the typographical and eventual language problems in paper. Such as page 3 line 113 Y2O3 should be corrected as Y_2O_3, similarly page 4 line 128.

Response 5: Thanks for this observation. We have revised the language problems in our paper.

Point 6: What is the way to select the Vickers hardness? The author should write clearly in the experimental method. What is the dimension of the samples used in each test? Also, how many samples have been tested for each?

Response 6: Thanks for the comment. Related test conditions have been added, please see on page 3 from line 109 to line 114.

Point 7: Please give some explanatory information about production and characterization steps. For example, what is the ball milling parameters (RPM, atmosphere, ball-to-powder ratio, milling medium materials, process control agent and its amount (is used or unused, if used, please specify) and why you selected only 4 h? Explain clearly what kind of scanning procedure you followed such as dwell time, 2theta increment in per second, etc.

Response 7: Thank you for your suggestion. The explanatory information about the production and characterization have been given, please see on page 2 line 94 and page 3, line 107.

Point 8: Improve the results and discussion and conclusion parts. The results and discussion section should be widened with more focusing point of the findings. And these sentences should be supported with the literature studies. Results and discussion and conclusion parts are inadequate according to citation and analyze in detail. There should be the importance of the study in detail, comparison results with other approaches in literature, the success of the prediction and computational results. To put the current work in a broader context, some high-quality literatures should be cited.

Response 8: Thanks for your suggestion. We have revised the results and discussion section by citing and comparing the previous works. The related contents have been marked in our manuscript. Such as page 10 line 282.

Point 9: There is a reference problem. First, your reference list contains none or a few papers from Materials journal. Second, the reference list needs to be revised and 50% of the citations must be published in the last 5 years. If your work is convenient for this journal's context then there are many references from Materials journal.

Response 9: Thank you for your suggestion. We have revised the reference lists, please see from page 10 line 309.

Point 10: In conclusion section, it is necessary to more clearly show the novelty of the article and the advantages of the proposed method. Add qualitative and quantitative results of your work. What is the difference from previous work in this area? Show practical relevance.

Response 10: Thanks for this comment. We have revised the conclusion section, please see page 10 line 287.