

Review of: "Yerba Mate as a Co-Precursor in the Synthesis of Silica Through the Sol-Gel Technique"

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Potential competing interests: No potential competing interests to declare.

The manuscript entitled "Yerba mate as a co-precursor in the Synthesis of Silica through Sol-gel technique" shows several critical issues:

1. The abstract is not written in an appropriate manner. It fails to draw attention to the manuscript's novelty and strength.
2. The use of solid waste "Yerba mate" in the synthesis of silica gel is appreciable, but the authors did not provide the chemical composition of Yerba mate, which is essential for its use as a silica precursor. Why Yerba mate is used as a co-precursor is not explained.
3. The experimental section is poorly written. In the sol-gel method, we need to maintain the pH of the mixture, but the authors did not mention at what pH they conducted the experiment.
4. The manuscript emphasizes photographic monitoring of the process, but the images are of poor resolution. Nothing can be concluded from the images.
5. Authors are suggested to conduct some important characterizations of the prepared silica gel like SEM, SEM-EDX, etc., for insightful information about the silica gel.
6. Some more latest references should be included in the manuscript.
7. The manuscript contains numerous linguistic errors and requires a thorough scientific language review.

The use of solid waste in the synthesis of value-added chemicals is highly encouraging work, but unfortunately, due to the poor structuring of the manuscript, the authors did not adequately demonstrate the impact of this work.

The manuscript needs a thorough revision, incorporating some insightful characterizations and a detailed experimental process.