

Abstract Submitted  
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**Controlling precipitate growth in aluminum rich alloys via externally applied stress**<sup>1</sup> JACK FRANKLIN, JENNIFER LUKES, University of Pennsylvania — The material properties of metallic alloys are directly influenced by their microstructure. The final microstructure of bulk specimens is currently determined through specific heat treatments designed to control the homogenous precipitation of secondary phases from a saturated matrix. This talk will introduce a novel stress-based method of controlling the precipitation and directed growth of secondary phases to create desired microstructures on the surface of an aluminum-copper alloy. Microstructures obtained under different stress conditions will be presented and the mechanisms leading to their formation will be discussed.

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