

Review Form 1.7

Journal Name:	Journal of Materials Science Research and Reviews
Manuscript Number:	Ms_JMSRR_114818
Title of the Manuscript:	Production of Metakaolin and Calcium Carbide Residue-Based Geopolymer Concrete with the Taguchi Method
Type of the Article	Original Research Article

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PART 1: Review Comments

	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>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>Yes, the manuscript on the production of Metakaolin and Calcium Carbide Residue-Based Geopolymer Concrete using the Taguchi Method is important for the scientific community due to its contribution to sustainable construction practices, optimization of concrete properties, exploration of novel material combinations, and potential practical applications in structural engineering.</p> <p>However, it is also important to note that the manuscript may have limitations or areas for improvement that could impact its overall significance for the scientific community.</p> <p>It accurately reflects the focus of the research on utilizing Metakaolin and Calcium Carbide Residue in geopolymer concrete production and applying the Taguchi Method for optimization.</p> <p>The abstract of the article seems comprehensive. It outlines the key aspects of the study, including the use of the Taguchi Method to optimize geopolymer concrete properties by varying factors such as liquid-to-binder ratio, coarse aggregate sizes, and curing regime. The abstract also mentions the evaluation of workability, density, compressive strength, and flexural strengths of the geopolymer concretes, as well as the identification of the optimal concrete mix.</p> <p>The subsections and structure of the manuscript appear to be appropriate. The manuscript seems to be well-organized, with clear subsections such as ANOVA Results, Geopolymer Concrete Mixture Proportions, and Conclusion. This structure helps in presenting the research methodology, results, and conclusions in a logical and systematic manner.</p> <p>The study follows a systematic approach, utilizes the Taguchi Method for optimization, presents experimental results on geopolymer concrete properties, and provides relevant data analysis such as ANOVA results and response indices.</p> <p>The references cited in the manuscript seem relevant to the study of geopolymer concrete and the Taguchi Method. However, without a full list of references, it is challenging to assess the sufficiency and recency of the sources</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>The language and English quality of the article seem suitable for scholarly communications. The text appears to be well-written, with clear and coherent sentences that convey the research findings effectively. However, a comprehensive review of the full manuscript would be necessary to make a more accurate assessment of the language quality.</p>	

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<p>Optional/General comments</p>	<p>A. How does the Taguchi method help in optimizing the properties of geopolymer concrete mix?</p> <p>B. What factors were considered in the study to produce the four concrete mixes?</p> <p>C. What were the key findings regarding the workability, density, compressive strength, and flexural strengths of the geopolymer concretes evaluated in the study?</p> <p>D. The document mentions the use of the Taguchi method for optimization but lacks a detailed explanation of how this method was applied. Providing more information on the specific steps taken and the reasoning behind the chosen factors and levels would enhance the credibility of the study.</p> <p>E. The study only considers three factors at two levels each for the concrete mixes. Expanding the range of factors, such as different types of activators or additional curing conditions, could provide a more comprehensive understanding of the optimization process.</p> <p>F. While the document briefly mentions the key findings related to workability, density, compressive strength, and flexural strengths, a more in-depth analysis and discussion of these results are necessary. Insights into the trends observed, potential limitations, and comparisons with existing literature would strengthen the research outcomes.</p> <p>G. The document does not include a comparison with conventional concrete or other types of geopolymer concrete mixes. Including such comparisons would help in assessing the effectiveness and practical implications of the optimized geopolymer concrete mixes.</p> <p>H. The document lacks proper citations for some statements and findings, making it challenging to verify the sources of information presented. Ensuring accurate and complete referencing is crucial for maintaining academic integrity and facilitating further research in the field.</p>	
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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>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

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<p>Department, University & Country</p>	<p>UCLA, USA</p>