

Review of: "Investigating the Mechanical and Tribological Effects of MoS₂ Reinforcement in AZ91 Magnesium Alloy: A Comprehensive Experimental Study"

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Potential competing interests: No potential competing interests to declare.

Dear Authors,

I have carefully reviewed your manuscript entitled "Investigating the Mechanical and Tribological Effects of MoS₂ Reinforcement in AZ91 Magnesium Alloy: A Comprehensive Experimental Study" and submitted it for publication in the Qeios journal.

The title suggests to readers that this study is comprehensive, which is not true.

The abstract should provide a brief and comprehensive research summary, encapsulating the main objectives, methods, results, and conclusions. A well-written abstract allows researchers to decide whether to read the full paper based on the abstract's content. In this manuscript, the abstract is written like a shortened introduction.

The introduction of a scientific article plays a pivotal role in the research presented. It should provide the necessary background to understand the research topic. It also summarizes relevant previous research, highlighting what has been done and identifying gaps the current study aims to address. In this case, the introduction does not meet any of these criteria; it does not address the gaps in the state of the art based on reviews of recent papers. A well-written introduction helps justify the need for the research. In your case, the novelty is not proved.

The idea of a scientific paper is to communicate new findings, insights, or advancements in a particular field of study. Your manuscript is more like a research report than a scientific paper. You reported some basic results without any discussion.

You wrote e.g., "Further investigation using techniques such as electron backscatter diffraction (EBSD) could provide more detailed information about grain size and texture evolution." It looks like a salami cut. If the authors thought that such a study would answer some unknown questions, then they should have carried it out and included the results in this manuscript.

LM microphotographs lack scale bars. In SEM micrographs, they are illegible. In general, the figures are of poor quality.

The conclusions are not supported by the data.

The cited literature is not balanced because most of the cited papers are very old.

