

Project 22 - Formation, Stability, and Mechanical Properties of Microeutectics in Bulk Solidified Al-Alloys

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Program Goal

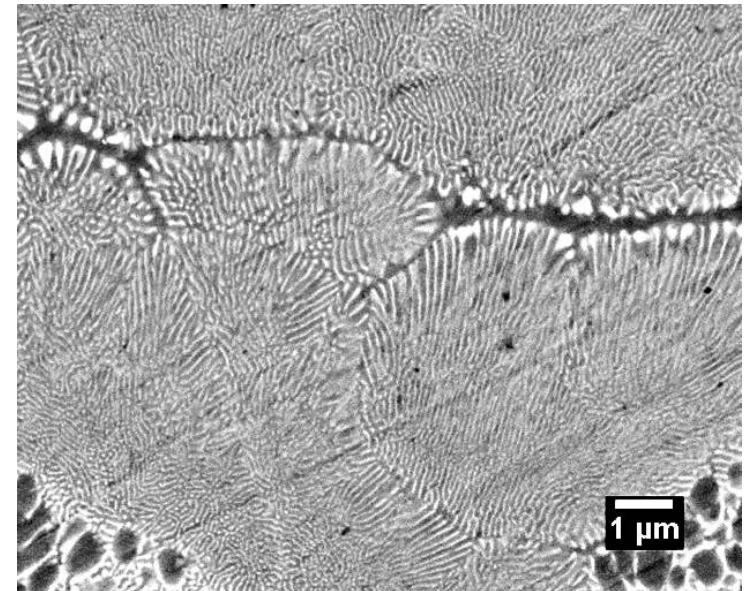
Develop high-temperature, high-strength aluminum alloys without the use of rapid solidification by forming stable microeutectic

Approach

From a knowledge of crystal structures of complex intermetallics, utilize Density Functional Theory calculations to identify compositions that generate desired microstructures

Benefits

Affordable, high performance aluminum alloys for use at elevated temperatures



Lamellar microeutectic microstructure in chill-cast sample

Project Duration

Ph.D. June 2015 – Aug. 2019



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