



ALLOY AND COMPOSITE FORMATION BY REACTIVE SYNTHESIS DURING ADDITIVE MANUFACTURING

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The Invention

UW researchers have discovered methods for forming metal alloys, including refractory intermetallic alloys, and ceramic composites using reactive synthesis during additive manufacturing (AM). In the AM processes, an exothermic reaction path is used, such that the heat from the reaction drives the synthesis reaction. Using this approach, component powders that are readily available from commercial vendors or easily synthesized using conventional methods are mixed in selected amounts and subsequently reacted via AM to produce metal alloys or ceramic composites.

Additional Information

For More Information About the Inventors

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Tech Fields

- [Engineering : Additive manufacturing](#)

For current licensing status, please contact Michael Carey at mcarey@warf.org or 608-960-9867