

Review Form2

Book Name:	Recent Developments in Chemistry and Biochemistry Research
Manuscript Number:	Ms_BPR_2390
Title of the Manuscript:	Development of new sol-gel materials with citrus waste based on the principles of the circular economy
Type of the Article	Book Chapter

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The manuscript contributes to the advancement of materials science research by exploring the synthesis of new materials using bio-waste in silica matrices, offering insights into the potential of bio-waste as a sustainable alternative in acid hydrolysis processes. The study's findings on the influence of orange and lemon peels on the acidity and morphology of siliceous solids can pave the way for innovative approaches in heterogeneous catalysis, showcasing the potential for bio-waste utilization in material synthesis. The article could enhance the discussion of the results by addressing how the exploitation of citrus bio-waste contributes to closing the loop, particularly regarding the impact of this type of waste use on reducing the consumption of natural resources in silica matrices. This would provide a more in-depth contribution to the theme of the circular economy, aligning more closely with the research question that guided the study.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title is appropriate as it is clear, effectively synthesizes the main idea of the manuscript, and presents the scope. It includes keywords such as sol-gel materials, circular economy, and waste, which aid in indexing the work in major search databases.	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract of the article is understandable. It clearly presents the research question guiding the study and describes the research objective and the methodology used to achieve it in a cohesive manner. The results are elucidated, highlighting the use of bio-waste in the hydrolysis process, but emphasizing the implication that it is not possible to use them completely for replacement. The conclusion emphasizes the possibility of using this type of bio-waste as an alternative for the excessive production of the same.	
Are subsections and structure of the manuscript appropriate?	A subsection in the results that explores the impacts of using orange and lemon peel waste in the supply chain to promote closed cycles, highlighting the key aspects of the circular economy, would be valuable for enriching the discussion. This would add depth to the results, which currently focus extensively on the characterization of the evaluated samples.	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript is scientifically robust due to its innovative approach of using bio-waste for the synthesis of new silica-based materials, supported by a thorough analysis and characterization using methods such as TEOS, SEM, potentiometric titration, XRD, and FT-IR characterization. It presents a significant factor for the industry in providing a viable solution for the use of orange and lemon waste, thereby strengthening the concept of the circular economy. The study contributes to the potential for future research to develop this type of innovation on a larger scale, helping to address the issue of excessive waste production.	

Review Form2

Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are sufficient for the production of the study and are relatively recent in relation to the concepts discussed.	
Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	The quality of the English used in the article is appropriate for communication with the academic audience, enabling correct understanding of the sentences used in the textual composition.	
Optional/General comments	Figure 1, which illustrates the Circular Economy diagram, should be presented in higher quality.	

PART 2:

	Reviewer's comment	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)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	

Reviewer Details:

Name:	Paulo Vitor Dos Santos Goncalves
Department, University & Country	Federal University of Santa Catarina, Brazil