

Printing on liquid elastomers

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Abstract

In recent years the research community has paid significant attention to geometrically engineered materials. These materials derive their unique properties from their structure rather than their chemistry alone. Despite their success in the laboratory, the assembly of such soft functional materials remains an outstanding challenge. Here, we propose a robust fluid-mediated route for the rapid fabrication of soft elastomers architected with liquid inclusions. Our approach consists of depositing water drops at the surface of an immiscible liquid elastomer bath. As the elastomer cures, the drops are encapsulated in the polymer and impart shape and function to the newly formed elastic matrix. Using the framework of fluid mechanics, we show how this type of composite material can be tailored.

Palabras clave

KeyWords Plus: [SOFT](#); [SURFACE](#); [FUTURE](#); [SHEETS](#)

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