

Review Form 3

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	Ms_IRJPAC_123628
Title of the Manuscript:	Naturals Dyes From Detarium Microcarpum Guill. And Perr. as photosensitizers In Dye-Sensitized Solar Cells
Type of the Article	Original Research Article

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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)
<p>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.</p>	<p>This manuscript is important for the scientific community as it explores the potential of natural dyes from <i>Detarium microcarpum</i> as eco-friendly and sustainable alternatives to synthetic dyes in dye-sensitized solar cells (DSSCs). The use of renewable materials for energy production is crucial in addressing environmental challenges, and this study contributes valuable insights into the viability of natural dyes in solar energy applications. I appreciate the manuscript for its innovative approach in investigating a lesser-known plant species, but it could benefit from deeper characterization and comparative analysis to strengthen its scientific impact. Overall, the research presents promising groundwork for future advancements in green energy technology.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title is clear and informative, effectively conveying the primary subject of the research.</p>	
<p>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>	<ul style="list-style-type: none"> The abstract provides a concise summary of the research objectives, methodology, and key findings. However, it would be helpful to include quantitative performance metrics for the DSSC efficiencies and comparative analysis with other sensitizers to give the reader a clearer understanding of the results. Suggestion: Consider expanding the abstract to provide more specific details on the findings, particularly in terms of efficiency, stability, or any challenges encountered with the natural dye. 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure of the manuscript are generally appropriate for a scientific study. The manuscript follows a standard research paper format, including sections like the introduction, methodology, results, and conclusion, which helps in presenting the information in a logical and cohesive manner. However, a few improvements can be suggested:</p> <ul style="list-style-type: none"> The introduction could benefit from a clearer breakdown, perhaps into subsections such as "background," "motivation," and "research objectives," to enhance readability. In the methodology section, adding more subsections, such as "dye extraction," "DSSC fabrication," and "performance measurement," would make the steps easier to follow. The results and discussion section could be separated into two distinct parts to allow for a more structured presentation of the findings, followed by a thorough analysis. <p>Overall, while the structure is generally sound, minor adjustments in subsections could improve clarity and flow.</p>	
<p>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.</p>	<p>The manuscript appears to be scientifically robust and technically sound as it employs well-established methodologies for extracting natural dyes and fabricating dye-sensitized solar cells (DSSCs). The authors provide clear procedural details, which ensure replicability and transparency. The performance evaluation of the solar cells is conducted using standard metrics, such as current-voltage (I-V) curves, allowing for proper assessment of the dye's efficiency as a photosensitizer. However, for further scientific rigor, additional characterization of the dye (e.g., molecular structure, functional groups) and more in-depth analysis of comparative data with other dyes would strengthen the technical foundation of the research.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> <p>⋮</p>	<p>The references in the manuscript are relevant and sufficient for providing a background on dye-sensitized solar cells (DSSCs) and the use of natural dyes in this context. However, some of the references appear to be slightly dated, and it would benefit the manuscript to include more recent studies, particularly on the advancements in natural dye applications in DSSCs and comparisons with synthetic dyes.</p> <p>Suggestions for additional references:</p>	

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	<ol style="list-style-type: none">1. Recent reviews or articles on natural dyes used as photosensitizers in DSSCs (e.g., studies published in the last 5 years).2. Studies addressing the stability and long-term performance of DSSCs using natural dyes to provide context on the limitations and challenges that may arise.	
<u>Minor REVISION</u> comments Is the language/English quality of the article suitable for scholarly communications?	There are occasional grammatical errors, awkward phrasing, and inconsistent use of technical terms that can affect the readability and professionalism of the manuscript. To enhance clarity and flow, I recommend: <ul style="list-style-type: none">• Polishing sentence structure to eliminate overly complex or lengthy sentences.• Ensuring consistency in the use of scientific terminology throughout the manuscript.• Addressing minor grammatical issues to improve overall readability.	
<u>Optional/General</u> comments		

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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