

### Review Form 3

Journal Name:	<a href="#">Journal of Materials Science Research and Reviews</a>
Manuscript Number:	Ms_JMSRR_125569
Title of the Manuscript:	Carbon from Recycled Materials for Solar Thermal Evaporation and Oil Absorption
Type of the Article	

#### **General guidelines for the Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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#### **Important Policies Regarding Peer Review**

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### PART 1: Review Comments

<b>Compulsory</b> REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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.	This manuscript is important for the scientific community as it addresses two critical environmental issues: sustainable water purification and oil spill remediation. By using carbon derived from recycled materials for solar thermal evaporation and oil absorption, it offers a dual-function, eco-friendly solution that reduces waste and promotes renewable energy use. The integration of recycled materials into advanced environmental applications represents a step forward in the circular economy and resource conservation. I like this manuscript because it highlights the potential of sustainable materials in tackling global challenges, which aligns with the ongoing drive toward greener, more efficient technologies.	
Is the title of the article suitable? (If not please suggest an alternative title)	YES	
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.	<p>The abstract provides a clear overview of the study, outlining the carbonization process, the materials used, surface modification techniques, and the results for both solar thermal evaporation and oil absorption. However, a few improvements could enhance its comprehensiveness:</p> <ol style="list-style-type: none"> <li><b>Clarify the significance of the acid treatments:</b> While it mentions that acid-treated carbon was less effective for solar thermal evaporation, it would be helpful to explain why these treatments were considered and how they affected the carbon's properties.</li> <li><b>Mention the control/comparison used:</b> The abstract compares the performance of recycled carbon with commercial activated carbon, but it could be beneficial to highlight why commercial activated carbon is used as a reference material.</li> <li><b>Rephrase for conciseness:</b> Some phrases could be more concise for clarity. For example, instead of "untreated recycled carbon performed better in solar thermal evaporation due to a larger solar interface area," it could be simplified to "untreated carbon showed higher efficiency in solar thermal evaporation due to its larger solar interface."</li> <li><b>Results of oil absorption need a clearer link to the findings:</b> The oil absorption data compares lemon juice-treated carbon with other treatments and commercial activated carbon, but it could be more direct in explaining the relevance of this result in practical applications.</li> </ol> <p>By including these points, the abstract would be more informative and streamlined.</p>	
Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript appear appropriate based on the information provided. It includes key experimental aspects such as the carbonization process, surface treatment methods, and the analysis of both solar thermal evaporation and oil absorption.	
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.	This manuscript appears scientifically robust and technically sound because it employs well-established methods such as carbonization and surface modification to evaluate the environmental applications of recycled materials. The use of multiple carbon sources (cotton fabric, cardboard, and wood) ensures a broad comparison, and the inclusion of untreated and acid-treated samples allows for a detailed assessment of the impact of surface modification. The experimental setup, with quantitative thermal analysis and performance comparisons to commercial activated carbon, strengthens the reliability of the results. Furthermore, the manuscript is grounded in relevant environmental applications, making it highly applicable and meaningful in addressing water purification and oil spill remediation challenges.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	To assess whether the references are sufficient and recent, it would be essential to ensure they cover the latest advancements in the fields of solar thermal evaporation, oil absorption, and the use of recycled carbon materials. Ideally, references should include recent studies (within the last 5–7 years) to reflect	

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:	<p>the current state of research, including key developments in sustainable materials, carbonization techniques, and environmental applications.</p> <p>If the manuscript does not already include these, I suggest adding references related to:</p> <ol style="list-style-type: none"> <li><b>**Advancements in solar thermal desalination technologies**</b>—especially studies that focus on the use of carbon-based or bio-based materials.</li> <li><b>**Recent research on oil absorption technologies**</b>—emphasizing porous materials and their application in environmental remediation.</li> <li><b>**Sustainable material development**</b>—particularly research on recycling waste materials into functional, high-performance products for environmental use.</li> </ol> <p>By ensuring that the references are up-to-date and relevant, the manuscript will be well-grounded in current scientific knowledge.</p>	
<p>Minor REVISION comments</p> <p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>	<p>Based on the information provided, the language quality of the article appears generally clear and understandable, but there might be areas that could benefit from slight refinement to meet the standards of scholarly communication. For example, certain sentences could be made more concise, and technical terms should be clearly defined to ensure accuracy and clarity. Additionally, the flow of ideas could be enhanced by improving the transitions between sections to make the manuscript easier to read.</p> <p>Overall, the language seems suitable for scholarly communications, but a careful review for grammar, punctuation, and style consistency would ensure that the manuscript is polished and professional.</p>	
<p>Optional/General comments</p>	<p>Proceed</p>	

**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)
<p><b>Are there ethical issues in this manuscript?</b></p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

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