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| Journal Name: | [**Advances in Research**](https://journalair.com/index.php/AIR) |
| Manuscript Number: | **Ms\_AIR\_132370** |
| Title of the Manuscript: | **Review on Research and Application of BF** |
| Type of the Article |  |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | 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. A minimum of 3-4 sentences may be required for this part.** | **This manuscript is significant for the scientific community as it provides a comprehensive review of the latest research on basalt fiber (BF) and its applications in enhancing concrete properties. By systematically analyzing the effects of BF on mechanical strength, frost resistance, and crack resistance, the study offers valuable insights for researchers and engineers seeking to improve the durability and sustainability of concrete materials. The findings highlight the optimal dosage and fiber length for maximizing performance, addressing key challenges such as fiber dispersion and synergy with other materials. Furthermore, the study contributes to the development of eco-friendly construction materials by promoting the use of BF as a sustainable alternative to conventional reinforcement fibers.** | This article provides a comprehensive review of the mechanical properties, freeze-thaw resistance, and crack resistance enhanced by basalt fiber. It summarizes the current research status of basalt fiber, offering a reference for the subsequent research on basalt. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes** | 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. | **The abstract of the article is well-structured and provides a comprehensive summary of the study. It effectively highlights the key aspects of basalt fiber (BF), including its benefits for mechanical properties, frost resistance, and crack resistance in concrete. However, a few refinements could improve its clarity and impact:**  **Suggested Improvements:**  **Expand on Challenges and Future Directions – While the abstract mentions some challenges (fiber dispersion, optimal dosage, multi-factor synergy), it could briefly suggest potential solutions or areas for further research to provide a more forward-looking perspective.**  **Clarify Optimal Dosage and Performance Relationship – The abstract states that BF improves properties at 0.1%–0.2% dosage but negatively impacts them at higher concentrations. A brief mention of why this occurs (e.g., fiber agglomeration and increased porosity) would improve clarity.**  **Mention Practical Applications – Highlighting real-world applications or industries that could benefit from these findings (e.g., sustainable construction, infrastructure durability) would enhance the practical relevance.**  **Concise Conclusion – Ending with a strong concluding statement about the overall significance of BF in sustainable construction and material science would make the abstract more impactful.** | Thank you for your valuable suggestions. |
| Is the manuscript scientifically, correct? Please write here. | Yes. | Yes |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes | Yes |
| Is the language/English quality of the article suitable for scholarly communications? | Yes | Yes |
| Optional/General comments |  |  |

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| **PART 2:** | | |
|  | Reviewer’s comment | Author’s comment *(if agreed with the 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?** |  | No |