

Project 30 – Microstructural Evolution of Metallic Alloys During Rapid Solidification

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Industrial Mentors – TBD

Program Goal

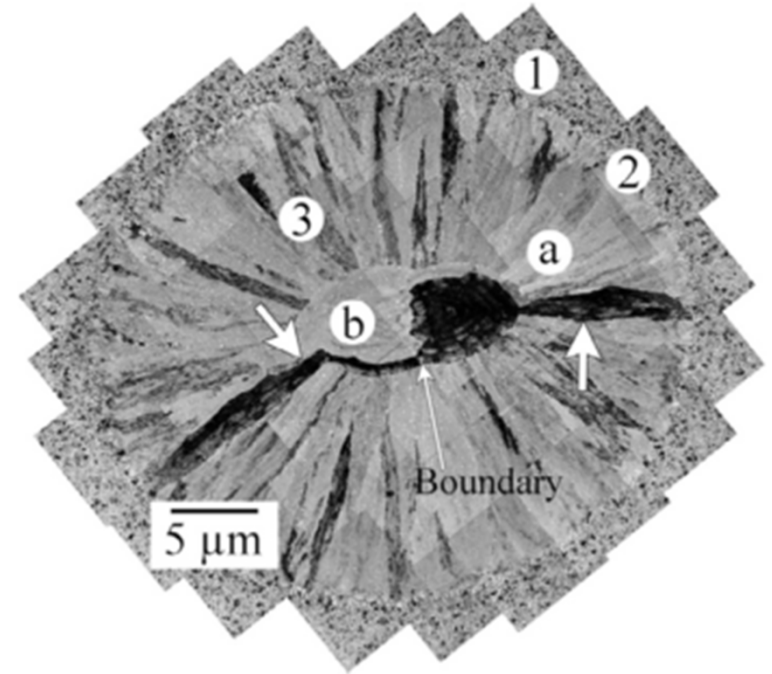
Understand the effect of rapid solidification on the as-solidified microstructure and subsequent solid-state phase transformations.

Approach

Use ex-situ and in-situ imaging to capture and characterize the mechanisms controlling microstructural development during far from equilibrium and equilibrium solidification.

Benefits

In-situ characterization of solid-liquid and solid-state phase transformations will give a full understanding of microstructural development during complex thermal cycling.



TEM image of a rapidly solidified Al-Cu alloy

Project Duration

Ph.D. August 2017 – May 2021



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