

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.

The research paper titled "Investigating the Mechanical and Tribological Effects of MoS₂ Reinforcement in AZ91 Magnesium Alloy: A Comprehensive Experimental Study" explores the enhancement of the AZ91 magnesium alloy through the incorporation of molybdenum disulfide (MoS₂) particles using friction stir processing (FSP). The study aims to improve the mechanical properties and wear resistance of the alloy, which is desirable for lightweight applications in the transportation industry. The subject of the paper is relevant, and the text presents interesting results. However, I suggest some improvements: the stress-strain curves are unusual and not very typical; they should be presented together, and the parts where the stress is equal to zero should be corrected. Additionally, the micrographs in Figures 3, 4, and 5 need scale bars.