Article Title: Comparative catalytic performance study of HPW/MAP and HPW/MAS catalysts in simultaneous esterification and transesterification of unrefined green seed canola oil

Overall

- 1. The novelty and the advantages of this manuscript did not express cleared. Great efforts must be made to explain the novelty of your study, especially in introduction.
- 2. The English writing is good, but there are some errors need to correct.
- 3. In the part of "Results and Discussion", more correlation of catalyst structure and its performance could be established.
- 4. In the methodology has not been provided information regarding the lower p/p¬0 range from which the measurement stars. The pore size distribution provides in Figure 2 starts from approx. 2.5 nm, although the pores relevant for the accessible SSA for the supercapacitors starts from c.a. 1 nm, so the assessment does not include them due to application of the too-high p/p0 initial point. Selection of the too high value of the initial p/p0 point leads to an artificial shift of the pore size distribution, hence not reliable as well as information obtained from it. Was that considered during the selection of the pressure range for the N₂ adsorption assessment? Also, was the CO₂ adsorption considered as the micropore assessment method?
- 5. To determine the BET surface area the amount of the material used for the experiment is affecting the surface area calculations. Can the authors disclose the exact amount of each material for BET analysis?
- 6. BET results: why the surface area of HPW/MAP is quite decreased compared to MAP. but the average pore size is increased? The author needs to play attention in this result.
- 7. Considering on the Figure 1b, the full isotherm of HPW/MAP is weird compared to others impregnated samples. It looks like this material has collapsed on its structure rather than pore blocking by HPW.
- 8. The pore size distribution in Figure 2b and 2 c is weird, this is due to the point for full isotherm is not appropriated. The authors need to check the point.
- 9. What kind of isotherms that the author uses for calculation in this manuscript?
- 10. The condition and amount of material used for the experiment are affecting the total acidity. Can the authors disclose the exact amount of each material for this analysis?

- 11. The baseline is also important. How does the authors calculate the total acidity? The authors could also provide the information for calculation because the total amount is very unusual.
- 12. The type of acid needs to analyze in deep detail and could provide in this manuscript. The acidity of bare HPW could also provide for camparison.
- 13. XRD results: it is interesting provide the low angle XRD data for confirm the characteristic of mesoporous types.
- 14. What is the active species on the surface of each catalyst? The author must identify and provide (may be used XPS for analysis) because this work is focused to study the enhancement of catalysts after by HPW.
- 15. To improve the quality of the manuscript, the comparison in HPW immobilization on the MAS and MAP need to include
- 16. It is not clear in Table 2 and 3, why some sample the author provides some \pm error but not all for those samples?
- 17. The comparison of the results obtained in this paper should be compared with similar work already published. What is the conclusion and originality of this work compared with already published one?