

Tribological behavior of 3D printed biomimetic surfaces

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Abstract: Tribological behavior of five different surfaces patterns, bioinspired from maize leaf skin, shark skin, snakeskin, pitcher's structure and lizard skin, was investigated. Bioinspired surfaces have been printed using Fused Deposition Modelling (FDM) technology from a marked Poly Lactic Acid (PLA). Tribological tests were carried out using a reciprocating sliding device under dry conditions at room temperature. Particular interest was given to the investigation of the friction anisotropy as well as the wear mechanisms. The correlation between the apparent friction coefficient and the test conditions, particularly, the 3D printed bioinspired surface patterns and the number of cycles, was emphasized via the friction maps	

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