

Mechanical Engineering Doctoral Defense

ADVANCED MANUFACTURING AND PROCESSING OF
CERAMICS AND CERAMIC COMPOSITES

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Abstract

Achieving a viable process for advanced manufacturing of ceramics and metal-ceramic composites is sought-after goal in a wide range of fields including electronics and sensors for harsh environments, microelectromechanical devices, energy storage materials, and structural materials, among others. In this dissertation, processing, and manufacturing of ceramics and ceramic composites are addressed, specifically a process for 3D printing of polymer-derived ceramics (PDC), and a process for low-cost manufacturing as well as healing of metal-ceramic composites are demonstrated.



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Zoom Link: <https://asu.zoom.us/j/3973605353>