Review of: "Synthesis of 1, 2-Disubstituted Benzimidazoles at Ambient Temperature Catalyzed by 1-Methylimidazolium Tetraflouroborate ([Hmim] BF_4) and Investigating Their Anti-ovarian Cancer Properties Through Molecular Docking Studies and Calculations"

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Potential competing interests: No potential competing interests to declare.

Comments

In the entitled manuscript, Abdulhamid Dehghani and his coauthors inform about the synthesis and molecular docking of 1, 2-disubstituted benzimidazoles and explore its role in ovarian cancer activity, as well as designing and evaluating the performance of 1-methylimidazolium tetrafluoroborate ([Hmim] BF4) as an effective catalyst. In this manner, these valuable findings need precise amendment and revision.

The following comments must be considered before it can be accepted:

1- There are many mistakes, and strong revision not only for the English language is necessary, but also the structure of phrases and sentences is urgently needed.

2- Manuscript title:

- The catalyst name is incorrect (1-hexyl-3-methyl, not 1-methyl), please check.

- Also, no need for the catalyst name abbreviation in the title.

- The title is so long; please check shortening it with concentrated words.

3- Abstract:

- More revision and concise statements are needed, especially to explore your findings and conclusions.

4- In the introduction, references are collected like [a][b][c]…, I suggest it is better to distribute them and make it easier for the reader and not exhaust him. And please check the correct name of the catalyst.

5- Experimental section:

In general procedures, you stated “The mode of interaction was investigated by docking.” Please give sufficient descriptions.

In the general procedure for the preparation of benzimidazole…, you say stirred at room temperature and after that was cooled to r.t. ??. Any references??

6- Results and Discussion:

In catalytic performance, you say “these results the best reaction condition,” which entry? Please mention.

You suggested your aldehydes to be 2-aryl aldehydes, and it is not applicable for all aldehydes used. You can replace it by benzaldehyde derivatives or aldehyde arrays.

Aldehydes were investigated in terms of electron and space… and they react without significant differences. Please give your rationale and give reasons for your findings. More discussion and explorations are needed.

You didn’t cite or refer to elemental and spectral analysis results and their role in elucidating your compounds as chemical evidence, where you mentioned in the experimental section.

7- In molecular docking study:

Please add the compound numbers beside their names.

2nd line: you generalized your statement obeying Lee Pinsky`s, Is this the sole factor or the main controller???

The 2nd rule was not obeyed? Is it OK, please give your arguments.

I suggest using the words rule, principle, or condition instead of using “law.”

8- Comparison of the prepared catalyst……..:

This section is not in the proper position; I suggest shifting it before the docking study.