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Title: Grain growth during ultrasonic welding of nanocrystalline alloys

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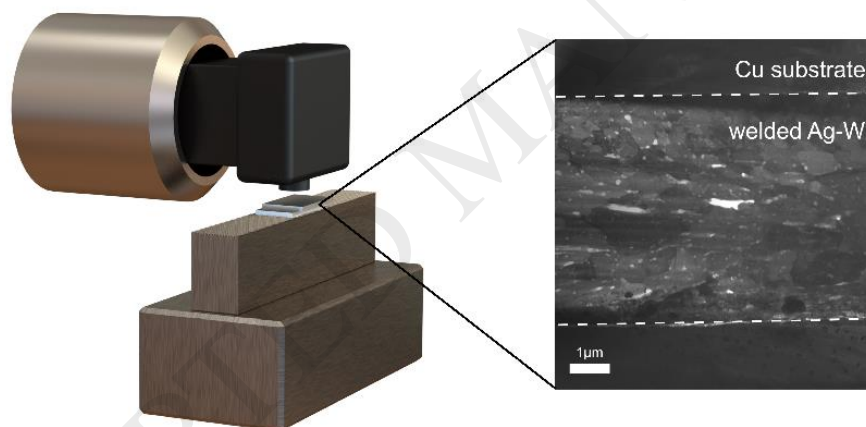
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Graphical Abstract:



Abstract: The effects of ultrasonic welding on the structure of nanocrystalline feedstock were investigated using nanostructured Ag-W as a model system. Transmission electron microscopy of welded Ag-W foils revealed extensive grain growth as well as second phase precipitation along the weld interface. These structural changes were related to the ultrasonic welding process variables by combining classical models of frictional heating and grain growth. Process diagrams showing the extent of grain growth under a given set of

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