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REVIEWER'S REPORT

Manuscript No.: IJAR-55742

Title: Sinter Crystallization of Soda Lime Silicate Waste Glass Modified With Eggshell Derived CaO for Glass Ceramic Tile Applications.

Recommendation:

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity			✓	
Significance			✓	

Reviewer Name: Mr. Bilal Mir

Reviewer's Comment for Publication.

The manuscript presents a relevant and timely study on the sustainable utilization of waste soda lime silicate glass and eggshell-derived CaO for the fabrication of glass-ceramic tiles via the sinter crystallization route. The topic is original and aligns well with current research trends in waste valorization, circular economy, and sustainable construction materials. The experimental approach is appropriate, and the use of multiple characterization techniques (XRF, XRD, FTIR, SEM/EDS) provides a comprehensive understanding of raw materials and sintered products. The results clearly demonstrate that sintering temperature significantly influences phase evolution, microstructure, and mechanical performance, with optimal properties achieved at 700 °C, supporting the suitability of the developed materials for tile applications. However, minor revisions are required to improve the manuscript's clarity and presentation. These include correction of grammatical and typographical errors, improvement of figure captions and consistency in formatting, clearer explanation of phase evolution (particularly the persistence of calcite at elevated temperatures), and minor refinement of the Results and Discussion section to reduce repetition and enhance flow. Addressing these issues will strengthen the manuscript and improve its readability without altering its scientific merit.