Review Form2

Book Name:	Research Advances in Environment, Geography and Earth Science
Manuscript Number:	**Ms_BPR_2430**
Title of the Manuscript:	**Composite Material Based on Clay and TiO2 forWastewater Treatment**
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 minimumof 3-4 sentences may be required for this part.	The manuscript presents a valuable contribution to the scientific community by exploring the potential of a low-cost, locally sourced material (clay-TiO2 composite) for wastewater treatment. This approach addresses a critical need in regions with limited access to advanced treatment technologies. The study's focus on both physicochemical and bacteriological aspects of wastewater treatment provides a comprehensive assessment of the composite's effectiveness. The positive results suggest that this material could offer a sustainable and accessible solution for improving water quality in developing regions. I appreciate this manuscript for its practical implications and potential for positive societal impact. The utilization of readily available materials and simple preparation methods makes this approach particularly attractive for implementation in resource-constrained settings. The study's focus on a real-world wastewater source (Marais Masay lake) further strengthens its relevance and applicability. However, the manuscript could be enhanced by addressing the limitations of the study and discussing the potential environmental impact of the composite material.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title "**Composite Material Based on Clay and TiO2 for Wastewater Treatment"** is generally suitable as it accurately reflects the core theme of the research, which is the development and application of a composite material composed of clay and TiO2 for the purpose of wastewater treatment. However, to enhance its clarity and specificity, you could consider a slightly more detailed title that highlights the key findings or the specific type of wastewater treated for example "**Clay-TiO2 Composite as a Sustainable Solution for Wastewater Treatment: A Case Study of Marais Masay Lake**"	

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 provides a good overview of the research, but it could be enhanced to offer a more comprehensive and engaging summary **Areas for Improvement:** • **Lack of specific quantitative data**: The abstract could be strengthened by including specific quantitative data to highlight the effectiveness of the treatment. For example, mentioning the percentage reduction in key pollutants or the final values of some critical parameters after treatment would make the results more impactful. • **Limited information on the study site**: The abstract mentions the Marais Masay lake but could briefly describe its relevance or the type of pollution it faces. • **No mention of the significance of the research**: The abstract could benefit from a sentence highlighting the unique aspects or potential impact of this research. **Suggested Additions:** • Include specific quantitative data on pollutant removal or improvement in water quality parameters. • Briefly describe the Marais Masay lake and its pollution challenges. • Add a sentence highlighting the significance of the research (e.g., the use of local materials, potential for low-cost treatment, etc.). **Suggested Deletions:** The sentence "The model reduced the amount of physicochemical pollution of wastewater at the end of the treatment" could be removed as it is somewhat redundant and doesn't add much value.	
Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript are generally appropriate for a scientific paper, but there is room for improvement in terms of clarity and organization. Areas that are good: • The manuscript follows a standard scientific format: Abstract, Introduction, Experimental Method, Results and Discussions, Conclusions, and References. • The Results and Discussions section is further divided into Physico-chemical analysis and Microbiological analysis, which helps to organize the presentation of the findings. However areas that need improvement are: • Some subsections could be more descriptive: The "Composite material summary" subsection could be renamed to something like "Preparation of the Clay-TiO2 Composite" to better reflect its content. • The "Methods of determination of pollution parameters" section is misplaced: This section seems to belong within the Experimental Method section, perhaps as a subsection titled "Analytical Methods." • The Results and Discussions section could be further organized: The current structure mixes the presentation of results with the discussion of their implications. Consider separating these into distinct subsections (e.g., "Physico-chemical Results," "Physico-chemical Discussion," "Microbiological Results," "Microbiological Discussion") for improved clarity. • The Conclusions section is brief: The conclusions could be expanded to provide a more comprehensive summary of the key findings and their implications.	
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 minimumof 3-4 sentences may be required for this part.	The manuscript demonstrates scientific correctness in several ways. It presents a clear research objective, employs established experimental methods for composite preparation and wastewater treatment, and provides both physicochemical and microbiological analyses to assess treatment efficacy. The data is presented transparently, and the discussion acknowledges potential limitations of the study. The manuscript also adheres to standard scientific formatting and includes citations to relevant literature, further supporting its scientific robustness and technical soundness.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The references in the manuscript are not entirely sufficient or recent. While they include some relevant sources, there are areas where the literature could be expanded and updated to strengthen the scientific foundation of the work. **Areas for Improvement:** • Limited recent references: The majority of the references are from before 2010, with the most recent being from 2020. The field of wastewater treatment and composite materials has seen	

	significant advancements in recent years, and including more up-to-date references would enhance the relevance and timeliness of the research. • Lack of depth in some areas: The references could be expanded in certain areas to provide a more comprehensive overview of the current state of knowledge. For example, additional references could be included on: ▪ The specific mechanisms of pollutant removal by clay-TiO2 composites. ▪ The long-term performance and stability of such composites in wastewater treatment applications. ▪ The potential environmental impacts of using these materials. ▪ Comparisons with other wastewater treatment technologies. Suggested Additional References: • Recent review articles or book chapters on wastewater treatment technologies, particularly those focusing on adsorption and photocatalysis. • Studies investigating the use of clay-TiO2 composites or similar materials for wastewater treatment. • Research on the environmental fate and potential toxicity of nanoparticles used in wastewater treatment. • Life cycle assessment or techno-economic analysis studies comparing different wastewater treatment technologies. • By incorporating more recent and comprehensive references, the authors can strengthen the scientific context of their work and demonstrate its contribution to the broader field of wastewater treatment. • You can check out this work “doi: https://doi.org/10.54905/disssi/v20i54/e35ije1670” where clay was defned and some of its properties were given.	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language and English quality of the article could be improved for better clarity and scholarly communication. There are several instances of grammatical errors, awkward phrasing, and inconsistencies in terminology. These issues can sometimes hinder the reader's understanding of the research and its implications. **Grammar and Syntax**: The sentence structure is mostly correct, but some sentences could be rephrased for better flow. For example, the phrase "in terms of both physicochemical and bacteriological quality" could be rephrased for clarity, such as "aiming to improve both the physicochemical and bacteriological quality of urban wastewater." • Consistency: Ensure that terms are used consistently throughout the manuscript. For example, if "Escherichia coli" is introduced as a full name, it can be abbreviated to "E. coli" thereafter, provided it is consistent throughout the text. • Technical Language: The use of technical terms like "physicochemical" and "bacteriological" is appropriate, but some phrases can be simplified or explained briefly for broader accessibility, such as specifying the types of analyses used or the relevance of each measured parameter. • Punctuation and Style: Minor punctuation issues, like comma placement, should be checked to ensure clarity. The use of commas to separate items in a list (e.g., pH, conductivity, turbidity) helps readability. Example of Improved Sentences: Original: "The physicochemical parameters measured before and after treatment are: pH, conductivity, turbidity, nitrates, phosphates, and chlorides." Revised: "Physicochemical parameters such as pH, conductivity, turbidity, nitrates, phosphates, and chlorides were measured before and after the treatment." The authors could benefit from a thorough language editing and proofreading process to ensure the manuscript meets the standards of scholarly communication.	

Optional/Generalcomments	• Full meaning should first be written before abbreviation. An example is in the abstract section.
	• The introduction needs to be really improved, such as:
	  ▪ Motivation and aim should also be clearly stated.
	  ▪ Relevant literatures needs to added and the research gap identified should be added.
	  ▪ Recent works really needs to be added.	

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:

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